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ACADEMIC CALENDAR

2023-2024
University of Alaska Fairbanks Academic Calendar 2023-2024

The academic calendar contains important dates and deadlines for students, staff and faculty.

FALL SEMESTER 2023

Deadline to apply for admission for fall semester (international students)	Wednesday, March 1
Fall 2023 course list available at UAOnline	Monday, March 20
Begin fall 2023 priority registration (UAF degree students)	Monday, March 27
Begin fall 2023 open registration (all UAF, UAA and UAS students, including nondegree students)	Monday, April 3
Deadline to apply for admission for fall semester (UA Scholars)	Monday, May 1
Deadline to apply for admission for fall semester (most graduate students; some programs have different deadlines)	Thursday, June 1
Deadline to apply for admission for fall semester without late application fee (undergraduate students)	Thursday, June 15
Financial aid is disbursed	Friday, Aug. 18
Residence halls open to first-year students only, 8 a.m.	Tuesday, Aug. 22
Residence halls open to all students, 8 a.m.	Thursday, Aug. 24
Orientation for students and families	Wednesday-Saturday, Aug. 23-26
Orientation for New Students	Wednesday-Saturday, Aug. 23-26
Orientation for Families	Tuesday-Wednesday, Aug. 22-23
Orientation for Student Veterans	Friday, Aug. 25
Orientation for Transfer Students	Friday, Aug. 25
Orientation for Graduate Students	Friday, Aug. 25
Orientation for International Students	Friday, Aug. 25
First day of instruction; late registration begins	Monday, Aug. 28
Labor Day (no classes, offices closed)	Monday, Sept. 4
Deadline for adding classes and late registration; 5 p.m. in person, midnight at UAOnline	Friday, Sept. 8
Last day for student- and faculty-initiated drops with refund (course does not appear on academic record)	Friday, Sept. 8
Deadline for tuition and fee payment; 5 p.m. in person, midnight at UAOnline	Friday, Sept. 8
Midterm grades due	Monday, Oct. 9
Deadline to apply for fall 2023 graduation	Sunday, Oct. 15
Spring 2024 course list available at UAOnline	Monday, Oct. 30
Last day for student- and faculty-initiated withdrawals (W grade appears on academic transcript)	Friday, Nov. 3
Begin spring 2024 priority registration (UAF degree students)	Monday, Nov. 13
Fall break (No classes, most offices closed)	Wednesday-Sunday, Nov. 22-26
Begin spring 2024 open registration (all UAF, UAA and UAS students, including nondegree students)	Monday, Nov. 27
Last day of instruction	Saturday, Dec. 9
Final examinations	Monday-Saturday, Dec. 11-16
Residence halls close, noon	Sunday, Dec. 17
Deadline for faculty to post grades, noon	Wednesday, Dec. 20
Winter break (no classes, most offices closed; reopen Wednesday, Jan. 3, at 8 a.m.)	Monday, Dec. 25-Tuesday, Jan. 2

SPRING SEMESTER 2024

Deadline to apply for admission for spring semester (international students)	Friday, Sept. 1
Deadline to apply for admission for spring semester (most graduate students; some programs have different deadlines)	Sunday, Oct. 15
Spring 2024 course list available at UAOnline	Monday, Oct. 30
Deadline to apply for admission for spring semester (undergraduate students)	Wednesday, Nov. 1
Begin spring 2024 priority registration (UAF degree students)	Monday, Nov. 13
Begin spring 2024 open registration (all UAF, UAA and UAS students, including nondegree students)	Monday, Nov. 27
Financial aid is disbursed	Monday, Jan. 8
Residence halls open to all students, 8 a.m.	Friday, Jan. 12
Orientation for new students and families	Friday, Jan. 12
Orientation for Student Veterans	Friday, Jan. 12
Orientation for New Students	Friday, Jan. 12
Orientation for Transfer Students	Friday, Jan. 12
Orientation for Graduate Students	Friday, Jan. 12
Orientation for International Students	Friday, Jan. 12
Orientation for Families	Friday, Jan. 12
Alaska Civil Rights Day (no classes, offices closed)	Monday, Jan. 15
First day of instruction; late registration begins	Tuesday, Jan. 16
Deadline for adding classes and late registration; 5 p.m. in person, midnight at UAOnline	Friday, Jan. 26
Last day for student- and faculty-initiated drops with refund (course does not appear on academic record)	Friday, Jan. 26
Deadline for tuition and fee payment; 5 p.m. in person, midnight at UAOnline	Friday, Jan. 26
Deadline to apply for spring 2024 graduation	Thursday, Feb. 15
Deadline for UA Foundation and privately funded scholarship applications	Thursday, Feb. 15
Midterm grades due	Monday, Feb. 19
Spring break (no classes)	Monday-Friday, March 11-15
University holiday (most offices closed for spring break)	Friday, March 15
Fall 2024 course list available at UAOnline	Monday, March 18
Last day for student- and faculty-initiated withdrawals (W grade appears on academic transcript)	Friday, March 29
Begin fall 2024 priority registration (UAF degree students)	Monday, April 1
Begin fall 2024 open registration (all UAF, UAA and UAS students, including nondegree students)	Monday, April 15
Last day of instruction	Monday, April 29
Final examinations	Tuesday-Saturday, April 30-May 4
Commencement	Saturday, May 4
Residence halls close, noon	Sunday, May 5
Deadline for faculty to post grades, noon	Wednesday, May 8

SUMMER SEMESTER 2024

All Summer Sessions	
Summer 2024 course list available at UAOnline	Monday, Feb. 5
Begin summer 2024 priority registration (UAF degree students)	Monday, Feb. 12
Begin summer 2024 open registration (all UAF, UAA and UAS students, including nondegree students)	Monday, Feb. 26
Deadline to apply for admission for summer semester	Wednesday, May 1
Financial aid is disbursed	Friday, May 10
Deadline to apply for summer 2024 graduation	Monday, July 15
Full Semester	
First day of instruction	Monday, May 20
Memorial Day (no classes, most offices closed)	Monday, May 27
Deadline to add/drop classes; fee payment deadline	Friday, May 31
Independence Day holiday (no classes, most offices closed)	Thursday-Friday, July 4-5
Withdraw deadline	Friday, July 12
Last day of instruction	Friday, Aug. 9
Deadline for faculty to post grades, noon	Wednesday, Aug. 14
First Six-Week Session	
First day of instruction	Monday, May 20
Deadline to add/drop classes; fee payment deadline	Friday, May 24
Memorial Day (no classes, most offices closed)	Monday, May 27
Withdraw deadline	Friday, June 14
Last day of instruction	Friday, June 28
Deadline for faculty to post grades, noon	Wednesday, July 3
Second Six-Week Session	
First day of instruction	Monday, July 1
Independence Day holiday (no classes, most offices closed)	Thursday-Friday, July 4-5
Deadline to add/drop classes; fee payment deadline	Tuesday, July 9
Withdraw deadline	Friday, July 26
Last day of instruction	Friday, Aug. 9
Deadline for faculty to post grades, noon	Wednesday, Aug. 14

OVERVIEW

Welcome to the University of Alaska Fairbanks

The catalog is a student's complete guide to studying at the University of Alaska Fairbanks. The catalog includes the academic calendar, information on admission, services and resources, graduation requirements, and program and course listings for occupational endorsement, certificate, associate, bachelor's, postbaccalaureate certificate, graduate certificate, graduate licensure, master's and Ph.D. degree students.

The catalog is updated each academic year to reflect changes in academic rules and degree requirements. If you are looking for a different academic year than the one listed above, please visit our archived catalogs (http://catalog.uaf.edu/archives/).

Programs approved after catalog publication are available in the addendum (http://catalog.uaf.edu/overview/addendum/). Students enrolling for the first time should refer to the registration guide (https://www.uaf.edu/handbook/register/). Students may search for courses available for registration using the UAOnline class schedule search tool (https://ssb-prod.ec.alaska.edu/PROD/bwck2sch.p_disp_dyn_sched/). For a schedule of classes at any of UAF's community campuses, contact the campus directly. Contact information for campuses and UAF offices can be found using the People Directory (https://people.alaska.edu/).

Accreditation

UAF is accredited by the Northwest Commission on Colleges and Universities (https://www.nwccu.org/). Additionally, it has the following specialized accreditations, certifications and standards:

- AACSB International
- ABET — Engineering Accreditation Commission
- ABET — Computing Accreditation Commission
- Alaska Police Standards Council
- American Alliance of Museums
- American Bar Association
- American Chemical Society
- Automotive Service Excellence Education Foundation
- Commission on Accreditation of Allied Health Education Programs: Medical Assistant and Paramedic Program
- Council for Accreditation of Counseling and Related Educational Programs
- Council for the Accreditation of Educator Preparation
- Council on Social Work Education
- Federal Aviation Administration
- National Association for the Education of Young Children
- North American Process Technology Alliance

Campuses

All UAF campuses are tobacco-free as of Dec. 31, 2015.

Fairbanks Campus

The 2,250-acre Fairbanks campus (also known as the Troth Yeddha' (p. 12) Campus) offers limitless opportunities for activity and recreation. The main campus has two lakes and 26 miles of trails as well as a major student recreation complex for indoor sports. Facilities are available for basketball, volleyball, badminton, tennis, calisthenics, dance, gymnastics, judo and karate. There are rifle and pistol ranges; courts for handball, racquetball and squash; a jogging track; a swimming pool; weight training and modern fitness equipment areas; an ice arena for recreational skating and hockey; a special aerobics area; a two-story indoor climbing wall; and an outdoor climbing tower covered with ice in the winter. UAF sponsors intercollegiate athletic teams in men's and women's basketball, men's and women's cross-country running and skiing, coed rifle, men's ice hockey and women's volleyball and swimming.

The Wood Center is the focus of many extracurricular activities. With a pub, dining facilities, meeting rooms, lounge and games area, the Wood Center is a gathering place for the entire university community.

UAF has some of the best facilities in the state. Performances are scheduled almost every weekend during the academic year in Davis Concert Hall or Salisbury Theatre. The Rasmuson Library, Alaska's largest library, offers extensive resource materials in print and online. An array of computer databases provides access to hundreds of academic journals, and internet connections allow students at remote rural sites to use library resources. The UA Museum of the North is not only one of the top visitor attractions in the state but also a resource for students. Its vast collections are used for demonstration and comparative studies in classrooms and labs.

The Fairbanks campus is the statewide university system's principal research center. Internationally respected institutes provide students with an opportunity to see science in action and participate in research activities.

FAIRBANKS AREA

Fairbanks, Alaska's second-largest city, sits on the banks of the Chena River in the heart of Alaska. The downtown district is easily accessible via the local bus system and a network of bike trails. The city is steeped in a history of riverboat captains and gold seekers. Its character has been shaped by a large military presence, the construction of the trans-Alaska oil pipeline and the continuing oil economy, and a thriving university. It is a city where the old quietly blends with the new. Striking modern buildings sit side-by-side with log cabins built in the early part of the last century.

With an area population of some 97,000, Fairbanks offers the conveniences of a big city, yet millions of acres of rolling hills and spectacular Alaska panoramas are only minutes away. Whether the sport is canoeing, climbing, running, dog mushing, skiing or fishing, nowhere else compares with Alaska. Denali (Koyukon Athabascan for "The High One"), the tallest mountain in North America, is often visible from many UAF residence hall windows.

TRANSPORTATION TO FAIRBANKS

Fairbanks is easily accessible by land or air. Anchorage is 365 miles away via the Parks Highway or the Alaska Railroad, and Seattle is 2,300 miles

away via the Alaska Highway. Major airlines offer several daily flights between Fairbanks and Anchorage, Seattle and many other destinations.

The Alaska Railroad provides a special one-way fare between Anchorage and Fairbanks for all full-time UAF students in summer or regular sessions. Students must ask for the special rate when making reservations and present their student ID to the ticket agent at check-in. For reservations, contact the Alaska Railroad at 907-458-6025 or 800-544-0552.

ECAMPUS

Since 1963, UAF has been a leader in offering distance courses and programs for students throughout Alaska and the world. Currently, eCampus offers more than 450 online courses in 60 disciplines. Additionally, eCampus offers full degrees and certificates completely online. Internet-based courses let students increase their educational opportunities, further their education and earn their degrees without the constraint of classroom attendance. eCampus courses are academically rigorous, meet during regular semesters and count toward degree and program requirements.

For more information, contact eCampus in the Bunnell Building on the Troth Yeddha' Fairbanks campus, by phone at 800-277-8060 or 907-455-2060, via email at uaf-ecampus@alaska.edu or at the eCampus website (https://ecampus.uaf.edu).

Community Campuses

In addition to the Fairbanks campus, UAF has community and rural campuses in downtown Fairbanks, Bethel, Dillingham, Kotzebue and Nome. These branches are central to fulfilling the UAF mission of providing educational opportunities throughout the state. Credits earned at any UAF campus or center are recognized at all UAF campuses, meaning that students may change campuses and transfer all UA credits.

BRISTOL BAY CAMPUS IN DILLINGHAM

The Bristol Bay Campus serves 32 rural communities in the Bristol Bay region within a 55,000-square-mile area. The campus includes 12 coastal communities served by the Aleutian-Pribilof outreach center in Unalaska/Dutch Harbor: the Aleutian archipelago, the lower Alaska Peninsula, the Shumigan Islands and the Pribilof Islands. The campus administrative center is in Dillingham (about 322 air miles from Anchorage and 570 air miles from Fairbanks). Enrollment at Bristol Bay Campus ranges from 500 to 800 students each semester. The campus offers an Associate of Arts degree in general studies and Associate of Applied Science degrees in allied health, applied business, applied accounting, community health, early childhood education, human services, information technology, interdisciplinary studies and renewable resources. Bachelor's degree programs include elementary education, interdisciplinary studies, rural development and social work. Master's degrees are offered in rural development and education. Other programs include Adult Basic Education, providing adult basic education through high school-level instruction for Bristol Bay adults, and the Marine Advisory Program.

The Bristol Bay Campus also provides educational opportunities for communities in its service area, including vocational-technical, community interest and graduate courses. Classes are offered by distance delivery (audio conference, video conference, correspondence or Internet) and by instructors using traditional methods. For more information, visit the Bristol Bay Campus website (https://www.uaf.edu/bbc/).

CHUKCHI CAMPUS IN KOTZEBUE

The Chukchi Campus is located 26 miles north of the Arctic Circle on the shores of the Chukchi Sea. The campus serves Kotzebue and 10 villages in a region of more than 36,000 square miles. Chukchi offers Associate of Arts as well as Associate of Applied Science degrees, and courses leading to baccalaureate degrees in education, rural development and social work. Courses are offered by local instructors and through the College of Rural and Community Development audio-conferencing and live internet instructional systems. For more information, visit the Chukchi Campus website (https://www.uaf.edu/chukchi/).

COMMUNITY AND TECHNICAL COLLEGE IN FAIRBANKS

The Community and Technical College is a comprehensive community college serving students in Fairbanks and outlying areas across the state of Alaska. Its core purpose is to provide community-driven education to meet the needs for workforce development, academic preparation and lifelong learning. CTC helps prepare Alaskans for Alaska's jobs.

CTC offers more than 40 certificate and degree programs through nine different locations throughout Fairbanks and the surrounding area.

CTC's downtown location (604 Barnette St.) provides a one-stop shop that enables students to take care of all of their university-related needs in one convenient location. Services include academic and financial aid advising, support to register and pay for courses, and placement testing. Students can even obtain parking passes and their student IDs. CTC's downtown location also contains a tutoring and learning center, open computer labs, and specialized classrooms and labs to support programs in health care, business, cybersecurity and IT support, construction management, early childhood education, and paralegal studies.

CTC provides services and education through eight other locations, several of which are specialized facilities equipped with industry-specific equipment and technology to support workforce and hands-on education programs such as culinary arts; EMS/paramedicine; firefighting; law enforcement; oil, gas and mining process technologies; automotive; diesel/heavy equipment; aviation maintenance; and welding.

- Aviation Maintenance Program Hangar: 3504 University Ave. South
- Bunnell House Early Childhood Lab School: 1793 Chatanika Dr.
- Fairbanks Pipeline Training Center: 3600 Cartwright Ct.
- Hutchison Institute of Technology: 3750 Geist Rd.
- University Park Building: 1000 University Ave.
- Offices on Fort Wainwright and Eielson Air Force Base
- Partnership office at Delta Career Advancement Center in Delta Junction

For more information, contact CTC at 907-455-2800 or visit the CTC website (https://www.ctc.uaf.edu).

INTERIOR ALASKA CAMPUS

The Interior Alaska Campus in Fairbanks serves 46 communities and villages in the Doyon and Tanana Chiefs Conference regions throughout the interior of Alaska, an area about the size of France. The Interior Alaska Campus is the most decentralized of the UAF campuses. Courses are offered online and by audio conference, on site by local or visiting instructors, and via intensive sessions in Fairbanks and Anchorage. The campus offers a range of degree programs, including occupational endorsements, certificates, and Associate of Arts and Associate of Applied Science degrees. Math and English tutors are available for all

students taking courses through the campus. For more information, visit the Interior Alaska Campus website (https://www.uaf.edu/iac/).

KUSKOKWIM CAMPUS IN BETHEL

The Kuskokwim Campus is located in Bethel and serves approximately 25,000 people in the Yukon-Kuskokwim Delta, which includes 47 remote Alaska Native Yup'ik and Cup'ik and Athabascan villages with 56 tribes in a 57,000-square-mile-area the size of Illinois. Bethel is a community of about 6,000 people 80 miles inland on the Kuskokwim River. KuC offers academic, vocational and community-interest courses, as well as courses leading to associate, baccalaureate and master's degrees, including a Bachelor of Arts degree in Yup'ik language and culture, the home language of many families in the region. The Emerging Scholars Program assists all full-time freshmen in the transition to college, both academically and socially, and in completing certificates and degrees. Students may attend classes on campus and through distance delivery. Housing on campus is available in Sackett Hall, which provides suites with space for four students in each. For more information, visit the Kuskokwim Campus website (https://www.uaf.edu/bethel/).

NORTHWEST CAMPUS IN NOME

Northwest Campus is located in Nome, a community of 3,500 that is the service hub for the 15 villages of the Bering Strait region. This 44,000-square-mile region extends from Shishmaref on the northern edge of the Seward Peninsula to Stebbins on the southern rim of Norton Sound. It includes communities on St. Lawrence and Little Diomede islands. The area contains 570 miles of coastline, which includes all of Norton Sound and portions of the Bering and Chukchi seas.

The Northwest Campus serves a total population of nearly 10,000. Certificates and associate, bachelor's and master's degrees are offered to the region's residents, with courses taught both traditionally and by distance delivery. The campus responds to the vocational, business development, cultural preservation and academic needs of the Bering Strait region. Many courses, programs and degrees are offered in cooperation with regional health and tribal organizations, school districts and corporations. Northwest Campus offers a high-latitude range management certificate program supporting reindeer herding and husbandry. For more information, visit the Northwest Campus website (https://www.uaf.edu/nwc/) or NWC on Facebook (http://www.facebook.com/UAF.NWC/).

Troth Yeddha'

In February 2013 the U.S. Board on Geographic Names officially recognized Troth Yeddha' as the name of the ridge on which the Fairbanks campus sits. In the Lower Tanana Athabascan language, this name means "Indian potato ridge" and refers to the plant with an edible root — *Hedysarum alpinum* — that is a traditional food for Native people throughout Alaska.

The Athabascan, or Dene, languages have ancient ties to the Tanana Valley. Athabascan geographic names are functional, rule-driven and shared across neighboring languages. Numerous Tanana Valley Athabascan experts have shared the Troth Yeddha' place name with pride.

In 1994, the late Chief Peter John of Minto said Athabascan people long ago would gather on Troth Yeddha' to talk and advise one another. When they learned this place would be used for a university, he said, they decided that the school would carry on a traditional use of this hill — a place for thinking and working together.

In recent years, numerous facts about the Chena Athabascans of Troth Yeddha' have been assembled. Until the 1840s, a small village was located near a pond at the base of the ridge, where the UAF Physical Plant building is now. Athabascan place names for the nearby lakes and streams, some of which incorporate the ridge's name, have also been identified.

UAF celebrates and honors the historical place of Alaska's first peoples. In 2008, the UA Board of Regents set aside seven acres next to the UA Museum of the North as Troth Yeddha' Park. The park is a venue to recognize the rich cultures of Alaska Natives and their presence on the Fairbanks campus.

For more information visit the Troth Yeddha' initiative website (https://www.uaf.edu/trothyeddha/).

Colleges and Schools

UAF colleges and schools offer programs leading to occupational endorsements, certificates and associate, bachelor's and master's degrees in the arts, sciences and professions. Doctoral programs are available in areas of particular strength, such as sciences and mathematics.

Business and Security Management

The College of Business and Security Management is a global learning community where innovation in teaching, discovery and service prepares students for professional success that benefits our community, the state of Alaska and the nation. The college's programs include bachelor's degrees in accounting, applied management, business administration and homeland security and emergency management, as well as 10 undergraduate minors and an occupational endorsement in homeland security. An undergraduate postbaccalaureate certificate in accounting is available. Graduate degrees include a Master of Business Administration, a Master of Security and Disaster Management and a Ph.D. in natural resources and sustainability. The college offers five graduate-level certificates in the field of homeland security and emergency management. The Army Reserve Officers' Training Corps (ROTC) program is housed within the college.

The College of Business and Security Management is accredited by the Association to Advance Collegiate Schools of Business International (AACSB) and is one of only approximately 1.5% of schools worldwide with additional specialized accreditation in accounting.

Going beyond the classroom, CBSM embraces experiential learning by encouraging students to be active participants in their education through involvement in student organizations, paid internships and events.

For more information, visit the CBSM website (https://www.uaf.edu/cbsm/) or call 907-474-7461.

Community and Technical College

The Community and Technical College fulfills UAF's community college mission in the greater Fairbanks and outlying area by offering high-quality certificates, degrees and specialized training programs. Its core purpose is to provide community-driven education to meet the needs for workforce development, academic preparation and lifelong learning. CTC helps prepare Alaskans for Alaska's jobs.

CTC offers more than 40 certificate and degree programs that prepare students for high-demand careers in health care; business; cybersecurity and IT support; construction management; culinary arts; early childhood education; EMS/paramedicine; firefighting; law enforcement; paralegal studies; oil, gas and mining process technologies; automotive; diesel/heavy equipment; aviation maintenance; and welding.

CTC benefits from strong partnerships with local employers in business, industry and organized labor. Many CTC faculty come from active workplace settings, ensuring that CTC students learn from people at the forefront of their professions.

Many CTC classes are held during evenings, weekends and online to support the needs of nontraditional students who have been away from college or whose work and family obligations make full-time student status challenging, as well as traditional students entering college for the first time.

CTC programs are delivered at nine locations throughout Fairbanks and the surrounding area. Each CTC location contains specialized facilities and equipment to support the industry experience and the hands-on education provided through programs such as aviation maintenance, automotive technology, culinary arts, diesel/heavy equipment maintenance, paramedicine, and more. CTC's downtown location (604 Barnette St.) provides a one-stop shop that enables students to take care of all of their university-related needs in one convenient place.

For more information, contact CTC at 907-455-2800 or visit the CTC website (https://www.ctc.uaf.edu/).

Education

The School of Education is dedicated to culturally responsive, place-based teaching, counseling, research and service for Alaska's diverse communities. Coursework and fieldwork in a broad range of undergraduate and graduate programs are available to students in Fairbanks and Anchorage and by distance delivery across the state. School of Education programs are fully accredited by the Council for the Accreditation of Educator Preparation and the Council for Accreditation of Counseling and Related Educational Programs.

Undergraduate degree programs and postbaccalaureate endorsement programs lead to State of Alaska teaching certificates in elementary and secondary education. A postbaccalaureate K-12 special education program leads to State of Alaska initial teacher certification or an additional endorsement in special education. The school counseling program leads to a State of Alaska Type C Special Services certificate. The clinical mental health counseling program provides the coursework required to be a licensed professional counselor in Alaska. Graduate degree programs leading to a Master of Education include school or clinical mental health counseling, elementary education, secondary education and special education certification and endorsement programs.

School of Education staff and faculty work closely with colleagues at UAF's rural campuses and with school districts across the state to prepare well-qualified educators and to offer professional development opportunities to education and counseling practitioners. Research, outreach and collaborative efforts focus on issues related to Alaska Native people and communities, Indigenous populations, cross-cultural contexts, place-based education, distance education, mental health and rural issues.

The School of Education advising office offers experienced, full-time personnel who provide advice about SOE programs on a drop-in or appointment basis and provide appropriate referrals for financial aid and other information that students and interns need. SOE's partnership with rural school districts, under the umbrella of the Alaska Indigenous Teacher Initiatives, provides various types of support for rural and Alaska Native students seeking to pursue education careers.

For more information, call 907-474-7341 or visit the School of Education website (https://www.uaf.edu/soe/).

Engineering and Mines

The College of Engineering and Mines includes the academic departments of civil, geological and environmental engineering; computer science; electrical and computer engineering; mechanical engineering; mining and mineral engineering; and petroleum engineering. The research enterprise of the college, the Institute of Northern Engineering, houses

the Arctic Infrastructure Development Center, the Mineral Industry Research Laboratory, the Petroleum Development Laboratory and the Water and Environmental Research Center.

CEM offers students a challenging academic experience that will allow them to contribute, compete and succeed in today's global economy. The college offers programs leading to undergraduate and graduate degrees in civil engineering, computer engineering, computer science, electrical engineering, geological engineering, mechanical engineering, mining engineering, petroleum engineering and earth systems science (hydrology). In addition to these degree programs, concentrations in many areas, including Arctic engineering, are available. An engineering Ph.D. program is also offered.

The baccalaureate degree programs in computer science and civil, computer, electrical, geological, mechanical, mining and petroleum engineering are accredited by ABET.

CEM's academic programs provide a basis for advanced study or specialized careers. CEM students benefit from small class sizes through increased interactions with faculty and other students and excellent access to instructional laboratories. The college provides opportunities for undergraduate and graduate students to participate in research. Theoretical and practical hands-on knowledge, in tandem with discipline-related research, gives CEM students the expertise and training they need for their chosen career path.

CEM departments are active in outreach activities such as Engineering Week, Teaching Through Technology (T3), the Alaska Native Science and Engineering Program, educational workshops and a range of short courses for the professional engineering community. Visit the CEM website (https://www.uaf.edu/cem/) or call 907-474-7730 for more information.

Fisheries and Ocean Sciences

The College of Fisheries and Ocean Sciences (CFOS) is responsible for statewide academic, research and service programs relating to Alaska's marine and freshwater environments and fisheries.

For undergraduate degrees, CFOS offers a minor and a Bachelor of Arts in fisheries, a Bachelor of Science in fisheries and marine sciences and minors in marine science and fisheries. Fieldwork and internship opportunities are available to undergraduate students through cooperating tribal, state and federal agencies, nonprofit entities and industry fishery partners. Undergraduate fisheries and marine sciences majors are prepared for graduate study or to enter management, private industry or other fields.

Graduate degrees offered by CFOS include a Master of Science and doctoral degrees in oceanography, marine biology and fisheries and a non-thesis Master of Marine Studies (M.M.S.). In addition, CFOS offers a Master in Marine Policy (M.M.P.) degree jointly with UAS. Graduate students prepare for careers in university research and education, or research or management with tribal, state and federal agencies and private industry. As part of their degree programs, graduate students conduct research in collaboration with faculty, often in remote locations around Alaska and beyond.

Education, research and extension work on freshwater and marine systems are conducted by the departments that make up CFOS. The Institute of Marine Science (https://www.uaf.edu/cfos/research/institute-of-marine-scien/), with major laboratory facilities in Fairbanks and Seward, focuses on oceanographic and marine biological research. The Kasitsna Bay Laboratory (https://www.uaf.edu/cfos/about-us/locations/kasitsna-bay/), near Homer, is the site for coastal research on intertidal and subtidal communities. The Juneau Center (https://www.uaf.edu/cfos/about-us/locations/juneau/) focuses on fisheries research and education. CFOS also operates the oceanographic vessel *Sikuliaq*, a global-class research vessel designed to work in the ice-laden waters of polar regions. The *Sikuliaq* is based in Seward.

For more information, visit the CFOS website (https://www.uaf.edu/cfos/) or call 907-474-7210.

Graduate School

The Graduate School is responsible for the oversight and management of graduate programs at UAF. The Graduate School works with UAF's colleges and schools that offer graduate programs leading to professional licenses, graduate certificates, master's degrees and doctoral degrees in a broad range of disciplines. The school also manages the graduate portion of the UAF Interdisciplinary Studies program, where students can pursue individualized graduate degrees (both master's and doctoral) that draw on multiple disciplines.

The Graduate School advocates for graduate students and their programs. The school provides information and guidance for prospective and current graduate students, professional support and training for graduate assistants, and several scholarships and fellowships.

For more information, contact the Graduate School at 907-474-7464 or visit the Graduate School website (https://www.uaf.edu/gradsch/).

Liberal Arts

As one of the largest colleges at Alaska's research university, the College of Liberal Arts supports scholarship for further understanding Alaska and the circumpolar region within a changing global context.

CLA offers a classic, yet forward-thinking liberal arts course selection. The core curriculum courses provide breadth to the general education of all UAF undergraduates, while liberal arts undergraduate and graduate programs theoretically ground students in their applied disciplines. Extensive research and creative work inform our teaching to provide students with opportunities to gain knowledge, skill, and expertise in and across the arts, humanities, cultures, global languages, and social and behavioral sciences.

CLA provides interdisciplinary learning opportunities beyond the classroom to foster responsibility, comprehension of vital issues, and commitment to the study and understanding of the human dimension in the circumpolar North.

More information is available at the CLA website (https://www.uaf.edu/cla/) or by calling 907-474-7231.

Natural Science and Mathematics

The College of Natural Science and Mathematics offers undergraduate and graduate degrees in the physical and life sciences, including atmospheric sciences, biology and wildlife, chemistry and biochemistry, geosciences and physics; statistics and mathematics; natural resources and environment; and education. It also hosts a cooperative 2+2 program in veterinary medicine with Colorado State University. CNSM provides most UAF undergraduate courses in science and mathematics, including the general education curriculum and a variety of outreach programs. The college is known for its modern teaching technologies, access to

professors and quality undergraduate student advising. CNSM also offers minors in each of its major disciplines.

Academic programs provide a foundation for professional careers or advanced study and help students develop critical thinking and analytical skills. CNSM majors enjoy close working relationships with faculty and other students. The college provides opportunities for undergraduate and graduate students to work with faculty on research projects. Unique opportunities are available through UAF research centers and institutes, including the CNSM Division of Research, the Geophysical Institute, the Institute of Arctic Biology, the UA Museum of the North, the International Arctic Research Center and the Agricultural and Forestry Experiment Station. The fundamental knowledge gained through courses and by working on practical, discipline-related projects gives CNSM graduates the skills and experience they need to enter the job market or continue their education.

CNSM is home to the Biomedical Learning and Student Training program, Alaska Native Science and Engineering Program, and K–12 outreach programs, including the Science Potpourri, the Alaska Summer Research Academy, Inspiring Girls Expeditions and GeoFORCE. In these and other programs, high school and university students work with CNSM faculty on original research projects to improve the quality of life in Alaska.

At the graduate level, CNSM offers master's and doctoral degrees in the natural sciences, mathematics and natural resources and sustainability. These advanced programs provide students with research opportunities in laboratory and field settings throughout Alaska. CNSM's doctoral programs provide opportunities for advanced study leading to academic and professional positions. For more information, visit the CNSM website (https://www.uaf.edu/cnsm/) or call 907-474-7608.

Rural and Community Development

The College of Rural and Community Development focuses on the needs of nontraditional students, including students who seek skills and degrees suited to the economy and well-being of rural communities. CRCD promotes workforce preparation, economic development, lifelong learning and community development. CRCD campuses provide general and vocational-technical education at the occupational endorsement, certificate and associate degree levels, baccalaureate degrees in rural development and child development/family studies and a master's in rural development. In cooperation with the College of Liberal Arts and the School of Education, CRCD offers baccalaureate and graduate degrees in cross-cultural studies, education and social work as well as a Ph.D. in Indigenous studies. CRCD also offers workshops, continuing education and short-term courses, developmental studies, credit for prior learning and other nondegree student services.

CRCD community campuses include Northwest (http://www.nwc.uaf.edu/) (Nome), Kuskokwim (http://www.bethel.uaf.edu/) (Bethel), Bristol Bay (https://www.uaf.edu/bbc/) (Dillingham), Chukchi (https://www.uaf.edu/chukchi/) (Kotzebue) and Interior Alaska (https://www.uaf.edu/iac/) (Fairbanks, which services 56 Interior communities).

CRCD serves nearly two-thirds of Alaska, encompassing 160 primarily Alaska Native Arctic, sub-Arctic and coastal communities. At least 16 Indigenous languages are spoken in the region served by CRCD, and the economy spans subsistence hunting and fishing, small-scale village development and cooperatives, and large-scale international corporate development. The College of Rural and Community Development focuses on responding to students and partners to develop the economic and social well-being of Alaska Native communities and beyond.

For more information, visit the CRCD website (https://www.uaf.edu/rural/) or call 907-474-7143.

Research Institutes, Centers and Consortia

UAF's location in Interior Alaska provides easy access to glaciers, permafrost, the Pacific and Arctic oceans, and other elements of a sub-Arctic climate. Accordingly, several research centers and academic departments focus their scholarly work on issues particular to the North. These include the environmental impact of human activities, the development of renewable and nonrenewable resources and energy sources, and the understanding and preservation of Indigenous Northern cultures.

The vice chancellor for research oversees all university research activities and has primary responsibility for the university's research mission. The VCR office directs the development of university research policies and monitors sponsored programs, research integrity, and intellectual property and licensing.

Assistantships are available for graduate students working on research with faculty in many research institutes and centers. Each researcher has a joint appointment with an academic department. Any student interested in specific faculty research projects and the availability of assistantships should contact the appropriate academic department.

Learn more about other research entities at UAF (https://www.uaf.edu/research/research-entities/).

Agricultural and Forestry Experiment Station

The Agricultural and Forestry Experiment Station (AFES) conducts research to enhance the quality of life in Alaska through development of natural, economic and human resources. Research emphasizes factors typical of high latitudes and is designed to provide the information and technology needed to manage renewable resources for the economic and social well-being of Alaskans. This work includes studies of natural and manipulated ecosystems, sustainable soil productivity, food production, food security and genetics for improved plant productivity. Additional research involves economic and legal aspects of resource use, silviculture and forest management, resource use for tourism and recreation, and education and communications in resources management.

AFES, in cooperation with state and federal agencies, conducts research at sites in Fairbanks, Palmer, Delta Junction, Nenana and Nome. AFES faculty have research sites within the Long-Term Ecological Research program funded by the National Science Foundation. This research, which is determining the structure and function of northern boreal forest ecosystems, forms the basis for sustainable forest management practices.

AFES researchers represent the disciplines of agronomy, forestry, horticulture, land use planning, outdoor recreation, plant pathology, resource policy and law and soil science. For more information, visit the AFES website (https://www.uaf.edu/afes/) or call 907-474-5211.

Alaska Center for Energy and Power

The Alaska Center for Energy and Power is a statewide, university-led, applied research program. ACEP excels at being responsive to immediate and long term needs of residents, industries and agencies and focuses on research related to community and industry-scale power generation, transmission, heating and transportation fuels. ACEP prioritizes its work on areas where Alaska has specific needs or where Alaska has a strategic advantage due to resource availability, unique circumstances, or location.

ACEP strives to develop and disseminate practical, cost-effective and innovative energy solutions for Alaska and beyond. Their three primary products are information, technology and a prepared, professional workforce. ACEP houses the Power Systems Integration program, the Pacific Marine Energy Center (https://www.pmec.us/), the Solar Photovoltaic program and the Data Collection and Analysis program, as well as other research initiatives such as Beneficial and Equitable Electrification.

For more information, visit the ACEP website (https://acep.uaf.edu) or call 907-474-5402.

Alaska Cooperative Fish and Wildlife Research Unit

The Alaska Cooperative Fish and Wildlife Research Unit is jointly sponsored and financed by the U.S. Geological Survey, UAF, the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service and the Wildlife Management Institute. The unit supports and guides graduate training in fisheries and wildlife biology and management.

Wildlife research is directed toward habitat relationships, wildlife population dynamics and the impact of northern development on wild animals and their habitats. Fisheries research focuses on the ecology and fisheries of Alaska freshwater ecosystems, and evaluation and development of cold-water fisheries techniques.

For more information, visit the Alaska Cooperative Fish and Wildlife Research Unit website (https://www.akcfwru.uaf.edu) or call 907-474-7661.

Alaska Native Language Center

The Alaska Native Language Center was established by state legislation in 1972 to document and preserve the 20 Indian, Aleut and Inuit languages in Alaska. It is the major center in the United States for the study of Inuit and northern Athabascan languages. Alaska Native

Language Center publishes its findings in dictionaries, grammar, story collections and research papers. The Alaska Native Language Archive houses a valuable collection of manuscript materials in and on Alaska Native languages, including word lists and documentation dating to the late 1700s. The archive is available to scholars and students and is housed at the Rasmuson Library.

As part of the College of Rural and Community Development (https://uaf.edu/rural/), ANLC's teaching program includes a B.A. in Yup'ik or Inupiaq, an A.A.S. degree or certificate in Native language education, and special classes in language literacy. A B.A. in Yup'ik language and culture teaches major courses focusing on the Yup'ik language.

For more information, visit the Alaska Native Language Center website (https://www.uaf.edu/anlc/) or call 907-474-7874.

Alaska Quaternary Center

The Alaska Quaternary Center (AQC), established in 1982, is a focal point for interdisciplinary Quaternary studies and research at UAF. The Quaternary Period spans the past two million years, a time of glacial-interglacial climate oscillations, floral and fauna migrations, mammalian extinctions and human evolution. Quaternary studies thus encompass scientific investigations of geologic, climatic, biologic and human systems of the past and present. The AQC comprises researchers in the anthropology, biology and wildlife, and geology and geophysics departments, the Institute of Agriculture, Natural Resources and Extension, the Institute of Marine Science, the Institute of Arctic Biology and the Geophysical Institute.

The AQC is housed within the Department of Geology and Geophysics (https://www.uaf.edu/geology/) and the College of Natural Science and Mathematics (https://www.uaf.edu/cnsm/). Through its endowment, the AQC supports student research and travel. In addition, as funding allows, the center sponsors seminars and hosts visiting speakers from countries throughout the world. Quaternary scholars from UAF regularly collaborate with Canadian, Russian and European colleagues conducting research in northern regions around the globe. The AQC plays an important role in Northern science during this time of increasing interest in global change, biodiversity and other aspects of Arctic climates and ecosystems.

For more information, call 907-474-5433 or visit the AQC website (https://www.uaf.edu/aqc/).

Alaska Sea Grant

Alaska Sea Grant is a partnership between the National Oceanic and Atmospheric Administration and the University of Alaska Fairbanks.

Alaska Sea Grant enhances the sustainable use and conservation of Alaska's marine and freshwater resources through research, outreach and education.

Alaska Sea Grant supports researchers and university graduate students contributing new knowledge about healthy coastal ecosystems, sustainable fisheries and resilient coastal communities. Alaska Sea Grant also recruits students into career-building national and state scholarships and fellowships in marine policy, fisheries population dynamics and other marine fields.

Alaska Sea Grant Marine Advisory Program faculty, located in coastal communities across Alaska, build partnerships that provide technical assistance to support economic development, marine literacy, workforce development and resource management. Thousands of adults and youth across the state attend workshops and presentations by ASG each year.

As part of its education mission, Alaska Sea Grant supports marine literacy among K-12 teachers and students through curriculum and other learning resources and training. Alaska Sea Grant produces publications and website resources available via an online bookstore that help the public understand Alaska's diverse marine ecosystem. Alaska Sea Grant also keeps scientists connected through community-based regional scientific conferences and through scientific symposia, including the international Lowell Wakefield Fisheries Symposium series.

For more information visit the Alaska Sea Grant website (https://alaskaseagrant.org/) or call 907-474-7086.

Center for Cross-Cultural Studies

Established in 1971, the Center for Cross-Cultural Studies is a teaching, research and development unit administered through the College of Rural and Community Development. It promotes programs that concentrate on the needs of Alaska's Indigenous societies, with particular regard to education and rural issues.

The center offers academic degree programs and coursework in cross-cultural studies. It designs and conducts basic and applied research projects, develops and evaluates alternative educational strategies for Alaska schools, and disseminates findings on current research in education and rural community development.

The center gives technical support and information to school districts, social service agencies, Native corporations, tribal governments, community colleges and state and federal agencies in rural Alaska. It provides direction for improving educational, professional and community development opportunities for rural Alaskans, and it is a forum for examining those issues. Curricula incorporating Indigenous knowledge and Native ways of knowing are available through the Alaska Native Knowledge Network (http://www.ankn.uaf.edu/) website

For more information, visit the Center for Cross-Cultural Studies website (https://www.uaf.edu/cxcs/), call 907-474-1902 or email uaf-cxcs@alaska.edu.

Center for One Health Research

The UAF Center for One Health Research seeks to engage participants from UAF, Alaska and the circumpolar North to build and support as well as collaborate on research, education and outreach programs to address the large, multifocal issues facing these regions.

UAF is seeking to significantly expand these efforts by building interdisciplinary teams that will approach their investigations from a One Health perspective using constructionist, integrative approaches to help manage problems at their source rather than their outcome. UAF has a One Health Master's program focused on understanding and putting One Health concepts into practice, and is in the process of building undergraduate and Ph.D. programs.

For more information, visit the Center for One Health Research website (https://www.uaf.edu/onehealth/) or call 907-474-6610.

Geophysical Institute

Founded in 1948, the Geophysical Institute is a world-renowned center for the study of geophysics from the sun to the center of the Earth.

Proximity to the Arctic provides excellent opportunities for high-latitude geosciences. Major research programs are underway in space physics, atmospheric science, seismology, volcanology, satellite remote sensing, tectonics and sedimentation. The institute operates a rocket range for space research and a satellite ground station with processing and archiving capabilities for earth science support. In addition, the Alaska Volcano Observatory (https://avo.alaska.edu/), the Alaska Earthquake Center (https://earthquake.alaska.edu/), Alaska Climate Research Center (https://climate.gi.alaska.edu/) and the Alaska Center for Unmanned Aircraft Systems Integration (https://acuasi.alaska.edu/) are located at the institute. More than 75,000 books, 350 journals and other specialized media are maintained at the Keith B. Mather Library (https://www.gi.alaska.edu/facilities/mather-library/).

GI faculty and students benefit from the coupled activities of education and research. Undergraduate and graduate students find work in research programs while gaining academic credit toward their degrees. Most GI faculty have joint appointments, providing teaching opportunities at the College of Natural Science and Mathematics or the College of Engineering and Mines.

The institute focuses on the needs of Alaska, using geophysical data as the basis for decision-making tools. Examples include monitoring earthquakes and volcanic eruptions leading to hazard alerts to federal and state agencies. Remote sensing specialists use satellite and airborne observations to help fight forest fires and monitor the health of Alaska's ecosystems. Institute scientists run computer simulations of tsunamis, aiding coastal communities in developing emergency evacuation plans. The institute has programs reaching out to K-12 schools with scientific curricula to educate and motivate potential science students.

More than 500 permanent field sites are operated throughout Alaska and are associated with the Poker Flat Research Range (https://www.pfrr.alaska.edu/content/welcome-poker-flat/), the Alaska Earthquake Center, the Alaska Volcano Observatory and the Permafrost Research Laboratory.

For more information, visit the Geophysical Institute website (https://www.gi.alaska.edu) or call 907-474-7558.

Institute of Arctic Biology

The Institute of Arctic Biology (IAB) is Alaska's principal research and educational unit for investigating high-latitude biological systems. IAB also provides critical knowledge to policymakers for stakeholders to interpret, predict and manage biological systems through the integration of research, student education and execution of public policy in service to Alaska and the nation.

The institute's research focuses on wildlife and conservation biology; ecology, biogeochemistry, ecosystems and modeling of Arctic landscapes; climate change; physiology; evolutionary biology; genetics; plant-animal interactions; and human health disparities, nutrition and physical activity using a community-based, participatory approach.

IAB administers several specialized research programs and associated facilities. These initiatives include Toolik Field Station (https://toolik.alaska.edu/), an internationally recognized interdisciplinary Arctic research station that annually hosts hundreds of scientists from around the world. The Bonanza Creek Long-Term Ecological Research (https://www.lter.uaf.edu/) program focuses on the long-term consequences of climate change and disturbance of boreal forests in Alaska. The Center for Alaska Native Health Research (https://www.uaf.edu/canhr/) investigates health disparities in Alaska Native people. The Center for Transformative Research in Metabolism supports interdisciplinary biomedical research in an effort to study hibernation and metabolism to develop therapeutics to treat metabolic diseases such as diabetes, obesity, sarcopenia, and cardiovascular disease. The Alaska IDeA Networks of Biomedical Research Excellence (https://alaskainbre.org/) is a program that seeks to enhance biomedical research infrastructure in Alaska and fund research and student training focused on the intersection of health, disease and the environment in people and animals. The Alaska Cooperative Fish and Wildlife Research Unit (https://www.akcfwru.uaf.edu/), part of the U.S. Geological Survey, promotes research and graduate student training in the ecology and management of fish and wildlife. Other facilities include IAB's research greenhouse (https://greenhouse.iab.uaf.edu/), which provides a year-round environment for research and education. Additionally, the Core DNA Lab (https://sites.google.com/alaska.edu/genomicscorelab/home/) allows UAF to conduct research at the cutting edge of molecular analysis.

For more information, call 907-474-7640 or visit IAB's website (https://www.iab.uaf.edu).

Institute of Marine Science

The Institute of Marine Science conducts marine science studies in the world's oceans, with special emphasis on Arctic and Pacific sub-Arctic waters.

Research efforts cover a wide range of disciplines in oceanography, marine biology and fisheries. Some projects are components of large national and international cooperative programs that are worldwide in extent. Institute of Marine Science researchers also participate in the broad marine science community through service on a variety of national and international committees and organizations.

The faculty offer degree programs at the undergraduate and graduate levels through the College of Fisheries and Ocean Sciences.

Research facilities include laboratories on the Troth Yeddha' campus in Fairbanks; fisheries laboratories at Lena Point in Juneau; the Kasitsna Bay Laboratory (https://www.uaf.edu/cfos/about-us/locations/kasitsna-bay/), a marine biology field station on Kachemak Bay; the Seward Marine Center (https://www.uaf.edu/cfos/about-us/locations/seward/), a major coastal facility in Seward; and the 261-foot global class, ice-strengthened Research Vessel *Sikuliaq*, which has its home port in Seward. The Seward Marine Center supports a high-quality seawater system and excellent biological and chemical laboratories as well as facilities for constructing and maintaining seagoing equipment such as moorings. The Alaska SeaLife Center, a private, state-of-the-art mammal and bird research and exhibition facility adjacent to the Seward Marine Center, also offers outstanding research facilities and hosts Institute of Marine Science faculty.

Institute of Marine Science formal collaborative research programs include Long-term Ecological Research Programs in the Northern Gulf of Alaska (NGA LTER) and in the Beaufort Sea lagoon ecosystems (BLE LTER); Gulf Watch Alaska; the international MOSAiC expedition in the Arctic Ocean; Center for Salmon and Society; Ocean Acidification Research Center; and affiliations with the EPSCoR Fire and Ice program

and the Alaska Blue Economy Center. Examples of topics addressed by individual research labs are the development of underwater glider capabilities and other instruments; cycling of trace metals in the ocean; effects of climate change on marine food webs; marine mammal ecology; fisheries genetics; commercial fisheries management; and seaweed mariculture.

For more information, visit the Institute of Marine Science website (https://www.uaf.edu/cfos/research/institute-of-marine-scien/) or call 907-474-7210.

Institute of Northern Engineering

The Institute of Northern Engineering (INE) is the research enterprise for the College of Engineering and Mines. INE faculty and students are engineering solutions for locations around the globe focusing on the world's cold regions. The institute is home to many of the world's leading researchers in cold climate science and engineering. INE research and support span the engineering and environmental disciplines, offering studies and expertise in energy production, modeling and testing of mechanical systems, environmental engineering, Arctic infrastructure, mining and petroleum development, hydrology and environmental sciences. INE also participates in many cross-institute endeavors.

The institute includes the Arctic Infrastructure Development Center (https://autc.uaf.edu/), Mineral Industry Research Laboratory (https://ine.uaf.edu/mirl/), Petroleum Development Laboratory (https://ine.uaf.edu/pdl/) and Water and Environmental Research Center (https://ine.uaf.edu/werc/). WERC serves as the home of the Alaska Stable Isotope Facility and the newly created emerging contaminants laboratory. External grant and research support for INE programs has been more than $20 million annually since 2011. Most of INE's researchers are full-time faculty in the College of Engineering and Mines, allowing research results to reach the classroom quickly.

INE offers diverse interdisciplinary research opportunities, challenging students to tackle wide-ranging engineering and science topics. Students gain knowledge and experience through hands-on engagement, setting them apart in the engineering job market.

To get started with your northern engineering research or studies, visit the INE website (https://www.uaf.edu/ine/) or call 907-474-5457.

International Arctic Research Center

The International Arctic Research Center (IARC) was founded in 1999 at UAF through an agreement between Japan and the United States "to demonstrate our ability to solve, jointly, problems that are beyond what any one nation can address" as outlined in the agreement signed by President Clinton and Prime Minister Hashimoto in 1997.

IARC's purpose is to understand the Arctic to make a difference. Our scientists provide useful, actionable science in order to set the groundwork for understanding and responding to Arctic change. Living and working in Alaska gives us a holistic knowledge and understanding of the Arctic. We value what the North and its people teach us.

More than 100 scientists, analysts, students and professional staff with interests that span physical, biological and social sciences work at IARC. They share their talents throughout Alaska, support local businesses and much more. We actively cultivate an environment where all individuals and groups feel welcomed and heard. Our different experiences, expertise and ways of knowing are our strengths, creating diverse thoughts and ideas.

IARC scientists work on roughly 150 research projects that investigate all elements of the Arctic system, including ocean, ice, atmosphere, land and society. What happens in the Arctic affects everyone on Earth. We value a culture of creativity that fosters innovation. We solve problems through local to international collaboration with different disciplines and knowledge systems, and by engaging with government agencies.

IARC is located in the Akasofu Building. For more information, call 907-474-6016 or visit the IARC website (https://www.iarc.uaf.edu).

Lena Point Fisheries Facility, College of Fisheries and Ocean Sciences

The Lena Point Fisheries facility is almost 31,000 square feet and has space for 13 faculty, four research assistants and 34 students enrolled in B.A., B.S., M.S., M.M.S. and Ph.D. programs. Four UAS biology and marine biology faculty hold collaborating appointments in the UAF Department of Fisheries and supervise UAF graduate students based in Juneau, Alaska.

Faculty supervise students on a broad array of fisheries, ocean sciences and marine policy topics, including quantitative stock assessment, biology and ecology of marine and freshwater species, molecular genetics, behavioral ecology, marine policy and other fields of study. Laboratories at the Lena Point Fisheries building include specialized facilities for seawater culture of marine animals and plants, quantitative (computer) analysis and fisheries stock assessment, geographic information systems, molecular genetics, salmon culture and marine ecology. Students also work in laboratories and facilities of other agencies in Southeast Alaska such as NOAA Fisheries' Auke Bay Laboratory and Ted Stevens Marine Research Institute, NOAA's Little Port Walter Field Station, the U.S. Geological Survey's Glacier Bay Field Station, the Douglas Island Pink and Chum, Inc. hatchery and the Alaska Department of Fish and Game's Mark, Tag and Age Lab.

The facility is adjacent to the National Marine Fisheries Service Ted Stevens Marine Research Institute. For more information, visit the Lena Point Fisheries website (https://www.uaf.edu/cfos/about-us/locations/juneau/) or call 907-796-5443.

UArctic

UAF is a founding member of UArctic, a cooperative network of universities, colleges and other organizations committed to higher education and research in the North. The consortium's goal is to create a strong, sustainable circumpolar region by empowering northerners and northern communities through education and shared knowledge. As part of this network, UAF participates in research and teaching partnerships and is a member of the student exchange program north2north, which provides opportunities for students from UArctic member institutions to experience different northern regions firsthand, and to share experiences face-to-face by allowing students to study at other UArctic institutions. For more information visit the UArctic website (https://www.uaf.edu/uarctic/) or call 907-474-6516.

University of Alaska Museum of the North

Voted the “Best Museum in Alaska,” the University of Alaska Museum of the North is a vital component of UAF’s research and education facilities as well as a thriving visitor attraction.

The museum’s research collections hold more than 1.4 million artifacts and specimens representing millions of years of biodiversity and more than 11,000 years of cultural traditions in the North. These collections form the foundation for the museum’s exhibits and education programs and serve as a critical source of data for issues unique to the circumpolar North. Using the collections, university students work with the museum’s faculty-curators on original research aimed at interpreting the region’s dynamic environment and cultures.

The museum’s Rose Berry Alaska Art Gallery features 2,000 years of Alaska art — from ancient ivory carvings to contemporary sculptures. In the Gallery of Alaska, exhibit highlights include the state’s largest gold display, extensive displays of Alaska Native art and artifacts, and Blue Babe, a 36,000-year-old mummified steppe bison.

The museum also hosts several special exhibits each year. In addition, the museum presents artists’ residencies, lectures and family programs on a variety of Alaska topics, and runs the museum store, featuring Alaska jewelry, books and Alaska Native artwork.

For more information, visit the University of Alaska Museum of the North website (https://www.uaf.edu/museum/) or call 907-474-7505.

The UAF Experience

UAF — Then and Now

UAF's Fairbanks campus, also known as the Troth Yeddha' (p. 12) Campus, is four miles west of downtown Fairbanks, on a low ridge overlooking the Chena and Tanana river floodplains. Artifacts found on the bluff tell us tribal groups used the hill beginning perhaps 3,500 years ago. It offered a wide view of the flats below and probably served as a base camp for hunting and gathering.

THE EARLY YEARS

Gold discoveries in the early 1900s brought sudden changes to the Tanana Valley. In 1906 the hill where UAF now stands became part of a federal Agricultural Experiment Station, and in 1915 the U.S. Congress approved money and transferred a piece of land from this station to establish a school of higher education. The institution began as the Alaska Agricultural College and School of Mines, focusing on research and teaching in support of agriculture and mining. Two years later the Alaska Territorial Legislature added funding, and in 1922, when the first building was completed, the college opened its doors to students. In the first semester, a faculty of six offered 16 classes to a student body of 12. Commencement in 1923 consisted of a single graduate.

The institution quickly began to grow. In 1931 the federal government transferred the entire Agricultural Experiment Station to the college. In 1935 the Alaska Territorial Legislature changed the institution's name to the University of Alaska to reflect the school's expanding role in research, teaching and public service for all Alaska. By then, faculty and course offerings had grown to include liberal arts, science and engineering.

World War II brought a rapid influx of population and development to the territory. Wartime national awareness of the need for scientific polar research in the interests of defense and communications led to the establishment in 1946 of the Geophysical Institute. Since its inception, the GI has earned an international reputation for studies of the Earth and the physical environment at high latitudes. The university awarded its first Ph.D. degree to a geophysics student in 1955.

STATEHOOD AND BEYOND

The University of Alaska had a significant role in the statehood movement of the 1950s, when the Constitutional Convention was held on campus. The Alaska Constitution was drafted in what is now Constitution Hall and signed in stately Signers' Hall, now the home of UAF student service and administrative offices. Alaska became the nation's 49th state in 1959.

Research expanded broadly in the decade of the 1960s with the establishment of institutes in several disciplines. The Alaska Legislature created the Institute of Marine Science in 1960 and the Institute of Arctic Biology two years later. Since 1969 the Geophysical Institute has operated Poker Flat Research Range, providing launch facilities for NASA and the Department of Defense. Poker Flat is the only university-owned rocket range in the world.

In 1970 the university was designated a federal Sea Grant institution for marine research. Alaska Sea Grant develops and supports research, education, and outreach programs and partnerships to help sustain economic development, traditional cultural uses, and conservation of Alaska's marine, estuarine and coastal watershed resources. Stations in Kodiak and Juneau are also actively involved in marine and fisheries research.

In 1972 the Alaska Legislature established the Alaska Native Language Center and provided operating funds. Since then the university has supported research, documentation and teaching of the state's 20 Native languages.

To meet the need for expanding services for all Alaskans, the University of Alaska statewide system was created in 1975. Campuses in Anchorage and Juneau were assigned their own chancellors and central staffs, with the statewide administration and overall university president remaining in Fairbanks.

Meanwhile, the campus in Fairbanks continued to expand. The University of Alaska Museum of the North, one of the state's most popular visitor attractions, moved into the Otto Geist Building in 1980. An expansion completed in 2006 nearly doubled the museum's size and added a research center, learning center and Alaska art gallery. The museum's unique collection offers the public a view of the rich and varied cultures of the North.

In 1981 UAF enrollment topped 5,000 students for the first time. The university also began to emphasize its shared scholarship and global education efforts in a series of agreements with schools in Japan, Denmark, Canada, India, People's Republic of China, Russia and other countries. The institution branched out to include campuses in Bethel, Dillingham, Kotzebue, Nome and the Interior. Learning centers in other communities such as Fort Yukon, Galena, McGrath, Nenana, Tok and Unalaska provide additional education services to rural Alaskans.

UAF's public service role is filled in part by the statewide Cooperative Extension Service with its 13 district offices. Public broadcasting stations KUAC FM and TV, the first public stations in the state, are headquartered at UAF.

In 1991 NASA named UAF a Space Grant institution for aerospace research, making it a Land, Sea and Space Grant institution, one of only a handful of triple-crown universities in the country.

TODAY

UAF's colleges and schools offer degrees and certificates in 106 disciplines with a variety of vocational and technical programs. Graduate degrees are available in a wide range of academic study. UAF is internationally known for its Pacific Rim and circumpolar North research. It is consistently among the top 100 universities in the nation for funding from the National Science Foundation. UAF is the primary doctoral degree-granting institution in Alaska, offering Ph.D. degrees in anthropology, Indigenous studies, several of the physical and natural sciences, mathematics and engineering. Master's degrees are offered in more than 40 fields in the humanities, social sciences, Arctic and Northern studies, and physical and natural sciences, and in professional fields such as engineering, justice, education and business administration. Interdisciplinary programs are possible for students who have a research focus in areas where UAF has faculty expertise and research facilities.

In 2017 UAF celebrated 100 years of making important contributions to Alaska, helping find solutions to the state's unique challenges in areas like Arctic engineering, wildlife biology, health care and education. UAF helps power Alaska's economy by turning students into professionals for Alaska's workforce.

Students

Individualism and diversity are Alaska traditions. At UAF, students find not only a broad mix of cultures and ages but also a climate of respect

for individual rights and preferences. A student from a rural Alaska village can share knowledge and insights with others from places as distant as Tallahassee or Tokyo. UAF's enrollment in fall 2021 was 7,471 students. Of those, 62% are female, 37% male and 1% are unknown; 87% are undergraduate and 13% are graduate students. UAF students hail from 49 states and 53 foreign countries.

Many UAF students are nontraditional. They study at night or after work and balance schoolwork with family responsibilities. The university offers a wide variety of evening and weekend classes. UAF students can attend classes through distance delivery from remote areas of Alaska or from anywhere in the world. Using computers, telephones and the Internet, students can take courses or work toward their degrees without leaving home.

Many students take advantage of UAF's exchange programs to study at colleges and universities around the world, or through the National Student Exchange program, which offers studies at universities throughout the United States. There are more than 100 different student organizations on campus, with that number going up all the time. Students produce the online Polaris News site, run the KSUA radio station and participate in scores of special interest groups.

Faculty

At UAF, you find faculty members who are among the best in the country. Because of the low 10:1 student-faculty ratio, you receive more personal attention here than you would at almost any other public university in the nation. Once you have chosen a major, you will be assigned a faculty advisor from your academic department. Your advisor will help you choose classes each semester and will explain programs and requirements. You will get to know the faculty not just as professors but also as friends, advisors and mentors. Education is an individual process, different for each person. At UAF, you are an individual, not just a face in the crowd.

UAF's Mission and Vision

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.

CORE THEMES

- **Educate:** Undergraduate and graduate students and lifelong learners
- **Research:** Create and disseminate new knowledge, insight, technology, artistic and scholarly works
- **Prepare:** Alaska's career, technical and professional workforce
- **Connect:** Alaska Native, rural and urban communities by sharing knowledge and ways of knowing
- **Engage:** Alaskans through outreach for continuing education and community and economic development

VISION STATEMENT

Excellence through transformative experiences

The University of Alaska Fairbanks is renowned for its Arctic research, Alaska Native and Indigenous programs, entrepreneurship, workforce development, and hands-on, personalized learning. UAF provides a world-class, inclusive experience — energized by innovative research, community engagement, student-centered teaching and creative expression.

Commitment to Quality

UAF has been accredited since 1934 by the Northwest Commission on Colleges and Universities. UAF acts continually to assess and improve the educational experience for its students. Students evaluate their teachers at the end of each semester; those student opinion reports are available online (https://www.uaf.edu/provost/inspire-us/review-evaluations.php). Faculty and administrators evaluate courses in the core curriculum every year. Each degree program and certificate is assessed at least every five years. Results are used to change and improve the education provided by UAF. The learning outcomes expected for each degree program can be viewed on the provost's website (https://www.uaf.edu/provost/assessment-review/assessment/).

UAF Facts and Figures

Here are some quick facts and figures about UAF. See more on the UAF Facts and Figures site (https://www.uaf.edu/facts/).

- Originally founded in 1917 when Alaska was still a territory, today UAF is America's northernmost Land, Sea and Space Grant institution.
- UAF encompasses the central Troth Yeddha' (p. 12) Campus in Fairbanks; Bristol Bay Campus in Dillingham; Chukchi Campus in Kotzebue; Interior Alaska Campus, covering the Interior; Kuskokwim Campus in Bethel; Northwest Campus in Nome; and the Community and Technical College in Fairbanks.
- UAF's geographically diverse student body represents 49 states and 39 foreign countries.
- UAF offers 149 degrees and 49 certificates in 106 disciplines.
- As America's Arctic university, UAF offers a number of unique programs and degrees particularly focused on the biology, climate, natural resources and peoples of northern latitudes, the circumpolar North and the Pacific Rim.
- The UAF mascot is the Nanook, a derivation of "nanuq," the Inupiaq word for polar bear. Up until the mid-1970s, the men's basketball team was known as the "Flying Nanooks" because of the regular, and long, airplane rides they took in order to compete with other college teams. Since 1963 all University of Alaska Fairbanks sports teams have been called Nanooks.

Degrees Conferred, Spring 2022

- 120 licensures and occupational endorsements
- 871 certificates and associate or baccalaureate degrees
- 214 master's and doctoral degrees

Student Profile, Fall 2022

ENROLLMENT

Troth Yeddha' Campus in Fairbanks	5,268
Community and Technical College	2,089
Bristol Bay Campus	262
Chukchi Campus	120
Interior Alaska Campus	259
Kuskokwim Campus	327
Northwest Campus	246
eCampus	4,255
University of Alaska Fairbanks (total[1])	7,425

[1] Some students attend more than one campus and are not counted twice in the total.

Female	63%
Male	36%
Unknown	1%
Alaska Native/American Indian	20%
Undergraduate	87%
Graduate	13%
Median Age	25

Estimated 2023-2024 UAF Annual Costs

For a list of estimated annual costs, please visit the Tuition and Fees Page (p. 71).

GETTING STARTED

Applying for Admission

Occupational Endorsement Programs

When to Apply for Occupational Endorsement Programs

Applications for admission to occupational endorsement programs are due no later than June 15 for fall semester, Nov. 1 for spring semester and May 1 for summer semester.

How to Apply

To be admitted to UAF, a student must:

1. **Submit an application for admission**
   Apply online (https://www.uaf.edu/admissions/). Applications must be received before the published deadlines. There is no fee to apply for an occupational endorsement program.
2. **Submit transcripts**
   Most applicants to occupational endorsement programs are not required to submit high school, GED or college transcripts, but all are strongly encouraged to do so. Transfer students who want to receive credit for prior work must submit official transcripts and need to work with their advisor to request courses that will apply toward the occupational endorsement.

Admission Requirements

For admission to occupational endorsement programs, official documentation must be provided showing that the applicant meets program age requirements by the first day of the semester (see individual program descriptions (p. 191) for minimum age requirements).

Program Completion

Occupational endorsement programs require between 9 and 29 credit hours that will be posted to the student's transcript upon completion and approval by the academic department. The credit hours may be applied to other undergraduate degree programs when applicable. Some occupational endorsement programs are not eligible for financial aid. Students should check with an advisor for the specific requirements of their program.

Where to Get More Information

Office of Admissions
University of Alaska Fairbanks
2nd floor, Signers' Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: uaf-admissions@alaska.edu
Telephone: 907-474-7500
Toll-free: 800-478-1823
Fax: 907-474-7097

Certificate or Associate Programs

When to Apply for Certificate or Associate Programs

Applications for admission to certificate or associate degree programs are due no later than June 15 for fall semester, Nov. 1 for spring semester and May 1 for summer semester.

High school seniors are encouraged to apply for admission as early as the first semester of their senior year and should provide a high school transcript including a list of courses in progress. Transfer students should apply at least three to four months before the beginning of the semester in which they plan to enroll to allow for additional time for processing of transfer credit, and should submit transcripts for all colleges attended.

How to Apply

To be admitted to UAF, a student must:

1. **Submit an application for admission**
   Apply online (https://www.uaf.edu/admissions/). Applications must be received before the published deadlines, along with a $40 nonrefundable application fee. Applications submitted after the published deadlines may not be processed by the beginning of the semester.
2. **Submit transcripts**
   Most applicants to certificate and associate degree programs are not required to submit high school, GED or college transcripts, but all are strongly encouraged to do so. Transfer students who want to receive credit for prior work must submit official transcripts.
3. **Submit official test results**
   Certificate and associate degree applicants must submit the results of the ACT, SAT or EdReady test taken within the last two years for English and composition placement. Students will also need to submit ALEKS test scores taken within the last year for placement into math, or any course that requires a math prerequisite. Contact Testing Services at 907-474-5277 or your high school guidance office for information concerning the ACT, SAT or EdReady tests. Visit here to take the ALEKS test (https://www.alaska.edu/aleks/).

INTERNATIONAL STUDENTS

See Applying for Admission: International Students (p. 33) page for additional information.

Admission Requirements

For admission to associate/certificate programs, official documentation must be provided showing that the applicant:

1. is at least 18 years old, or
2. has a high school diploma, or
3. has a General Educational Development (GED) diploma.

Applicants under the age of 18 who will not have a high school diploma or GED before the start of their first semester are not admissible but may take courses as nondegree students. Please note that in order to qualify for federal financial aid, students must have either a high school diploma or a GED.

TRANSFER STUDENTS

Transfer students are eligible for admission if they left their previous accredited institution(s) in good standing. Admission status will be determined on an individual basis if a student attended an unaccredited/non regionally accredited postsecondary institution.

HIGH SCHOOL STUDENTS

High school students may take classes at UAF. There are two enrollment options for students interested in certificate or associate degree programs: Secondary Student Enrollment and Tech Prep. Both have specific registration requirements but do not require admission to UAF.

HOME-SCHOOLED STUDENTS

Home-schooled students may be admitted to an associate or certificate program if the student is at least 18 years old, holds a GED, graduated from a state-sponsored correspondence program with a high school diploma, or with the approval of the director of admissions.

After Acceptance

Qualified applicants will receive a letter of acceptance once all items are received and evaluated. Acceptance to UAF is final only when the Office of Admissions has approved all necessary credentials.

For additional program-specific application requirements, please see descriptions for the individual certificate programs (p. 206) and associate programs (p. 236).

REQUEST TO POSTPONE

An offer of admission to UAF is valid for the semester for which the applicant applied. Requests to postpone admission until a later semester may be made to the Office of Admissions. Admission may be postponed for up to one calendar year.

READMISSION OF FORMER DEGREE STUDENTS

Undergraduate degree students who choose not to enroll for a semester or more may be eligible to re-enroll in their original degree program without reapplying for admission. Students remain eligible to register for classes if:

- they have not been academically disqualified,
- they have not attended a non-UA institution since they were last enrolled at UAF,
- their lapse in enrollment is less than two years, and
- they are continuing with the same degree program.

Students who meet all of the above requirements should consult with their academic advisor and register for classes. Students who do not meet all of these requirements should submit a new application for admission along with the $40 application fee and transcripts of any non-UA coursework taken. Students who are unsure about their status should contact the Office of Admissions.

FRESH START FOR RETURNING STUDENTS

Fresh Start can offer a new beginning for students who performed poorly at UAF and have taken at least a two-year break from classes. Students who withdrew from school or were dismissed for academic reasons may apply for readmission through the Fresh Start program and request that their entire prior academic record be disregarded. Students who qualify for Fresh Start will begin their college study anew, with no

credits attempted or earned and no quality points reflected in future GPA calculations. Fresh Start can be used only once.

All prior coursework will remain part of the student's overall academic record and appear on transcripts, but none of the previously earned credits can be used in a new program. These credits will be included only in GPA computations for graduation with honors (see Graduation with Honors (p. 224)). A student admitted under Fresh Start may be allowed advanced standing or a waiver of requirements just as any other student, but will not be allowed credit by exam for courses lost in Fresh Start. Students interested in Fresh Start should contact the Office of Admissions.

READMISSION OF SERVICE MEMBERS

The Higher Education Opportunity Act of 2008 requires that students who left school to serve in the uniformed services be readmitted into the same program with the same standing they had when they left. UAF allows for special readmission of these students. More information is available at Military and Veteran Services (https://www.uaf.edu/veterans/).

Where to Get More Information

Office of Admissions
University of Alaska Fairbanks
2nd floor, Signers' Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: uaf-admissions@alaska.edu
Telephone: 907-474-7500
Toll-free: 800-478-1823
Fax: 907-474-7097

Bachelor's Degree Programs

When to Apply for Bachelor's Degree Programs

First-year and transfer students apply for admission to bachelor's degree programs by June 15 for fall semester, Nov. 1 for spring semester and May 1 for summer semester. Applications are available for admission one year prior to the deadline: June 16 for fall semester, Nov. 2 for spring semester and May 2 for summer semester.

Applications are processed in the order they are received. Applications received after the published deadlines may not be processed by the beginning of the semester.

High school seniors are encouraged to apply for admission as early as the first semester of their senior year and should provide a high school transcript including a list of courses in progress, and are encouraged to submit ACT and/or SAT scores. Transfer students should apply at least three to four months before the beginning of the semester in which they plan to enroll to allow for additional time for processing of transfer credit, and should submit transcripts for all colleges attended.

How to Apply

To be admitted to UAF, a student must:

1. **Submit an application for admission**
   Apply online at the Office of Admissions website (https://www.uaf.edu/admissions/). Applications must be received before the published deadlines, along with a $50 nonrefundable application fee. Applications submitted after the published deadlines have a $75 nonrefundable application fee and are processed in the order they are received. They may not be processed by the beginning of the semester.
2. **Submit transcripts**
   To be considered official, transcripts must arrive in sealed envelopes from each institution attended.

   High school transcripts — Applicants with no college coursework or fewer than 30 semester credit hours of college credit must submit official high school transcripts. Students currently enrolled in high school may submit unofficial, in-progress transcripts for admissions review. Acceptance becomes final when official transcripts with the degree earned are received.
   College transcripts — Applicants who have college-level coursework will need to submit unofficial, in-progress college or university transcripts to UAF for admissions review. Official transcripts are required for applying transfer credit and in order to be fully admitted.
   International — See Applying for Admission: International Students (p. 33) page for additional information.
3. **Submit official test results**
   First-year and transfer applicants with fewer than 30 semester credit hours are encouraged to submit the results of either the ACT or the SAT examination. Please note that the EdReady, ASSET, COMPASS, ALEKS or other placement tests do not satisfy this requirement. Applicants are also encouraged to send in official results of Advanced Placement (AP), International Baccalaureate (IB) and/or CLEP scores.

INTERNATIONAL STUDENTS

See Applying for Admission: International Students (p. 33) page for additional information.

Admission Requirements

For admission to baccalaureate-level programs, applicants must:

1. have a high school diploma, and
2. pass the 16-credit high school core curriculum (see High School Entrance Requirements (p. 28)) with a GPA of at least 2.5 and
3. have a cumulative GPA of 2.5.

Admission to a specific bachelor's degree program is based on a combination of your high school GPA and completion of specific high school courses. See High School Entrance Requirements (p. 28) to specific colleges and schools within the university.

HIGH SCHOOL ENTRANCE REQUIREMENTS FOR ALL BACHELOR'S DEGREE PROGRAMS

High School Core Curriculum

Required for all first-year students; 2.50 GPA in core; 16 credits total, which must include:

English	Math	Social Sciences	Natural/Physical Sciences	Foreign Language[1]
4 cr	3-4 cr in college preparatory mathematics (selected from Algebra I, II, geometry, trigonometry, elementary functions, precalculus or calculus)	3-4 cr	3-4 cr (includes 1-cr lab science course in biology, chemistry or physics)	2 cr
College of Engineering and Mines • College of Natural Science and Mathematics • College of Fisheries and Ocean Sciences				
4 cr	Algebra-2 cr; Geometry-1 cr; Trigonometry-1⁄2 cr; At least an additional 1⁄2 cr of advanced math is recommended for computer science, mathematics, physics, statistics and engineering.	3-4 cr	Physics or Chemistry-1 cr; Natural Sciences-1 cr; Elective-1cr. Both physics and chemistry are strongly recommended for engineering.	Same as high school core
College of Liberal Arts • College of Business and Security Management • College of Rural and Community Development • General Studies (exploratory)				
4 cr	Same as high school core; College of Business and Security Management students should be well-prepared in mathematics with at least Algebra II, but precalculus or higher is preferred.	3-4 cr	Same as high school core	Same as high school core

[1] Recommended but not required.

PRE-MAJOR

Students who have not met the minimum requirements for admission to a baccalaureate degree program will be admitted to pre-major in Exploratory Studies.

Students will be changed to major status when they are in good standing and have completed 14 credits at the F100 level or above with a C (2.0) average or higher; 9 of the 14 credits must satisfy the general education requirements.

EXPLORATORY STUDIES

Incoming students are not required to choose a degree program and have the option of choosing Exploratory Studies. These students are advised by the Academic Advising Center and will work with them on transitioning into a declared major. Students receiving GI assistance or veterans' benefits may be required to change to a declared major to keep their benefits award.

HOME-SCHOOLED STUDENTS

Home-schooled students who have gone through a state-recognized program and have a valid high school diploma may be admitted to a bachelor's program according to UAF admission standards. See the How to Apply section (p. 27) for more information.

For home-schooled students who have not gone through a state-recognized program, admission to a bachelor's degree is through an individual review by the director of admissions (or a designee). Applicants are encouraged to submit scores from either the SAT or ACT. Additional supporting documentation, such as letters of recommendation, may be requested for review by the director of admissions. In some cases, files will be shared with deans, department chairs or faculty for further review.

Students who have not met the minimum requirements for admission to a bachelor's degree program may be admitted to pre-major status. Students will be changed to major status when their admissions file is complete, they are in good standing, and they have completed 14 credits at the 100 level or above with a C (2.0) average or higher, 9 credits of which must satisfy baccalaureate general education requirements (GER).

TRANSFER STUDENTS

A transfer student is defined as someone coming into the university who has been a degree student at any other institution prior to the semester applied for. Students with more than 30 university semester credit hours must submit official transcript(s) from every college or university previously attended. Students with less than 30 semester credits must submit high school transcripts and are encouraged to submit test scores (ACT or SAT) in addition to their college transcripts, and will be evaluated based on all transcripts. Transfer students are eligible for admission to a bachelor's program if they have a 2.0 GPA in their previous coursework and left their previous institution(s) in good standing. If applying to a technical or scientific program, students may need to present a higher grade average and proof that they have completed appropriate background courses before they will be admitted. Admission status for students who have attended an unaccredited postsecondary

institution will be determined on an individual basis. See Transferring Credits (p. 42) for more information.

PROBATIONAL ACCEPTANCE

Applicants with previous college coursework may be admitted with probationary status or an academic warning if their cumulative or most recent term grade point average is less than C (2.0).

Dual Enrolled/High School Students

HIGH SCHOOL STUDENTS

High school students (https://uaf.edu/admissions/apply/highschool.php) may take classes at UAF. The Alaska Higher Education Admission Decision (AHEAD) program requires formal admittance to UAF. Other enrollment options are Secondary Student Enrollment, Alaska Advantage Program, North Star College and Tech Prep (https://www.ctc.uaf.edu/academics/high-school-students/), which have specific registration requirements and require admission as a nondegree student.

AHEAD PROGRAM

The Alaska Higher Education Admission Decision program allows qualified high school students to be formally admitted to UAF as general studies students. AHEAD students are assigned an academic advisor and follow the registration timeline for degree students. To qualify, students must have completed three-fourths of their high school core curriculum and have a cumulative 3.0 GPA or higher. Students who wish to apply to the AHEAD program may get a program application from the Office of Admissions (https://uaf.edu/admissions/apply/highschool.php).

ALASKA ADVANTAGE PROGRAM

The Alaska Advantage program (https://ecampus.uaf.edu/admissions/alaska-advantage/) provides dual-enrolled students access to a unique virtual middle college opportunity featuring UAF's high-quality online courses. The program offers comprehensive student support for high school students and competitive package pricing to students from partner school districts.

NORTH STAR COLLEGE

North Star College (https://www.k12northstar.org/northstarcollege/) is a middle college partnership between UAF and the Fairbanks North Star Borough School District. Participating students have the opportunity to earn 7-15 college credits per semester that also apply toward FNSBSD graduation requirements. Interested students should apply directly through FNSBSD. Qualified students are selected by lottery.

After Acceptance

INCOMPLETE AND FINAL ACCEPTANCE

Qualified applicants will receive a letter of acceptance once all required items are received and evaluated. Applicants who are currently enrolled in high school or another college, or who have not submitted all required official transcripts, may be granted "incomplete" admission. Students with incomplete admission are not permitted to receive financial aid and may not register for future semesters. Acceptance becomes final when the Office of Admissions receives all required documents. For first-year students, that includes a final official high school transcript showing the student has satisfactorily completed all work in progress and that a high school diploma or GED has been earned. For transfer students, that includes a final official transcript from every college or university previously attended.

REQUEST TO POSTPONE

An offer of admission to UAF is valid for the semester for which the applicant applied. Requests to postpone admission until a later semester must be made in writing to the Office of Admissions. Admission may be postponed for up to one calendar year. Students are required to notify the Office of Admissions if they are attending another school outside the University of Alaska statewide system.

APPLYING FOR A SECOND BACHELOR'S DEGREE

Upon official acceptance to a UAF undergraduate degree program, a student who earned a bachelor's degree from a regionally accredited institution will be considered to have completed the equivalent of the baccalaureate general education requirements (GER).

READMISSION OF FORMER DEGREE STUDENTS

Undergraduate degree students who choose not to enroll for a semester or more may be eligible to re-enroll in their original degree program without reapplying for admission. Students remain eligible to register for classes if:

- they have not been academically disqualified,
- they have not attended a non-UA institution since they were last enrolled at UAF,
- their lapse in enrollment is less than two years, and
- they are continuing with the same degree program.

Students should be aware that poor academic performance at other campuses in the UA system may affect their academic standing upon their return to UAF. Students who meet all of the above requirements should consult with their academic advisor and register for classes. Students who do not meet all of these requirements should submit an undergraduate application for admission along with the application fee and transcripts of any non-UA coursework taken. Students who are unsure about their status should contact the Office of Admissions.

Fresh Start for Returning Students

Fresh Start can offer a new beginning for students who performed poorly at UAF when they last attended and who have taken at least a two-year break from classes. Those who withdrew from school or were dismissed for academic reasons may apply for readmission and request that their entire prior academic record be disregarded. Students who qualify for Fresh Start begin their college study anew with no credits attempted or earned, and no quality points reflected in future GPA calculations. Fresh Start can be used only once.

All prior coursework will remain part of the student's overall academic record and appear on transcripts, but none of the previously earned credits can be used in a new program. These credits will be included only in GPA computations for graduation with honors (see Graduation with Honors (p. 254)). A student admitted under Fresh Start may be allowed advanced standing or a waiver of requirements just as any other student, but will not be allowed credit by exam for courses lost in Fresh Start.

Readmission of Service Members

The Higher Education Opportunity Act of 2008 requires that students who left school to serve in the uniformed services be readmitted into the same program with the same standing they had when they left. UAF allows for special readmission of these students. More information is available at the Military and Veteran Services website (https://www.uaf.edu/veterans/).

Where to Get More Information

Office of Admissions
University of Alaska Fairbanks
2nd floor, Signers' Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: uaf-admissions@alaska.edu
Telephone: 907-474-7500
Toll-free: 800-478-1823
Fax: 907-474-7097

Graduate Degree Programs

When to Apply for Graduate Degree Programs

Applicants should apply to a graduate degree program at least six to nine months before the beginning of the semester in which they plan to enroll. Most departments require earlier submission of credentials for acceptance to their program. Contact the department for specific deadlines. The number of students accepted for graduate study is limited.

Graduate students are strongly encouraged to apply early. Applications received near the deadline will be processed as time permits or may be considered for the following semester.

How to Apply

To be admitted to UAF, a student must:

1. **Submit an application for admission**
   Apply online (https://www.uaf.edu/admissions/). Applications must be received before the published deadlines, along with a $75 nonrefundable application fee. Applications submitted after the published deadlines have a $100 nonrefundable application fee. Departmental deadlines may allow for applications past the published deadlines.
2. **Submit official transcripts**
   The Office of Admissions requires official transcripts of all college-level coursework. To be considered official, transcripts must arrive in sealed envelopes or by a secure electronic service from each institution attended. Students with coursework from international institutions must submit transcripts to SpanTran (https://spanside.my.salesforce-sites.com/SpantranApplication/?Id=2e1852c0-68a2-4141-b5f5-43a1edf03e48) or Word Education Services (WES) (https://www.wes.org/).
   Transcripts for International Applicants
   See Applying for Admission: International Students (p. 33) page for additional information.
3. **Submit official test results**
   Not all departments require Graduate Record Exam (GRE) scores if the student has earned a GPA of 3.0 or higher. The UAF school code for the GRE is 4866. Refer to the prospective degree program admission requirements to determine which tests are required.
4. **Submit resume/curriculum vitae**
   Include work and research experience, publications, patents, honors, professional and civic memberships, and foreign travel.
5. **Submit statement of academic goals**
   Write a statement indicating why study is desired in a particular program. Include qualifications and educational experience. For applicants to M.Ed. or education licensures/certificate programs, a four-to-five-page self-evaluation essay is required.
6. **Submit three letters of recommendation**
   Send at least three letters of recommendation from people able to vouch for the applicant's academic work, character and ability to undertake graduate study and research.

ADDITIONAL APPLICATION INFORMATION

- **Master of Fine Arts Applicants**
  Master of fine arts applicants must submit writing samples when applying for admission to the creative writing program. An art portfolio (usually slides) must be submitted when applying to the program in art.
- **Interdisciplinary Applicants**
  Submit a Proposed Graduate Study Plan (https://www.uaf.edu/gradsch/prospective/interdisciplinary-program/admissions-procedure/) and a comprehensive research proposal. Applicants must also obtain a commitment from UAF faculty members to serve on an advisory committee. Contact the Graduate School for specific interdisciplinary procedures.
- **International Students**
  See Applying for Admission: International Students (p. 33) page for additional information.
- **Students in Western Regional Graduate Programs**
  Students from Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming may be eligible for resident tuition through the Western Regional Graduate Program/Western Interstate Commission for Higher Education. This program is for students pursuing a graduate degree in administration of justice, Arctic and Northern studies, or rural development. For more information about this program, contact the Graduate School (https://www.uaf.edu/gradschool/) at 907-474-7464 or uaf-grad-school@alaska.edu. Students with questions may also contact the WICHE Student Exchange Program (http://wiche.edu/wrgp/) at P.O. Box 9752, Boulder, CO 80301-9752, or 303-541-0210.

Admission Requirements

In general, applicants may be admitted to a graduate program if they have a bachelor's degree from an accredited institution with at least a 3.0 (B) cumulative undergraduate GPA and a 3.0 (B) GPA in their major. The undergraduate major should provide suitable preparation for continuation of studies in the field of choice. Some programs require the Graduate Record Exam (GRE) or Graduate Management Admission Test (GMAT) and other special criteria for admission.

For the purposes of admission to graduate study, all grades, including those generated from retaking a course, are included in calculating GPA.

If an applicant meets the minimum requirements for the university, the Office of Admissions sends the complete application to the academic department. Program heads and/or committees in fields of interest will determine the adequacy of the student's preparation and whether or not departmental facilities are sufficient for their aims.

Information on specific degree programs is available from academic departments or by contacting the Graduate School (https://www.uaf.edu/gradschool/) at 907-474-7464, uaf-grad-school@alaska.edu.

After Acceptance

Qualified applicants can be accepted for admission while enrolled in their last semester at another college. Acceptance is incomplete, pending receipt of the final transcript indicating satisfactory completion of work in progress and the completion of graduation requirements prior to enrollment at UAF.

Final acceptance to UAF is complete only when the Office of Admissions receives and accepts all credentials.

REQUEST TO POSTPONE

An offer of admission to UAF is valid for the semester for which the applicant applied. Requests to postpone admission until a later semester

should be sent to uaf-admissions@alaska.edu. Admission may be postponed for up to one calendar year with the approval of the academic department and the dean of the graduate school. All graduate student requests to postpone are subject to approval by the department to which the student is applying.

Where to Get More Information

Office of Admissions
University of Alaska Fairbanks
2nd floor, Signers' Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: uaf-admissions@alaska.edu
Telephone: 907-474-7500
Toll-free: 800-478-1823
Fax: 907-474-7097

Graduate School
University of Alaska Fairbanks
202 Eielson Building
PO Box 757560
Fairbanks, AK 99775-7560
Email: uaf-grad-school@alaska.edu
Telephone: 907-474-7464

International Students

When to Apply as an International Student

International students may apply for admission to associate, bachelor and graduate-level degrees. Applications for admission from international students are due no later than March 1 for the fall semester and Sept. 1 for the spring semester. For graduate applicants, it is important to note that certain departments maintain earlier deadlines.

International students must complete all UAF application requirements to be admitted and meet U.S. immigration agencies' requirements to receive a Certificate of Eligibility for Non-immigrant Student Status, or Form I-20.

UAF does not issue immigration documentation Form I-20 to students entering academic programs that are offered only through distance delivery, certificate programs, occupational endorsement programs or the A.A.S. degree program in professional piloting.

Admission Requirements

More information regarding the process for application to associate, bachelor or graduate programs can be found in the Getting Started (p. 24) section.

UNDERGRADUATE APPLICANTS

To be admitted to UAF, a student must:

1. Apply online (https://uaf.edu/admissions/apply/international.php). Applications must be received before the published deadlines, along with a $50 nonrefundable application fee. Applications submitted after the published deadlines have a $75 nonrefundable application fee and are processed in the order they are received.
2. Send official secondary school and/or university transcripts to S (http://www.wes.org/)panTran (https://spanside.my.salesforce-sites.com/SpantranApplication/?Id=2e1852c0-68a2-4141-b5f5-43a1edf03e48) or Word Education Services (WES) (https://www.wes.org/). University coursework also needs to be evaluated with a comprehensive course-by-course credential report through a NACES-approved evaluation service. Transcripts from Canadian institutions (excluding Quebec) are exempt from this requirement; they may be sent directly from the issuing institution.
3. Submit certified official secondary school and/or university transcripts and English translations. It is required that official transcripts of all high school and/or college-level coursework be signed and sealed by a registration official of the institution(s) attended.
4. Submit official TOEFL or IELTS test scores. Individuals with questions about exceptions to this requirement should contact the Office of Admissions at uaf-admissions@alaska.edu.
5. Submit a copy of the passport identification page.
6. Complete the UAF Financial Statement for International Applicants and submit it with supporting financial documentation. For instructions, please refer to the form. This is a requirement for immigration documentation I-20 issuance, not for admission.

GRADUATE APPLICANTS

To be admitted to UAF, a student must:

1. Apply online (https://uaf.edu/admissions/apply/international.php). Applications must be received before the published deadlines, along with a $75 nonrefundable application fee. Applications submitted after the published deadlines are only accepted upon a department's request and have a $100 nonrefundable application fee.
2. Review the department's department-specific requirements and application deadlines.
3. Send official secondary school and/or university transcripts to S (http://www.wes.org/)panTran (https://spanside.my.salesforce-sites.com/SpantranApplication/?Id=2e1852c0-68a2-4141-b5f5-43a1edf03e48) or Word Education Services (WES) (https://www.wes.org/). University coursework also needs to be evaluated with a comprehensive course-by-course credential report through a NACES-approved evaluation service. Transcripts from Canadian institutions (excluding Quebec) are exempt from this requirement; they may be sent directly from the issuing institution.
4. If the transcript does not show that a bachelor's degree has been or will be awarded, a diploma must also be sent.
5. Submit official GRE or GMAT test scores. Not all departments require GRE or GMAT scores if the student has earned a GPA of 3.0 or higher. Refer to the admission requirements of the prospective degree program to determine which tests are required.
6. Submit a resume/curriculum vitae. Include work and research experience, publications, patents, honors, professional and civic memberships, and foreign travel.
7. Submit a statement of academic goals. Write a statement indicating why study is desired in a particular program. Include qualifications and educational experience. (For applicants to M.Ed. programs or education licensures/certificates, a four- to five-page self-evaluation essay is required.)
8. Submit three letters of recommendation. Send at least three letters of recommendation from people able to vouch for the applicant's academic work, character and ability to undertake graduate study and research.
9. Submit official TOEFL or IELTS test scores. Individuals with questions about exceptions to this requirement should contact the Office of Admissions at uaf-admissions@alaska.edu.
10. Submit a copy of the passport identification page.
11. Complete the UAF Financial Statement for International Applicants and submit it with supporting financial documentation. For instructions, please refer to the form. This is a requirement for immigration documentation I-20 issuance, not for admission.

Required Funding Amounts

The minimum estimated cost for one school year at UAF for an international student is $40,942 for undergraduate students and $39,933 for graduate students. (Students taking College of Engineering and Mines courses: $42,334 undergraduate and $41,877 graduate. College of Business and Security Management courses: $42,670 undergraduate and $42,363 graduate.) This covers tuition, fees, housing and food on campus, books, health insurance, and a reasonable amount of personal expenses. It does not include transportation to and from Alaska, summer and winter break living housing.

Residents of countries that hold approved sister city/sister province agreements qualify for resident tuition. A complete list of sister cities and provinces is listed below. Students on an F-1 visa who are not from a UA sister city or province are not eligible for resident tuition. For international students who are residents of a sister city, please contact the International Student and Scholar Services (ISSS) for more information.

UA SISTER CITIES AND PROVINCES

Country	City or Province
Australia	Darwin
Canada	Inuvik, Northwest Territory and Whitehorse, Yukon Territory
China	Harbin, Heilongjiang Province
Great Britain	Whitby, England
India	Pune
Japan	Chitose, Hokkaido Prefecture, Kanayama, Nemuro, Noshiro, Obihiro, Saroma, Teshio
Korea	Inchon
Mongolia	Erdenet City
Norway	Hammerfest, Mo, Tromsø
Philippines	Camiling
Russia	Khabarovsk Region, Magadan, Mirnyy, Noglicki, Okha, Providenya, Vladivostok, Yakutsk, Yelisovo
Taiwan	Chiayi Township

Immigration Requirements

Once a student has been fully admitted by Admissions, UAF ISSS will issue immigration documentation Form I-20, which must be presented at a U.S. embassy or consulate in the country of citizenship in order to obtain an F-1 (student) visa. Form I-20 requires the university to certify to U.S. immigration agencies that a student has been accepted for full-time enrollment and has sufficient funds to meet estimated expenses for an academic program.

If a student is already in the United States on an F-1 visa, the Student and Exchange Visitor Information System (SEVIS) record may be transferred as long as the record is in active status. The student must contact ISSS before requesting a SEVIS record transfer to UAF.

English Proficiency Requirements

Students on an F-1 visa are required to submit scores from the TOEFL (Test of English as a Foreign Language) or the IELTS (International English Language Testing System) exam. Some permanent residents (green card holders) are not required to submit TOEFL or IELTS scores (see exceptions below). English proficiency may be demonstrated by:

1. A minimum TOEFL score of 79.
2. A minimum IELTS score of 6.5.
3. Completion of secondary education in Great Britain, New Zealand, Australia or Canada (excluding Quebec).

Requests for exception to this policy may be submitted via email to the Office of Admissions. Acceptable grounds for waiving this requirement may include:

1. Successful completion (C or higher) of a college-level, non-ESL English composition course.
2. A comparable score on another approved exam such as the ACT, SAT or EdReady exam.
3. Long-term permanent residents of the U.S. who are able to provide adequate documentation (transcripts, test scores, etc.) demonstrating academic readiness for WRTG 111x.

Request to Postpone

If applicants are unable to attend, they must notify the Office of Admissions and ISSS. Students may request to postpone their admission for up to one calendar year. For graduate applicants, acceptance is not guaranteed for a future semester. An updated financial statement and current supporting financial documents will be required from all students.

Where to Get More Information

Office of Admissions
University of Alaska Fairbanks
2nd floor, Signers' Hall
P.O. Box 757480
Fairbanks, AK 99775-7480
Email: uaf-admissions@alaska.edu
Telephone: 907-474-7500
Toll-free: 800-478-1823
Fax: 907-474-7097

International Student and Scholar Services (ISSS)
University of Alaska Fairbanks
215 Eielson Building
P.O. Box 757760
Fairbanks, AK 99775-7760
Email: uaf-isss@alaska.edu
Telephone: 907-474-7583

Course Placement

Placement Requirements

Many UAF courses require placement. All students planning to take courses with specific placement requirements must meet those requirements before registering for those courses. Specific writing, reading and math placement requirements are listed in the sections below.

Students need mathematics placement at MATH F105 or above and writing placement at WRTG F111X or above to register for natural science general education requirement courses unless otherwise noted.

Placement Tests

Test results are required for first-time degree or certificate students, transfer students with fewer than 30 transfer credits, or students planning to take F100-level English, reading, mathematics, natural sciences and many general education courses. Placement scores from ALEKS, EdReady, American College Testing Program (ACT) or the Scholastic Aptitude Test (SAT) must be on file with the Office of the Registrar before registration.

Students who enroll in any course without meeting placement or prerequisite requirements may be dropped or withdrawn from the course through the faculty-initiated withdrawal process.

Score Expiration

Writing placement exam scores expire two calendar years from the date taken.

Mathematics placement exam scores expire one calendar year from the date taken.

Students enrolling in developmental or lower-division general education requirement courses must have completed any prerequisite courses within two calendar years of their enrollment.

Course Prerequisites

Course prerequisites indicate what previous preparation is needed to enroll in a course. An instructor has the right to waive a course prerequisite if the instructor documents that the student possesses the background required to succeed in the class. Instructors also have the right to drop any students from a course if they do not meet the prerequisite or have not received a grade of C- or better in all prerequisite courses. Students who take a course at a higher level than a corresponding prerequisite course required for a degree program are not exempt from taking that required course.

Writing

Placement into writing courses requires either prerequisite course credit (a grade of C- or better) or a standardized placement test that measures academic skills such as critical thinking and reading. The score from any of the tests (see Writing Course Placement Scores (p. 36) table) places the student in the appropriate writing class. A writing sample, given on the first day of class, may modify this placement. Degree or certificate students placed in developmental writing or reading courses (F050-F110) should register for them during their first semester. These courses help students gain the competencies necessary to succeed in college-level courses. If the student's standardized test scores are below the minimums for WRTG F111X on the Writing Course Placement Scores (p. 36) table but the student's high school cumulative GPA is 3.0 or higher, the student may be given permission to enroll in WRTG F111X by the director of University Writing, the director of Student Success and Instruction at the UAF Community and Technical College, or rural campus writing faculty.

On the basis of test scores, students may be required to take developmental writing and/or developmental studies courses. These courses help students gain the competencies necessary for success in college-level courses.

Writing Course Placement Scores

Courses	ACT English + Reading Total Combined Score	SAT Redesigned[1] Evidence Based Reading + Writing Total Combined Score	EdReady
WRTG F211X , WRTG F212X, WRTG F213X or WRTG F214X[2]	60-72	710-800	N/A
WRTG F111X	36-59	480-700	70+
WRTG F111X and WRTG F068	N/A	N/A	65-69
WRTG F110	30-35	430-470	60-64
WRTG F090	26-29	390-420	55-59
WRTG F080	18-25	330-380	>55
Adult Basic Education[3]	2-17	200-320	N/A

1 The SAT Redesigned was first administered in March 2016.

2 Students with ACT or SAT scores that place them in WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X may receive local advanced placement credit for WRTG F111X upon completion of WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X with a grade of C or better. To receive this credit, students should submit the Application for WRTG F111X Credit form to the Office of the Registrar.

3 Adult Basic Education program listing (http://www.jobs.alaska.gov/abe/) can be found here (http://www.jobs.alaska.gov/abe/).

Foreign Language

Students may not register for foreign language classes higher than F101 unless they have received credit through CLEP, AP, transfer or another UAF-approved test for the prior levels. With the approval of the Department of Foreign Languages and Literatures, students may enroll in the level of a language at which they are competent, based on prior experience.

Mathematics

Mathematics course placement varies according to the type of degree the student is planning to pursue and the corresponding math course(s) needed. (See the degree program requirements (p. 252) for more detail.) The UAF mathematics placement test (ALEKS) (https://www.alaska.edu/aleks/) is used to determine math placement. Minimum test scores for placement in math and developmental math courses are listed in the Math, Statistics and Developmental Math Placement Scores (p. 37) table below.

Students who have limited access to or limited experience with the Internet should contact the Department of Mathematics and Statistics (https://www.uaf.edu/dms/) or the Department of Developmental Education (https://www.uaf.edu/deved/) for assistance.

Math, Statistics and Developmental Math Placement Scores

Courses	ALEKS PPL
MATH F251X	78-100
MATH F211, MATH F230X	70-100
MATH F152X	65-77
STAT F200X	55-100
MATH F122X, MATH F151X, MATH F156X[1]	55-77
MATH F113X	30-100
MATH F105[2], MATH F105N, MATH F113X (MATH F071, MATH F105G, MATH F105H, MATH F105J)	30-54
MATH F055 (MATH F055D, MATH F055E, MATH F055F, MATH F061, MATH F062, HLTH F116, TTCH F131)	17-29
MATH F068	10-29
MATH F054 (MATH F056, ABUS F155)	0-16

1 Placement for BIOL F115X, BIOL F116X, CHEM F105X, CHEM F106X.

2 Placement for all general education requirements for natural sciences courses except those listed different in the catalog.

Note: Academic advisors should check test score and prerequisite course dates on BANNER or UAOnline and instruct students to retest if their test scores are more than **ONE** year old for the placement test date and **TWO** years old for the course prerequisite date. Students who enroll in any course without meeting placement or prerequisite requirements may be dropped or withdrawn from the course through the faculty-initiated withdrawal process.

Note: Completion of MATH F068 will meet the requirements needed to enter MATH F071, MATH F105 and MATH F105N.

Note: MATH F051 is appropriate for students needing a review of basic math skills.

Note: MATH F065 assists students in reviewing and reinforcing course concepts covered by MATH F054, MATH F055, MATH F062, MATH F071, MATH F105 and MATH F105N.

Note: Students, in consultation with their academic advisor or course instructor, may opt to take a course lower than their placement.

Note: Academic advisors should check test score and prerequisite course dates on BANNER or UAOnline and instruct students to retest if their test scores are more than **ONE** year old for the placement test date and **TWO** years old for the course prerequisite date. Students who enroll in any course without meeting placement or prerequisite requirements may be dropped or withdrawn from the course through the faculty-initiated withdrawal process.

Note: Completion of MATH F068 will meet the requirements needed to enter MATH F071, MATH F105 and MATH F105N.

Note: MATH F051 is appropriate for students needing a review of basic math skills.

Note: MATH F065 assists students in reviewing and reinforcing course concepts covered by MATH F054, MATH F055, MATH F062, MATH F071, MATH F105 and MATH F105N.

Note: Students, in consultation with their academic advisor or course instructor, may opt to take a course lower than their placement.

Registration

In order to attend a class, students must be either registered or wait-listed. Credit for classes may be earned only when tuition and fees are paid in full. Registration is held each semester on dates published in the academic calendar (https://catalog.uaf.edu/calendar/).

Registration instructions are provided in the UAF registration guide (https://www.uaf.edu/register/).

The first day of instruction for all semester-length courses is the date indicated in the official semester academic calendar. That date might not be the first day that a class meets.

When a student registers for courses, the university holds that individual financially responsible for the payment of tuition and fees. The university may drop a student's registration for nonpayment. Other consequences for nonpayment include not being able to receive grades or transcripts.

Academic Advising - Required

Academic advising is an important part of planning education. Degree students must obtain an academic advisor's approval every semester to begin the registration process. All undergraduate degree and certificate students are required to have an academic advisor. Students will work in tandem with their academic advisor to develop a viable educational plan that reflects their academic interests and goals. The academic advisor will assist in determining the best options, alternatives and sequences of classes to take. Academic advising is available at several campuses. See Services and Resources (http://catalog.uaf.edu/services/academic-advising-learning-assistance/) for more information.

Graduate Students

First-semester graduate students must meet with their advisor, or, if no advisor is assigned, then they should meet with the department or program chair to begin their registration process.

Continuing graduate students who meet the registration requirement as found under the How to Earn a Graduate Degree (p. 416) section of the catalog need to confer with their advisor as to what courses to enroll in for each semester but are not required to meet with their advisor prior to registration.

Nondegree Students

Anyone who wants to attend classes at UAF as a nondegree student may register as long as they have the appropriate permissions. New nondegree students must complete a free nondegree application (https://uaf.edu/admissions/apply/#now) in order to be eligible to register.

Nondegree students may also see an academic advisor, and it is recommended for those taking 9 or more credits in a semester or for those who have accumulated 30 or more UAF credits.

Nondegree students are subject to placement examination requirements for courses. Any nondegree student who wants to be considered a degree candidate must submit an application for admission, meet regular admission requirements and submit transcripts. Nondegree students are not eligible for financial aid or priority registration.

It's important for potential graduate students to understand that credits earned as a nondegree student might not be accepted for use toward a graduate degree program. Please see the transfer credit section of How to Earn a Graduate Degree (p. 416).

High School and Secondary School Students

High school and secondary students may take classes at UAF either as a degree or nondegree students.

- **Secondary Student Enrollment**
  The secondary student enrollment process allows secondary school students to register for UAF classes. A student meeting course prerequisites may enroll in university classes. Students must consult their appropriate school district officials and school counselors for approval prior to registration if they wish to use university courses to meet high school graduation requirements.
  Registering for courses at UAF establishes a permanent academic record that reflects student academic performance in all courses attempted. Students must submit the free nondegree application (https://uaf.edu/admissions/apply/#now) and must obtain a parent's or guardian's permission (https://uaf.edu/reg/files/forms/REC_Secondary%20Student%20Parent%20Guardian%20Agreement.pdf) to enroll.
  A parent or guardian may not attend a course in which their secondary school student is registered unless and until the parent or guardian is also officially registered for the course.
  Note: Enrollment in UAF courses as a secondary student does not constitute formal admission to the university for the purposes of earning a certificate or degree. Please note that in order to qualify for federal financial aid, a student must have either a high school diploma or a GED.
- **TECH PREP Opportunities**
  The TECH PREP program allows students to earn credits toward a UAF certificate or associate degree by completing career and technical education classes in high school that have been approved for college credit by UAF. The classes available for credit vary from school to school, but in general, they are taken from the following areas: applied business; automotive; airframe and powerplant; human services; computer information office systems; allied health; drafting; emergency medical services; and welding. For more information, contact the student's high school counselor or the Community and Technical College at 907-455-2800.
- **Alaska Higher Education Admission Decision (AHEAD) program**
  The AHEAD program allows qualified high school students to be admitted to UAF as general studies students. AHEAD students are assigned an academic advisor and follow the registration timeline for degree students.

  To qualify, students must submit an AHEAD program application (https://uaf.edu/admissions/apply/highschool/). They must have completed three-fourths of their high school core curriculum and have a cumulative 3.0 GPA or higher. (To qualify for federal financial aid, students must have either a high school diploma or a GED.)

Adding, Dropping and Withdrawing from Classes

Information about the add/drop process can also be found at UAOnline (https://uaonline.alaska.edu) and at the Office of the Registrar website (https://www.uaf.edu/reg/). Adds, drops and withdrawals are not final until the student has completed the appropriate procedure, paid any relevant fees or tuition and submitted all necessary paperwork to the Office of the Registrar. If a class is dropped within specified time frames, the course will not be part of a student's academic transcript. Important deadlines are listed in the Important Registration Change Deadlines (p. 39) table below.

Important Registration Change Deadlines

FULL TERM SECTIONS

Action[1]	Begins[2]	Ends	Notes
Adding a class	First day of registration for the semester	Last day of the second week of instruction for the semester	Advisor's signature not required.
Credit/No-credit option	First day of registration for the semester	Friday of the third week of instruction for the semester	Undergraduates only; only electives not specified in a student's core, major, minor and degree programs are eligible for this option.
Dropping one or more class(es) (class does not appear on transcript)	First day of registration for the semester	Last day of the second week of instruction for the semester	
Faculty-initiated drop (class does not appear on transcript)	First day of registration for the semester	Last day of the second week of instruction for the semester	Faculty member will notify the Office of the Registrar.
Withdrawing from a class (class appears on transcript with W grade)	After the last day of the second week of instruction for the semester	Last day of the tenth week of instruction for the semester	
Withdrawing from all classes (total withdrawal)	After the last day of the second week of instruction for the semester	Last day of the tenth week of instruction for the semester	Advisor's signature required for student in degree program; total withdrawal form must be completed.
Faculty-initiated withdrawal (class appears on transcript with W grade)	After the last day of the second week of instruction for the semester	Last day of the tenth week of instruction for the semester	Faculty member will notify the Office of the Registrar. Student will receive an email notification at their UAF account.
Appeal for late withdrawal from a class[3]	After the last day for student-initiated withdrawals	30 days after the first published day of instruction for the next regular semester.	Advisor's signature is required for students in a degree program and must complete appeal for late withdrawal paperwork; reviewed by a campus appeals committee. Late withdrawals are allowed for exceptional cases only and approval is not automatic.

Note: Add/drop, total withdrawal and credit/no-credit requests must be completed by the appropriate deadlines.

1 Add, drop, withdrawal and credit/no-credit option deadlines will be adjusted proportionally for courses that are less than a semester in length. See next two tables.

2 The first day of instruction for all semester-length courses is the date indicated in the official semester academic calendar. It might not be the first day that a class meets.

3 Late withdrawals are allowed for exceptional cases only, and approval is not automatic.

SECTION - MORE THAN 4 WEEKS, BUT LESS THAN THE FULL SEMESTER

Action[1]	Begins[2]	Ends	Notes
Adding a class	First day of registration for the semester	Five business days after the class begins	Advisor's signature not required.
Dropping one or more class(es) (class does not appear on transcript)	First day of registration for the semester	Five business days after the class begins	
Faculty-initiated drop (class does not appear on transcript)	Published first date of semester	Five business days after the class begins	Faculty member will notify the Office of the Registrar.
Credit/No-credit option	First day of registration for the semester	Friday of the third week of instruction for the semester	Undergraduates only; only electives not specified in a student's core, major, minor and degree programs are eligible for this option.
Withdrawing from a class (class appears on transcript with W grade)	Six business days after the class begins	Before 60% of the scheduled length of the course has elapsed	
Faculty-initiated withdrawal (class appears on transcript with W grade)	Six business days after the class begins	Before 60% of the scheduled length of the course has elapsed	Faculty member will notify the Office of the Registrar. Student will receive an email notification at their UAF account.

SECTION - LESS THAN 4 WEEKS

Action[1]	Begins[2]	Ends	Notes
Adding a class	First day of registration for the semester	First day of class	Advisor's signature not required.
Dropping one or more class(es) (class does not appear on transcript)	First day of registration for the semester	First day of class	
Faculty-initiated drop (class does not appear on transcript)	Published first date of semester	First day of class	Faculty member will notify the Office of the Registrar.
Credit/No-credit option	First day of registration for the semester	Friday of the third week of instruction for the semester	Undergraduates only; only electives not specified in a student's core, major, minor and degree programs are eligible for this option.
Withdrawing from a class (class appears on transcript with W grade)	Second day of class	Before 60% of the scheduled length of the course has elapsed	
Faculty-initiated withdrawal (class appears on transcript with W grade)	Second day of class	Before 60% of the scheduled length of the course has elapsed	Faculty member will notify the Office of the Registrar. Student will receive an email notification at their UAF account.

NON-ATTENDANCE DROP POLICY

Students are expected to begin attending classes on the first day of instruction. Some departments, in trying to find space for students on waitlists, require that students to attend the first class session or notify the department in advance that they cannot attend the first class. If the first class is missed without notifying the department, a student may be dropped from the course, and the space may be assigned to a student on the waitlist.

Because of the high demand for writing, English, and communication courses listed below, students who fail to attend either of the first two meetings of a basic course will be dropped even if they registered in advance and paid their fees. If space becomes available in a class from which they have been dropped by the department, they need to follow the add procedure to re-enroll.

Code	Title	Credits
Composition		
WRTG F111X	Writing Across Contexts	3
WRTG F213X	Writing and the Sciences	3
ENGL F414	Research Writing	3
Basic Speech		
COM F131X	Fundamentals of Oral Communication: Group Context	3
COM F141X	Fundamentals of Oral Communication: Public Context	3

WITHDRAWING

- **Withdrawing from a Class**
  Withdrawing from a full-semester class later than the second Friday after the first day of instruction (last day to drop classes) results in a grade of W appearing on a student's academic record. While a W grade does not affect GPA, it may impact financial aid. Be sure to check with the Financial Aid Office before withdrawing from classes. The last day for withdraw from a class is the 10th Friday after the first day of instruction. For specific dates, see the academic calendar (p. 7). Fees and tuition are not automatically refunded for W grades. See the tables above for classes lasting less than a full semester.
- **Withdrawing from a Class Shorter than the Full Semester**
  Withdrawal must be done by the 60 percent point of instruction.
- **Total Withdrawal from All Classes**
  If a student wants to withdraw from all classes later than the second Friday after the first day of instruction (last day to drop classes), use a Total Withdrawal form available at the Office of the Registrar forms page (https://www.uaf.edu/reg/forms/) or through the Office of the Registrar in Signers' Hall on the Fairbanks campus. Students receive a W grade for all classes, which does not impact their GPA. A student-initiated total withdrawal is subject to the same deadlines as withdrawal from a class. For specific dates, see the academic calendar (p. 7). Fees and tuition are not automatically refunded for W grades.

WITHDRAWALS AFTER THE DEADLINE

Appeals for a late withdrawal after the student-initiated withdrawal deadline — the tenth Friday after the first day of instruction — are exceptions to policy and are allowed only in exceptional cases. Approval is not automatic, and documented evidence needs to be provided to support the request. Acceptable serious and compelling reasons may include:

1. death in the immediate family;
2. serious illness or injury of the student or immediate family; and
3. factors outside of the student's control (for example, fire or flood).

Failing a course, avoiding an unsatisfactory grade or ignorance of policies are not serious and compelling reasons for seeking a late withdrawal and will not be approved.

Appeals for late withdrawals must be submitted within 30 class days after the beginning of the next regular semester. Forms for an appeal for late withdrawals are available at the Office of the Registrar forms page (https://www.uaf.edu/reg/forms/), through the Office of the Registrar in Signers' Hall on the Fairbanks campus, or through local campus student services offices. Once received, the appeal will be evaluated by a campus-wide committee, which will return a decision to the student. The decision of the university is final, and a student who files a written appeal under these procedures shall be expected to abide by the final disposition of the review, as provided, and may not seek a further appeal of the matter under any other procedure within the university.

FACULTY-INITIATED DROP OR WITHDRAWAL

Instructors have the right to drop students who do not meet course prerequisites, did not obtain a grade of C- or better in all prerequisite courses, or who have not participated substantially in a class. Faculty-initiated drops submitted prior to the last day to drop classes will not appear on the student's transcript. Faculty-initiated withdrawals may occur between the last day to drop classes and the 10th Friday after the first day of instruction. A grade of W will appear on the student's transcript for faculty-initiated withdrawals. Fees and tuition are not automatically refunded for W grades.

DIRECTED AND INDIVIDUAL STUDY

Directed study courses allow a student to contract with an instructor to enroll individually in a course that is listed in the catalog but in a semester in which the course is not offered in the regular schedule.

For example, a directed study proposal may be approved if the course is not being offered that semester and the student needs to complete the course for graduation. The title of the directed study course will include DS.

Individual study courses provide students with opportunities to improve their knowledge in areas of study not listed in the current catalog. A student who requests or is advised to undertake such an individual study should present a brief proposal and syllabus to the appropriate faculty member. The syllabus must be attached to an individual study form. This requirement does not apply to directed study courses. An individual study course number will end in 97.

Registration for directed and individual study courses is not available via the web. To register for a directed or individual study course, download the request form (https://www.uaf.edu/reg/forms/) or pick up a copy at the Office of the Registrar. Submit the completed form to the Office of the Registrar.

Where to Get More Information

Office of the Registrar (https://www.uaf.edu/reg/)
University of Alaska Fairbanks
1810 Salcha Street | 102 Signers' Hall
P.O. Box 757495 | Fairbanks, AK 99775-7495
Email: uaf-registrar@alaska.edu
Telephone: 907-474-6300

Transferring Credits

Overview and Alternate Ways to Earn Credit

Credit accepted at UAF that has been earned from other regionally accredited institutions, earned through military educational experiences or accepted by special approval is considered transfer credit. Where possible, transfer credit is equated with UAF courses. See the Table of GER Substitutions: UA System (p. 43) for a list of substitutions within the University of Alaska system and the Table of GER Substitutions: Non-UA Institutions (p. 43) for substitutions from non-UA institutions.

UAF's Transfer Credit Estimator (https://uaf.transfer.degree/app/#!/my/account/) shows courses previously evaluated by UAF and is an unofficial reference for undergraduate students who are considering transferring to UAF. An official evaluation of transfer credits will be provided after formal application and admission to UAF.

International transfer students, please refer to the admissions requirements for international students (p. 33) to ensure your previous coursework is transferred correctly.

Alternate Ways to Earn Credit

For other options for earning credit, including UAF Advanced Placement Testing, Credit for Prior Learning, UAF Credit by Exam & Competency Testing, College-level Examination Program (CLEP), College Board Advanced Placement Exams (AP), International Baccalaureate (IB), Credit for Language Testing and Dantes Standardized Subject Tests (DSST), see the Alternate Ways to Earn Credit (p. 46) section.

Regulations

The following regulations apply to transfer of credit:

1. Students are eligible for the transfer of credit when they have been admitted to an undergraduate degree or certificate program.
2. The applicability of transfer credit to a student's major and/or minor requirements is subject to approval by the major and/or minor department. Transfer students must fulfill the UAF graduation and residency requirements, including those specific to their programs.
3. Undergraduate credits earned at the 100 level or above with a C- grade or higher at institutions accredited by one of the six regional accrediting agencies will be considered for transfer. Instructor permission may be required for purposes of registration if the transfer credit courses have not satisfied the prerequisite requirements. Transfer credit is not granted for courses with doctrinal religious content or for graduate courses (for undergraduate programs).
   - **Note**: For information about transferring graduate credits to meet graduate program requirements, contact the Graduate School at uaf-grad-school@alaska.edu or 907-474-7464.
4. Any student who has completed a bachelor's degree from a regionally accredited institution will be considered to have completed the equivalent of the baccalaureate general education requirements, the Associate of Arts general education requirements and the Associate of Science general education requirements when officially accepted to a bachelor's, Associate of Arts or Associate of Science program at UAF. These students will also be considered to have completed the communication, computation and human relations requirements for the Associate of Applied Science and the certificate.
5. Any student who has completed an Associate of Arts or an Associate of Science degree from a regionally accredited institution will be considered to have satisfied the 100- and 200-level UAF general education requirements.
6. Any transfer student from a regionally accredited institution who has completed an associate degree specifically developed for transfer and is listed as such in the transferring institution's catalog and has completed at least 26 general education semester credit or 39 general education quarter credit requirements as part of the curriculum for the associate's degree at their previous institution(s) will be considered to have satisfied the UAF general education requirements.
7. Any transfer student who has completed the baccalaureate general education requirements at any regionally accredited institution will be considered to have completed the baccalaureate general education requirements at UAF. The student is responsible for providing an official statement and documentation certifying general education requirements completion at the previous institution.
8. Transfer credit is not included in the computation of the UAF GPA.
9. Class standing (e.g., freshman, sophomore) is based on the number of college credits accepted in transfer by UAF, combined with any courses completed in residence at UAF.
10. A student will be awarded credit for currently valid government and professional certifications that have been reviewed and approved for designated course equivalencies at UAF. A list of these programs (https://docs.google.com/spreadsheets/d/1SePj2xAeyrq58l9_Qbk913i-vPRbeW7KEPu0jwAwyII/edit/?usp=sharing) is available in the Office of Admissions.
11. Credit may also be awarded for satisfactory completion of training programs, based on recommendations of the American Council on Education. ACE college credit recommendations can be found online (http://www2.acenet.edu/credit/?fuseaction=search.main). The award of credit is subject to review and approval of appropriate UAF faculty.

Military Credit

Credits may be awarded for formal service schooling and military occupational specialties (MOS) based on recommendations published by the American Council on Education. ACE military credit recommendations can be found online (http://www.acenet.edu/news-room/Pages/Military-Guide-

Online.aspx). Credit completed through the Community College of the Air Force or Department of Defense courses is included in the category of military experience.

Non-University of Alaska GER Substitutions

TABLE OF GER SUBSTITUTIONS: NON-UNIVERSITY OF ALASKA INSTITUTIONS

This table describes courses accepted by transfer to UAF from institutions outside the University of Alaska system that may substitute for UAF's general education requirements. Students transferring from either UAA or UAS should consult Table of GER Substitutions: UA System (p. 43), or visit the Transfer to UAF webpage (https://www.uaf.edu/admissions/apply/transfer.php).

UAF General Education Courses	Transfer Courses
WRTG F111X	The required first-semester composition course at the 100 level (must be basic freshman composition and not developmental)
WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X	The second half of the introductory composition series at the 100 level or above
COM F121X, COM F131X or COM F141X	A 100-level or above performance course in fundamentals of speech communication, public speaking or small group communication
Arts (3 credits)	An introductory course in the arts
Humanities (3-5 credits)	An introductory course in the humanities
Social Sciences (6 credits)	An introductory courses in different social sciences disciplines
Additional Arts/Humanities/Social Sciences (3-5 credits)	See Arts, Humanities, Social Sciences above
MATH F113X, MATH F122X, MATH F151X, MATH F152X or MATH F156X or;	A 100-level or above mathematics course having a prerequisite of at least two years of high school algebra
MATH F230X, MATH F251X, MATH F252X, MATH F253X or STAT F200X	A calculus or statistics course at the 100 level or above
Natural Sciences (8 credits)	Courses in basic natural sciences (biology, chemistry, earth sciences, physics) with labs, at the 100 level or above. Non-lab courses are transferable only as a second natural science course. To fulfill general education requirements, a transfer student must complete two lab courses or two labs. Transfer of credit for courses in a natural science other than those listed requires approval of the dean of the College of Natural Science and Mathematics.

University of Alaska GER Substitutions

TRANSFERRING CREDITS WITHIN THE UNIVERSITY OF ALASKA SYSTEM

In general, undergraduate credits earned at the 100 level or above at a University of Alaska institution will transfer to UAF. In addition, to serve students who transfer among the three institutions that make up the University of Alaska system, UAF, UAA and UAS have identified fully transferable general education requirements for baccalaureate degrees.

Credit for course work successfully completed at one UA institution which applies to general education requirements will fulfill the same categories at all other UA institutions. This applies even if there is no directly matching course work at the institution to which the student transfers.

Transfer students from UAA or UAS who have completed all general education requirements in the baccalaureate program before transferring to UAF will have completed all requirements for the UAF baccalaureate general education requirements. Courses taken to complete the baccalaureate general education requirements at UAA or UAS will meet UAF baccalaureate general education requirements according to the current Table of GER Substitutions: UA System (p. 43). Students should notify the UAF Office of Admissions if they completed the general education requirements at UAA or UAS prior to enrollment in a major program of study at UAF.

In accordance with UA Board of Regents policy, completion of the 38-44 credits of the UAF general education requirements meets the general education requirements at UAA and UAS.

For more information about transfer credit visit the Transfer to UAF website (https://www.uaf.edu/admissions/apply/transfer.php).

TABLE OF GER SUBSTITUTIONS: UA SYSTEM

Use this course substitution table to determine how individual courses that meet UAA or UAS general education requirements may substitute for individual UAF general education requirements. This table applies only to courses taken within the University of Alaska system. Students transferring courses from outside the UA system should consult Table of Substitutions: Non-UA Institutions (p. 43) or visit the Transfer to UAF webpage (https://www.uaf.edu/admissions/apply/transfer.php).

WRITTEN COMMUNICATION (6 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
WRITTEN COMMUNICATION (3 cr)		
WRTG F111X	WRTG A111	WRTG S111
WRITTEN COMMUNICATION (3 cr)		
WRTG F211X, WRTG F212X, WRTG F213X, WRTG F214X	WRTG A211, WRTG A212, WRTG A213, WRTG A214	WRTG S211, WRTG S212

ORAL COMMUNICATION (3 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
ORAL COMMUNICATION (3 cr)		
COM F121X, COM F131X, COM F141X	COMM A111, COMM A235, COMM A237, COMM A241	COMM S111, COMM S235, COMM S237, COMM S241

ARTS (3 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
ARTS (3 cr)		
Complete one of the following:		
ACNS F223X, ANS F161X, ANS F202X, ANS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X, FLPA F105X, FLPA F121X, FLPA F161X, FLPA F200X, FLPA F215X, FLPA F217X, HUM F201X, MUS F103X, MUS F125X, MUS F200X, MUS F223X	AKNS A215, AKNS A216, AKNS A261, ART A160, ART A261, ART A262, DNCE A170, MUS A100, MUS A110, MUS A121, MUS A215, MUS A216, MUS A224, THR A111, THR A121, THR A214, THR A215	ART S105, ART S160, ART S181, ART S201, ART S260, ART S261, ART S262, MUS S123, THR S111, THR S211, THR S212

HUMANITIES (3-5 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
HUMANITIES (3-5 cr)		
Complete one of the following:		
ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X, ENGL F201X, ENGL F270X, FL F200X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	AKNS A101A, AKNS A101B, AKNS A101C, AKNS A101D, AKNS A101E, AKNS A101F, AKNS A101H, AKNS A101I, AKNS A102A, AKNS A102B, AKNS A102C, AKNS A102D, AKNS A102E, AKNS A102F, AKNS A102H, AKNS A102I, AKNS A114A, AKNS A114B, AKNS A114E, AKNS A114F, AKNS A114H, AKNS A114I, AKNS A201, AKNS A230, AKNS A240A, AKNS A240F, AKNS A240H, AKNS A240I, ASL A101, ASL A102, ASL A201, ASL A202, ENGL A121, ENGL A200, ENGL A203, ENGL A205, ENGL A206, ENGL A245, FREN A101, FREN A102, FREN A201, FREN A202, GER A101, GER A102, GER A201, GER A202, HIST A101, HIST A102, HIST A121, HIST A122, HIST A131, HIST A132, HNRS A192, HUM A211, HUM A212, JPN A101, JPN A102, JPN A201, JPN A202, LING A101, PHIL A101, PHIL A201, PHIL A211, PHIL A212, PHIL A301, PHIL A305, PHIL A313, PHIL A314, PS A331, PS A332, PS A333, RUSS A101, RUSS A102, RUSS A201, RUSS A202, SPAN A101, SPAN A102, SPAN A201, SPAN A202, THR A211, THR A212	AKL S105, AKL S106, AKL S107, AKL S108, AKL S109, AKL S110, AKL S205, AKL S206, AKL S207, AKL S208, AKL S209, AKL S210, COMM (was JOUR) S101, ENGL S200, ENGL S215, ENGL S217, ENGL S226, ENGL S261, ENVI S120, FREN S101, FREN S102, HIST S105, HIST S106, HIST S131, HIST S132, HUM S120, PHIL S101, PHIL S201, PHIL S301, SPAN S101, SPAN S102, SPAN S201, SPAN S202

SOCIAL SCIENCES (6 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
SOCIAL SCIENCES (6 cr)		
Complete two courses in two different disciplines from the following:		
ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X, ECON F101X, ECON F102X, ECON F111X, ECON F120X , ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X, JUST F110X, JUST F125X, JUST F251X, NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SPRT F281X, SWK F103X, WGS F201X	ANTH A101, ANTH A200, ANTH A202, ANTH A250, BA A151, CEL A292, COMM A255, COMM A280, ECON A101, ECON A102, ECON A120, ECON A210, ECON A256, EDEC A105, ENVI A212, GEOG A101, HNRS A292, INTL A101, JPC A104, JUST A110, JUST A175, JUST A251, LEGL A101, LSSS A111, PS A101, PS A102, PS A311, PSY A111, PSY A150, PSY A200, SOC A101, SOC A201, SOC A202, SWK A106, SWK A243, URS A121, WSGS A200	ANTH S101, ANTH S202, ANTH S211, ECON S100, ECON S201, ECON S202, GEOG S101, HIST S105, HIST S106, HIST S131, HIST S132, PS S101, PS S102, PS S202, PS S251, PSY S111, PSY S250, SOC S101, SOC S201

ADDITIONAL ARTS/HUMANITIES/SOCIAL SCIENCES (3-5 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
Additional ARTS/HUMANITIES/SOCIAL SCIENCES (3-5 cr)		
Complete one additional course from the Arts, Humanities or Social Sciences courses listed above.		

MATHEMATICS (3-4 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
MATHEMATICS (3-4 cr)		
Complete one of the following:		
MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X[1], MATH F251X[1], MATH F252X[1], MATH F253X[1], STAT F200X	MATH A104, MATH A115, MATH A121, MATH A151, MATH A152, MATH A155, MATH A221, MATH A251, MATH A252, MATH A253, STAT A200, STAT A253, STAT A307	MATH S113, MATH S151, MATH S152, MATH S251, MATH S252, STAT S200

[1] Or any math course having one of these as a prerequisite.

NATURAL SCIENCES (8 CREDITS)

To meet these UAF General Education course requirements	Use any of these UAA general education courses	Use any of these UAS general education courses
NATURAL SCIENCES (8 cr)		
Complete two of the following:		
ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, SCIA F101L	(OR complete UAA requirement of 7 cr, one of which must be a lab course) **Lab Courses:** ANTH A205 / ANTH A205L, ANTH A211/ ANTH A211L ASTR A103 / ASTR A103L, ASTR A104 / ASTR A104L, BIOL A102, BIOL A103, BIOL A108, BIOL A111, BIOL A111L, BIOL A112, BIOL A112L, BIOL A178 / GEOL A178, BIOL A179 / GEOL A179, CHEM A103 / CHEM A103L, CHEM A104 / CHEM A104L, CHEM A105 / CHEM A105L, CHEM A106 / CHEM A106L, ENVI A211 / ENVI A211L, GEOL A111 / GEOL A111L, GEOL A115 / GEOL A115L, GEOL A221, LSIS A102, PHYS A123 / PHYS A123L, PHYS A124 / PHYS A124L, PHYS A211 / PHYS A211L, PHYS A212 / PHYS A212L **Non-lab Courses:** ANTH A205, ANTH A211, ASTR A103, ASTR A104, BIOL A100, BIOL A102, BIOL A178, BIOL A200, CHEM A103, CHEM A104, CHEM A105, CHEM A106, ENVI A111, ENVI A211, GEOG A111, GEOL A111, GEOL A115, GEOL A178, PHYS A101, PHYS A123, PHYS A124, PHYS A211, PHYS A212	(OR complete UAS requirement of 7 cr, one of which must be a lab course) **Lab Courses:** BIOL S103, BIOL S104, BIOL S105, BIOL S106, BIOL S111, BIOL S112, BIOL S115, BIOL S116, CHEM S103, CHEM S105 & CHEM S105L, CHEM S106 & CHEM S106L, ENVS S102, GEOL S104, PHYS S123, PHYS S124, PHYS S211, PHYS S212 **Non-lab Courses:** ANTH S205, CHEM S100, CHEM S105, CHEM S106, GEOL S105, OCN S101, PHIL S206, PHYS S165

Alaska Native-themed Substitutions: UA System

If a student has satisfied the Alaska Native-themed requirement at either University of Alaska Anchorage or University of Alaska Southeast, that course will be used to satisfy the Alaska Native-themed requirement at UAF (p. 275).

Alternate Ways to Earn Credit

Exam Services

As a national test center, UAF Exam Services administers paper-and-pencil and computer-based exams. The office advises UAF students, prospective students and the community on national testing matters for college admissions and placement and for career and professional certification. Under the oversight of eCampus, UAF Exam Services also coordinates the College-Level Examination Program and can perform private proctoring.

For more information and exam registration, visit Exam Services in 131 Bunnell Building, call 907-455-2060, email uaf-testing@alaska.edu or visit UAF Exam Services online (https://ecampus.uaf.edu/exam-services/).

Credit for National Exams

There are several ways to earn college credit by receiving a passing score on a national exam. UAF currently accepts the following exams:

- College-level Examination Program (CLEP)
- College Board Advanced Placement Exams (AP)
- International Baccalaureate (IB)
- Credit for Language Testing
- Dantes Standardized Subject Tests (DSST)

For any of the following exam options, grades are not computed in the UAF GPA. Credit received for exams is not considered UAF residence credit and is not considered to be part of the semester course load for classification as a full-time student. Credit is awarded to current or previously enrolled degree students at UAF. Rules that apply to transfer courses (including the tables of substitutions) also apply to course credit received through a national exam. The credit for national exam options are briefly outlined here.

All exams from the exam services listed above will be awarded credit. Departments may review exams for direct equivalencies. If no equivalencies are determined, students will receive elective credit for successful completion, as determined under each exam section. Courses may be added as General Education Requirements (GER) based on exam documentation per the professional judgment of the Office of Admissions.

UAF Advanced Placement Credit

- **English**
  Students with ACT or SAT scores that place them in WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X (see Writing Course Placement Scores (p. 35) table) may receive local advanced placement credit for WRTG F111X upon completion of WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X with a grade of C or better.
  Students who have received transfer credit that substitutes for WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X with a grade of C or better and who meet the ACT or SAT test score requirement may also receive credit for WRTG F111X.
  To receive this credit, students must submit the Application for WRTG F111X Credit form to the Office of the Registrar. The form is available at the Office of the Registrar or the English Department.
- **Alaska Native Language**
  After completing a course in which the student was placed (above 101) and earning a B grade or higher, the student may ask to receive credit for the two immediately preceding prerequisite courses, if any. However, credit cannot be awarded for such courses if university credit has already been granted. Credit will not be awarded for special topics courses, individual study courses, literature or culture courses, conversation courses, or any course taught in English.
- Articulations may change or be added throughout the academic year. The admissions website (http://www.uaf.edu/transfer/) will have the most up-to-date information.

Credit for Prior Learning

The Academic Advising Center administers the credit for prior learning program, wherein students may earn undergraduate credit based on university-level learning they have obtained outside the classroom. Students can document the university-level learning they have gained through employment, volunteer service or other life experiences with a portfolio or copies of licenses and certificates earned. Certificate, associate or bachelor's degree students may earn up to 25 percent of total program requirements through the credit for prior learning program.

Credentials for admitted degree students who are currently enrolled are reviewed by faculty from participating departments who determine if this process is appropriate and make recommendations for awarding prior learning credit. Review is based on equivalency to courses listed in this catalog. Credit received for prior learning does not affect your GPA and is not considered residence credit. The university will award transfer credit for specified national and state authorizations, certificates, credentials and/or examinations (see Transferring Credits (p. 42)) that do not need credit for prior learning review. For further information or assistance, contact the Academic Advising Center, 510 Gruening Building, 907-474-6396 or uaf.advising@alaska.edu. The credit for prior learning student handbook is available in a pdf format (https://uaf.edu/advising/files/cpl/CPL-Handbook-2016.pdf).

UAF Credit by Exam

Credit by exam can be earned at UAF by students who are currently enrolled. It is up to the discretion of the department to decide which courses are available for credit by exam, the testing method and grading procedures (excluding those courses ending -90 through -99). Credit by exam may not duplicate a course for which credit has already been granted or in which the student is currently enrolled. Credit by exam may not be requested for audited courses until one year has passed since the end of the semester in which the course was audited.

There is a $40 per credit hour non-refundable fee that will be placed on the student's account when the form is processed by the Office of the Registrar.

The credit by examination form is available on the Office of the Registrar forms page (https://www.uaf.edu/reg/forms.php). For more information on credit by exam, contact the Office of the Registrar.

UAF Competency Testing

Students with appropriate background experience may complete certain components of the UAF general education requirements via competency testing. Credit by exam is not available.

- **Library Competency Exam**
  The Library Competency Exam, administered by UAF eCampus Exam Services, is offered to fulfill the bachelor's degree requirement for LS F101X. The LCE, offered daily in eCampus Exam Services for $30, is designed to test or verify a student's knowledge of standard library functions, services and organization. Students may take the LCE twice. There are copies of a study guide on hand at UAF eCampus in 131 Bunnell. While no credit is awarded for passing this exam, a score of at least 70 percent will fulfill the bachelor's degree requirements for LS F101X. Please contact eCampus Exam Services at 907-455-2060, uaf-testing@alaska.edu or 131 Bunnell Building for more information.
- **Computer Skills Placement Exam**
  The Computer Skills Placement Exam is offered to fulfill the degree requirement for AIS F101, required by students seeking a B.B.A. or B.A.M. degree at UAF. The Computer Skills Placement exam will be offered by CBSM. It is designed to test or verify a student's knowledge of information technology and file management procedures. While no credit is awarded for passing this exam, a score of at least 70 percent will fulfill the degree requirement for AIS F101. Fill out the form at the UAF Registrar's website (https://uaf.edu/reg/forms.php).
- **Oral Communication Competency Exam**
  Requests for competency testing for COM F141X will be considered only if, in the opinion of a member of the Communication and Journalism Department faculty, a student presents evidence of substantive prior experience in formal public speaking situations (competency testing is

not available for COM F131X). Neither prior oral intensive course work nor COM F432 is considered evidence of substantive prior experience. If the prior experience is sufficient, the individual will be asked either: a) to provide a video (not audio) recording of a formal public speaking presentation at least 10 minutes in length, or b) to present a 10-minute persuasive speech before a live audience, with at least one member of the Communication and Journalism Department faculty present. This process may be attempted only once. The date for live speeches will be established each semester, at a single time during the fourth to sixth week of classes. While no credit is awarded for passing this exam, a grade of at least a B (3.0) for either type of presentation will fulfill the general education requirements for COM F141X. For more information and an application for competency testing, contact eCampus Exam Services at 907-455-2060, 122 Bunnell Building, or the Department of Communication and Journalism at 907-474-7761 or 101 Bunnell Building.

College-Level Examination Program (CLEP)

- The College-Level Examination Program (CLEP) is a national testing program that awards college credit for some introductory courses. The exams cost $120 each (cost subject to change) and are administered by appointment only.
  See a list of CLEP general and subject exams approved for credit at UAF below. To register for a CLEP exam or for more information, contact UAF eCampus Exam Services at 907-455-2060 or uaf-testing@alaska.edu. The following criteria apply to CLEP exams:
- Students can earn up to 6 semester credits upon successful completion of a general CLEP exam in the discipline of college mathematics, humanities, natural sciences or social sciences/history. Students who have earned less than 6 credits in the discipline (or 3 credits for mathematics), from any source, will be awarded the difference in credits upon successful completion of the exam. Students who already have 6 or more credits in the discipline (or 3 credits for mathematics) will not receive credit for the exam. General CLEP exams previously evaluated by departments are listed in bold font in the CLEP Exams Currently Evaluated table.
- All CLEP exams are approved for credit. Departments may review exams to determine whether or not the exam is a direct equivalent to a current UAF course. If the exam is not a direct equivalent to a current UAF course, the exam will transfer in as an elective and can be counted towards GER at the discretion of the Office of Admissions. All exams that were previously evaluated for a direct equivalent are listed below. Please refer to the Transfer Credit website (https://uaf.edu/reg/transfer-credit.php) for the most recent equivalencies posted.
- Students may not duplicate a course for which credit has already been earned or in which the student is currently enrolled.
- Students must wait at least one year after the end of an audited course before taking the CLEP subject exam for that course.
- The minimum passing score for approved CLEP exams is 50, with the exception of the following foreign languages scores: **French** semester I and II minimum 50, semesters III and IV minimum 59; **German** semester I minimum 39, semester II minimum 50, semester III minimum 55, semester IV minimum 60; **Spanish** semester I minimum 39, semester II minimum 50, semester III minimum 57, semester IV minimum 63.
- Articulations may change or be added throughout the academic year. The admissions website (https://www.uaf.edu/transfer/) will have the most up-to-date information.

COLLEGE-LEVEL EXAMINATION PROGRAM EXAMS CURRENTLY EVALUATED

Examination Name	UAF Course Equivalent	Credits
Algebra (College)	MATH F122X or MATH F151X	3 or 4
American Government	PS F101X	3
Calculus	MATH F251X	4
Chemistry	CHEM F105X/CHEM F106X	8
College Composition	WRTG F111X	3
College Mathematics[1]	**Mathematics elective credits**	3
Financial Accounting	ACCT F261X	3
French Language	FREN F101X/FREN F102X	4/3
	FREN F201/FREN F202	3/3
German Language	GER F101X/ GER F102X	4/3
	GER F201/GER F202	3/3
History of the United States I	HIST F131[2]	3
History of the United States II	HIST F132X	3
Human Growth and Development	PSY F240[2]	3
Humanities[1]	**Humanities elective credits**[3]	6
Introductory Business Law	ABUS F241	3
Natural Sciences[1]	**Natural sciences elective credits**	6
Precalculus	MATH F151X/MATH F152X	4/3
Principles of Marketing	ABUS F260	3
Principles of Macroeconomics	ECON F102X	3
Principles of Microeconomics	ECON F101X	3
Principles of Management	ABUS F232	3
Psychology (Introductory)	PSY F101X	3
Social Sciences/History[1]	**Social sciences elective credits**[2]	6
Sociology (Introductory)	SOC F101X	3
Spanish Language	SPAN F101X/SPAN F102X	4/3
	SPAN F201/SPAN F202	3/3
Western Civilization I: Ancient Near East to 1648	HIST F101[2]	3
Western Civilization II: 1648 to Present	HIST F102X	3

1 General CLEP Exam. Students who have earned less than 6 credits in the discipline (or 3 credits for mathematics), from any source, will be awarded the difference in credits upon successful completion of the exam. Students who already have 6 or more credits in the discipline (or 3 credits for mathematics) will not receive credit for the exam.

2 Can be used to meet the social sciences general education requirement.

3 Can be used to meet the humanities general education requirement.

X = Course meets general education requirement.

The Table of GER Substitutions: Non-UA Institutions (p. 43) guidelines determine which courses may meet general education requirements.

Must have a minimum score of 50 in order to receive UAF credit, with the exception of foreign language exams (p. 48), where score determines the number of credits awarded.

College Board Advanced Placement Exams (AP)

UAF grants advanced credit for exam results of 3 or higher, or a score of 4 or 5 (effective fall 2016) for Calculus AB or BC, on the College Board (CEEB) Advanced Placement Tests (see the College Board Advanced Placement (AP) Exams Currently Accepted table below). These exams are usually taken during the junior or senior year in high school.

To receive CEEB advanced placement credit, ask that an official report of the exam results be sent to the Office of Admissions from the College Board. Credits may be earned for more than one advanced placement exam.

COLLEGE BOARD ADVANCED PLACEMENT (AP) EXAMS CURRENTLY ACCEPTED

Examination Name	UAF Course Equivalent	Credits
Art: History	ART F261X/ART F262X	6
Art, Studio: 2-D	Art electives[1,3]	6
Art, Studio: 3-D	Art electives[1,3]	6
Art, Studio: Drawing	Art Electives[1,3]	6
Biology	BIOL F115X/BIOL F116X	8
Calculus AB	MATH F251X	4
Calculus BC	MATH F251X/MATH F252X	8
Chemistry	CHEM F105X/CHEM F106X	8
Chinese Language and Culture	CHNS F101X/CHNS F102X	10
Computer Science A	CS F201	3
English Language & Composition	WRTG F111X or GER humanities elective	3
English Literature & Composition	WRTG F111X or GER humanities elective	3
Environmental Science	Natural sciences elective (meets general education requirement)	4
European History	HIST F101[2]/HIST F102X	6
French Language and Culture	FREN F101X/FREN F102X	7
German Language and Culture	GER F101X/GER F102X	7
Government and Politics: Comparative	PS F201X	3
Government and Politics: United States	PS F101X	3
Human Geography	GEOG F101X	3
Italian Language and Culture	Foreign Language electives[3]	8
Japanese Language and Culture	JPN F101X/JPN F102X	10
Latin	Foreign Language electives[3]	6
Macroeconomics	ECON F202X	3
Microeconomics	ECON F201X	3
Music Theory (score of 3)	MUS F103X	3
Music Theory (score of 4 or 5)	MUS F131[3]/MUS F133[3]	5
Physics 1	PHYS F123X	4
Physics 2	PHYS F124X	4
Physics C: Electricity and Magnetism	PHYS F212X	4
Physics C: Mechanics	PHYS F211X	4
Psychology	PSY F101X	3
Russian Language and Culture (Prototype)	RUSS F101X/RUSS F102X	8
Spanish Language and Culture	SPAN F101X/SPAN F102X	7
Spanish Literature and Culture	Spanish electives (200 level)[3]	2
	SPAN F201[3]	3
Statistics	STAT F200X	3
United States History	HIST F131[2]/HIST F132X	6
World History	HIST F100X	3

1 Portfolios may be submitted to the Art Department for further evaluation.
2 Can be used to meet the social sciences general education requirement.
3 Can be used to meet the humanities general education requirement.

X = Course meets general education requirement.

The Table of GER Substitutions: Non-UA Institutions (p. 43) guidelines determine which courses may meet general education requirements.

Must have a minimum score of 3, or a score of 4 or 5 for Calculus AB or BC, in order to receive UAF credit.

International Baccalaureate

The International Baccalaureate Diploma Program is a two-year curriculum for students ages 16 to 19 and is similar to the final year of secondary school in some countries in Europe. UAF grants advanced credit, with a waiver of fees, for IB higher-level and some standard-level exams on which students have earned a score of 4 or higher, or a score of 5 or higher for mathematics (see the International Baccalaureate Exams Currently Accepted table below). To receive IB credit, students should submit an official copy of their IB exam results to the Office of Admissions.

Articulations may change or be added throughout the academic year. The admissions website (http://www.uaf.edu/transfer/) will have the most up-to-date information.

INTERNATIONAL BACCALAUREATE EXAMS CURRENTLY ACCEPTED

Examination Name	Level	UAF Course Equivalent	Credits
Biology	HL	BIOL F115X/BIOL F116X	8
Chemistry	SL	CHEM F103X/CHEM F104X	8
Chemistry	HL	CHEM F105X/CHEM F106X	8
Classical Greek	HL	Humanities electives[1]	6
French	SL	FREN F101X/FREN F102X	7
French	HL	FREN F101X/FREN F102X	10
		FREN F201[1]/FREN F202[1]	6
German	SL	GER F101X/GER F102X	7
German	HL	GER F101X/GER F102X	10
		GER F201[1]/GER F202[1]	6
History of Europe & the Islamic World	HL	HIST electives[2]	6
Japanese	SL	JPN F101X/JPN F102X	8
Japanese	HL	JPN F101X/JPN F102X	10
		JPN F201[1]/JPN F202[1]	10
Language A1 (English)	HL	WRTG F111X and	3
		ENGL electives	3
Language A: Language & Literature		Not Accepted for Credit	-
Language A: Literature		Not Accepted for Credit	-
Literature and Performance		Not Accepted for Credit	-
Latin	HL	LAT F101X/LAT F102X	6
Mathematics	HL	MATH F251X	4
Mathematics w/Series & ODE option	HL	MATH F251X	4
		MATH F252X	4
Mathematics and Further Math	HL	MATH F251X, MATH F252X	8
	SL	MATH electives	3
Philosophy	HL	PHIL F102X	3
Physics	SL	PHYS F123X	4
Physics	HL	PHYS F123X/PHYS F124X	8
Russian	SL	RUSS F101X/RUSS F102X	8
Russian	HL	RUSS F101X/RUSS F102X	8
		RUSS F201[1]/RUSS F202[1]	8
Social & Cultural Anthropology	SL	ANTH electives	6
	HL	ANTH F242[2]	3
Spanish	SL	SPAN F101X/SPAN F102X	7
Spanish	HL	SPAN F101X/SPAN F102X	7
		SPAN F201[1]/SPAN F202[1]	6
Theatre	SL	FLPA F200X	3
Theatre	HL	FLPA F200X	3
		FLPA electives	1
20th-C World History: History of Africa	HL	HIST F100X substitute	3
		HIST electives	3
20th-C World History: History of the Americas	HL	HIST F100X substitute	3

		HIST electives	3
20th-C World History: History of Asia & Oceania	HL	HIST F100X substitute	3
		HIST electives	3
20th-C World History: History of Europe & the Middle East	HL	HIST electives[2]	6
Visual Arts	HL	ART F105X[1,3]/ART F161[1]	6

1 Can be used to meet the humanities general education requirement.
2 Can be used to meet the social sciences general education requirements.
3 Can be used to meet the arts general education requirement.

X = Course meets general education requirement.

The Table of GER Substitutions: Non-UA Institutions (p. 43) guidelines determine which courses may meet general education requirements.

If an international baccalaureate exam is not in this table, contact the Office of Admissions at uaf-admissions@alaska.edu for more information.

Must have a minimum score of 4 (or a score of 5 in mathematics) to receive UAF credit.

Credit for Language Testing

UAF accepts successful test results from Brigham Young University or other national testing programs (subject to approval from the Department of Foreign Languages and Literatures) in languages for which no CLEP test is available, for a maximum of 12 credits. The first 10 credits may be applied to the general education Humanities and/or Additional Arts/Humanities, Social Sciences requirement, and any additional credits will be awarded general humanities elective credit. Results must be submitted directly to the Office of Admissions by the testing agency. For more information on foreign language testing opportunities, contact UAF eCampus Exam Services at 907-455-2060 or uaf-testing@alaska.edu.

Students who are speakers of non-English languages transferring from foreign partner universities to UAF are exempted from taking a foreign language test to demonstrate fluency in that language. Complete the language exemption/GER credit waiver form and file it with the Office of Admissions. Upon approval, 3 credits of general education humanities and/or 3 credits of additional arts/humanities/social sciences general education requirements will be waived. This applies only to students participating in formalized articulation agreements established between UAF and partner institutions.

Articulations may change or be added throughout the academic year. The admissions website (http://www.uaf.edu/transfer/) will have the most up-to-date information.

Dantes Standardized Subject Tests

Dantes Standardized Subject Tests (DSST), a national program, offers exams in traditional academic, vocational/technical and business subject areas. Credit is awarded for successfully completing the tests, as recommended by the American Council on Education. All DSST exams are approved for credit. Departments may review exams to determine whether or not the exam is a direct equivalent to a current UAF course. If the exam is not a direct equivalent to a current UAF course, the exam will transfer in as an elective and can be counted towards GER at the discretion of the Office of Admissions. DSST exams cost $120 each (cost subject to change).

A list of DSST exams that are currently approved for transfer can be found here (https://docs.google.com/spreadsheets/d/1SRP5-LZr3CEg8cNHunt-tv6nxD7jMsF__pHa0eZh3wg/edit/?usp=sharing).

Articulations may change or be added throughout the academic year. The admissions website (http://www.uaf.edu/transfer/) will have the most up-to-date information.

RESOURCES AND TUITION

Academic Advising and Learning Assistance

Academic advising is a vital part of a student's experience at UAF. In fact, academic advising is so important many UAF programs require degree students to meet with their academic advisor at least once a semester, including the summer semester, before students can register for classes. An academic advisor can assist students in developing an educational plan encompassing both academic and career goals, as well as major and/or minor requirements. Advisors are also able to help build a semester-by-semester study plan to ensure timely graduation. Students can access DegreeWorks through UAOnline (https://uaonline.alaska.edu) to view and track all major and degree requirements. Newly admitted baccalaureate degree students entering UAF with less than 30 credits will be advised by the Academic Advising Center's First Year Program Advisors. All other bachelor's students will meet with either a faculty member from their major or a staff advisor within their school or college. Visit the newly admitted student page (https://www.uaf.edu/admitted/advising.php) for a list of academic advisors' contact information.

The Academic Advising Center on the Troth Yeddha' Campus in Fairbanks helps not only first-year baccalaureate degree students entering UAF with less than 30 credits, but their advisors also serve exploratory studies and pre-major students, as well as students in majors who are exploring other bachelor's degrees. Certificate, associate, vocational and technical program students are advised at the Community and Technical College's Student Advising and Registration Center, in downtown Fairbanks. Alaska Native students and students from rural Alaska are encouraged to seek an academic advisor from Rural Student Services, in the Brooks Building. Students attending community campuses outside Fairbanks should contact local student services staff for information on registration, deadlines and other policies unique to their campus or region.

Academic Advising Center & First Year Advising

Academic Advising Center advisors offer comprehensive guidance for exploratory studies and pre-major students, and first-year bachelor's degree students entering UAF with less than 30 credits. AAC advisors also assist in serving student-athletes, nondegree students, academically disqualified students, and students who are in transition from a declared major to another degree program. The center is also a clearinghouse for general university and degree information. Academic advisors at the AAC also help students with information about nontraditional credit options like credit for prior learning and meeting requirements for pre-professional academic programs like law, dentistry, architecture, pharmacy, physician assistant or other pre-professional programs outside of what is offered in Alaska.

The Academic Advising Center, in cooperation with other departments, provides academic support with reference materials, referrals and study assistance to build and refresh knowledge in writing, math, reading and science. Advisors can also help students identify their interests, abilities and learning styles using assessments, inventories and other tools that provide guidance about careers and academic majors. These programs are free for UAF students. Much like Rural Student Services or Student Support Services, the Academic Advising Center provides comprehensive academic advising services, including assisting with admissions, registering for classes, explaining academic requirements, exploring degree options, career advising, financial aid and scholarship resources, as well as student advocacy and university skills programming.

Contact the Academic Advising Center by visiting 510 Gruening, calling 907-474-6396, or emailing uaf-advising@alaska.edu (uaf.advising@alaska.edu). Specific information for students can be found on the Academic Advising Center website (https://www.uaf.edu/advising/).

Community and Technical College Student Advising and Registration Center

The Community and Technical College Student Advising and Registration Center provides advising and support for students in A.A. and A.A.S. degrees, certificates and specialized training programs to contribute to a successful learning experience and transition to a career. Staff recognizes the unique concerns of adult and returning students as well as traditional students entering college. Academic advisors can help with

pre-admission advising, academic assessment, placement, and financial aid information and applications, as well as with choosing a major.

The center offers academic support through developmental courses, workshops, classroom presentations and one-on-one assistance to help conquer academic hurdles. In addition, advising staff provide personalized career advice based on job market information and a student's personal goals. Staff ensures that students have a broad base of support as they plan the move from college to career.

For more information, contact the Student Advising and Registration Center by visiting the Community and Technical College located at 604 Barnette St., Fairbanks, AK 99701, calling 907-455-2800 or visiting the Student Advising and Registration Center website (https://www.ctc.uaf.edu/student/).

Rural Student Services

Rural Student Services is the vital link between the Fairbanks campus and rural Alaska communities. RSS provides comprehensive academic advising services, including assisting with admissions, registering for classes, explaining academic requirements, exploring degree options, career advising, financial aid and scholarship resources, as well as student advocacy and cultural programming.

RSS functions as a student support center in the Brooks Building on the UAF Troth Yeddha' Campus in Fairbanks. RSS advisors recognize the unique cultural components of Alaska Native and rural Alaska students at UAF.

RSS is committed to responding to student needs by providing quality services to Alaska Native and rural students who expend positive effort in the pursuit of higher education and its opportunities. Our comprehensive approach is unique in recognizing students' efforts to develop and maintain academic and personal balance as they contribute to the cultural richness of the University of Alaska Fairbanks and beyond.

Students who are enrolled at UAF and are Alaska Native or come from a rural area are encouraged to use RSS' resources and services.

For more information visit Rural Student Services in the Brooks Building, call 907-474-7871, email uaf-rss@alaska.edu or visit the Rural Student Services website (https://www.uaf.edu/ruralss/).

International Student Advising

Students from other countries face many situations that American students do not encounter. International students must comply with immigration regulations, adapt to a new and often strange culture and adjust to the American system of higher education. International student advisors are a liaison between the student and various U.S. immigration agencies. Advisors issue documents so students can apply for visas, help students adjust to UAF and provide immigration and personal assistance.

For more information, contact International Student and Scholar Services at 907-474-7677, uaf-isss@alaska.edu or at the International Student and Scholar Services website (https://www.uaf.edu/isss/).

Student Support Services

Student Support Services provides UAF bachelor's degree students opportunities for academic development, helps them meet college requirements and motivates them to complete their degree program. SSS addresses the unique challenges faced by students from non-college-going and limited-income backgrounds and supports students experiencing a documented disability by helping them take advantage of academic support resources at UAF. The program is primarily funded by two TRiO grants from the U.S. Department of Education, as well as additional institutional support.

Services include comprehensive advising, tutoring and peer coaching, free printing, first-year learning communities for STEM and non-STEM majors, academic mentoring, cultural and social engagement, laptop and media loans and a supportive environment where students are valued. Eligible first-year students attending UAF in person are encouraged to apply to the Emerging Scholars Academy or Emerging STEM Scholars Academy summer bridge program and cohort learning community.

All services are free to eligible students. The program is staffed with College Reading and Learning Association-certified student tutors as well as 24/7 online tutor access.

To receive SSS program services, a student must have an academic need and meet one or more of the following criteria:

- be financially limited according to federal criteria, or
- be a first-generation college student (meaning neither parent has earned a bachelor's degree from the U.S.), or
- have a documented physical or learning disability.

Participants must also be U.S. citizens or permanent residents, be enrolled in at least 9 credit hours and be admitted to and pursuing a bachelor's degree from UAF.

For information, visit Student Support Services in 514 Gruening, call 907-474-6844, email trio.sss@alaska.edu or visit the Student Support Services website (https://www.uaf.edu/sss/) for an application.

Tutoring Services

Information about lab hours for all Fairbanks campus academic support resources and tutoring options is on the Academic Advising Center website (https://www.uaf.edu/advising/student-resources/). Most of these resources are free.

- **Accounting Lab**
  The Accounting Lab provides tutoring services to students enrolled in accounting courses. Located in 219 Bunnell Building, the lab is staffed by accounting graduate students and outstanding undergraduate students. Lab hours are assigned (but flexible) Monday through Saturday. For more information, contact the Accounting Program at 907-474-7461.
- **Chemistry Learning Center**
  For more information, contact the Department of Chemistry and Biochemistry at 907-474-6287 or visit the Chemistry Learning Center website (https://www.uaf.edu/chem/student_resources/clc/).
- **Developmental Education Math, English and Reading Labs**
  The Department of Developmental Education provides academic support labs in math, English and reading. These labs are at each rural campus, at the Community and Technical College, and on the Fairbanks campus. Labs provide tutoring and small-group instruction for students taking developmental, academic or vocational math, and reading and writing courses. Academic support labs supplement and support student learning, as well as improve and expand student skills in these areas. For more information, contact your local campus or the Department of Developmental Education at 907-474-1112 or 1-877-747-1580 or visit the CTC Student Success Center website (https://www.ctc.uaf.edu/student-services/student-success-center/).

- **Engineering Tutoring**
  The College of Engineering and Mines offers tutoring for various engineering courses each year. Visit the CEM tutoring website (https://www.uaf.edu/cem/resources/tutoring.php) for more information.
- **Foreign Language Laboratory**
  The language lab, in 609 Gruening, provides assistance in French, Spanish, Japanese, German and Russian. Computer programs, CDs, cassettes and spell-checkers are available. Call the Department of Foreign Languages and Literatures at 907-474-7396 for lab hours.
- **Math and Statistics Laboratory**
  This lab provides flexible-hour assistance seven days a week to students enrolled in mathematics and statistics courses. The lab is coordinated by faculty, and services are provided by students. For more information, visit the Math and Statistics Lab website (https://www.uaf.edu/dms/mathlab/math-and-stat-lab/) or contact the Math Department at 907-474-5427.
- **Communication Center**
  The Communication Center provides coaching on refining presentation topics and presentation organization. Students receive immediate, constructive suggestions from Communication Center coaches. The center is usually open weekdays and some evenings. Visit the Communication Center's website (https://www.uaf.edu/speak/) for center hours or contact them at 907-474-5470 or uaf-speakingcenter@alaska.edu.
- **Writing Center**
  The Writing Center, in 801 Gruening, is open Sunday through Friday for tutoring all enrolled students. The staff, composed of English graduate teaching assistants and outstanding undergraduate students, reviews student writing projects at any stage, whether planning, drafting or revising. Tutors are available to help students improve grammar and usage. For more information, call the Writing Center at 907-474-5314.

Alumni Association

The UAF Alumni Association is an independent nonprofit that connects and supports UAF graduates and former students. The association works closely with the University Advancement team. UAFAA offers scholarships, sponsors networking events in Alaska and the Lower 48 including the Nanook Rendezvous reunion, and advocates on behalf of the university before the state Legislature. Through the association, alumni have the opportunity for lifelong involvement with UAF and their former classmates. For more information contact the alumni association at 907-474-7081, uaf-alumni@alaska.edu or the alumni association website (https://www.uaf.edu/alumni/).

Army ROTC

UAF is home to the only Army Reserve Officers Training Corps in Alaska. The military science program is staffed with regular Army and Alaska National Guard officers and noncommissioned officers. Students are challenged by the curriculum to develop interpersonal, mental and physical skills, cultivating leaders of character capable of bearing the responsibilities of tomorrow's civil and military leadership positions.

The focus of ROTC is academic excellence and preparing leaders. All students enrolled in at least one course are assigned a faculty member to provide leadership and academic counseling.

ROTC offers a variety of resources, including scholarships, athletic teams and academic assistance. Neighboring Fort Wainwright offers students numerous opportunities to participate in military activities such as the Arctic biathlon competition, mentorships and recreational activities in an Arctic environment. For more information visit the UAF ROTC website (https://www.uaf.edu/rotc/) or call 907-474-7501.

Financial Assistance

Army ROTC provides financial assistance in the form of scholarships and stipends. The current stipend is $420 monthly and is tax-free for all contracted cadets. ROTC scholarships also pay 100% of tuition and mandatory fees and provide $1,200 annually for books and supplies. Scholarships are available for two to four years and may be used for graduate studies.

Army ROTC also offers partnership, or simultaneous membership, programs with the Reserves and National Guard. These partnerships provide a suite of financial assistance programs for ROTC cadets, including tuition assistance, GI Bill® benefits, bonuses, stipends and pay. In addition, Army ROTC at UAF is granted a limited number of room waivers and chancellor's tuition waivers for qualified students. For more information, call the Army ROTC Recruiting Officer at 907-474-6852, or the the Army ROTC Human Resources Tech at 907-474-6851 or visit the UAF ROTC website (https://www.uaf.edu/rotc/).

Curriculum

The military science curriculum is an approved minor that includes credit for one writing- and one oral-intensive course. Classes, including outdoor skills labs, are offered every semester. Labs give students hands-on instruction in areas such as rappelling, skiing, first aid, land navigation and survival.

Army ROTC comprises two levels: the basic course followed by the advanced course. Credit for the basic course can be earned in three ways: by completing freshman and sophomore military science classes, by completing a four-week summer camp or by having prior military basic training. Students incur no obligation to Army ROTC or the Armed Forces during the basic course.

Students who complete the basic course may enter the advanced course, which is normally reserved for juniors and seniors pursuing a commission in the regular Army, Army Reserves or Army National Guard. For more information, contact the Department of Military Science at 907-474-6852, 907-474-7501, uaf-army-rotc-dept@alaska.edu or through the UAF ROTC website (https://www.uaf.edu/rotc/).

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website *(*https://www.benefits.va.gov/gibill/*).*

Associated Students of the University of Alaska Fairbanks

The Associated Students of the University of Alaska Fairbanks office is located in the Wood Center (https://uaf.edu/woodcenter/). All students paying the Fairbanks consolidated fee are ASUAF members. ASUAF runs service departments and programs dedicated to the interests and welfare of UAF students. ASUAF represents UAF students to the university administration, the University of Alaska Board of Regents and the Alaska Legislature. Officers are selected by the student body in elections held every fall and spring semester.

For more information, visit the ASUAF website (https://www.uaf.edu/asuaf/), email asuaf.office@alaska.edu or call 907-474-7355.

Athletics

The National Collegiate Athletic Association is the primary association that governs and controls intercollegiate athletics on the national level. The Alaska Nanooks athletic program is a multidivisional member of the NCAA, with 10 teams competing at the Division I and Division II levels, including men's and women's basketball, men's and women's cross country running, men's and women's Nordic skiing, coed rifle, women's volleyball, women's swimming, and men's ice hockey. For intercollegiate athletics information, call 907-474-6665 or visit the Alaska Nanooks website (https://www.alaskananooks.com).

The Alaska Nanooks have conference affiliations with the Great Northwest Athletic Conference, Rocky Mountain Intercollegiate Ski Association, and Pacific Collegiate Swim and Dive Conference. The men's ice hockey team competes independently. The 11-time NCAA champion Alaska Nanooks rifle team competes in the Patriot Rifle Conference.

The Ernest N. Patty Center, home of the Alaska Nanook teams, was completed in 1963 and houses a 1,650-seat gymnasium, a 25-yard swimming pool, athletic training room, ticketing box office, varsity weight room, rifle range, administrative offices and locker rooms with saunas. In 1979, the 1,300-seat Patty ice arena was built to the west of the Patty Center. The Alaska Nanooks men's hockey team practices at the Patty ice arena and competes off campus at the 4,595-seat Carlson Center.

Campus Mail Center

To receive mail on the Fairbanks campus, students who live on campus must rent a campus mailbox, located on the lower level of Constitution Hall. There is no alternative for mail delivery on campus. All mail for students living on campus comes to the Campus Mail Center and is not delivered anywhere else on campus. This includes U.S. Postal Service, FedEx and UPS mail.

The mailbox rental fee is $75 per semester and is billed automatically to the student's account at the beginning of each semester (fall and spring). Billing will continue until the mailbox account is closed through SCLogic (https://uaf.sclintra.com/). Students who do not live on campus may also rent mailboxes as long as enough are available. Limited numbers of larger boxes are available for an additional cost. There is a $25 charge for lost or unreturned keys.

Renting mailboxes, updating address information and closing mailboxes are done through SCLogic (https://uaf.sclintra.com/).

Mailboxes are for individual or family use. They are not to be shared with other students. Mail not addressed to the box holder will be returned to the sender. USPS mail is delivered to box holders only through their mailboxes; UPS and FedEx will deliver packages to the Campus Mail Center using the physical address: 1692 Tok Lane Room #107, Box 75xxxx (using the student's mailbox number), Fairbanks, AK 99775. A delivery notice will then be placed in the student's mailbox. Parcel lockers are available for most package pickups.

The Campus Mail Center also serves as a Passport Application Acceptance Office open to the public. The center's Passport Services webpage (https://www.uaf.edu/fs/services/passport-services.php) has forms and information about services, fees, appointment scheduling procedures and more.

For more information, visit the Campus Mail Center website (https://www.uaf.edu/fs/services/campusmailcenter/). Questions? Email us at uaf-campusmailcenter@alaska.edu, call 907-474-7215 or write to UAF Campus Mail Center, P.O. Box 750100, Fairbanks, AK 99775-0100.

Campus Recreation

Recreational opportunities are organized by Nanook Recreation. Activities are housed primarily in the Student Recreation Center, the Patty ice arena and the Patty Center. For information on hours, recreational activities or intramurals, call 907-474-5886 or visit the Nanook Recreation website (https://www.uaf.edu/recreation/).

The SRC offers a wide variety of structured and unstructured recreational activities. The SRC provides a weight room and a large gym floor that can be divided into courts for volleyball, tennis, badminton, soccer and basketball. A two-story indoor climbing wall, an eight-lap-per-mile running track, an aerobics/dance floor and cardiovascular machines provide many options for a well-rounded workout. Eligible students can access SRC facilities when their fees are paid — remember to bring your workout shoes as street shoes are not allowed on the courts or floors.

Intramural leagues, competitions, and fitness and recreation instruction give students many opportunities to stay fit, learn lifetime skills and use their existing skills. Nanook Recreation staff members develop and support sports clubs in response to student interests and available resources.

Outdoor fields for soccer and Ultimate Frisbee, an outdoor climbing wall — which in winter is converted to an ice climbing wall — and a disc golf course are next to the SRC, and the campus has many miles of cross-country trails for running, walking and skiing, including a lighted ski trail. In addition, recreational skating, recreational hockey, and intramural hockey take place at the Patty Ice Arena, also next to the SRC. Students taking 6 credits in a classroom and paying the Fairbanks consolidated fee also have the opportunity to receive a season pass to Ski Land at no additional charge. Ski Land has the farthest north chairlift in North America, ski and snowboard rentals, miles of trails, a terrain park and an aurora viewing lodge. Visit the Nanook Recreation website (https://www.uaf.edu/recreation/) for more details. This program may be renewed annually after this publication.

Explore Alaska's wild frontier by joining an Outdoor Adventures excursion. OA organizes a variety of outings, such as hikes, whitewater raft trips and rock climbing excursions. OA also offers courses such as ice climbing, winter camping and wilderness leadership. Equipment is available for rent, including backpacks, canoes, cross-country skis and much more. Visit the Outdoor Adventures office in the Student Recreation Center or on the Nanook Recreation website (https://www.uaf.edu/recreation/) for more information.

Students with disabilities are encouraged to participate in campus recreation programs. Anyone confronted with any barrier to participation is urged to contact the SRC office.

Career Services

Career Services is here to provide students and alumni with professional advice, guidance and networking opportunities. The office also provides career counseling, major exploration and job/internship search assistance. The Career Services advisors review resumes and cover letters, conduct practice interviews and provide online resources through

the Career Services website. Information about employment, internships and on-campus jobs is available by appointment.

Students and alumni can network with employers and explore careers by participating in on-campus recruitment events and attending career fairs where students can apply for full-time employment and internships with local, statewide and national employers. Career Services also supports the use of Handshake, a career management platform for employers, students and alumni. All students and alumni have access to their personalized Handshake account. Career Services is available to help students use this platform.

Career Services is on the third floor of the Eielson Building in room 304. For more information, call 907-474-7596, email uaf-career@alaska.edu or visit Career Services online (https://www.uaf.edu/career/).

Continuing Education and Professional Development

The Community and Technical College offers training and continuing education programs to meet employment needs in the trades and professions. In response to individual and community demands, CTC provides short courses, noncredit workshops, supervisory and customer service skill seminars for local businesses and agencies, and general programs for cultural enrichment. Programs can be tailored to a specific group or need, and offer an economical way to improve workforce development skills.

For more information about professional development, call 907-455-2869.

Cooperative Extension Service

The Cooperative Extension Service is part of the largest informal education system in the world, connecting Extension programs and land-grant colleges and universities in every U.S. territory and state.

Whether teaching people how to grow food in Alaska's diverse climates, helping them safely preserve their harvest or building stronger communities through youth development, Extension Service staff have provided research-based, practical education to Alaskans since 1930. Extension now offers community outreach and engagement programs in all areas of the state through in-person and remote opportunities.

UAF's outreach role is filled in part by Extension faculty and staff in Anchorage, Bethel, Delta Junction, Dillingham, Fairbanks, Juneau, Kodiak, Nome, Palmer, Sitka and Soldotna.

As the state's gateway to the university system, Extension serves some 50,000 Alaskans annually, providing a link between Alaska's diverse people and communities by interpreting relevant knowledge of interest to Alaska residents. Major issue areas include food safety and security; health; climate change; energy; youth, families and communities; and economic development.

Extension has produced hundreds of publications and videos on a variety of topics with practical information that Alaskans can use. These are available at district offices or online at the Extension website (https://www.uaf.edu/ces/).

For more information, call 907-474-5211 or 877-520-5211 toll-free, or visit the Cooperative Extension Service website (https://www.uaf.edu/ces/).

Developmental Education

The mission of developmental education at UAF is to make educational opportunity and success possible for all students by developing the skills and attitudes necessary to achieve academic excellence and student success and to develop lifelong learning skills.

Developmental education courses prepare students for university academic and vocational/technical programs by improving skills in math, writing and reading. Study skills classes prepare students to successfully negotiate the university experience. A student's need for developmental education courses is determined by high school transcripts, test scores, other achievement data and discussions with counselors, advisors and instructors. Students may also take developmental education courses when they want to improve their skills or proficiency.

There are three categories of developmental education courses:

- developmental math
- developmental English (writing skills)
- developmental studies (reading and study skills)

Descriptions of developmental education classes are listed in the courses section under math, writing and developmental studies.

For more information, contact the Department of Developmental Education at 907-455-2869 or visit the Developmental Education website (https://www.uaf.edu/deved/).

Dining

The UAF Dining Experience

UAF Dining offers a welcoming, affordable dining experience for Fairbanks residential and commuter students. With multiple locations on the Fairbanks campus, you will find something to satisfy all your dining needs. All of them accept cash, BearBucks, Munch Money and credit cards. Please visit the UAF Dining website (https://www.uaf.edu/dining/) for more information on each location.

MEAL PLAN OPTIONS

Meal plans are combinations of block meals and Munch Money. All-you-care-to-eat block meals can be used at Dine Forty-nine and as cash equivalency up to $8 at Fairbanks campus dining locations. Munch Money is used like cash at all dining locations and most vending machines on campus.

MEAL PLANS

Meal Plan	Block Dinners	Munch Money	Price per semester	Available to
Ultimate Monthly Block	1 for each day of the month	$2,000	$3,095	All
Aurora Block	20 per month	$1,700	$2,695	All
Nanook Block	15 per month	$1,500	$2,325	All
Denali plan	0	$2,795	$2,795	All
Blue plan	0	$2,395	$2,395	All

Gold plan	0	$1,295	$1,295	Graduate students and Cutler Apartment residents
Cub plan	5 per month	$600	$850	Graduate students and Cutler Apartment residents

USING YOUR MEAL PLAN

Blocks and Munch Money are accessed using the Polar*Express* student ID card. With all meal plans, you have the option to eat at any campus dining location or to make purchases at most campus vending machines.

All students living in a residence hall and Cutler Apartments are required to purchase a meal plan. UAF also offers meal plans to students not living on campus. Students wishing to share meals with others may do so as long as they are present. For more information on meal plan options and plan details, please review the Dining Services program terms and conditions (https://uaf.edu/dining/forms-and-feedback.php).

All pricing is per semester. Students will automatically be enrolled in the same meal plan in the spring semester unless Dining Services is notified in writing of a different selection. These plans are non-transferable. Monthly block meals will reset on the first of each month, weekly blocks will reset on Sundays. Up to $250 in leftover Munch Money from the fall semester will be added to the spring meal plan. All remaining Munch Money expires at the end of the academic year in May if not used. Unused blocks and Munch Money are nonrefundable.

Dining services on campus are provided by UAF partner Chartwells Higher Education Dining Services, an international food and facilities management services company. Check Dining Services' website (https://www.uaf.edu/dining/) for additions or changes.

Where To Get More Information

Dining Services
University of Alaska Fairbanks
309 Eielson Building
P.O. Box 757815
Fairbanks, AK 99775-7815
Email: uaf-dining@alaska.edu
Telephone: 907-474-6661

Disability Services

Disability Services strives to ensure universal access to classes, coursework, housing, programs and activities. UAF has designated Disability Services to determine reasonable accommodations for students with disabilities. Accommodations are free and available to any student who qualifies as an individual with a disability or chronic illness and is enrolled in at least 1 credit hour or is registered for a university-sponsored program.

UAF Disability Services serves students who are enrolled in classes at the Fairbanks campus, as well as the Bristol Bay, Chukchi, Interior Alaska, Kuskokwim, Northwest, and Community and Technical College campuses, eCampus, and the College of Rural and Community Development.

Disability Services uses an interactive process designed to be convenient for students. It starts with a simple conversation. Our first goal is to better understand your unique experience. We then partner with faculty and staff to provide academic, university housing and programmatic accommodations.

For more information, contact Disability Services at 907-474-5655, email uaf-disability-services@alaska.edu or visit the Disability Services website (https://www.uaf.edu/disabilityservices/).

E-learning

UAF's eCampus offers an alternative for anyone preferring an online educational option. The advantage of online learning is its flexibility. Students select their own hours of study and work in the surroundings they choose. E-learning offers the freedom to structure a personal academic schedule and the flexibility to continue educational progress, even when it is impossible or challenging to attend scheduled, face-to-face classes.

UAF eCampus offers more than 450 asynchronous courses in 60 disciplines and offers full degrees and certificates completely online. eCampus courses follow all university calendars and deadlines and must be completed within the semester time frame. These courses use a learning management system (typically Canvas). Students are required to have reliable Internet access to complete eCampus courses and may be required to have quizzes or exams proctored.

For UAF students, eCampus courses count as residence credit. All students can enroll in eCampus courses via UAOnline (https://uaonline.alaska.edu). When a student enrolls in an eCampus course, the course may be used to determine full-time/part-time status and eligibility for financial aid and scholastic action. The grade will average in both semester and cumulative GPAs.

Information on course offerings, online certificates and degrees, enrollment information and course descriptions can be found at the eCampus website (https://ecampus.uaf.edu). For more information contact UAF eCampus in 131 Bunnell Building on the Troth Yeddha' Fairbanks Campus, by phone at 800-277-8060 or 907-455-2060, via email at uaf-ecampus@alaska.edu or at the eCampus website (https://ecampus.uaf.edu).

The University of Alaska provides many possibilities for students to take distance-delivered courses. The campuses at Anchorage, Fairbanks and Juneau, along with their community college networks, offer hundreds of courses using a variety of delivery modes. Opportunities for students who prefer distance-delivered courses can be found at the University of Alaska distance learning website (https://distance.alaska.edu).

Equity and Compliance

Staff in the Department of Equity and Compliance (DE&C) lead UAF's diversity, equity, inclusion and accessibility efforts focused on building inclusive systems and a welcoming environment at UAF. This includes strategic planning, prevention programming, training and addressing complaints of discrimination and sexual harassment. Staff ensure equality of employment and educational opportunities and work to eradicate discriminatory practices.

DE&C staff investigate complaints of discrimination and sexual harassment and work with parties to find a resolution. If students or employees believe they are being treated differently because of their

race, religion, color, national origin, citizenship, age, sex, physical or mental disability, status as a protected veteran, marital status, changes in marital status, pregnancy, childbirth or related medical conditions, parenthood, sexual orientation, gender identity, political affiliation or belief, genetic information or another legally protected status, they can lodge a complaint with DE&C. Complaints can be filed online (https://www.uaf.edu/equity/), over the phone or in person by visiting the office.

The Department of Equity and Compliance is located on the third floor of Constitution Hall at 1692 Tok Lane. For more information, call 907-474-7300 or visit the DE&C website (https://www.uaf.edu/equity/).

Exam Services

As a national testing center, UAF Exam Services administers paper-and-pencil and computer-based exams. The office advises UAF students, prospective students and the community on national testing matters for college admissions and placement and for career and professional certification. Under the oversight of eCampus, Exam Services also coordinates the College-Level Examination Program and can perform private proctoring.

For more information and exam registration, visit Exam Services in 131 Bunnell Building, call 907-455-2060, email uaf-testing@alaska.edu or visit UAF Exam Services online (https://ecampus.uaf.edu/exam-services/).

Exploratory Studies

Students pursuing a bachelor's degree who haven't declared a major or haven't decided which major to pursue are admitted as exploratory studies students. Exploratory studies students usually take courses required for the university's general education requirements. Many of these courses are the same for all majors and allow the student to make progress toward completing degree requirements while at the same time investigating subject areas that may help choose a major or career. Exploratory studies students work with academic advisors in the Academic Advising Center who encourage exploring, selecting and committing to an appropriate major. All exploratory studies students must declare a major before they have earned 60 credits. To declare a major, simply complete a change of major form available from the Office of the Registrar or on the Registrar's website (https://www.uaf.edu/reg/forms/). Students receiving GI assistance or veteran's benefits may be required to change to a declared major to keep their benefits award. Students must have declared a major in order to participate in the Western Undergraduate Exchange program.

The vice provost functions as the dean for general studies and undeclared students, and oversees academic assistance and actions concerning general studies and undeclared students.

For more information, contact the Academic Advising Center at 907-474-6396 or the vice provost's office at 907-474-2764.

Pre-Major

Students admitted in pre-major standing have not yet met the admission requirements for bachelor's degrees. A bachelor's-intended student will work with advisors in the Academic Advising Center, but it is helpful to also contact the department of the intended major. Pre-major students will work with an academic advisor to determine the best selection of courses to pursue their desired major, as well as complete any additional admittance requirements into their desired program. Students who are in good standing and have completed 14 credits at the 100 level or above with a C grade average (2.0) or better, of which 9 credits must satisfy baccalaureate general education requirements, will be changed to exploratory studies major status. The vice provost will notify students of their change of status and inform the registrar. Exploratory studies students can then use the change of major form to move from exploratory studies to their desired major. Admittance into a desired major is determined by the completion of individual program requirements and the approval of the department chair.

Honor Societies

For information or a current list of honor societies, contact the Honors College (https://uaf.edu/honors/) at 907-474-6612 or the Student Leadership and Involvement Office (https://www.uaf.edu/sli/) at 907-474-1170.

Honors College

The UAF Honors College provides opportunities for students to pursue excellence in academic and personal development. We foster critical and independent thinking and help students become informed, responsible and active citizens. Honors students have access to small classes, research opportunities, intensive advising and scholarships. Students are encouraged to participate in service, leadership, research, study abroad, internships and other opportunities that contribute to their personal growth.

Eligibility

Students who meet at least one of the following criteria are automatically eligible for admission to the Honors College and can opt-in at the Honors College website (https://www.uaf.edu/honors/).

- 3.5 or higher cumulative GPA from high school (weighted)
- UA Scholar
- Highest-tier Alaska Performance Scholarship awardee
- Alaska Native Science and Engineering Program (ANSEP) student
- Rural Alaska Honors Institute (RAHI) graduate
- Biomedical and Student Training (BLaST) student
- Student has earned at least 30 credits through the University of Alaska Advantage Program

Students who do not meet at least one of these eligibility criteria, but are interested in petitioning for admission to the Honors College, are strongly encouraged to do so at the Honors College website (https://www.uaf.edu/honors/prospective-students/application-requirements.php). Petitions include an academic statement, letters of recommendation and an interview with Honors College staff and students.

Program Features

Honors students complete a flexible schedule of courses that includes honors sections of general education courses and courses developed specifically for the Honors College. Other courses may be contracted for honors credit by students who work with individual professors. With approval by the director, students who study abroad may earn up to 6 honors credits for the academic courses they take at their host universities. Undergraduate students who complete graduate courses may count those courses toward their honors course requirement. In all cases, courses will only count toward honors distinction if the student

earns a grade of B (3.0) or higher. Honors students are expected to complete a minimum of 6 honors credits each academic year.

The Honors College offers students intensive advising with an opportunity to develop a personal plan for their UAF years that builds in generous scholarships, extracurricular opportunities, research, leadership, service and more to meet the goals of each student.

The Honors House, located in the heart of campus, provides honors students with a casual and comfortable home away from home. The house includes computer labs, a smart classroom, quiet study areas, a kitchen, a laundry room and a place for social gatherings.

The Honors College also features a Living-Learning Community (LLC) for first-year students. The Honors LLC allows students to live in a supportive environment, plan and participate in honors events with students who share similar interests, and gain a deeper connection to the Honors College.

College Requirements

To graduate as a University Honors Scholar, students must fulfill GPA, capstone project or thesis, and honors course and credit requirements.

In order to graduate, honors students must maintain a cumulative GPA of at least 3.25.

In addition to the other college requirements, students must work with a faculty mentor to complete a capstone thesis or project that includes a written component and an oral presentation.

University Honors Scholar designation is awarded at commencement to students who complete 12 credits of honors coursework including specific honors courses, elective honors courses, and a capstone project or thesis, in addition to other program requirements.

Any student who, in addition to completing the honors capstone, completes 18 credits of honors coursework is recognized as a University Honors Scholar with Distinction, so long as their GPA is 3.5 or higher. In addition, students who wish to graduate as Honors Scholars with Distinction perform at least 40 hours of service learning, which can include volunteer work, participation in the Honors Student Advisory Council, attendance at campus-wide events and more.

Any student who, in addition to completing the honors capstone, completes 24 credits of honors coursework is recognized as a University Honors Scholar with Highest Distinction (3.5+ GPA). In this case, the student completes upwards of 80 hours of service learning.

Climate Scholars Program

The Climate Scholars Program (CSP) is a signature track within the Honors College. Focusing on rapid environmental change, and climate resiliency and adaptation, the CSP features unique and, in many cases, unparalleled opportunities to engage in experiential learning all over the State of Alaska and beyond. As with all other honors students, Climate Scholars complete a capstone thesis project and may graduate with 12, 18 (distinction), or 24 credits (highest distinction). More information can be found at the Climate Scholars Program website (https://www.uaf.edu/honors/climate-scholars/).

Additional Information

For more information contact the Honors College at the Honors House, 520 Copper Lane, 907-474-6612, uaf.honors@alaska.edu or visit the Honors College website (https://www.uaf.edu/honors/).

Housing

Single-Student Housing

The educational experience at UAF will be one of the great adventures of a student's life. The Department of Residence Life can be a vital part of that adventure through programs that give a comfortable, energetic environment in which to live and learn. The community fosters close friendships and academic achievement, helps students develop individual leadership abilities and provides opportunities for personal growth.

Some of UAF's residence halls have a wonderful view of the Alaska Range and Denali, the tallest peak in North America.

Residence Life offers living environments to meet every need. Options include coed buildings by floor or by room, small community atmospheres or larger halls, options for students to live in themed living-learning communities, apartment-style options, double, single and super-single rooms, gender-inclusive housing options and first-year experience halls. Residence hall students have the conveniences of home within walking distance to class. Benefits include:

- wireless high-speed internet connections
- laundry facilities
- gender-inclusive housing
- living-learning communities
- trained staff on call 24 hours
- more than 1,000 programs each year
- the ability to participate in residence hall associations or community councils
- shared community kitchen and lounge spaces

ELIGIBILITY

All UA students who are degree-seeking and enrolled in at least 9 credits (in-person, online or distance-education class) are eligible for campus housing, but students are not guaranteed housing until approved by the Department of Residence Life. Students must be current on required immunizations to live in campus housing.

APPLICATION PROCESS

Students must have access to UAOnline to apply for campus housing. All housing applications and forms can be found in the MyHousing Portal. We have a two-part housing application process. Please complete the Housing Eligibility Form first, then access to the housing application(s) that fits each individual's housing needs will be given. More information can be found here (https://uaf.edu/reslife/apply/). Incoming non-first-year applicants must pay the $40 nonrefundable application fee with the signed housing application. Application fees are waived for first-year applicants. Upon acceptance, Residence Life will send a written confirmation and receipt to the student.

COSTS

On-campus costs are comparable to off-campus living costs. When amenities such as in-room Wi-Fi connections, all utilities, transportation and laundry facilities are added in, the on-campus costs are even more favorable. Residential fees are due in full at fee payment along with

all other fees. All students living in a residence hall are required to purchase a meal plan. Please see the Dining Services section (http://catalog.uaf.edu/services/dining/) for more information regarding meal plans.

Residence hall and meal plan fees are listed below. All room and meal plan costs are subject to change. Students whose housing applications have been accepted will be able to withdraw (minus the application fee) if rates increase after they apply. Contact Residence Life about residence hall fees. Questions about the meal plan should be directed to Dining Services at 907-474-6661 or uaf-dining@alaska.edu.

Fairbanks Campus Single-Student Housing	(per semester)*
Double rooms	$2,550-$2,907
Single rooms[1]	$3,060-$3,557
Super-Single rooms [2]	N/A
Cutler Apartment Complex	$3,060-$3,723[3]

[1] Extremely limited availability

[2] Super-single = Double room occupied by one person. Super-singles are limited to specific facilities. (Not available for Fall 2023 & Spring 2024)

[3] Includes winter break

* All students will be charged a per-semester nonrefundable $25 programming fee. This fee supports the administration, events and activities scheduled in the campus communities throughout the program.

CONSEQUENCES OF CANCELING A HOUSING CONTRACT

After July 31, students who have submitted a housing application are expected to live on campus and pay appropriate housing fees for their reserved space. Students who do not occupy their reserved space by the first day of classes or who cancel their reserved space after July 31 will be charged a $150 cancellation fee. Dining plans also carry cancellation consequences. Direct questions about meal plans to Dining Services at 907-474-6661 or uaf-dining@alaska.edu.

On-campus housing applications are for the academic year. Students living on campus for the fall semester but not living on campus the following spring semester should follow the spring schedule to avoid the cancellation fee.

Room charges and refunds are processed according to the following schedule:

Housing Refund Schedules

FALL 2023

Cancellation Date	Refund	Cancellation Fee?
Before Aug. 1	100% refund	$0
Aug. 1-23	100% refund	$150
Aug. 24-Sept. 8	90% refund	$150
Sept. 9-22	75% refund	$150
Sept. 23-Oct. 6	50% refund	$150
Oct. 7-20	25% refund	$150
After Oct. 20	No refund	$150

SPRING 2024

Cancellation Date	Refund	Cancellation Fee?
Before Dec. 1	100% refund	No
Dec. 1-Jan. 11	100% refund	$150
Jan. 12-26	90% refund	$150
Jan. 27-Feb. 9	75% refund	$150
Feb. 10-23	50% refund	$150
Feb. 24-March 8	25% refund	$150
After March 8	No refund	$150

HALLS AND ROOMS

Every residence hall has common areas — including recreation lounges, study lounges, small kitchens and laundry facilities — to foster academic and personal growth. Recreational lounges typically have televisions, couches, tables, chairs, and pool tables or ping pong tables. Hall kitchens generally include a range/oven, refrigerator, microwave, sink, table and chairs. Kitchens are for preparing snacks and not designed to replace the university meal plan.

All student rooms have high-speed internet connections. Students must furnish their own twin-long linens, blankets, pillows and towels. Custodial service is provided for all common areas such as hallways, lounges and centrally located bathrooms.

FIRST-YEAR LIVE-ON REQUIREMENT

(Due to the renovations of Moore and Bartlett Hall, the First-Year Live-on Requirement is suspended from Fall 2023 through Spring 2024.)

All incoming first-year undergraduate students are required to live on campus. The live-on requirement is a commitment between the undergraduate students and the University of Alaska Fairbanks to enhance students' experience and success. Living on campus for at least the first year is a significant advantage, students will be part of a community and make connections to other students, faculty and staff. Living on campus also connects students to services that support them as they transition to college life at UAF. First-year undergraduate students enrolled in 9 credits or more, are under the age of 21 and are not planning to live locally with parent(s)/legal guardian as specified below, are required to live in a UAF residence hall for one academic year (fall/spring, excluding summer and winter breaks). UAF students receiving a scholarship specifically for living expenses are required to live on campus as specified in the stipulations of the award or conditions of the program. Incoming spring transfer students who are still in their first matriculated year are required to live in a university residence hall and carry a traditional meal plan for the spring semester. All undergraduate international students in their first year of study in the United States are required to live on campus their first year. Requests for permission to

reside off-campus for other reasons are considered on their own merit, taking into account individual circumstances.

The University of Alaska Fairbanks recognizes that exceptions to the live-on requirement may be appropriate in certain circumstances. Students can request an exception to the live-on requirement by completing an Exception to Housing Agreement Form via their MyHousing Portal (https://ssb-prod.ec.alaska.edu/ssomanager/saml/login/?MAU=F). Those seeking an exemption must meet one or more of the following criteria, subject to validation. Other exceptions not listed below will also be considered on a case-by-case basis:

1. Student is married, in a registered domestic partnership or civil union.
2. Student is a parent with custody of a child or children or caring for a dependent who is living with them.
3. Student is living with immediate family or legal guardian. Parent(s), sibling(s) or grandparent(s) are the only individuals that qualify as immediate family. Immediate family or legal guardian must also live within a 40-mile radius of campus.
4. Credits are 100% eCampus.

More information about the first-year live-on requirement, including frequently asked questions, can be found here (https://uaf.edu/reslife/edge.php).

EDGE PROGRAM

The Education, Development, Growth and Experience program provides support and resources to help traditional first-time students achieve academic success. The EDGE program is for all first-time students under 21 years of age who live on campus. Alcohol is prohibited in EDGE halls. Participants receive instruction in academic success skills, campus resources and other topics that foster success.

LIVING-LEARNING COMMUNITIES (LLC)

We have multiple LLCs on campus:

Honors LLC (https://uaf.edu/reslife/llc/community.php) — UAF's Honors College (https://uaf.edu/honors/) and Residence Life collaborate to provide opportunities for students to pursue excellence in their academic and personal development. In addition, Residence Life supports the Honors College efforts to foster critical and independent thinking and help students become informed, responsible and active citizens. This LLC is located in the EDGE Halls and is available for first-year students (https://uaf.edu/reslife/edge.php). Residents must be a part of the UAF Honors College to participate in the Honors LLC.

Outdoor Adventures LLC (https://uaf.edu/reslife/llc/community.php) — The Outdoor Adventures Living-Learning Community serves to provide students with an opportunity to explore the great outdoors that is Alaska! With support from Outdoor Adventures, students can expect to have exposure to programs ranging from hiking to ice climbing. Students will also have access to special pricing and trip opportunities. This LLC is located in the EDGE Halls and is available for first-year students (https://uaf.edu/reslife/edge.php). All interested in exploring personal growth and a personal spirit of adventure are encouraged to participate!

Stonewall LLC (https://uaf.edu/reslife/llc/community.php) — The Stonewall Living-Learning Community is a safe and inclusive community for students. Through collaboration with various UAF campus partners and the Fairbanks community, UAF's LGBTQ+ student population is supported through connection, education and advocacy. The Stonewall LLC is located in the EDGE Halls and is available for first-year students (https://uaf.edu/reslife/edge.php).

GENDER INCLUSIVE HOUSING

Gender Inclusive housing is available in all of our Residence Halls, including within our LLCs. Gender Inclusive housing is for anyone who would like to live with someone of the opposite gender or gender identity. Gender-inclusive housing is not specific to a floor or hall and is assigned based on student preference. Gender-inclusive housing may or may not have gender-neutral bathrooms; however, in the instance there are gender-specific bathrooms, residents may use the bathroom consistent with their gender identity.

Students selecting gender-inclusive housing with no preferred roommate (or whose roommate moves out mid-term) must be open to living with any gender students. This can include cisgender female, cisgender male, transgender female, transgender male, nonbinary, agender and genderqueer students.

UNDERGRADUATE STUDENT APARTMENTS

Currently, Cutler Apartments is the only apartment-style facility open to traditional undergraduate students. Each apartment has a kitchen, two bedrooms and one bathroom, and houses up to four students. Each apartment also has a small patio or deck, and most have shared storage space. There are two laundry facilities in the complex that are open 24 hours a day. Cutler Apartments are available to undergraduate and graduate students in single-student housing.

ROOM USE DURING VACATION PERIODS

All halls are open during Thanksgiving and spring break, but most are closed during the winter break, with the exception of Cutler Apartments. All students living on campus in the fall and spring are eligible to remain on campus over the winter break provided they apply to do so and pay the winter break fee. Space is limited and is available on a first-come, first-served basis. The winter break fee for Cutler Apartments is included in the fall semester rates. Food service may not be available during the winter and spring breaks. Summer housing is also available; assignments are made through Residence Life.

Employee, Family and Graduate Housing

UAF offers a variety of on-campus housing for student families. The university owns and maintains 180 furnished apartments on campus, ranging from one- to three-bedroom units. They are affordable, comfortable and conveniently located near the center of campus.

ELIGIBILITY

Employees, graduate students, and students with dependents or students who are over the age of 26 are eligible for employee, family and graduate housing options at UAF. The main agreement holder must be degree-seeking and registered for a minimum of 9 credits (in-person, online or distance education class) or be a benefited employee to live in campus housing.

APPLICATION PROCESS

Students must have access to UAOnline to apply for campus housing. All housing applications and forms can be found in the MyHousing Portal.

We have a two-part housing application process. Please complete the Housing Eligibility Form first, then access will be given to the housing application(s) that fits the student's housing needs. More information can be found here (https://uaf.edu/reslife/home/). Further information will be received within one week of the housing application submission. For many of Residence Life's employee, family and graduate housing units, a waitlist is maintained according to the order the application was received. Submitting an application is not a guarantee of accommodations, but it gives Residence Life the information it requires to meet the applicant's needs. All apartment preferences are honored on a first-come, first-served basis. Once a unit has been designated, a $40 nonrefundable application fee will be requested.

PET POLICY

Specific employee, family and graduate housing units allow pets. Residents of employee, family and graduate housing may keep one pet in their unit. Certain types of pets are permitted, including fish, small caged animals, dogs and cats. Residents are limited to types of pets depending on the unit. Detailed information about pet policies can be found on the Residence Life website (https://uaf.edu/reslife/files/Animal_Policy.pdf). All pets must be registered with the Department of Residence Life. Applying to keep a pet does not guarantee approval.

COSTS

Costs for individuals living on campus are comparable to the costs of living off-campus. On-campus apartment rental rates include all utilities.

Occupancy agreements are for either six or 12 months, but agreements may be terminated early for any reason as long as 30-day notice is provided. Those who terminate their agreement early and fail to provide a 30-day notice will be charged a $500 cancellation fee. All residents must provide a notice to vacate by submitting a Housing Cancellation Form via their MyHousing Portal. See the cancellation/termination section of the agreement for more detailed information.

Those with pets will be required to pay a pet deposit.

FAIRBANKS CAMPUS EFG HOUSING	
(per month; 6-month or yearlong contract required)*	
Efficiency, double-shared, one- to three-bedroom apartments	$853-$1,794
One- to three-bedroom home with garage	$1,400-$1,898

* All EFG units will be charged a $25 programming fee with their January and September rent.

EFG COMPLEXES

The Fairbanks campus maintains the following EFG complexes: Stuart Hall and Walsh Hall offer one-bedroom apartments (400 square feet); Hess Village offers one-bedroom (425 square feet), two-bedroom (720 square feet) and three-bedroom (900 square feet) apartments; Garden Apartments (695 square feet) is a six-plex offering shared two-bedroom apartments. Harwood Hall offers efficiencies (380 square feet) and one-bedroom apartments (470 square feet). Chandalar Drive holds one-bedroom (600 square feet), two-bedroom (1,408 square feet) and three-bedroom (1,450 square feet) homes with garages. Tanana Drive has two-bedroom (1,400 square feet) homes with garages. Children are not allowed in Stuart, Walsh or Harwood Hall. All complexes are equipped with laundry facilities.

Campus apartments are fully furnished and include high-speed Wi-Fi internet connections and laundry facilities. Limited unfurnished units are available.

Immunization Policy and Housing

The University of Alaska strictly enforces immunization and test requirements for students living in high-density housing. To live in Cutler, Garden, Bartlett, Moore, Skarland, McIntosh, Wickersham, Nerland or Stevens Hall, students are required to submit records showing that they have had the following:

- Two measles, mumps and rubella (MMR) immunizations (or proof of immunity)
- Tetanus immunization within the last 10 years (this can be either tetanus/diphtheria [TD], or tetanus, diphtheria and pertussis [TDAP])
- Negative tuberculosis (TB) test (often called a PPD test) within the first year of living in housing. If the TB test was positive, negative confirmatory testing or negative chest x-ray report is required
- Meningococcal (MCV4) for residents under the age of 21, last administered after the age of 16.

If a student does not have access to these records, these immunizations and TB testing can be obtained at the Student Center for Health and Counseling or at a clinic or pharmacy in the community (https://uaf.edu/chc/resources/after-hours.php). If these are done in the community, please upload immunization records to the Patient Portal (https://uafchc.uaf.edu/login_directory.aspx), bring the documents to the Student Health and Counseling Center or send them to:

UAF Student Health and Counseling Center
P.O. Box 755580
Fairbanks, AK 99775

Although the university urges all students to be immunized against communicable diseases, these requirements are specifically intended to help ensure the health of all resident students.

MANDATORY IMMUNIZATIONS AND TESTS

Proof of required immunizations must be submitted by July 31 for fall and Nov. 30 for spring, or housing assignments will be canceled or applications will be held. The university may require additional or expanded immunization and testing if the university community's health and safety warrants it.

The university may grant exemptions from immunization requirements based on medical or religious reasons. The chancellor may also grant exemptions to people who will occupy student residence facilities for less than a semester. Those exempted from immunization or testing for a disease may be removed from student residence facilities should an outbreak of that disease occur or threaten to occur. Residence Life cannot authorize exceptions to this policy.

See Board of Regents' Policy, Part IX–Student Affairs, Chapter XI–Student Health. For more information, contact the Student Health and Counseling Center (https://www.uaf.edu/chc/) at 907-474-7043 or uaf-sh-cc@alaska.edu.

Where To Get More Information

Department of Residence Life

University of Alaska Fairbanks
Main Floor, Moore-Bartlett-Skarland Complex
P.O. Box 756860
Fairbanks, AK 99775-6860
Email: uaf-housing@alaska.edu
Telephone: 907-474-7247
Fax: 907-474-6423

Libraries

UAF has two libraries on the Fairbanks campus and libraries on three rural campuses. The Elmer E. Rasmuson Library, on the Troth Yeddha' campus in Fairbanks, is the leading research library in the state, with a comprehensive physical and online collection. The Keith B. Mather Library, also on the Troth Yeddha' campus in Fairbanks, holds collections in the geological and biological sciences and is Alaska's U.S. Patent and Trademark Office depository. Both libraries offer wireless networking, public computer terminals and designated quiet study spaces with natural lighting. Rasmuson Library also has group study rooms and a secure 24-hour study space with computers.

The Rasmuson and Mather libraries provide extensive reference and instructional services for students. Library faculty and staff help students conduct library research using print materials and online databases and collections. The library information and research course, LS F101X, is a required course for bachelor's and associate degrees and gives students an introduction to effective methods of identifying, locating and evaluating information resources, as well as a thorough introduction to information literacy.

UAF libraries provide access to online catalogs and databases, as well as resources worldwide through interlibrary loans. The library website is a gateway to more than 200 subscribed online databases, with broad coverage in the sciences, humanities and social sciences, business management and engineering. Web-based indexes and collections link to full-text articles from more than 60,000 periodicals. Additional web-based resources include reference tools, electronic books, specialized sources for Arctic and polar information (https://archives.library.uaf.edu/) and indexes to special formats such as government documents and dissertations. ScholarWorks@UA (https://scholarworks.alaska.edu/), the University of Alaska online institutional repository, makes theses, dissertations, articles and other scholarly works by UA students and faculty freely available to the public.

The Rasmuson Library is a federal depository library and houses titles from the Government Printing Office that are related to Alaska and some Pacific Northwest states. Special collections in the library include the internationally recognized Alaska and Polar Regions Collections and Archives, which houses historical books, periodicals, documents, manuscripts, photographs, film, audio recordings, oral history projects and maps. APRCA digitizes selected archival materials to make unique collection materials available worldwide.

Get more Rasmuson Library information at 907-474-7481, AskRasmusonLibrary@uaf.libanswers.com or at the Rasmuson Library's website (https://library.uaf.edu).

Military and Veteran Services

The University of Alaska Fairbanks is home to a robust and growing military and veteran student community. As a military-friendly school, we are dedicated to providing academic opportunities in a supportive learning environment that serves the unique needs of our active service members, veterans and their families. UAF offers in-state/resident tuition, credits for military training, flexible online degree programs, Veterans Administration and Tuition Assistance educational benefits advising and much more to our veterans, active service members and their dependents. We are also ranked as one of America's Best Military Friendly Online Colleges.

The UAF Department of Military and Veteran Services (DMVS) wants to meet students where they are. DMVS has locations on the Troth Yeddha' Campus in Fairbanks, Fort Wainwright, Eielson Air Force Base, Fort Greely/Delta Junction and Clear Air Station. UAF has been designated a Military Friendly Institution since 2008, and, in addition to providing student services, UAF offers university classes on Fort Wainwright and Eielson Air Force Base.

Offices at Fort Wainwright, Eielson Air Force Base and the Troth Yeddha' Campus actively support the Wounded Warrior Transition Unit through services that include academic and financial aid advising, future career preparation and registering for classes. Testing services are also available for writing and math (ACCUPLACER and ALEKS), awarding college credit (CLEP and DANTES) and industry certification exams available through Pearson VUE.

The DMVS dedicates itself to providing comprehensive support to veterans, active service members and their dependents in an atmosphere of respect for their service to our nation. They endeavor to assist students in maximizing their VA educational benefits, Tuition Assistance and MyCAA grants to meet the student's educational goals, while striving to build a community for past, present and future military-affiliated students.

- The Post-9/11 GI Bill® (Chapter 33 (https://www.va.gov/education/about-gi-bill-benefits/post-9-11/)) pays tuition and fees for up to 36 months. This benefit is available for individuals with at least 90 days of aggregate service on or after September 11, 2001, individuals discharged with a service-connected disability after 30 days, dependent children and spouses using benefits whose qualifying veteran or servicemember has transferred portions or all of their Post-9/11 benefits and Purple Heart recipients who were honorably discharged after September 11, 2001, with any amount of service.
- The Montgomery GI Bill® (MGIB) is another VA education benefit available to eligible servicemembers or veterans to help with tuition and training costs. UAF is authorized to certify both MGIB variants: MGIB-Active Duty® (Chapter 30 (https://www.va.gov/education/about-gi-bill-benefits/montgomery-active-duty/)) and MGIB-Selected Reserve® (Chapter 1606 (https://www.va.gov/education/about-gi-bill-benefits/montgomery-selected-reserve/)).
- Veteran Readiness and Employment (Chapter 31 (https://www.va.gov/careers-employment/vocational-rehabilitation/)), also called VR&E, helps to connect veterans with a service-connected disability of 10% or greater with a VR&E counselor. Together, they develop a plan, often including additional education, for our nation's wounded heroes who aspire to open careers and advancement opportunities.
- Spouses and children of veterans or active service members who sacrificed everything in the line of duty, were captured or missing, or have a VA-rated permanent or total service-connected disability, may qualify for help to pay for college or professional training. They may qualify and use the Dependents' Educational Assistance (Chapter 35 (https://www.va.gov/education/survivor-dependent-benefits/dependents-education-assistance/)) program or The Marine Gunnery Sergeant John David Fry Scholarship (Fry Scholarship

(https://www.va.gov/education/survivor-dependent-benefits/fry-scholarship/)) for tuition and training costs.

Tuition Assistance is available to many Active Duty, Reserve, and National Guard service members. The DMVS can help to navigate the process, apply for TA and use this benefit to grow both in and out of their service commitments.

For more information, contact the Department of Military and Veteran Services at UAF-VA@alaska.edu or visit the DMVS website (https://www.uaf.edu/veterans/). Walk-ins are welcome at one of their respective locations:

- the Troth Yeddha' Campus, 1732 Tanana Loop, Rasmunson Library Room 404, 907-474-7400;
- Eielson Air Force Base, 2631 Wabash Ave., Room 204, 907-377-1396; or
- Fort Wainwright, 4391 Neely Rd., Room 137, 907-356-3826.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website *(*https://www.benefits.va.gov/gibill*/).*

New Student Orientation

New Student Orientation helps incoming students establish a foundation for success. All new students are strongly encouraged to participate in New Student Orientation on the Fairbanks campus. Orientation is required for all first-year bachelor's-degree students (regardless of the number of earned college credits) and international students (undergraduate F-1 and international exchange J-1 status). Domestic transfer students are also encouraged to attend.

New Student Orientation features a variety of workshops and activities to address the needs of incoming students, including campus tours, opportunities to meet faculty and staff, numerous campus resource presentations, and many fun social events. The fall semester includes the popular family orientation for parents and other family members of new students. Fees are $150 per student for fall orientation, which covers all programs except special Outdoor Adventures activities; $25 for one-day fall transfer student orientation; $25 (plus $10 for each additional guest) for two-day fall family orientation; and $35 for spring orientation.

For more information, contact the New Student Orientation office at 907-474-6295 or visit the New Student Orientation website (https://www.uaf.edu/admitted/orientation/).

PolarExpress Identification Card

The Polar*Express* card is the official UAF photo identification card used by students, staff and faculty to access UAF facilities and make purchases. The card includes your name, photograph and UA identification number. A central database holds information to identify the buildings and rooms you may access, meal plan type, some account balances, library checkouts, computer lab access and other activities. See the complete list on the Office of the Bursar's website (https://www.uaf.edu/bursar/polarexpress/).

Your Polar*Express* card lets you check out library books, vote in student elections, and gives you access to the Student Health and Counseling Center and other student services. The card's magnetic stripe holds a unique key that provides secure access to residence halls, laboratories and the Student Recreation Center. You can deposit money into your Bear Bucks account, which can be used at all Dining Services locations, photocopiers, vending machines and the UAF Bookstore. The Polar*Express* card is a permanent card, valid for two years after the holder's last affiliation with the university. All privileges expire upon departure from the university, with the exception of Bear Bucks and Munch Money accounts. Bear Bucks expire two years after your last affiliation, and Munch Money accounts expire at the end of the academic year with the ability to roll over up to $250 per semester. Holders who return to the university system within two years and no longer have their Polar*Express* card must purchase a replacement card.

You can access your account balance and add money to your Polar*Express* card through eAccounts (https://eacct-ualaska-sp.transactcampus.com/eaccountsuaf/AnonymousHome.aspx), a secure way to check all your stored value accounts (Bear Bucks, Munch Money, copy card, etc.), add money to your card, view your transaction history, deactivate a lost or stolen card and more.

Safety

POLICE AND FIRE DEPARTMENTS

The UAF Police Department was founded in 1991 to meet the increasing needs of the university community. UAFPD is a progressive, proactive department that strives towards active community engagement. The department is responsible for the protection of the students, staff, faculty and general public on the Fairbanks campus as well as for the protection of university and private property. Through its officers and community service officers, the department provides a variety of functions, some unique to university police departments. These include a firearm storage room for all affiliated personnel, a bike registration program, providing escorts, and conducting after-hours vehicle jump starts and unlocks. Police personnel also provide presentations on various topics including violent intruders, personal safety and drug orientation training.

The university emergency communications center serves the Fairbanks campus 24 hours a day. In addition to handling campus law enforcement calls, the center also monitors alarm systems both on and off campus and handles after-hours Facility Services calls. The center employs full-time career dispatchers.

The University Fire Department provides fire, rescue, EMS response and public assistance to the Fairbanks campus as well as the University Fire Service Area and EMS district. The department provides protection for a 26-square-mile area and more than 22,000 people. The department is nationally recognized and staffed full-time at two stations, one on campus and one in the fire service area. The department provides plan review and inspection services to the Fairbanks area and rural campuses. The Fire Department provides exceptional employment and career opportunities for students interested in a career in emergency services. The hands-on, interactive program develops highly skilled individuals able to perform all the duties of professional career firefighters.

The emergency telephone for both police and fire is **911**. For more information, call 907-474-7721 for the Police Department, 907-474-5770 for the Fire Department, or visit the Police Department website (https://www.uaf.edu/police/) or Fire Department website (https://www.uaf.edu/fire/).

ANNUAL SECURITY AND FIRE SAFETY REPORT

The 2022 Annual Security and Fire Safety Report for the University of Alaska Fairbanks campuses is available in PDF format (https://www.uaf.edu/csrr/files/2022-Annual-Security-and-Fire-Safety-Report.pdf).

The report contains information regarding campus safety and security including topics such as: campus law enforcement authority; crime reporting policies; campus alerts (timely warnings and emergency notifications); fire safety policies and procedures; programs to prevent dating violence, domestic violence, sexual assault and stalking; the procedures the university will follow when one of these crimes is reported; and other matters of importance related to security on campus. The report also contains information about crime statistics for the three most recent calendar years concerning reported crimes that occurred on campus; in on-campus student housing facilities; in off-campus buildings or property owned or controlled by the university or a recognized student organization; and on public property within, or immediately adjacent to and accessible from, the campus. The report also contains fire statistics for any fires occurring in an on-campus student housing facility during the three most recent calendar years.

If you would like to receive a paper copy of the Annual Security and Fire Safety Report for the University of Alaska Fairbanks campuses, you can stop by the UAF Center for Student Rights and Responsibilities located on the 3rd floor of Constitution Hall or request a copy be mailed to you by calling 907-474-7317 or emailing uaf-studentrights@alaska.edu.

Student Affairs and Enrollment Management

At Student Affairs and Enrollment Management, we work to develop creative ways to serve students. We strive to ensure that the UAF academic experience is an intellectual, spiritual and social one. We encourage student collaboration, comments and ideas and believe in the importance of the student voice.

Student Affairs and Enrollment Management provides student-centered programs and services to help students achieve their personal, academic and career goals. In collaboration with the academic deans, Student Affairs and Enrollment Management leads the university in recruiting a diverse student body. With the creative use of ongoing assessment, Student Affairs and Enrollment Management supports and develops programs and communities that contribute to the retention, success and leadership development of students.

Student Affairs and Enrollment Management departments include:

- Admissions (https://www.uaf.edu/admissions/)
- Associated Students of UAF (https://www.uaf.edu/asuaf/)
- Center for Student Rights and Responsibilities (https://www.uaf.edu/csrr/)
- Dining Services and Contract Operations (https://www.uaf.edu/dining/)
- Disability Services (https://www.uaf.edu/disabilityservices/)
- Financial Aid (https://www.uaf.edu/finaid/)
- Military and Veteran Services (https://www.uaf.edu/veterans/)
- Nanook Recreation (https://www.uaf.edu/recreation/)
- Registrar (https://www.uaf.edu/reg/)
- Residence Life (https://www.uaf.edu/reslife/)
- Student Health and Counseling Center (https://www.uaf.edu/chc/)
- Wood Center/Center for Student Engagement (https://www.uaf.edu/woodcenter/)

The Office of the Vice Chancellor for Student Affairs and Enrollment Management (https://www.uaf.edu/student-affairs/) is a resource and referral center where students who need assistance at UAF will find help. For more information, contact Student Affairs at uaf-student-affairs@alaska.edu or 907-474-2600.

The Center for Student Rights and Responsibilities is also a resource and referral center where students can get help with concerns, issues or needs. For more information, visit the Center for Student Rights and Responsibilities website (https://www.uaf.edu/csrr/), email uaf-studentrights@alaska.edu or call 907-474-7317.

Student Health and Counseling Center

At the Student Health and Counseling Center, students may receive health care, counseling, substance abuse referrals, health education and assistance with student health insurance. Students must pay the Fairbanks consolidated fee to be eligible for these services.

The medical staff provides primary health care and referrals for specialty medical services when appropriate. General office visits for preventive care, illness and injury are provided at no charge. Medications, laboratory services, medical supplies and some physical examinations are provided at reduced cost. Students should call for appointments. Urgent care appointments are available when necessary.

The counseling staff offers individual, group and crisis intervention counseling. Counselors, all with graduate-level training, assist with a variety of personal and interpersonal issues. Students should call to schedule appointments. Students in emergency situations are usually seen on the same day.

The student health insurance program for international and graduate students on a stipend is administered through the Student Health and Counseling Center. Staff are available to answer questions about policy coverage and to help with information about how to file claims.

The Student Health and Counseling Center is located on the second floor of the Whitaker Building. For more information and current hours, call 907-474-7043, fax 907-474-5777, email uaf-sh-cc@alaska.edu or visit the Student Health and Counseling Center website (https://www.uaf.edu/chc/).

Study Away Programs

National Student Exchange

UAF is a member of the National Student Exchange. Through this program, qualified students may apply for exchange enrollment at any one of almost 200 colleges and universities throughout the United States, its territories and Canada. NSE enables students to take advantage of specialized courses or unique programs at member institutions and explore new areas of the U.S.

Applicants must have completed a minimum of two full-time semesters at UAF as a degree student and have a minimum 2.5 cumulative GPA in order to participate in NSE. The priority application deadline for the upcoming academic year is March 1.

Students approved to participate in NSE pay a $500 study away fee to UAF each semester they are away. Tuition is paid either to the host institution at the in-state rate, or the student may pay tuition at UAF, depending on availability. The Alaska Performance Scholarship, UA Scholars and most other forms of financial aid may be used to cover costs.

For more information, visit the National Student Exchange website (https://www.nse.org).

Note: Students attending any campus of the University of Alaska system under the National Student Exchange program are assumed to be receiving the benefit of reduced tuition because of their enrollment at an NSE partner university in another state. Therefore, time spent in NSE does not count toward the time required to establish residency in Alaska for tuition purposes. If students end their participation in NSE, they could begin establishing residency for tuition purposes as set forth in the UA Resident and Nonresident Tuition policy *(*http://catalog.uaf.edu/costs-financial-aid/tuition-fees/#Residency*) on the Tuition and Fees page.*

Study Abroad And International Exchange Programs

Studying abroad is an excellent opportunity for every UAF student to learn about other cultures and gain international experience while earning academic credit. Programs are available in nearly 50 countries worldwide. UAF has direct exchange partnerships with 16 universities in 7 countries and also participates in the north2north exchange program organized by UArctic. Additional study abroad programs are available through affiliated program providers.

Students participating in approved programs receive UAF credit for classes and internships completed abroad. Applicants must have completed a minimum of two full-time semesters at UAF as a degree student and have a minimum 2.5 cumulative GPA. Other requirements may also apply, and all applications are subject to approval by the Study Away Program office. Application deadlines are Oct. 1 for spring semester programs and March 1 for most summer, fall semester or academic year programs. Students interested in gaining international experience should begin planning early in their UAF careers.

All students approved to participate in international programs pay a $500 study away fee to UAF each semester they are away. Students participating in exchange programs pay for 15 credits of undergraduate or 9 credits of graduate UAF tuition and a 4% of tuition network fee. For non-exchange study abroad programs, all tuition, housing and student fees are paid directly to the program provider or host institution. The Alaska Performance Scholarship, UA Scholars and most other forms of financial aid may be used to cover costs; scholarships are also available for many programs.

Contact the Study Away Program for more information at 907-474-6396 or uaf-studyaway@alaska.edu, or visit the Study Away Program website (https://studyabroad.uaf.edu/).

Summer Sessions and Lifelong Learning

Summer Sessions and Lifelong Learning provides a wide variety of outreach and learning opportunities year-round. Our 365 SMART Academy offers a diverse selection of virtual homeschool enrichment programs during the fall and spring semesters, as well as dozens of in-person day camps during the summer months.

Summer Sessions also offers weekend workshops and special interest non-credit courses to community members year-round. The Osher Lifelong Learning Institute, also housed by Summer Sessions, provides ongoing learning opportunities for adults 50 and older.

Each summer SSLL hosts a minimum of 40 free lectures, concerts and recreational activities for students and community members. In January, a Here Comes the Sun community concert brings the community together with great music until we can meet again in the Georgeson Botanical Garden for the summer concert series.

SSLL educational travel programs take groups overseas several times each year to study the cultural, political and natural history of destination countries. We also run several travel programs in Alaska, such as migratory birding tours, Alaska tours for OLLI groups from the Lower 48, and an ESL/cultural institute for foreign university students.

For more information, contact Summer Sessions and Lifelong Learning, 216 Eielson Building, phone 907-474-7021, toll-free at 866-404-7021, email summer@alaska.edu, or visit the Summer Sessions website (https://www.uaf.edu/summer/).

Technology on Campus

The Office of Information Technology is located in the Bunnell Building on the Troth Yeddha' Campus. The walkup service desk in Bunnell 231 is where students can get free help with their laptops and other technology devices. In addition to walkups, the OIT Service Desk can be contacted by calling 907-450-8300 or 800-478-8226, emailing helpdesk@alaska.edu or visiting OIT online (https://www.alaska.edu/oit/get-help/).

Internet Access, Computing Labs and Smart Classrooms

Wireless internet is available throughout the Troth Yeddha' Campus buildings, including residence halls.

There are walkup computers available in the Rasmuson Library and the Moore-Bartlett-Skarland residence complex. The Nook, in 319 Bunnell Building, offers virtual computer stations and plenty of collaborative seating while using personal devices. The Nook includes easy access to power outlets, wired and wireless network access, mobile printing, and conference tables where students can share content on their devices with others on a large screen.

On the Troth Yeddha' Campus, there are over 160 smart-learning spaces outfitted with instructional technology such as web videoconferencing, computers, digital projectors, document cameras, digital monitors and lecture capture. These classrooms enable a flexible, modern learning experience spanning multiple teaching modalities from face-to-face to online and hybrid situations.

Video Conferencing

OIT's Video Conferencing Services provides consultation, planning, installation, training and scheduling for videoconferencing classrooms and other video-enabled rooms on the Fairbanks campus and across the University of Alaska system. VCS can schedule and support job interviews for students, faculty and staff. For more information, visit the

OIT Video Conferencing Services website (https://www.alaska.edu/oit/services/video-conferencing/).

Tuition, Costs and Financial Aid

Tuition, Fees and Costs

Tuition

Tuition is determined by the number of credit hours in which the student is enrolled, the level of the courses, and the student's residency status (see the 2023-2024 tuition table below).

- Undergraduate students are considered full-time at 12 or more credits.
- Graduate students are considered full-time at 9 or more credits.
- Students enrolled in no more than 4 credits per semester pay tuition at the resident rate.

2023-2024 TUITION

	Resident	Nonresident	WUE
Fairbanks Undergraduate 100-499-courses[1]	$289/credit	$855/credit	$434/credit
Community Campus 100-299-level courses[2]	$234/credit	$800/credit	$351/credit
All 600-799-level courses	$539/credit	$1105/credit	N/A

WUE Western Undergraduate Exchange; 150% of Alaska resident rate.

1 Applies to Undergraduate courses offered through the Rural College and Fairbanks Troth Yeddha' campus.

2 Applies to 100-299-level courses offered through the Community and Technical College and Bristol Bay, Chukchi, Interior Alaska, Kuskokwim and Northwest Campuses.

Note: Audited credits are charged at the same rate as other credits.

RESIDENT AND NONRESIDENT TUITION

Students eligible for Alaska resident tuition generally include:

- an Alaska resident, defined as a person who is a U.S. citizen or eligible noncitizen who has been physically present in Alaska for at least the past two years;
- students who received a State of Alaska Permanent Fund Dividend within the last 12 months and can certify they have been in Alaska for the past 12 months;
- military personnel on active duty, their spouses and dependent children;
- members of the National Guard, their spouses and dependent children;
- veterans of the U.S. armed forces, and their dependents, who are eligible for Veterans Affairs educational benefits;
- dependent children of a person who graduated and holds an associate, bachelor's, master's or doctoral degree from the University of Alaska;
- dependent children of an Alaska resident as evidenced by the most current federal income tax return filed within the past 16 months;
- students participating in the Western Interstate Commission on Higher Education Western Regional Graduate Program;
- students enrolled in 4 or fewer credit hours within the UA system during a semester;
- students from other states or provinces whose public universities waive nonresident tuition surcharges for Alaska residents, or who are from foreign cities and provinces with established Alaska sister city or sister province relationships;
- students designated by the UA Scholars Program as UA Scholars;
- participants of the University of Alaska College Savings Plan;
- spouse or dependent children of a University of Alaska employee; or
- students who graduated within the past 12 months from a qualified Alaska high school.

Students will be considered nonresident if within two years prior to applying for residency they:

- were absent from Alaska for an aggregate of more than 120 days for other than documented absences due to illness or attendance at another educational institution while maintaining Alaska residency;
- committed any act inconsistent with Alaska residency, such as claiming residency in another state or voting as a resident of another state;
- registered as a resident in an educational institution in another state; or
- paid tuition at the University of Alaska at the Western Undergraduate Exchange program rate.

To prove physical presence, students must provide documentation of one of the following:

- student moved household goods to Alaska at least two years ago;
- student's lease, rental or ownership of real property in Alaska for at least the prior two years;
- student's permanent employment in Alaska for at least the prior two years; or
- other documentation of Alaska residency for the two prior years deemed satisfactory by the UAF Office of Admissions.

Students applying for resident tuition assessment must file a residency form with the Office of Admissions before the published end of the add/drop period for regular semester-length courses for the semester for which residency is sought. Failure to file and provide adequate proof of physical presence by this date will waive any claim that the student was eligible for resident tuition assessment for that semester or prior semesters unless otherwise determined by the Office of Admissions.

Residency criteria, as paraphrased above, are determined by UA Board of Regents residency policy and regulations (https://www.alaska.edu/bor/policy-regulations/chapter-05-10-tuition-student-fees.php). For more information and applications, students should contact the Office of Admissions (https://www.uaf.edu/admissions/).

Basic Student Fees

Basic Student Fees	
(per semester unless otherwise indicated)	
Fairbanks Campus and Rural Campus Consolidated Fees	
UAF, CTC, Juneau Fisheries and eCampus	$53 per credit
CRCD Campuses (Rural College, Bristol Bay, Interior Alaska, Kuskokwim, Northwest, Chukchi)	$21 per credit
UA Facilities	$6 per credit
UA Network	
4 percent of tuition	varies ($9-$45 per credit)
Parking Permit	
8 credits or fewer	$51
9 or more credits	$88
Annual permit	$153
Spring/summer	$153
Multivehicle	additional $10
Course Fees	varies

Note: All fees are subject to change.

CONSOLIDATED FEE

Cost: $53 per credit for UAF, CTC, Juneau Fisheries and eCampus

The non-refundable consolidated fee provides students access to various services that enhance their educational experience beyond the classroom and ensures the continuation and expansion of critical universitywide services for all students. The consolidated fee paid by each student supports these specific services: student government, student health and counseling center, student recreation center, support for online and distance learning, student sustainability, student activities and services, libraries and digital resources, technology, and transportation and related infrastructure. **The consolidated fee is mandatory and cannot be negotiated, waived or reduced.**

Cost: $21 per credit for CRCD campuses (Rural College, Bristol Bay, Interior Alaska, Kuskokwim, Northwest, Chukchi)

The non-refundable consolidated fee provides students access to various services that enhance their educational experience beyond the classroom and ensures the continuation and expansion of critical universitywide services for all students. CRCD campus students are assessed a reduced fee due to their distance from the Fairbanks campus, but they do receive access to UAF services through online or other methods. The consolidated fee paid by each student supports these specific services: telehealth and counseling, virtual recreation classes, streaming of sporting events, libraries and digital resources, and technology. **The consolidated fee is mandatory and cannot be negotiated, waived or reduced.**

Detailed list of services provided by the consolidated fee:

ASUAF

The Associated Students of the University of Alaska Fairbanks represent student views and concerns to the university administration, University of Alaska Board of Regents and Alaska Legislature. ASUAF also partially funds the publication of the UAF student online newspaper, the Polaris News; the student-managed ASUAF Concert Board; KSUA, the student radio station; and other media. Other services provided through ASUAF include a free half-hour attorney consultation, academic travel funding, subsidized student club activities, regular free coffee service and much more. Contact ASUAF at 907-474-7355 or visit the ASUAF website (https://www.uaf.edu/asuaf/).

Athletics

Provides admission to all home athletic competitions and live-streaming of Nanook sporting events. Admission will only be guaranteed until the start of each event. The fee does not include postseason competition. For further details regarding event and ticket policies, visit the Alaska Nanooks website (https://www.alaskananooks.com/).

Libraries and Digital Resources

Provides library services such as research assistance and instruction, online and digital resources, subscriptions for databases and journals, and improvements to library materials and spaces (physical and virtual) used by students.

Recreation

Provides membership to the Student Recreation Center (SRC), Patty ice arena, Patty pool, Outdoor Adventures and virtual recreation classes. The SRC is a comprehensive fitness facility with equipment, courts, track, group fitness, intramurals and a climbing wall. The Patty ice rink provides recreational ice skating sessions. The Patty pool provides lap swim sessions. Outdoor Adventures has discounted equipment rentals, trips and an outdoor rock/ice wall. Some extra programs have additional fees associated; consult Nanook Recreation staff for details. Anyone under the age of 18 using the SRC and its facilities must be accompanied by a parent or guardian whose minimum age is 21 unless they are a full-time UAF student. Call 907-474-5886 for more information.

Student Activities and Services

Supports Nanook traditions such as Starvation Gulch, Winter Carnival and SpringFest as well as student activities and student life programs that enhance the out-of-class experience of students, and will provide ongoing operational and capital funding for programs.

Student Health and Counseling Center

Provides basic medical and counseling services, including telehealth and counseling, at the Student Health and Counseling Center on the Fairbanks campus. See the Student Health and Counseling Center website (https://www.uaf.edu/chc/) for more information or contact the Student Health and Counseling Center at 907-474-7043.

Student Sustainability
Invests in energy-efficiency programs and renewable energy projects at UAF.

Summer Activity
Supports student activities.

ECampus
Funds go toward academic and advising support, online student resources, exam proctoring services, technology upgrades, and enhancements to course delivery.

Technology
Supports technology initiatives including implementation of and access to UAF's wireless network, delivering university-licensed software to all students, increasing the number of technology-enabled classrooms and computing spaces, and expanding and improving online and self-service environments.

Transportation and Related Infrastructure
Covers a portion of the costs of operating shuttle buses that provide transportation throughout campus and to various university facilities off campus, street and lot maintenance, snow removal, lighting and plug-ins.

UA FACILITIES FEE

Cost: $6 per credit

Who pays: All students

What's covered: The UA facilities fee is assessed to all undergraduate and graduate students to address the capital reinvestment for university facilities and academic equipment. Capital reinvestment funds construction that modernizes university classrooms, laboratories, residence halls and other buildings so students have learning and living facilities that enhance the academic experience.

UA NETWORK FEE

Cost: 4 percent of tuition

Troth Yeddha' Undergraduate: $12
Community Campus: $9 per credit
Graduate: $22 per credit
Nonresident rate: $32 per Community Campus credit
Nonresident rate: $35 per Troth Yeddha' Undergraduate credit
Nonresident rate: $45 per graduate credit

Who pays: All students

What's covered: The UA network charge covers rapidly rising costs, especially in the maintenance and enhancement of the universitywide technology infrastructure. The 4 percent network charge is applied on a per credit hour basis (rounded to the nearest dollar) to tuition, nonresident surcharges if applicable, and fees in lieu of tuition for credit and noncredit courses. The minimum network charge per course is $9.

COURSE FEES

Cost: Varies

Who pays: Students enrolled in courses with special fees. See the class schedule for individual classes

What's covered: Some courses require special equipment, supplies or services and charge a materials fee in addition to tuition.

HEALTH INSURANCE

Student health insurance is not mandatory at UAF except for international students studying in F-1 or J-1 immigration statuses. The university does not provide a student health insurance program except for international students and students who are contracted with the Graduate School as teaching or research assistants on stipends or who are receiving graduate fellowships. Students without insurance who would like to obtain a plan may visit the Student Health and Counseling Center website (https://www.uaf.edu/chc/) for more information on shopping for a policy.

International students in F-1 or J-1 status are required to enroll in either the UAF-sponsored insurance plan or in a plan of their choice that meets regulatory compliance rules. Students must provide documentation of enrollment to International Programs and Initiatives before the fee payment deadline each semester. Students who do not enroll in an insurance plan approved by International Programs and Initiatives by the appropriate semester deadline will be dropped from classes at UAF.

Contracted teaching and research assistants on stipends and those receiving graduate fellowships are automatically enrolled in the UAF-sponsored plan as part of their benefits package. More information on this plan can be found at the Graduate School's website (https://www.uaf.edu/gradsch/).

The UAF-sponsored international student plan meets the Department of State insurance requirements for exchange visitors in J-1 status. However, this plan is not compliant with the federal Affordable Care Act (ACA). Contact International Programs and Initiatives with any questions. The graduate insurance plan is ACA-compliant but does not meet the Department of State insurance requirements for exchange visitors in J-1 status.

PARKING PERMIT

Cost: Fall 2023/spring 2024, single vehicle, $51 for 8 or fewer credits; $88 for 9 or more credits; $153 annual permit. With any of these permit options, two or more vehicles (up to a total of four) may be registered for the multivehicle option for an additional $10. The hangtag allows one vehicle to be parked on campus at a time. (Campus residents may not purchase the multivehicle option. Employees are not eligible to purchase parking permits at student rates.)

Costs are based on the combined total credit hour enrollment at UAF, Community and Technical College, eCampus, or any class held at a UAF location where credit is given through another location.

Who pays: Students who park a vehicle at any on- or off-campus UA, UAF or Community and Technical College location are required to

have a parking permit or permit displayed on the vehicle at all times, including evenings.

What's covered: Parking in permit-required and general-use lots and spaces at any on- or off-campus UA, UAF, or Community and Technical College location in Fairbanks

How to get a permit: Request a permit through UAF's online parking system (https://uaf.edu/bursar/parkingservices/). Select the type of parking permit(s) needed, the delivery option and the payment method. A two-week temporary permit can immediately be printed to use until the permit arrives in the mail or is picked up. Permits can also be purchased and picked up at the Bursar's Office in Signers' Hall. Please bring a current vehicle registration to ensure the correct information for the file. Debit and credit card payments will no longer be accepted in person or over the phone at the Bursar's Office. In-person, please pay with either cash or check, or have the charge added to the student's Banner account.

How to pay: Complete the permit purchase at UAF's online parking system (https://uaf.edu/bursar/parkingservices/). Payment options are all major credit cards or "student account," if parking has been added to the student account.

It is the responsibility of all students parking a vehicle on any UAF property (on or off campus) to know UAF parking regulations (https://uaf.edu/bursar/parkingservices/). For more information, call 474-7384 or email uaf-bursar@alaska.edu.

Estimated 2023-2024 UAF Annual Costs

UAF COMMUNITY AND TECHNICAL COLLEGE STUDENTS

	Alaska Resident	Non-Resident	WUE[2]
Tuition and fees[3] (30 credits, 100-299-level classes)	$9,260	$27,290	$13,280
Housing and food (double room and meal plan)	$10,450	$10,450	$10,450
ANNUAL TOTAL	$19,710	$37,740	$23,730

UAF UNDERGRADUATE STUDENTS, FOUR-YEAR PROGRAMS AT TROTH YEDDHA' CAMPUS

	Alaska Resident	Non-Resident	WUE[2]
Tuition and fees[3] (30 credits, 100-499-level classes)	$10,970	$29,000	$15,020
Housing and food (double room and meal plan)	$10,450	$10,450	$10,450
ANNUAL TOTAL	$21,420	$39,450	$25,470

UAF GRADUATE STUDENTS

	Alaska Resident	Non-Resident	WUE[2]
Tuition and fees[3] (18 credits, 600-799-level classes)	$12,398	$23,000	
Housing and food (double room and meal plan)	$10,450	$10,450	
ANNUAL TOTAL	$22,848	$33,450	

Note: All fees are subject to change.

Other Fees

Other Fees	
(per use unless otherwise indicated)	
Application for Admission	
Certificate or associate degree	$40
Baccalaureate	$50 ($75 if late)
Graduate	$75 ($100 if late)
Application for Graduation	$50 ($80 if late)
Campus Housing	
Residence halls (per semester)	$2,550-$4,233[1]
Fairbanks campus employees, family, and graduate housing	$1,173-$1,821 per month[2]
Kuskokwim Campus housing	Contact campus
Campus Mail Box	
Semester	$75
Summer Only	$30
Credit by Examination	$40/credit
Credit Card Transaction	2.95 percent ($3 minimum)
Credit for Prior Learning	$50 plus $10/credit
Duplicate Tuition/Fees Receipt	$5/copy
Graduate Student Reinstatement	$50
Late Add/Late Registration	$50
Late Payment Fees	$50; $125, $175
Late Placement Test or Guidance Test	$5
Meal Plans (per semester)	$610-$2,695
New Student Orientation (Fairbanks area)	
Fall	$150
Spring	$35
Payment Plan	$65-$90
Records Duplication	$0.25/page
Reinstatement Fee	$100
Residence Life Programming Fee	$25
Returned Check Fee	$30
Textbooks (approximate)	$250-$1,100/semester
Transcripts	
Electronic, $12; paper, $15	$12-$15
Expedited paper	$30
Unofficial	$5
UAF CBSM Tuition Surcharge	25 percent of tuition ($72-$135/credit)[3]
UAF CEM Tuition Surchage	20 percent of tuition ($47-$108)

1 Plus one-time application fee of $40
2 Plus one-time application fee of $75 and a refundable $600 damage deposit
3 Only applies to upper-division (300-499) and graduate-level courses

Note: All fees are subject to change.

APPLICATION FOR ADMISSION

Cost: $40-$75 (add $25 if late)

Who pays: Applicants to certificate and associate degree programs are charged $40; applicants to baccalaureate programs $50; applicants to graduate programs, $75. There is a $25 late fee charged for all baccalaureate and graduate program applications submitted after the published deadlines.

What's covered: Assessment and processing of prospective student applications

APPLICATION FOR GRADUATION

Cost: $50 ($80 if late)

Who pays: Students planning to graduate in a given semester must apply for graduation. Early applications are encouraged and can be submitted the semester before expected graduation. Application deadlines are Oct. 15 for fall, Feb. 1 for spring and June 15 for summer graduation.

What's covered: Credit check, degree requirement audit and certification of eligibility to graduate

CAMPUS HOUSING

For complete rate information, please go to the Residence Life website (https://uaf.edu/reslife/rates/).

RESIDENCE LIFE PROGRAMMING FEE

Cost: $25 per semester

Who pays: Residential students and employees

What's covered: Fee revenues will be used to modernize the student experience by better serving university residents by providing sustainable funding for community councils and the Residence Hall Association.

How to apply: Send the completed application and application fee to the UAF Department of Residence Life. Applications are available online (https://www.uaf.edu/reslife/apply/). Room rent and meal plan fees, along with all other fees, are due in full by fee payment end. Information about Residence Life is available at 907-474-7247, uaf-housing@alaska.edu or on the Residence Life website (https://www.uaf.edu/reslife/).

KUSKOKWIM CAMPUS HOUSING

For information about campus housing at the Kuskokwim Campus in Bethel, visit the Kuskokwim Campus website (https://www.bethel.uaf.edu) or call 907-543-4562.

CAMPUS MAILBOX

Cost: $75 per box per semester, $30 summer only. Limited numbers of larger boxes are available for an additional cost.

Who pays: Students who wish to receive U.S. Postal Service mail on campus must rent a campus mailbox at the Campus Mail Center in Constitution Hall. USPS mail is delivered on campus to post office boxes only, not to street addresses. The fee can be paid at UAOnline or at the Bursar's Office in Signers' Hall. Fees renew automatically each semester until the rental agreement is canceled and keys are returned.

What's covered: Mailbox space, postal and mail forwarding services

CREDIT BY EXAMINATION

Cost: $40 per credit hour

Who pays: Students using the credit-by-exam option for earning UAF course credit

What's covered: The fee pays for coordinating the exam or other evaluation requirements between student and professor, grade recording and transcription.

CREDIT CARD TRANSACTION FEE

Cost: 2.95 percent ($3 minimum)

Who pays: Anyone making credit or debit card payments via UAOnline. Note: credit and debit card payments are not accepted in person, by mail, or over the phone.

What's covered: Fees charged by credit card companies. Note: The university does not receive any of this fee.

CREDIT FOR PRIOR LEARNING

Cost: $50 fee payment plus $10/credit hour for credits earned

Who pays: Students using the credit-for-prior-learning option to earn UAF course credits

What's covered: The fee pays for the portfolio or license/certificate review by faculty evaluation committee. If credit is awarded, the fee per credit hour earned pays for grade recording and transcription.

GRADUATE STUDENT REINSTATEMENT

Cost: $50

Who pays: Graduate students who do not meet registration requirements and fail to file an approved leave of absence may request reinstatement from the dean of the Graduate School and will be charged $50.

What's covered: Reinstatement processing

LATE ADD/LATE REGISTRATION

Cost: $50

Who pays: Students given permission to add a class after the last day to pay tuition and fees will be charged a late registration fee of $50 that must be paid within five business days. This includes drop/add (swap) courses. No late fee will be charged when a student:

- adds a late-start course during the regular registration period for that course, or
- is moved into a class for which they were waitlisted, or
- is changed from one section to a different section of the same course, or
- adds graduate thesis or research credits, or
- adds a course to replace a canceled course in which they were previously enrolled, or
- is moved to a lower or higher level of a course (e.g., MATH F151X to MATH F105) due to the instructor's recommendation.

This fee is refundable only if all classes for which a student is registered are canceled. See the Registration Guide (https://www.uaf.edu/handbook/register/) for the procedure for adding a class.

What's covered: Processing of late registration

LATE PAYMENT FEES

Cost: $125 for first; $175 for second; $50 per month for late payment plan payments

Who pays: All students who have missed the fee payment deadline and have a balance of $300 or more. An additional $175 fee will be added to accounts not paid by the withdrawal deadline.

What's covered: Processing of late payments

LATE PLACEMENT TEST OR GUIDANCE TEST

Cost: $5

Who pays: Students who take a placement or guidance test outside of scheduled testing sessions

What's covered: Test oversight, administration and recording

MEAL PLANS

Cost: $850-$3,095

Who pays: All students living in residence halls and Cutler Apartments are required to purchase a meal plan, with the exception of graduate students. UAF also offers meal plans to commuter students, including residents of family housing and students living off campus. Students who do not live on campus but are interested in purchasing a meal plan can contact Dining Services at 907-474-6661 or uaf-dining@alaska.edu. Please review the dining contract for more details. All prices are per semester.

What's covered (per semester): See Dining Services (http://catalog.uaf.edu/housing-dining/dining-services/) page for details of specific meal plans and how to purchase plans.

Note: The Wood Center food court is closed for campus holidays. Dining locations are limited during UAF winter and spring breaks.

NEW STUDENT ORIENTATION

Cost: $150 for fall semester, covers all programs except special Outdoor Adventures activities; $10 for one-day fall transfer student orientation, and $25 (plus $10 for each additional guest) for two-day fall family orientation. $35 for spring orientation.

Who pays: Any new student may participate in New Student Orientation on the Fairbanks campus. NSO is required for all first-time bachelor's degree students (regardless of the number of earned college credits) and international students (undergraduate F-1 and international exchange J-1 status). Domestic transfer students are also encouraged to attend.

What's covered: All materials, sessions, general entertainment and meals not included in student meal plans

PAYMENT PLAN

Cost: $65-$90 depending on when a student signs up. Discount only applies to online enrollment via UAOnline.

Who pays: Students unable to pay all tuition and fees at the beginning of a semester

What's covered: Budgeting by distributing the costs of tuition and fees across two or more payment dates. See the Bursar's Office website (https://www.uaf.edu/bursar/) for more information.

RECORDS DUPLICATION

Cost: $0.25 per page

Who pays: Anyone who requests copies of their own academic records

What's covered: Copies of records in a student's academic file in the Office of the Registrar (except transcripts from another school). Students need to submit a written request for copies. The Office of the Registrar provides document copies as time permits. All copies provided through this service are stamped "unofficial."

REINSTATEMENT FEE

Cost: $100

Who pays: Students dropped from classes due to nonpayment will be charged $100 to have classes reinstated

What's covered: Reinstatement processing

RETURNED CHECK FEE

Cost: $30

Who pays: If a check is returned for any reason, a hold will be placed on the student's account which will prevent the student from registering, viewing grades, participating in graduation activities and receiving transcripts until the check clears and a $30 fee is paid.

What's covered: Processing returned checks

TEXTBOOKS

Cost: Varies according to course load. A student can expect to pay about $250-$1,100 per semester for textbooks. The cost for books averages about $90-$115 per course.

Who pays: Students in classes with required texts

What's covered: Texts, assigned readings or other course materials assigned by instructors

TRANSCRIPTS

Cost: $12-$30

Electronic = $12
Paper = $15
Expedited paper = $30

Who pays: Anyone who requests their own transcripts from the Office of the Registrar

What's covered:

- **Official transcripts** can be issued electronically (secure PDF delivery to an email address) or on special transcript paper in a sealed envelope sent by U.S. mail. Official transcript requests are handled by Parchment (accessible via UAOnline) and by the Office of the Registrar. Electronic transcripts can be delivered within minutes of the request as long as there are no holds on the student account. Processing time for paper transcripts is normally three to five business days. Transcript requests are processed as they are received and cannot be held for grades or degrees.
- **Unofficial transcripts** are accessible via UAOnline.

UAF CBSM TUITION SURCHARGE

Cost: 25 percent of tuition ($72-$135/credit)

Who pays: Students enrolled in upper-level and graduate courses in College of Business and Security Management departments. **Please note:** Tuition waivers do not cover tuition surcharges.

UAF CEM TUITION SURCHARGE

Cost: 20 percent of tuition ($47-$108/credit)

Who pays: Students enrolled in lower-level, upper-level, and graduate courses in the College of Engineering and Mines departments. **Please note:** Tuition waivers do not cover tuition surcharges.

PAYING TUITION AND FEES

Students are not considered registered for any classes until all tuition and fees are paid or other payment arrangements have been made by the fee payment deadline. Please note that the payment due dates may vary if a student is taking classes from multiple campuses. This includes room rent, meal plan costs, student activity fees, health fees and deposits. Any charges unpaid at the end of the previous semester are also due and must be paid before they can re-enroll. If a student owes money to the university and submits an enrollment form and payment for the current semester, they will not be enrolled in the requested classes; instead, the payment will be applied toward the outstanding balance.

Other than tuition and fees, which are due according to every semester's payment schedule, any charges owed to the university are due within 30 days.

A $30 charge and a hold will be placed on the account for returned checks. This will prevent a student from registering, viewing grades, receiving transcripts and graduation activities.

CONSEQUENCES OF NOT PAYING

Failure to pay in full or make other payment arrangements by the fee payment deadline may result in the cancellation of a student's class schedule. UAF may withhold transcripts, grades and other services, and cancel meal plans and housing if financial obligations are unmet. If the university takes such action, *the student will still be responsible for the account balance in full.*

Registration may be withheld from any student who is delinquent in paying any amount due to the university. The registration process is not complete until the student has paid all fees and charges due. UAF may drop a student from courses after the fee payment deadline if a balance is owed to the university. A $100 reinstatement fee will be charged to re-enroll in any dropped courses.

FAILURE TO MEET FINANCIAL OBLIGATIONS

University policy requires a financial hold to be placed on a student's account if they fail to meet financial obligations. The hold will prevent any registration, transcript or graduation activity.

Past-due accounts will be sent to a collection agency. Interest, late fees and/or collection costs will be added to the student's account. Past-due balances may be reported to a local credit bureau. The university is

authorized to garnish Alaska Permanent Fund Dividends for payment of past-due accounts.

TUITION WAIVERS

Note: Tuition waivers do not cover tuition surcharges.

- **Senior Citizen Tuition Waiver**

  UA Board of Regents policy waives regular tuition for Alaska residents at the age of eligibility for full Social Security retirement benefits. A student is eligible to use the senior citizen tuition waiver and enroll in UAF courses if:

  - the student is a permanent resident of Alaska;
  - the student is age-eligible to receive full Social Security retirement benefits; and
  - there is space (i.e., no waitlist) in the class or classes desired.

If using a senior tuition waiver, a student may not register until the first day of instruction of the semester. Both age and residency requirements must be met by one of the following dates to be eligible for the corresponding semester: Sept. 1 for fall; Jan. 1 for spring; May 1 for summer. Reimbursements will not be made to senior citizens who pay for a course and then request a waiver.

- **Employee Tuition Waiver**

  Employee tuition waivers pay only for tuition. Tuition waiver forms must be turned in by the fee payment deadline. The employee is responsible for all other fees. Employees who pay for a course and later become eligible for a waiver will not be reimbursed. Late fees and payment deadlines apply. More information is available at the Bursar's Office website (https://www.uaf.edu/bursar/).

Refunds

TUITION AND FEES

Students may drop courses in UAOnline or submit an add/drop form to the Office of the Registrar per published deadlines in the academic calendar (p. 7). The following conditions apply:

- If UAF cancels a course, students' tuition and fees will be refunded in full.
- Refund processing is automatic for students who officially drop courses by the refund deadlines.
- It is the responsibility of each student to review their course dates and be aware of the published refund deadlines for their particular courses.
- The first day of instruction for full-semester courses is the first day of instruction listed in the academic calendar.
- **Full semester courses (fall and spring):** 100% of tuition and course fees are automatically refunded when the drop is completed by the second Friday of the semester.
- **Courses meeting at least four weeks but less than the full semester: S**tudents may drop within five business days of the first class meeting (as listed in UAOnline) to receive 100% refund of tuition and fees.
- **Courses meeting less than four weeks:** Students may drop on the first day the class meets (as listed in UAOnline).
- **Summer courses:** Please refer to the academic calendar (p. 7) for summer registration and fee payment deadlines.

REFUND PROCESSING

Financial aid will start to be disbursed to student accounts 10 days before the first day of class, and the Bursar's Office will begin processing refunds at that time. Submit an Advance of Funding (https://nextgensso.com/sp/startSSO.ping?PartnerIdpId=urn:mace:incommon:alaska.edu&TargetResource=https%3a%2f%2fdynamicforms.ngwebsolutions.com%2fSubmit%2fStart%2ffdff12a6-e312-4608-9a57-61df7c5a0dd8) if funds are needed for books and supplies. Refund processing is automatic for students who officially drop courses by the published refund deadlines. Remember to return parking permits if dropped during the 100 percent refund time.

All refunds are processed electronically or by mail. The Bursar's Office does not issue refund checks for amounts less than $10. It is the student's responsibility to check their account and contact the Bursar's Office to receive a refund as cash or to apply it to the student's Polar*Express* card as a nonrefundable payment.

If tuition and fees are paid for the semester by credit card, the credit card will be refunded (up to the amount paid). Any remaining credit balances will be refunded by check or direct deposit.

If tuition was paid through external sources such as financial aid, federal loans, scholarships or grants, refunds will be received as a check sent to the mailing address of record or direct deposited in the student's bank account.

Once processed by the Bursar's Office, direct deposit takes three to five business days to disburse to a bank account. Check refunds will take at least 10 business days to be received in the mail.

Refunds are subject to federal regulations. Refunds due to dropped classes or a total withdrawal may disqualify a student to receive scholarships or financial aid. In that case, the funds may be returned to the lender or grantor pursuant to all applicable rules and regulations.

If paid by cash or check, a refund check will be sent to the mailing address of record or direct deposited in the student's bank account. If the Bursar's Office is notified that a check is not received due to an incorrect address, **a fee of $18.50 will be charged for all checks reissued due to a stop-pay request by the student.** Please be sure UAOnline reflects the current mailing address.

If tuition and fees were paid by check, refund processing will begin after all checks have cleared the bank.

Any balance owed to the university will be deducted from the student's refund.

Students who drop during the 100 percent refund period and want to maintain health insurance coverage should contact the Student Health and Counseling Center at 907-474-7043.

DIRECT DEPOSIT OF REFUNDS

Enrolling in direct deposit allows refunds to be electronically deposited into the student's bank account. It's simple, safe and convenient. Enrollment is available through our secure self-service website. Sign up for direct deposit through UAOnline (https://uaonline.alaska.edu) by following these steps:

- At the "Student Services & Accounting Information" menu select the "Direct Deposit Enrollment" link.
- Select "1st time setup of direct deposit"

- Select the account type
- Enter the bank routing code
- Enter account number
- Re-enter account number
- Select "Submit"

EXCEPTION TO POLICY: APPEAL FOR REFUND OF TUITION

Appeals for a refund of tuition are exceptions to policy and are only approved in events that are unanticipated and unavoidable. Approval is not automatic, and documented evidence needs to be provided to support requests (physician's note, letters of support from instructors, etc.). Acceptable unanticipated and unavoidable reasons may include:

- death in the immediate family;
- serious illness or injury of the student or immediate family member; and
- factors outside of the student's control (e.g., fire, flood).

Work-related issues, personal hardships, changing one's mind about college, poor academic performance, disciplinary withdrawal, not receiving expected financial assistance or failure to read UAF's published documents are considered to be the result of personal choices and actions and will not be considered.

Appeals for refund of tuition must be submitted within 30 class days after the beginning of the next regular semester. Forms for an appeal for refund of tuition are available online (https://www.uaf.edu/bursar/forms/), through the Bursar's Office in Signers' Hall on the Fairbanks campus or at CTC. Once received, the appeal will be evaluated by a campuswide committee which will return a decision to the student. The decision of the committee is final, and a student who files a written appeal under these procedures shall be expected to abide by the final disposition of the review, as provided, and may not seek further appeal of the matter under any other procedure within the university. Submission of appeals and appropriate documentation after published deadlines will not be considered. Contact the Bursar's Office for more information.

HOUSING

Students who move off campus or withdraw from the university will receive room refunds according to the schedule on their housing agreement.

Any refund of room charges will be based upon the housing agreement.

MEALS

Please refer to the meal plan agreement for specific information about meal plan refunds.

Where To Get More Information

Office of the Bursar
University of Alaska Fairbanks
130 Signers' Hall
P.O. Box 757640
Fairbanks, AK 99775-7640
Email: uaf-bursar@alaska.edu
Telephone: 907-474-7384
Fax: 907-474-5898

Financial Aid

What Is Financial Aid

Most students will need financial aid to help pay for the cost of attending college. Financial aid in the form of scholarships, grants, loans and employment is available at UAF to eligible students who need assistance to attend school.

Financial aid can be used to help pay for tuition, fees, books, supplies and living expenses such as housing and food.

The Financial Aid Office provides counseling and information to students and parents and administers a comprehensive program of financial assistance. Specific information regarding financial aid programs at UAF is on the Financial Aid website (https://www.uaf.edu/finaid/). The Financial Aid Office is in 107 Eielson. Contact Financial Aid at 907-474-7256, toll-free at 888-474-7256 or at uaf-financialaid@alaska.edu.

Who Receives Financial Aid

To receive financial aid a student must:

1. Be admitted to a financial aid-eligible certificate or degree program at UAF;
2. Be a U.S. citizen or eligible noncitizen (F-1 and J-1 students are not eligible for state or federal financial aid, but may apply for University of Alaska Foundation or UAF privately funded scholarships, and graduate fellowships or assistantships);
3. Have a valid social security number;
4. Be making satisfactory academic progress as defined by the Financial Aid Office policy (policies and forms are available online (https://www.uaf.edu/finaid/));
5. Not be in default on any federal education loan and not owe a refund because of overpayment of a previous federal grant or loan at any college or university;
6. Have earned a high school diploma, GED or equivalent.

How to Apply for Financial Aid

The forms to apply for federal, state and UAF financial aid programs are available at the Financial Aid Office or Financial Aid website (https://www.uaf.edu/finaid/).

All students must complete the Free Application for Federal Student Aid to be considered for grants, scholarships, loans and work-study.

FAFSA forms may be completed at the FAFSA website (http://studentaid.gov). The earliest date students may begin completing the form is Oct. 1.

The priority application deadline for UAF is Feb. 15. If a student misses the deadline, they may still apply for financial aid, but they might not be eligible for institutional scholarships.

Important Financial Aid Dates

- **Oct 1**
  Apply for federal aid with the Free Application for Federal Financial Aid. It is best to apply well before the time the students will need financial aid.
- **February**

Apply for admission to UAF. Financial aid cannot be processed for students who have not been admitted to a UAF degree or certificate program.

- **Feb. 15**
  UAF scholarship application is due. This application includes three short essays, which may be revised at any time, so applicants should start early. Apply online (https://apply.mykaleidoscope.com/scholarships/2023-2024/).
- **May to July**
  Federal student loan borrowers should complete federal loan promissory note and entrance counseling online (http://studentaid.gov). Processing time is approximately one week. If sent to UAF in time, loans will be disbursed 10 days before the first day of class each semester.
- **June 1 for fall; Oct. 15 for spring**
  Deadline for admission to graduate programs, with all supporting documentation, transcripts and test scores.
- **June 15**
  Deadline for undergraduate admission to UAF for the fall semester. This is an absolute MUST. UAF cannot process financial aid for students who have not been admitted. Application for fall Nanook Pledge and Nanook Commitment scholarships due (included in the Application for Admission).

Costs of Attending UAF

The information in the Estimated UAF Living Expenses table below for a typical full-time undergraduate student for the school year will help estimate the total cost of attending UAF:

ESTIMATED UAF LIVING EXPENSES

	Single student living alone off campus	Single student living in UAF residence hall
Tuition and fees[1]	$10,970	$10,970
Books, supplies	$2,000	$2,000
Housing and Food [2]	$12,750	$10,450
Transportation	$1,000	$1,000
Misc./personal	$2,500	$2,500
TOTAL	$29,220	$26,920

1 Estimate includes undergraduate Alaska resident tuition costs. Includes consolidated, UA facilities and UA network fees. Does not include specific course fees, health insurance, books, supplies, parking, travel or special costs associated with international or exchange students. Add $16,980 for nonresident tuition. Costs are subject to change.

2 Double room and meal plan

Standard budgets do not always fit everyone. Financial Aid staff will try to provide methods of covering unusual expenses such as medical bills, special child care or emergency items. Since eligibility is based on prior income, a student may request a review of their eligibility if their income changes from loss of job, divorce, death or disability.

How Eligibility Is Determined

After the FAFSA is filed, the Financial Aid Office receives an Institutional Student Aid Record from the U.S. Department of Education. The information on this form is used to determine a student's eligibility for financial aid at UAF.

Once the office has received this report, students will receive an email either requesting more information (such as copies of income tax forms, proof of citizenship, etc.) or a financial aid offer notice detailing the student's eligibility for financial aid. This information is also available via UAOnline (https://uaonline.alaska.edu). Students should respond to requests for more information promptly to avoid delays.

The total amount of financial aid awarded will be based on the FAFSA results and the student's cost of attendance.

Scholarships, Grants and Tuition Waivers

Grants are usually based on financial need, whereas scholarship awards are based on academic achievement as well as financial need. These types of aid do not have to be repaid. Most grants and scholarships are designed for undergraduate students.

- **Nanook Pledge Scholarship**
  The Nanook Pledge is a four-year merit scholarship for incoming first-year, transfer and readmitted students at UAF. Awards range from $1,000 to $12,000 per year and are based on high school GPA, test scores, tuition rate and transfer GPA. Students must be admitted to a UAF baccalaureate program and enrolled full time to be eligible for the Nanook Pledge Scholarship. The Nanook Pledge is available for up to four years for continuous enrollment at UAF.
- **Nanook Commitment Scholarship**
  The Nanook Commitment is a four-year need-based scholarship for incoming first-year, transfer and readmitted students at UAF. Awards are based on high school or transfer GPA, tuition rate and need as determined by the Free Application for Federal Student Aid (FAFSA). Students must be admitted to a UAF baccalaureate program and enrolled full time to be eligible for the Nanook Commitment Scholarship. The Nanook Commitment is available for up to four years for continuous enrollment at UAF.
- **University of Alaska Scholars Program**
  UA Scholars are exceptional graduates of Alaska high schools who are offered a unique opportunity to attend the University of Alaska with a $12,000 scholarship paid over eight semesters at $1,500/semester. The UA Scholars Program encourages Alaska's high school graduates to pursue their advanced education in the 49th state. Alaska high schools designate the top 10% of the junior class at the end of their junior year for the UA Scholars Award. UA Scholars may use their awards at any of the UA system campuses. The award may also be applied to the costs of qualified student exchange programs. Contact the UA Scholars coordinator at the Office of Admissions at 907-474-7500 or 800-478-1823.
- **Alaska Performance Scholarship**
  The Alaska Performance Scholarship is available to Alaska residents who graduated from an Alaska high school (public, private or home school) in 2011 or later. Students must complete high school, achieve a high school GPA of at least 2.5, earn a minimum score on a college or career readiness test, enroll at least half time, remain in good standing and have qualifying education costs remaining after using all other non-loan aid. Students can receive up to eight semesters of award with three maximum annual award levels of up to $2,378, $3,566 and $4,755. To qualify, students must complete the FAFSA by June 30. For more information, visit the Alaska Performance Scholarship website (http://acpe.alaska.gov/FINANCIAL_AID/Grants_Scholarships/Alaska_Performance_Scholarship/) or call 800-441-2962.
- **UAF Privately Funded Scholarships**

Several hundred privately funded scholarships are available to all prospective and current students in a variety of academic majors. Students may apply online (https://apply.mykaleidoscope.com/scholarships/2023-2024/). New and prospective students must also apply for admission to UAF to be considered for scholarships. For more information contact the Office of Financial Aid at 907-474-6228 or 888-474-7256.

- **University of Alaska Foundation Scholarships**
  Scholarships are available for students attending any campus in the UA system. Applications are submitted online (https://apply.mykaleidoscope.com/scholarships/2023-2024/). The deadline is Feb. 15. For information, call 907-450-8033 or visit the University of Alaska Foundation website (https://www.alaska.edu/foundation/).
- **Army ROTC Scholarships**
  The U.S. Army awards four-year scholarships to high school students based on nationwide competitions. Students may use these scholarships to attend the university of their choice, provided that the university is also host to an Army ROTC program. The UAF Army ROTC program supports campus-based competition for two-, three- and four-year scholarships for qualified UAF students. These scholarships may be used for undergraduate or graduate programs. Army ROTC scholarships pay UAF tuition and mandatory fees, $900 annually for books and supplies, and a monthly stipend for living expenses ranging from $300-$500 depending on the length of the scholarship.
  For more information about the Army scholarship program, eligibility requirements and the application process, contact the Department of Military Science at 907-474-6852 or email uaf-army-rotc-dept@alaska.edu.
- **Bureau of Indian Affairs and Native Corporation Scholarships**
  The federal Bureau of Indian Affairs offers grants to undergraduate full-time students. Applicants must be at least one-quarter American Indian or Alaska Native. These grants supplement other financial aid and are based on financial need. Grants range from $50-$3,000 or more each year. The average grant at UAF is $1,600. More information on BIA grants can be obtained from the BIA Regional Office, 1675 C Street, Anchorage, AK, 99501-5198, or by telephone at 907-271-4115. Some regional and village corporations provide scholarships to shareholders. Contact local corporations for details on eligibility and application procedures.
- **Pell Grant**
  The federal Pell Grant is a need-based grant available to undergraduate students to help pay college costs. Since this grant is based on financial need, students must complete the Free Application for Federal Student Aid. A federal processor will send applicants a student aid report indicating whether they qualify. Federal Pell Grants award up to $7,395 for the 2023-2024 academic year.
- **Federal Supplemental Educational Opportunity Grant**
  This grant is for exceptionally needy undergraduate students. Award amounts range from $500-$1,000 each year.
- **Alaska Education Grant**
  The AlaskAdvantage need-based grant is awarded to Alaska residents attending Alaska institutions. Priority is given to students pursuing degrees in Alaska workforce priority programs (such as allied health, social and community services, or teaching) or who have an ACT score of 25 or higher or SAT score of 1180 or higher. Part-time awards range from $500-$1,000 per academic year. Full-time awards range from $1,000-$4,000 per academic year.
- **Western Undergraduate Exchange (WUE)**
  UAF participates in the Western Undergraduate Exchange administered by the Western Interstate Commission for Higher Education. Only new undergraduate degree applicants claiming residency in Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington or Wyoming are considered for WUE, which reduces nonresident tuition to 1.5 times the resident tuition rate. WUE applicants must submit an application for admission and clearly mark their interest in WUE on the form. Priority deadline for reviewing WUE applications is Feb. 15. For more information, contact the Office of Admissions at 800-478-1823, 907-474-7500, or through the Office of Admissions website (https://www.uaf.edu/admissions/).
  Note: Students attending any campus of the University of Alaska system under the Western Undergraduate Exchange program are assumed to be receiving the benefit of reduced tuition because of their residency in a partner state. Therefore, time spent in WUE does not count toward the time required to establish residency in Alaska for tuition purposes. If students end their participation in WUE, they could begin establishing residency for tuition purposes as set forth in the resident and nonresident tuition policy (http://catalog.uaf.edu/costs-financial-aid/tuition-fees/).

Graduate Assistantships

Students must be admitted to a graduate program to receive an assistantship. Research and teaching assistantships are awarded to qualified graduate students by each department or program. For application information, contact the department or program directly. For more information, see Graduate Assistantships. (https://www.uaf.edu/gradschool/current-students/assistantships.php)

Fellowships are available through the University of Alaska Foundation, the Graduate School and private organizations. A limited number of these awards are granted each year, and the amounts vary. For information, contact the UA Foundation at 907-474-7687, the Graduate School at 907-474-7464, or visit the Graduate School website (https://www.uaf.edu/gradsch/).

Loans

Loans represent a major source of assistance as a student tries to meet the full costs of their education. Educational loans generally have long-term repayment schedules and offer low interest rates. They often have provisions for deferring payments and may offer more benefits related to financial needs.

Any student who borrows money for college should understand the specific conditions and requirements regarding disbursements, deferments and repayment options. Students who fail to meet the conditions of the satisfactory academic progress policy may be denied all federal aid.

UAF participates in the Federal Student Loan Program. The Federal Stafford Loan provides loans from the federal government. The program offers subsidized and unsubsidized loans. Subsidized loans are for students who have a financial need; the government makes interest payments on the loan while the student is in school, in grace period or in deferment. Unsubsidized loans are those for which interest accrues while in school. A student may receive subsidized federal loans for up to 150% of their program's published length. If a student exceeds this time frame, their loans will lose the interest subsidy and interest will begin to accrue on those loans. Loan repayment calculations are available on the program website (http://www.finaid.org).

Students must be enrolled in at least 6 credits to qualify for a state or federal loan. Yearly limits for dependent students are $5,500 for first-year students, $6,500 for second-year students and $7,500 for upper-level undergraduates. Independent students may borrow, including the subsidized federal loan, up to $9,500 as first-year students, $10,500 as second-year students and $12,500 as third- or fourth-year students. Graduate students may borrow $20,500. The interest rate varies annually and is capped at 8.25%.

The Federal Parent Loan for Undergraduate Students is a program for parents of dependent students. The cost of attending UAF determines the annual loan limits. A variable interest rate or finance charge, not to exceed 9%, is determined each year for the federal PLUS programs.

Student Employment

Campus jobs help many UAF students pay college costs. Many student positions are available across UAF campuses, as well as the University of Alaska statewide system offices in Fairbanks. More than 1,000 students are employed in these jobs. Full-time student status is not required unless specified by a department. However, students who are less than full-time are subject to FICA withholding, and departments that hire part-time student employees are subject to the applicable benefit rate charge.

Student employees may work up to 20 hours each week while classes are in session and up to 40 hours when classes are not in session. Pay rates are based on the job classification. The average pay varies from $300-$500 each month. Since there is no “pool” for workers, students apply directly to the departments with position vacancies. Job announcements and information on how to apply for positions are available from Human Resources, 907-474-7700, or at the Careers at UA website (https://alaska.edu/jobs/).

The Federal Work Study program provides jobs for graduate and undergraduate students with financial needs. Job placement and working conditions are similar to regular student employment. To qualify for FWS, students must be eligible for federal financial aid as determined based on information provided on the required FAFSA.

Veteran Services

The UAF Department of Military and Veteran Services monitors the educational progress and status of veterans who attend UAF using VA educational benefits. They also help veterans, service members and eligible dependents with the paperwork needed to begin and continue certification under the various GI Bill® benefits. If a student qualifies and wishes to use their benefits, they must be fully admitted to UAF and in a state-approved degree or certificate program. A complete list of benefit programs is available on the DMVS website (https://www.uaf.edu/veterans/va-educational-benefits/). If a student is unsure whether if they are entitled to GI Bill benefits, contact the Department of Veterans Affairs in Muskogee, Oklahoma, at 888-442-4551 (888 GI BILL 1) or through the Department of Veterans Affairs website (http://www.gibill.va.gov). Specific questions regarding vocational rehabilitation should be directed to the Fairbanks Vet Center, 540 Fourth Ave., Suite 100, Fairbanks, AK 99701, or call 907-456-4238.

Because the Department of Veterans Affairs processes benefit payments as a reimbursement, the student should initiate their VA paperwork 60-90 days before classes start. They can apply for veteran benefits online (https://www.va.gov/). They can request certification of their UAF VA educational benefits at the DMVS website (https://www.uaf.edu/veterans/forms/), or visit their office location, call 907-474-7400 or email uaf-va@alaska.edu.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website *(*https://www.benefits.va.gov/gibill/*).*

Remaining Eligible for Aid

Students receiving financial aid are required to maintain satisfactory academic progress. Undergraduate students must satisfactorily complete a minimum of 67% of the total credits attempted each year and have a cumulative grade point average of 2.00 (3.00 for graduate students).

Students may appeal the suspension of aid. Appeals must be in writing and must state the reasons for failure to maintain satisfactory standards of progress, as well as the steps the student will take to meet those standards in the future. Appeals should be directed to the Financial Aid Office, which will determine if the requirements for satisfactory academic progress will be waived. Academic progress requirements are subject to changes in federal or state law and institutional policy. A complete description is available at the Financial Aid Office (https://www.uaf.edu/finaid/).

Payment to the Student

Disbursement of financial aid is usually in equal amounts by semester. Students are given half the total award at the beginning of each semester. Tuition, fees and all other amounts due to UAF at the time financial aid is released to the student must be paid before the balance of aid is released to the student.

All financial aid checks, as well as checks from outside organizations (such as Native corporations, clubs, etc.), are initially credited to the student’s account to pay for any debt owed to the university. Any balance remaining is refunded to the student in accordance with the university’s refund policy. Students who receive federal financial aid and totally withdraw from classes during a semester may have to pay back a portion of the federal financial aid received for that semester. The amount to be repaid is based on the number of class days attended before withdrawal compared to the total days in the semester and the amount of federal aid received. If the withdrawing student is entitled to a refund of tuition and fee charges, all or part of the refund may be returned to the federal financial aid programs. The amount of a refund, repayment or return of federal financial aid is based on U.S. Department of Education regulations concerning the return of federal financial aid. Any refund or repayment calculation exceeding the amount of refund determined by university policy will be charged to the student. Financial aid recipients are strongly encouraged to speak with the Financial Aid Office about the potential impacts of withdrawing from courses.

Rights and Responsibilities of Accepting Financial Aid

As a financial aid recipient at UAF, students have the right to:

1. Know what financial programs are available.
2. Know how to apply, how eligibility is determined and what terms and conditions are related to a student's aid.
3. Know how the university determines whether a student is making satisfactory academic progress toward a degree and what happens if a student is not making such progress.

4. Request an explanation of the student's financial aid package, including what portion is a gift and what portion must be repaid and the terms of repayment.
5. Know the costs of attending UAF and the refund policy for students who withdraw.

For continued receipt of financial aid, a student must:

1. Complete and file all financial aid forms accurately and on time.
2. Read and understand all documents signed. Students should also keep copies for their records.
3. Know the limits and conditions of financial aid programs.
4. Notify the Financial Aid Office of any change of address, name, marital status, attendance status or receipt of additional financial awards.

Where to Get More Information

Office of Financial Aid
University of Alaska Fairbanks
107 Eielson Building
P.O. Box 756360
Fairbanks, AK 99775-6360
Email: uaf-financialaid@alaska.edu
Telephone: 907-474-7256
Toll-free: 888-474-7256

Undergraduate Research and Scholarly Activity

As a research university, UAF offers students opportunities to participate in experimental and observational research and creative activities. The Office of Undergraduate Research and Scholarly Activity supports, develops, documents and institutionalizes UAF's diverse and robust programs of undergraduate research and scholarly activity. Building on existing efforts and capacities, URSA enables UAF students to pursue varying levels of research engagement, including independent scholarly investigations, a B.F.A. exhibit or performance, and/or a senior thesis.

Eligibility

Undergraduate students from all disciplines are eligible to engage in research or creative activity for academic credit or for pay. All UAF students are eligible to enroll in URSA courses and apply for URSA awards that support their research or creative projects with funding for travel, supplies and stipends. First-year students and new transfer students are encouraged to attend the UAF Research and Creative Activity Day or contact the URSA office to learn about research and creative opportunities across all disciplines at UAF. Students can use URSA as a resource to help find a faculty mentor with whom they might work on a research or creative project. The project may be designed by the student or the faculty mentor and will lead to the creation of new information.

For more information, contact the URSA office at 301 Bunnell Building, 907-450-8772 or ursa.uaf@alaska.edu, or visit the URSA website (https://www.uaf.edu/ursa/).

Upward Bound

The goal of the Upward Bound program is to improve the graduation rates of high school students and increase the number of graduates who enter colleges and universities.

Upward Bound College Bound serves 160 low-income, first-generation college students who demonstrate potential for academic success and whose parents have not earned college degrees. Services offered in target schools include tutorial sessions; educational, recreational, or cultural events; group activities; exploration of postsecondary education opportunities and visits to campuses; financial aid application assistance; and participation in the six-week summer program.

The residential summer program is for 50 students selected for participation from the target schools. The summer experience helps UB students become familiar with the college experience, residence life and services provided and, most importantly, places an emphasis on academic development and growth.

Participation in this program is only available to students at target schools who qualify. Upward Bound is a federally funded program.

For more information, call 907-474-5685 or email uafupwardbound@gmail.com.

Wood Center

The William Ransom Wood Center, under the Division of Student Affairs, is the student union building. It is the focal point of campus activities and services for the university and Fairbanks communities.

Services at Wood Center include event scheduling, campus information, dining facilities, meeting rooms, laundry and shower facilities, and a recreation area with pool tables and a bowling alley. Wood Center is also the campus's lost-and-found location.

Wood Center is home to the Student Activities Office, which oversees Nanook Traditions. Student Activities organizes events designed to entertain, educate and inspire the UAF community. Nanook Traditions are among UAF's most highly anticipated annual events. These include the Starvation Gulch bonfires in September, Winter Carnival in February, Festival of Native Arts in March and SpringFest in late April. For more information, visit the Student Activities Office website (https://www.uaf.edu/activities/).

The Student Leadership and Involvement program provides opportunities for students to learn about and practice leadership skills and become involved on campus and in the community. Through the SLI program students can complete and earn Co-Curricular Opportunities for Leadership Development certificates. The COLD certificates provide tangible ways for students to be recognized for leadership development within the UAF community and beyond. Students who complete the COLD certificate are eligible for graduation with leadership honors and/or distinction. To find out more about SLI, visit the Wood Center or SLI online (https://www.uaf.edu/sli/).

The Nanook Diversity and Action Center (https://www.uaf.edu/ndac/) promotes a community of inclusion, social justice and cultural pluralism by providing educational activities in collaboration with student organizations that honor and support areas of age, gender, religion, ability, socioeconomic status, race, ethnicity, culture, sexual orientation and gender expression. Additionally, NDAC focuses on prevention and

wellness efforts, including alcohol and drug misuse prevention, bystander intervention, and Sexual Assault Awareness Month.

More than 100 student organizations (https://www.uaf.edu/sli/clubs/list.php) are active on campus. Membership in a student organization can help you make social connections. It can also help in career and leadership development and enhance your resume. Each semester a student organizations fair provides an opportunity to learn more about these diverse groups. Contact the Student Leadership and Involvement office (https://uaf.edu/sli/) to learn more about UAF student organizations.

Alaska Esports at UAF brings together competitive and casual gamers from across the diverse community of UAF. As a member of the National Association of College Esports, we have four to six college esports teams that offer a variety of scholarships. All are welcome in the esports arena, from the over-the-shoulder spectator to the occasional dabbler, to the die-hard competitor looking to raise gameplay to the next level. In addition to playing a wide variety of old and new titles, our community participates in speedrunning events, pro-matches watch parties, “book club” style play-throughs of amazing narrative video games and questing in MMOs, amongst many other activities. Whether you have thousands of hours in your favorite game or want to find out what all the fuss is about, we have something to offer you.

The Wood Center Pub offers evening entertainment for those 21 and older with live music, an open mic night, movies, trivia games and karaoke. Special events include theme nights, beer and wine tastings and comedy performances.

The Associated Students of the University of Alaska Fairbanks is also located in the Wood Center. All students enrolled in 1 or more credits are ASUAF members. ASUAF runs service departments and programs dedicated to the interests and welfare of UAF students. ASUAF represents UAF students to the university administration, the University of Alaska Board of Regents and the Alaska Legislature. Officers are selected by the student body in elections held every fall and spring semester. For more information, visit ASUAF online (https://www.uaf.edu/asuaf/) or call 907-474-7355.

ASUAF Student Media is also located in the Wood Center. The student newspaper, the Sunstar (https://www.uafsunstar.com/), provides student-produced stories and features. The student radio station KSUA (https://www.ksuaradio.com/) allows students to gain experience in broadcasting. For more information, call 907-474-7034 or visit Wood Center online (https://www.uaf.edu/woodcenter/).

ACADEMIC REGULATIONS

To encourage a positive learning environment and high academic standards, universities establish specific scholastic requirements and community rules. At UAF, academic regulations address issues such as grading, academic standing, and student rights and responsibilities. Since policies may change, it is important for students to stay informed about current requirements. By enrolling at UAF, a student agrees to abide by university rules, regulations and academic standards.

Academic Standards

UAF's academic standards are designed to help students take action to ensure student success and completion of their degree. Students are encouraged to reach out to their academic advisor (https://www.uaf.edu/admitted/advising.php), instructors, dean or other campus resources (https://www.uaf.edu/admitted/advising.php) to ensure continued success.

Academic standing and honors are assessed at the end of each semester, including summer. In order to remain in good standing, undergraduate and certificate students must earn a GPA of 2.0 at the end of each semester and maintain a cumulative GPA of 2.0 or higher. If a student does not meet these requirements, academic standing action may result in a warning, probation or disqualification (p. 82) from the university.

Catalog Year

UAF defines catalog year as beginning in the fall and ending at the conclusion of the summer semester. For example, the 2023-2024 catalog year includes fall 2023, spring 2024 and summer 2024.

Good Standing

Undergraduate students — Students are in good standing if their cumulative GPA and most recent semester GPA are 2.0 or better.

Graduate students — To maintain good academic standing in UAF graduate programs, students must:

- Maintain a cumulative GPA of 3.0 in courses taken since admission to graduate school. Before advancing to candidacy, however, a cumulative GPA of 3.0 is required. Students must earn at least a B grade in 400-level courses.
- Be registered at UAF with a minimum of six graduate or 400-level credits per year unless on an approved leave of absence.
- Abide by all parts of the Student Code of Conduct.
- Have a current graduate study plan or an advancement to candidacy submitted and approved unless within the first year of graduate study.
- Have on file with the Graduate School by May 15 of each year an annual report from the graduate advisory committee certifying satisfactory progress. This is the responsibility of the student. Students starting in January need not submit an annual report until May of the next academic year. If a satisfactory annual report is not filed as specified, the student may be placed on probation.
- Pass any required qualifying exams or comprehensive exams. Departments may set the number of times a student may retake an exam.

Academic Honors for Undergraduate and Certificate Students

The chancellor's list is comprised of students who have earned a semester GPA of 3.9 or higher; the dean's list includes students with a GPA of 3.5-3.89.

To be eligible for academic honors at the end of a semester, a student must:

- be a full-time student in a UAF undergraduate degree or certificate program, and
- have completed at least 12 UA institutional credits with the letter grades of A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- or F, and
- for students with an incomplete or deferred grade, academic honors might not be determined until those grades have been finalized.

UAF announces the names of students who earn honors each semester on its news and information website. The honors list is also shared with the news media, elected officials and the public via news releases, newsletters and social media posts. The following are exceptions:

- Students with incompletes or deferred grades that are changed after the publication of honors are not announced separately.
- If a student has requested that information not be released (under FERPA), the student's name will not be released to the media.

Warning, Probation, Disqualification or Dismissal

Academic standing is assessed at the end of each semester, including summer.

WARNING

Students who have either a semester or a cumulative GPA below 2.0 are placed or continued on academic warning. Students on academic warning will be encouraged to meet with an advisor to discuss academic support resources (https://www.uaf.edu/admitted/advising.php).

PROBATION

Undergraduate students — Students whose semester and cumulative GPA falls below 2.0 after any semester, including the summer session, will be put on academic probation. Students on probation may not enroll in more than 13 credits a semester unless an exception is granted by the appropriate dean. Probation may include additional conditions as determined by the dean of the college or school in which the student's major is located. Students on probation will be referred for developmental advising/education and/or to an advising or support counseling center. The student should work with an academic advisor to prepare an

academic plan for achieving a higher GPA. Removal from probation requires the student's cumulative and semester GPAs to be at least 2.0.

Graduate students — Probationary status indicates a student is not in good standing. When a student is placed on probation, the dean of the school or college and the advisory committee will tell the student what requirements are necessary to return to good standing. If a student does not return to good standing by the end of two semesters, the student may be dismissed from the degree program.

ACADEMIC DISQUALIFICATION

Undergraduate Academic Disqualification — Academic Disqualification (https://www.uaf.edu/reg/standing.php) is the status assigned to those undergraduate students who begin a semester on academic probation (including students admitted on probation for that term) or are continuing on probation and fail to earn a semester GPA of 2.0 or higher. Academically disqualified students are ineligible for most types of financial aid.

The student's program will be changed to inactive and the student will not be allowed to attend UAF for one academic (fall or spring) semester. After non-attendance for either the fall or spring semester, the student may complete a form for reinstatement.

Reinstatement — An academically disqualified student who desires to continue in the same program or another baccalaureate program may submit a request for reinstatement after not attending UAF or another UA institution for one academic semester (not including summer). The student should complete a request for reinstatement, which includes a plan for academic success. This form must be reviewed and approved by an academic advisor. Completed reinstatement forms must be submitted to the Office of the Registrar no later than the Friday before the first day of the semester for which a student wishes to be reinstated. An academically disqualified student must be successfully reinstated within two years of disqualification or they will need to reapply for admission.

- If reinstatement is granted, the student will remain on probation and be required to meet with an advisor prior to registration for classes until their cumulative GPA is 2.0 or above. Students must achieve a term GPA of 2.0 or above for each term.
- Reinstated students will have a maximum semester course load limit of 13 credits. Overloads will not be allowed; however, school or college deans may set a lower credit limit.
- Should a second academic disqualification occur, the student will be required to sit out one calendar year before being reinstated to UAF, CTC or CRCD. The Alternative Program and Appeal options are not allowed.
- Should a third academic disqualification occur, the student will be required to sit out two calendar years before being readmitted to UAF, CTC or CRCD and will need to reapply for a certificate or degree program through the Office of Admissions.
- UAF honors the academic status decisions of the University of Alaska Anchorage and the University of Alaska Southeast. Any student required to sit out at UAA or UAS will be eligible to register for UAF courses after the sit-out period and the hold has been released by the originating campus.

Alternative Program Option - Baccalaureate students who wish to continue attending may apply to the UAF Community and Technical College or College of Rural and Community Development for admission into an associate-level degree, certificate or occupational endorsement program with dean approval. This process can be completed with a full academic success plan developed with their new program academic advisor and submitted to the Office of the Registrar.

- Readmitted students will have a maximum semester course load limit of 13 credits. Overloads will not be allowed; however, school or college deans may set a lower credit limit.
- Should a second academic disqualification occur, the student will be required to sit out one calendar year before being reinstated to UAF, CTC or CRCD. The Alternative Program and Appeal options are not allowed.
- Should a third disqualification occur, the student will be required to sit out two calendar years and may reapply for a degree program through the Office of Admissions.
- UAF honors the academic status decisions of the University of Alaska Anchorage and the University of Alaska Southeast. Any student required to sit out at UAA or UAS will be eligible to register for UAF courses after the sit-out period and the hold has been released by the originating campus.

Appeal of Academic Disqualification — A student who wishes to appeal an academic disqualification decision and remain in their current undergraduate program may submit an appeal form, available at the Office of the Registrar. Appeals must be initiated no later than the Friday before the first day of instruction for the semester in which a student wishes to be reinstated. The appeal form with a full academic plan for success will be reviewed by a committee for first-step approval and will then be approved by the dean of the college or school where reinstatement is being requested.

- Students who successfully appeal will have a maximum semester course load limit of 13 credits. Overloads will not be allowed; however, school or college deans may set a lower credit limit.
- Should a second academic disqualification be received, the student will be required to sit out one calendar year before being reinstated to UAF, CTC or CRCD. The Alternative Program and Appeal options are not allowed.
- Should a third academic disqualification be received, the student will be required to sit out two calendar years and may reapply for a degree program through the Office of Admissions.
- UAF honors the academic status decisions of the University of Alaska Anchorage and the University of Alaska Southeast. Any student required to sit out at UAA or UAS will be eligible to register for UAF courses after the sit-out period and the hold has been released by the originating campus.

ACADEMIC DISMISSAL

Graduate students — If recommended by the department chair, graduate advisory committee and dean of the college or school, and approved by the dean of the Graduate School, a student will be dismissed because of unsatisfactory performance. Unsatisfactory performance is deemed as one or more of the following:

- Exceeding the maximum time limit for the degree.
- Not being registered at UAF for a minimum of six credits per year unless on an approved leave of absence.
- Having less than a 3.0 cumulative GPA for courses taken since admission to graduate school.
- Being on probationary status for more than two consecutive semesters.
- Violating the Student Code of Conduct.

- Lacking progress as judged by the advisory committee and documented on the student's annual report.
- Having substantive inaccuracies in the original application for admission.

If the student does not have a graduate advisory committee, dismissal can occur upon the recommendation of the department chair and the dean of the college or school, with approval from the dean of the Graduate School.

Information Release and FERPA

The Office of the Registrar is responsible for keeping student education records. The Family Educational Rights and Privacy Act of 1974, as amended, protects the privacy of education records, establishes the right of students to inspect and review their education records, and provides guidelines for the correction of inaccurate or misleading data through informal and formal hearings.

FERPA affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within 45 days of the day the university receives a request for access. Students should submit a written (letter or fax) request to the Office of the Registrar that identifies the record(s) they wish to inspect. The registrar will make arrangements for access and notify the student of the time and place where records may be inspected. If the records are not maintained by the Office of the Registrar, registrar-designated staff will refer the student to the appropriate personnel or office to access the record.
2. The right to request the amendment of a record they believe is inaccurate or misleading. A student may ask the university to amend the student's education records if he/she believes they are inaccurate or misleading or otherwise in violation of the student's privacy or other rights. If the university decides not to amend the record as requested by the student, the university will notify the student of the decision and advise the student of their right to a hearing regarding the request for amendment. If the university denies the amendment request after the hearing, the student is given the right to insert a statement in the education record.
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. The university may release, without consent, certain directory information.

The university discloses education records without a student's written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person designated by the university to perform an assigned function on behalf of the university, including an individual employed by the university as an administrator, supervisor, instructor or administrative staff member (including law enforcement unit personnel and health staff) or a volunteer; a person or company with whom the institution has contracted to perform a service instead of using university employees (such as an auditor, attorney or another third party); a member of the board of regents; a government entity or any other entity with which a student is placed as part of their education; or a student serving on an official committee (such as a judicial or academic review committee or scholarship committee) or helping another university official perform their tasks. A university official has a legitimate educational interest if the official needs the student's education record to perform work appropriate to their position.

Upon request, the university also discloses education records without consent to officials of another school in which a student seeks or intends to enroll, or where the student is already enrolled.

The following information is designated as directory information by the university:

a. Names of students
b. Dates of attendance at the university
c. Program/major field(s) of study
d. Degrees and certificates received including dates
e. Participation in officially recognized university activities
f. Academic and co-curricular awards, honors, and scholarships received and dates received
g. Weight and height of students on athletic teams
h. Students' email addresses
i. Hometown, city and state

Students may inform the Office of the Registrar in writing that they do not give permission for the university to release their directory information, or they may submit the request through UAOnline (https://uaonline.alaska.edu). The request is valid until a subsequent request to release directory information is received in writing or through UAOnline (https://uaonline.alaska.edu).

Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by the university to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5920

The University of Alaska Board of Regents' policy and university regulation 09.04 regarding education records can be reviewed at the University of Alaska Regents' Policy and University Regulations site (https://www.alaska.edu/bor/policy-regulations/).

Honors and Scholarships

Names of students receiving awards or scholarships or who appear on the dean's list or chancellor's list are released to the media unless a student has requested that no directory information be released. Instructions for electing FERPA confidentiality (https://www.alaska.edu/studentservices/ferpa/) are available online.

Appeal of Academic Decisions

The University of Alaska Board of Regents policy on student dispute resolution is available online at the Board of Regents policy and university regulation website (https://www.alaska.edu/bor/policy-regulations/chapter-09-03-student-dispute-resolution.php).

The academic appeals advisor is a professional academic advisor in the Academic Advising Center. The academic appeals advisor helps students determine whether the appeal or petition is appropriate, reviews documentation relevant to the appeal or petition and navigates the process for the appeal or petition submission. In the preceding

sentence, “appropriate” does not refer to whether an appeal is likely to be successful, but rather whether the appeal falls within the purview of the grade or academic decisions appeal process. The academic appeals advisor does not guarantee the appeal or petition will be successful and will not comment on the likelihood of acceptance. Students are responsible for writing the appeal or petition, gathering and recording relevant documentation and submitting the appeal or petition with the proper signatures.

For more information, contact the Academic Advising Center at 907-474-6396 or uaf-advising@alaska.edu.

Grade Appeals Policy

A student who wishes to appeal a faculty decision on a final grade must submit a grade appeal form. There are only two valid reasons for the appeal of a grade:

1. an error in the calculation of the grade, or
2. arbitrary and capricious grading.

Evidence of either must be documented for an appeal to be successful. The desire for a higher grade is not sufficient grounds to justify an appeal.

Grade appeal policy information and forms are available at the Office of the Provost and Executive Vice Chancellor’s Student Resources website (https://www.uaf.edu/provost/resources/student.php).

Academic Decisions Other Than Assignment of Grades

Students have the right to appeal academic decisions other than grades. Decisions that fall into this category include:

- denial of admission
- faculty-initiated withdrawal
- dismissal from a program
- pass/fail decisions of a faculty committee on non-course examinations (such as qualifying, comprehensive or thesis examinations)

APPEALS POLICY FOR ACADEMIC DECISIONS OTHER THAN ASSIGNMENT OF GRADES

Detailed “Appeals Policy for Academic Decisions Other Than Assignment of Grades” can be found on the Faculty Senate policies and procedures website (https://www.uaf.edu/uafgov/faculty-senate/policies-procedures/).

Step 1 - Communication

Often, problems and misunderstandings can be resolved by communicating directly in writing with the person who made the decision. If the student does not find the outcome acceptable, the next step is an informal appeal.

Step 2 - Informal Appeal

The informal appeal must be submitted to the academic leader of the department or program within 15 class days after the beginning of the next regular semester. An extension to the deadline may be approved by the academic leader with a written request and supporting documentation from the student. A deadline extension will be limited to one semester, but every effort should be made to complete the appeal process within the current semester.

Step 3 - Formal Appeal

If the student wishes to appeal the decision of the academic leader, the student can file a formal appeal with the Office of the Provost and Executive Vice Chancellor. The formal appeal must be made in writing within five class days after the student has learned the outcome of the informal appeal. By submitting a formal request for review, the student acknowledges that no additional mechanisms exist within the university for the informal review of the decision.

Detailed “Appeals Policy for Academic Decisions Other Than Assignment of Grades” can be found on the Faculty Senate policies and procedures website (https://www.uaf.edu/uafgov/faculty-senate/policies-procedures/).

The academic appeals advisor helps undergraduate students with the policies and procedures associated with grade appeals, appeals policy for academic decisions other than assignment of grades, academic petitions and financial aid satisfactory progress appeals.

Students’ Rights and Responsibilities

The university respects and upholds the principles of due process and a fair and equitable process as specified in the Board of Regents’ Policy 09.02 Student Rights and Responsibilities. For more information regarding the rights and responsibilities of students, refer to the Center for Student Rights and Responsibilities website (https://www.uaf.edu/csrr/). You are encouraged to read the Board of Regents’ policy carefully to fully understand your responsibilities to our community.

We strive to create a safe and respectful environment for all members of our community. If you have questions about expectations of you as a student or believe your rights are being violated, we encourage you to reach out to the Center for Student Rights and Responsibilities for help. UAF reserves the right to suspend, expel or take other necessary and appropriate action in cases where a student is unable or unwilling to uphold community standards and campus safety.

Student Code of Conduct

1. As with all members of the university community, the university requires students to conduct themselves honestly and responsibly and to respect the rights of others. Students may not engage in behavior that disrupts the learning environment, violates the rights of others or otherwise violates the Student Code of Conduct (09.02), university rules, regulations or procedures. Students and student organizations are responsible for ensuring that they and their guests comply with the code while on property owned or controlled by the university or at activities authorized or sponsored by the university.
2. Sexual and gender-based misconduct is addressed separately in accordance with Regents’ Policy and University Regulation 01.04, which provides policies and regulations for the reporting and investigation of alleged sexual and gender-based misconduct. Sanctions for sexual and gender-based misconduct are imposed according to the student code of conduct.
3. The university may initiate disciplinary action and impose sanctions on any student or student organization found responsible for committing, attempting to commit, or intentionally assisting in the commission of any of the following prohibited forms of conduct:

- cheating, plagiarism or other forms of academic dishonesty;
- forgery, falsification, alteration or misuse of documents, funds, property or electronic records;
- damage or destruction of property;
- theft of property or services;
- harassment;
- discrimination, including sex or gender-based discrimination, which is also addressed in Regents' Policy and University Regulation 01.04 (https://www.alaska.edu/bor/policy-regulations/chapter-01-04-titleix.php);
- hazing;
- endangerment, assault or infliction of physical harm;
- sex or gender-based misconduct;
- disruptive or obstructive actions;
- mistreatment of animals;
- misuse of firearms, explosives, weapons, dangerous devices or dangerous chemicals;
- failure to comply with university directives;
- misuse of alcohol;
- misuse of drugs or other intoxicants;
- violation of regents' policy, university regulation, rules or procedures; or
- any other actions that result in unreasonable interference with the learning environment or the rights of others.

4. Examples of actions that constitute these prohibitions will be described in the university regulation and major administrative unit rules and procedures.
5. This policy and university regulation and major administrative unit rules and procedures are not intended to define prohibited conduct in exhaustive terms but rather to set forth examples to serve as guidelines for acceptable and unacceptable behavior.

The university has established procedures for enforcing the UA code of conduct. Each student at the university shall be afforded due process in all disciplinary matters. For a complete guide to these procedures, please refer to Board of Regents Policy and University Regulation 09.02 (https://www.alaska.edu/bor/policy-regulations/chapter-09-02-student-rights-responsibilities.php).

Student Behavioral Standards

Education at the university occurs inside and outside the classroom, with the goal to enhance personal growth and development. UAF behavioral expectations (as outlined by Board of Regents' policy) create clear guidance for navigating the university environment in a way that supports all community members. They are not designed to ignore your individuality but rather to encourage you to exercise self-discipline, accountability and awareness of social responsibility. Contact the Center for Student Rights and Responsibilities (https://www.uaf.edu/csrr/) for more information.

For students wanting to address complaints about faculty or staff conduct, UAF provides one level of administrative oversight for decisions made by university employees. The Center for Student Rights and Responsibilities can assist students with addressing concerns and complaints and, in situations where it is appropriate, can provide mediation for a situation. Individuals are encouraged to first attempt informal resolution with the employee making the decision or the employee's supervisor. An individual seeking further review has the option of filing a written request with the employee's supervisor for decisions made by university employees that are not covered in other university policies, regulations and procedures. The request must include all relevant information to be considered during the review. The supervisor will consider the information available at the time of the review and provide written notification of the outcome to the individual who filed the request. The supervisor's written response will be the final decision of the university.

Nondiscrimination Policy and Disclaimer

Notice of Nondiscrimination

(BOR POLICY & REGULATION 01.02.020 (HTTPS://ALASKA.EDU/BOR/POLICY-REGULATIONS/))

The University of Alaska does not discriminate on the basis of race, religion, color, national origin, citizenship, age, sex, physical or mental disability, status as a protected veteran, marital status, changes in marital status, pregnancy, childbirth or related medical conditions, parenthood, sexual orientation, gender identity, political affiliation or belief, genetic information, or other legally protected status.

When implementing this commitment, the university is guided by Title VI and VII of the Civil Rights Act of 1964 and Civil Rights Act of 1991; Title IX of the Education Amendments of 1972; Executive Order 11246, and Executive Order 11375, as amended; Equal Pay Act of 1963; Age Discrimination in Employment Act of 1967 and Age Discrimination Act of 1975; Vietnam Era Veterans Readjustment Assistance Act of 1974; Americans with Disabilities Act (ADA) of 1990; the Americans with Disabilities Act Amendments Act of 2008; Genetic Information Nondiscrimination Act of 2008; Pregnancy Discrimination Act; Immigration Reform & Control Act; Vocational Rehabilitation Act of 1973 and other federal laws or Alaska Statutes which guarantee equal opportunity to individuals and protected classes within our society.

The university's commitment to nondiscrimination, including against sex discrimination, applies to students, employees and applicants for admission and employment.

Therefore, this policy affects employment policies and actions, as well as the delivery of educational services at all levels and facilities of the university. Further, the university's objective of ensuring equal opportunity will be met by taking affirmative action: i.e., making intensified, goal-oriented efforts to substantially increase the participation of groups where their representation is less than proportionate to their availability; providing reasonable accommodations to employees and students with disabilities; and ensuring that employment opportunities are widely disseminated to agencies and organizations that serve underrepresented protected classes.

The following person has been designated to handle inquiries regarding the nondiscrimination policies:

University of Alaska Anchorage Office of Equity and Compliance (https://www.uaa.alaska.edu/about/equity-and-compliance/)
Director, Office of Equity and Compliance
3190 Alumni Drive, Suite 352
Anchorage, AK 99508
Phone: 907-786-0818
E-mail: uaa_titleix@alaska.edu

University of Alaska Fairbanks Department of Equity and Compliance (https://www.uaf.edu/equity/)
Director, ADA/504 Coordinator, Department of Equity and Compliance
1692 Tok Lane, 3rd Floor Constitution Hall
PO Box 756910
Fairbanks, AK 99775-6910
Phone: 907-474-7300
E-mail: uaf-deo@alaska.edu

University of Alaska Southeast Title IX Coordinator (https://www.uas.alaska.edu/titleix/)
UAS Title IX Coordinator
11066 Auke Lake Way
Juneau, AK 99801
Phone: 907-796-6371
E-mail: uas.titleix@alaska.edu

For sex discrimination claims or other inquiries concerning the application of Title IX of the Education Amendments of 1972 and its implementing regulations, individuals may contact the University's Title IX Coordinator, or the Assistant Secretary in the U.S. Department of Education Office of Civil Rights, or both:

UAA Title IX Coordinator (https://www.uaa.alaska.edu/about/equity-and-compliance/)
3190 Alumni Drive, Suite 352
Anchorage, AK 99508
Phone: 907-786-0818
E-Mail: uaa_titleix@uaa.alaska.edu

UAF Title IX Coordinator (https://www.uaf.edu/titleix/)
1692 Tok Lane, 3rd Floor Constitution Hall
Fairbanks, AK 99775-6910
Phone: 907-474-7300
E-Mail: uaf-tix@alaska.edu

UAS Title IX Coordinator (https://www.uas.alaska.edu/titleix/)
11066 Auke Lake Way
Juneau, AK 99801
Phone: 907-796-6371
E-Mail: uas.titleix@alaska.edu

Office for Civil Rights, Seattle Office (http://www2.ed.gov/about/offices/list/ocr/docs/howto.html)
U.S. Department of Education
915 Second Ave., Room 3310
Seattle, WA 98174-1099
Phone: 206-607-1600
TDD: 800-877-8339
Fax: 206-607-1601
E-mail: OCR.Seattle@ed.gov

For employment or educational discrimination, students, parents, employees and applicants for employment may file a complaint with the U.S. Department of Education within 180 calendar days of the alleged discriminatory act:

Office for Civil Rights, Seattle Office (http://www2.ed.gov/about/offices/list/ocr/docs/howto.html)
U.S. Department of Education
915 Second Ave., Room 3310
Seattle, WA 98174-1099
Phone: 206-607-1600
TDD: 800-877-8339
Fax: 206-607-1601
E-mail: OCR.Seattle@ed.gov

For employment discrimination, employees and applicants for employment may file a complaint with the Equal Employment Opportunity Commission at the below addresses within 180 calendar days of the alleged discriminatory act:

U.S. Equal Employment Opportunity Commission (https://www.eeoc.gov/filing-charge-discrimination/)
Federal Office Building
909 First Avenue, Suite 400
Seattle, WA 98104-1061
Phone: 800-669-4000
TTY: 800-669-6820
ASL Video Phone: 844-234-5122
Fax: 206-220-6911
E-mail: info@eeoc.gov

For educational discrimination, individuals may file a complaint with the U.S. Department of Justice:

U.S. Department of Justice (https://civilrights.justice.gov/#three)
Civil Rights Division
950 Pennsylvania Avenue, N.W.
Washington, DC 20530
Phone: 202-514-3847
Toll-Free: 855-856-1247
TDD: 202-514-0716
Fax: 202-514-8337
E-mail: education@usdoj.gov

For employment or educational discrimination, individuals may file a complaint with the State of Alaska:

Alaska State Commission for Human Rights (https://humanrights.alaska.gov/)
800 A Street, Suite 204
Anchorage, AK 99501-3669
Phone: 907-274-4692
Toll-Free Complaint Hotline (in-state only): 800-478-4692
Fax: 907-278-8588
E-mail: hrc@alaska.gov

For discrimination related to a Department of Labor-funded grant, individuals may file a complaint with the U. S. Department of Labor within 180 calendar days of the alleged discriminatory act:

U.S. Department of Labor (https://www.dol.gov/agencies/oasam/centers-offices/civil-rights-center/)
Civil Rights Center
ATTENTION: Office of External Enforcement
200 Constitution Ave NW
Room N-4123
Washington, DC 20210
Phone: 202-693-6500
Phone, Office of External Enforcement: 202-693-6502
Fax: 202-693-6505
E-mail: CRCExternalComplaints@dol.gov

For discrimination related to a National Science Foundation-funded grant, individuals may file a complaint with the National Science Foundation within 90 calendar days of the alleged discriminatory act on the basis of race, sex (including sexual harassment), color, national origin and

disability. Age discrimination complaints may be filed within 180 calendar days of the alleged discriminatory act:

National Science Foundation (https://www.nsf.gov/od/oecr/)
Office of Equity and Civil Rights (OECR)
2415 Eisenhower Avenue, Suite W 17200
Alexandria, VA 22314
Phone: 703-292-8020
E-mail: programcomplaints@nsf.gov

UA's grievance procedures and grievance process under Title IX, including how to report or file a formal complaint of sex discrimination, how to report or file a formal complaint of sexual harassment, and how UA will respond are located in UA Board of Regents' Policy and Regulation Chapter 01.04 (https://www.alaska.edu/bor/policy-regulations/chapter-01-04-titleix.php). This chapter defines prohibited behavior and details the administrative grievance procedures and grievance process for inquiries, investigations, hearings and appeals that apply when prohibited behavior is alleged to have occurred.

Clery Statement

At the University of Alaska Fairbanks, the safety, security and well-being of our students, faculty, staff and visitors are a top priority. To help you make an informed decision and comply with the Clery Act, we publish an Annual Security and Fire Safety Report (https://uaf.edu/csrr/safety-prevention/security-fire.php). This report contains information from the three previous calendar years concerning reported offenses, arrests, crimes and disciplinary referrals that occurred on campus; in specific off-campus buildings owned or controlled by the university; and on public property within or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security, alcohol and other drug use, crime prevention strategies, and how to report crimes, sexual assault and other related matters.

Catalog Disclaimer

This catalog and its contents shall not be construed as a contract between the University of Alaska Fairbanks and prospective or enrolled students. The catalog is merely a vehicle of information, including university policies, regulations, rules and procedures. Although every effort is made to ensure its correctness, regulations of the university and its program requirements change from time to time during the period any student is attending the University of Alaska Fairbanks; to the extent there is a conflict between this catalog and university policies, regulations, rules or procedures, the university policies, regulations, rules or procedures will control.

Accordingly, if regulations or program requirements of the university in any way conflict with information contained in this catalog, the current regulations and program requirements govern. The university reserves the right to initiate changes in any of its regulations or program requirements affecting the operation of the university and its program requirements; such changes shall become effective upon whatever time periods are required by applicable statutes, university regulations or program requirements.

UAF is accredited by the Northwest Commission on Colleges and Universities, 8060 165th Ave. N.E., Suite 200, Redmond, WA 98052.

Communication via Email

UAF uses email to communicate with students about many important matters. Email is often the only way some information is distributed, so it is important to check email frequently and read messages sent from the university. For example, if a student is waitlisted for a class, an email will be sent when a seat becomes available. If action is not taken on the email within a specified time frame, the student risks losing that seat to the next student on the waitlist.

The university automatically assigns each student an official University of Alaska email account. Although each student is able to indicate a preferred email address in UAOnline, many faculty and departments at UAF will communicate only through the alaska.edu address. Each student is responsible for knowing — and, when appropriate, acting on — the contents of all university communications sent to the university-generated email address.

If a student prefers to use another email account, rather than the university-generated one, there are three steps to take to ensure receipt of all official communications:

1. Log in to UAOnline (https://uaonline.alaska.edu/) and enter or update the preferred email address under the "Personal Information" menu.
2. Log in to the University of Alaska email account (https://www.alaska.edu/google/) and set up a forward to the preferred account.
3. When switching active email accounts, repeat steps 1 and 2 to ensure the preferred email is always current.

Attendance

UAF is committed to student success and academic integrity. Students are expected to adhere to the class attendance policies set by their instructors in the course syllabi. When possible, students should make every effort to communicate with their instructor in writing prior to being absent.

Types of Absences

GENERAL ABSENCES

If a class is missed, the student is responsible for conferring with their instructor as soon as possible concerning their absence and discussing the possibilities for arranging alternative learning opportunities. Note that some departments drop students who miss the first day of class and who fail to obtain their instructor's prior approval for the absence.

UAF-SANCTIONED ABSENCES

If scheduled to miss class for an academic requirement or to represent UAF in an official capacity (e.g., NCAA athletic competition, music performance, research opportunities), a student must notify their instructor in writing within the first five days classes are in session in the semester in which the absences will occur. The notification should list all scheduled absences and bear the signature of a UAF school official.

Instructors are encouraged to make reasonable accommodations for students who miss class to participate in these official, UAF-recognized activities. However, it is the student's responsibility to follow up on the notification of absence by discussing alternative learning opportunities with their instructors before the end of the drop/add period (typically the second Friday of the semester). Doing so will allow the student to drop

the class and add another if, after a good-faith effort, the student and instructor cannot arrange for comparable learning opportunities that would enable success in the class.

EXTENDED ABSENCES

The University of Alaska Fairbanks recognizes that students may need to miss more classes than allowed by a particular instructor as specified in course policies.

Extended absences are defined as missed classes or coursework by students beyond what is permissible by the instructor's written course policies. Students may need to miss class and/or coursework for a variety of reasons, including, but not limited to:

- Bereavement
- Personal illness or injury
- Serious illness of a friend, family member or loved one
- Military obligations
- Jury service
- Other emergency or obligatory situations

When possible, students should first contact their instructor to ask about the possibility of taking an extended absence. If assistance from the instructor is not immediately available, students may wish to request formal assistance from the Center for Student Rights and Responsibilities (https://www.uaf.edu/csrr/).

To request an extended absence, students must submit a form as soon as practicable after realizing their need to miss class and/or coursework. The request may be made by filling out the electronic form (https://cm.maxient.com/reportingform.php?UnivofAlaska&layout_id=13) that is processed by the Center for Student Rights and Responsibilities, stopping by the office or calling 907-474-7317.

The Center for Student Rights and Responsibilities shall verify the request utilizing supporting documentation, e.g., a note from a health care provider, obituary, jury summons, etc. This is followed by a letter being sent to the requesting student's instructors with a request to work with the student. The letter shall be signed by a university official. A copy of the letter shall be sent to the student's assigned advisor. In the event the student does not have an assigned advisor, a copy of the letter shall be sent to the Vice Provost.

The instructor and student will each make a good-faith effort to strategize how the student may be successful in the course in spite of an extended absence. Options include, but are not limited to:

- Alternative learning opportunities
- Makeup exams
- Submitting assignments late
- Other reasonable accommodations

In the event that the instructor and student are unable to reach a mutual agreement in spite of their good faith efforts, the student may withdraw from the class before the withdrawal deadline, submit an appeal for late withdrawal after the deadline, may be eligible to request an incomplete (I) grade or receive a no basis (NB) grade. Students should consult with their assigned academic advisor and/or contact the Center for Student Rights and Responsibilities for assistance. Students must realize that their extended absence may have other, nonacademic impacts, including but not limited to:

- Financial aid
- Scholarships
- Health insurance
- University housing

Class Standing

Undergraduate Students

Class standing is determined by the total credits a student has earned.

- Transfer students are given class standing based on the number of transfer credits accepted by UAF
- Nondegree students are registered without class standing

First-year	0-29 credits
Sophomore	30-59 credits
Junior	60-89 credits
Senior	90 or more credits

Postbaccalaureate Students

Students are given the class standing of "postbaccalaureate" only after being officially admitted to a postbaccalaureate degree program.

Graduate Students

Students are given the class standing of "graduate" only after being officially admitted to a graduate degree or certificate program.

Full- or Part-Time Status/Study Load

Undergraduate Students

Undergraduate students registered for 12 or more semester credits are classified as full-time students, 9-11 credits are three-quarter-time, 6-8 credits are half-time, and less than 6 credits are considered part-time. **To complete an undergraduate program in four years, 15 or more credits need to be completed each semester.**

Credits carried at any UA unit (or any combination of UAF/UAA/UAS) are used to determine study-load hours and full-time, three-quarter-time, half-time and part-time classification. Audited courses, credit-by-examination, non-credit, continuing education units (CEUs) and professional (500-level) courses are not included in the study-load computation.

Students in good standing may enroll in up to 18 credits in the fall and spring semesters without special permission. To enroll in more than 18 credits, a 3.0 cumulative GPA and overload approval from the student's advisor are required.

Students in good standing may enroll in up to 15 credits in the summer semester without special permission. To enroll in more than 15 credits, a 3.0 cumulative GPA and overload approval from the student's advisor are required.

Graduate Students

Graduate students registered for 9 or more semester credits, with 3 or more at the F600 level, are classified as full-time students. Graduate students enrolled in 6-8 credits are three-quarter-time, 5 credits are half-time and less than 5 credits are considered part-time.

Credits carried at any UAF department are considered in determining study-load hours and full-time, three-quarter-time, half-time and part-time classification. Audited courses, credit-by-examination, non-credit, continuing education units (CEUs) and professional (F500-level) courses are not included in the study-load computation.

Students may enroll in up to 14 credits per semester without special permission. To enroll in 15-19 credits, a student must be in good standing and obtain an overload approval from the student's advisor and department chair. Enrollment in more than 19 graduate credits will be allowed only in extraordinary circumstances and requires good standing and overload approval from the student's advisor, department chair, college/school and the dean of the Graduate School.

Grading Policies

Grading System

Grading System Defined

All course grades are letter grades unless otherwise specified in the class schedule. The method of grading (letter or pass/fail) is an integral part of the course structure and is included in the course description. Instructors are expected to state their grading policies in writing at the beginning of each course. Grades appearing on academic records are:

A[1]	"A" (including A+ and A-) indicates a thorough mastery of course content and outstanding performance in completion of course requirements.[1]
B[1]	"B" (including B+ and B-) indicates a high level of acquired knowledge and performance in completion of course requirements.[1]
C[1]	"C" (including C+ and C-) indicates a satisfactory level of acquired knowledge and performance in completion of course requirements.[1]
D[1]	"D" (including D+ and D-) indicates a minimal level of acquired knowledge and minimal performance in completion of course requirements. This grade does not satisfy requirements for courses in the major, minor, core or graduate programs.[1]
F	"F" indicates failure to meet a minimal level of understanding of course content and/or performance in completion of course requirements. All F grades, including those earned in pass/fail courses, are included in the GPA calculations.
P	**Pass** — The pass grade indicates satisfactory completion of course requirements at either the undergraduate or graduate level. A pass grade does not affect a student's GPA but credits earned with pass grades may meet degree requirements and may be used as a measure of satisfactory progress. Satisfactory performance is the equivalent of a C grade (2.0) or better in undergraduate coursework and B grade (3.0) or better in graduate courses. The entire class must be graded pass/fail, with the grading system noted in the class schedule.
CR	Indicates credit was given under the credit/no-credit option.
DF	**Deferred** — This designation is for courses such as theses and special projects that require more than one semester to complete. It indicates that course requirements cannot be completed or that institutional equipment breakdown resulted in noncompletion by the end of the semester. Credit may be withheld without penalty until the course requirements are met within an approved time. **For undergraduate courses, the grade will automatically change to a W (withdrawn) after two years unless an extension is requested and granted by the registrar.**
AU	**Audit** — A registration status indicating that a student has enrolled for informational instruction only. No academic credit is granted. A W may be given if a student fails to attend an audited course.
W	**Withdrawn** — Indicates withdrawal from a course after the first two weeks of a semester.
I[2]	**Incomplete** — An incomplete is a temporary grade used to indicate that the student has satisfactorily completed (C (2.0) or better) the majority of work in a course but for personal reasons beyond the student's control, such as sickness, has not been able to complete the course during the regular semester.[2]
NB	**No Basis** — Instructors may award a No Basis grade if there is insufficient student progress and/or attendance for evaluation to occur. No credit is given, nor is NB calculated in the GPA. This is a permanent grade and may not be used to substitute for the Incomplete. It cannot be removed by later completing outstanding work.
NS	**Not Submitted** — Grade not submitted by instructor.
NG	**Non-Graded** — Used for sections that are not graded, usually continuing education units (CEUs) or lab sections. Has no impact on GPA calculation.

1 The letter grades A, B, C and D may include a "+" or "-" to indicate that a student's level of performance is slightly higher or lower than that of the letter grade alone.

2 See "When is an Incomplete Given?" section for more information.

When is an Incomplete Given?

- An instructor has the option to give an incomplete grade when a student has completed approximately 75% of the class assignments satisfactorily (C or better).
- If approving the request, the instructor will:
  - give an 'Incomplete' when final grades are submitted for the class and
  - submit the Incomplete Grade Notice form (https://www.uaf.edu/reg/faculty/faculty-forms.php) to the Office of the Registrar.
- A student with an incomplete grade has one year to finish the class before the incomplete is converted to an F grade.
- The I grade is not computed in the student's GPA until it has been changed to a regular letter grade by the instructor or until one year has elapsed, at which time it will be computed as an F.
- A student can not be awarded a degree with an incomplete (I) grade in any class.
- Extensions beyond a year:
  - In circumstances such as military deployment or major and extended illness of the student, an extension may be granted.

- Before the original deadline has passed, the student must request an extension of the incomplete.
- The extension must be approved by the instructor, the dean and the provost prior to the original deadline date.

Grading Options

Auditing

Students who want to enroll in one or more courses for informational purposes may register as an auditor if space is available and auditing is permitted in the class. The student pays for the course tuition and fees, but the course credits are not included in the computation of study load for full-time/part-time determination or for overload status.

The requirement, acceptance and review of work, and lab privileges are at the discretion of the instructor. A grade of AU (audit) is granted to students who complete an audited course, but no credit is awarded. Audited courses do not apply to degree requirements, and they will not transfer to other institutions.

When registering, the student should indicate on the registration form or in UAOnline the desire to audit a course. Students who want to change from audit to credit must request the change before the add/drop deadline. Requests made after the add/drop deadline must be approved by the instructor of the course. All changes must be made before the deadline for student-initiated withdrawals.

Instructors set the requirements under which an AU grade is to be recorded. Faculty can give a W grade for auditors not meeting the established auditing requirements. After auditing a class, at least one year must pass before requesting local credit by exam for that class.

CHANGING FROM CREDIT TO AUDIT

Courses that have the audit option available may be changed from credit to audit (or audit to credit) status prior to the add/drop deadline without the permission of the instructor in UAOnline. Changes after the add/drop deadline can be made with approval by the instructor until the last day for student-initiated withdrawals using an add/drop form.

Credit/No-Credit Option

Undergraduates only — The credit/no-credit option encourages students to explore areas of interest not necessarily related to their major. This option may be used for one undesignated elective (an elective that is not specifically required for the student's major) each semester. The deadline for choosing the credit/no-credit option is the third Friday after the first day of instruction in a semester. The instructor does not know the student's status in the course, and the course is completed the same way as other students in the class. Credit for the course is awarded if the student's performance is at the C- grade level or higher; if the performance falls below that level, the course will not appear on the student's academic record. In either case, the course will not be included in any GPA calculations. If credit is granted, a CR grade will be entered for the course.

Under the credit/no-credit option, students may take undesignated elective courses or courses to meet the minimum credit requirements for a degree. Major or minor requirements and those specified as foundation courses are not allowed.

GPA Computation

Grade Points and Computing GPAs

Grade point average (GPA) is a student's weighted numerical average of the grades earned in courses at UAF. To compute GPA, divide the total number of credits attempted into the total number of grade points earned. Grade points are calculated by multiplying the number of grade points awarded, according to the chart below, by the number of credits attempted for the course. The following grades are figured in a student's GPA: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- and F. Grades of I, DF, W, P, NB, AU and CR do not carry grade points and do not affect a student's GPA.

Noncredit courses, transfer credits and credit by examination do not affect the GPA calculations. “Graduating GPA” is a student's cumulative grade point average at the time of graduation. If, after earning a bachelor’s degree, more classes are taken from UAF as a nondegree student, grades for those courses won’t be factored into the official graduating GPA. The exception is students who are officially admitted to a second degree program.

Grade	Grade points per credit
A+	4.0
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-[4]	1.7
D+	1.3
D	1.0
D-[5]	0.7
F	0.0

[4] Minimum grade possible for a course to count toward general education requirements, major, minor or degree requirements, or as a prerequisite for another course

[5] Minimum grade possible to earn credit for a course

Note: Some degree programs require C or higher for their major or minor requirements. Check program listings for specific degree requirements.

Example of Grade Point Average Computation

Course	Credits	Grade	Credits x Grade points per credit	= Grade Points
BIOL F111X	4	A	4 cr × 4 pts	16
COM F131X	3	D+	3 cr × 1.3 pts	3.9
WRTG F111X	3	C-	3 cr × 1.7 pts	5.1
MATH F122X	3	B-	3 cr × 2.7 pts	8.1
HIST F131	3	F	3 cr × 0 pts	0
Total	**16**			**33.1**
			33.1 grade points ÷ 16 credits = 2.07 GPA	

Repeating Courses

Repeating Courses

All grades (original and retakes) for a course completed at UAF are included on a student's academic record, but only the last grade earned for a course is computed in the GPA unless the course is one that can be repeated for credit. For purposes of calculating honors for graduation, all courses (even those repeated) are included in the GPA.

Midterm Grades

Midterm Grades

Midterm grades help students gauge their class performance and, if necessary, seek assistance early in the term. Instructors are responsible for ensuring that students are aware of the grading policy for a course and that homework, exams and other assignments are returned to students in a timely manner. Instructors are asked to submit midterm grades within the first four to six weeks of the semester.

Grade Error Policy

Grade Error Policy

A grade other than an incomplete or deferred submitted by the instructor after a course is completed is the final grade and becomes part of the student's permanent academic record. A grade will not be changed unless the instructor made a legitimate error in calculating the grade. If an error has occurred, contact the instructor immediately. Grade error corrections must be received within 30 class days after the beginning of the next regular semester, and must be approved by the instructor's department head and dean. This is not an appeal of an academic decision.

Undergraduate Credit Loads and Overloads

Undergraduate students in good standing may take up to 18 credits in a regular (fall/spring) semester. Students who are on academic probation are limited to 13 credits per regular semester.

FINANCIAL AID TERM	MAX CREDITS
Fall	18
Spring	18
Summer	15

Fall/spring: Students who wish to take more than 18 credits in a regular fall/spring semester must have a cumulative GPA of 3.0 or higher. Any student in good standing seeking an overload of 19 to 23 credits must get advisor approval; for more than 23 credits, or for any student with less than a 3.0 GPA, the dean of the student's college or school must also approve.

Summer: Students who wish to take more than 15 credits in a summer semester must have a cumulative GPA of 3.0 or higher. Any student in good standing seeking an overload of 16 to 20 credits must get advisor approval; for more than 20 credits, or for any student with less than a 3.0 GPA, the dean of the student's college or school must also approve.

Veterans Affairs Educational Benefits, Tuition and Fees

Title 38 United States Code Section 3679(e) School Compliance Policy

As part of the Veterans Benefits and Transition Act of 2018, section 3679 of title 38, the University of Alaska Fairbanks (UAF) complies with the requirements as outlined below:

Note: A Covered Individual is any individual who is entitled to educational assistance under Chapter 31, Vocational Rehabilitation and Employment, or Chapter 33, Post-9/11 GI Bill® benefits.

- UAF permits any covered individual to attend or participate in the course of education during the period beginning on the date on which the individual provides to UAF Department of Military and Veteran Services a Certificate of Eligibility for entitlement to educational assistance under Chapter 33, a Statement of Benefits from the VA.gov (https://www.va.gov/education/) website, or a VAF 28-1905 form for Chapter 31, and ending on the earlier of the following dates:
- The date on which payment from the Veterans Benefits Administration (VA) is made to UAF.
- 90 days after the date UAF certified tuition and fees following receipt of the Certificate of Eligibility.
- UAF will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to UAF due to the delayed disbursement funding from VA under Chapter 31 or 33.

In addition, the statute allows UAF to require Chapter 31 and Chapter 33 students to take the following additional actions:

1. Submit a Certificate of Eligibility for entitlement to educational assistance no later than the first day of a course of education.
2. Submit a written request, Certification Request Form (https://www.docusign.net/Member/PowerFormSigning.aspx?

PowerFormId=6fd8e948-ff69-46ba-9db0-b7bdb32367d4), authorizing UAF to charge the entitlement.

3. Provide additional information as necessary to UAF for the proper certification of enrollment to the VA.
4. Make payment for a difference between the amount of the student's financial obligation and the amount of the VA education benefits disbursement.

UAF will hold a student responsible for any portion of tuition and other fees not covered by the VA by the published fee payment deadlines. A late fee may be assessed for account balances not covered by the VA education benefit disbursement. UAF Housing, Parking, Dining and other elective fees are not included in the deferred payment for tuition and fees. Students may contact the UAF Office of the Bursar to discuss available payment options if needed.

If students do not turn in a Certificate of Eligibility, or Statement of Benefits, and/or Certification Request Form (https://www.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=6fd8e948-ff69-46ba-9db0-b7bdb32367d4) by the first day of class, a late fee may be assessed.

VA payment reversals are due within five business days. Balances over $300 are subject to late fee assessment.

VA Chapter 30 and 35 students will follow standard student guidelines for payment or payment arrangements by the fee payment deadline.

UAF requires a Certificate of Eligibility from the VA in order to post an Expected (estimated) VA payment to your student account. In addition, UAF requires a Certification Request Form (https://www.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=6fd8e948-ff69-46ba-9db0-b7bdb32367d4) for each semester you wish to use VA Education Benefits. Without the initial Certificate of Eligibility, a Certification Request Form (https://www.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=6fd8e948-ff69-46ba-9db0-b7bdb32367d4) each semester, or a Certification Adjustment Form (https://www.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=81b4a873-cd8b-4001-9363-fc6aa4f6f955) if changes are made to an already certified class schedule, you may need to make payment arrangements with the UAF Office of the Bursar before the required fee payment deadlines.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website (https://www.benefits.va.gov/gibill/).

ACADEMIC DEPARTMENTS

W

Accounting

B.B.A. Degree, Postbaccalaureate Certificate, Minor

The accounting department offers an extensive program for those interested in the fields of general accounting, auditing, managerial accounting, taxation and government accounting. The objectives of the program are to provide a strong business background through an understanding of accounting and to train students for employment in accounting work.

The College of Business and Security Management is accredited by the Association to Advance Collegiate Schools of Business International and is one of only approximately 1.5% of schools worldwide with an additional specialized accounting accreditation. The UAF accounting program is the only accounting program in Alaska with AACSB accreditation.

B.B.A., ACCOUNTING

The accounting program prepares students for certification as certified public accountants, certified management accountants, certified financial managers, certified internal auditors and certified fraud examiners. The UAF accounting program places nearly 100% of its graduates.

Minimum Requirements for Accounting Bachelor's Degree: 120 credits

Learn more about the bachelor’s degree in accounting (https://uaf.edu/academics/programs/bachelors/accounting.php), including an overview of the program, career opportunities and more.

POSTBACCALAUREATE CERTIFICATE, ACCOUNTING

The accounting postbaccalaureate certificate provides candidates who already have a bachelor's degree in another field of study with the accounting program core body of knowledge that will enable them to complete the CPA exam and seek professional employment as accounting professionals.

Minimum Requirements for Accounting Postbaccalaureate Certificate: 30 credits

College of Business and Security Management
Accounting Program (https://www.uaf.edu/cbsm/programs/accounting.php)
907-474-7461

Programs

Degree

- B.B.A., Accounting (p. 277)

Postbaccalaureate Certificate

- P.B.C.T., Accounting (p. 397)

Minor

- Minor, Accounting (p. 358)

Alaska Native Languages

Associate, B.A. Degrees, Occupational Endorsement, Certificates, Minor

A.A.S., CERTIFICATE, NATIVE LANGUAGE EDUCATION

The Native language education program trains teachers of Native language and culture, providing coursework in Athabascan, Inupiaq or Yup'ik. The certificate and degree are recognized by some Alaska school districts and serve as steps toward a four-year degree. Candidates for the Yup'ik option must score advanced oral proficiency on an oral proficiency exam before being admitted into the program.

Minimum Requirements for Native Language Education Certificate: 30 credits; for A.A.S. Degree: 60 credits

A.S., CERTIFICATE, YUP'IK LANGUAGE PROFICIENCY

The Yup'ik language proficiency program is designed to provide students with the opportunity to pursue the structured study of Yup'ik in order to develop intermediate-level speaking and listening skills, as well as basic reading and writing abilities in the language. The certificate may serve as a step on the way to a two-year or four-year degree.

Minimum Requirements for Yup'ik Language Proficiency Certificate: 30 credits; for Yup'ik Language Proficiency A.A.S. Degree: 60 credits

B.A., ALASKA NATIVE LANGUAGE

Alaska Native languages are spoken by far northern people from the northeastern tip of Siberia, across Alaska and Canada, to East Greenland. Alaska Native languages include the Yupik, Inupiaq and Athabascan languages of Alaska that also extends to Siberia Canada and Greenland. In terms of population and number of speakers, Alaska Yup'ik is by far the largest Alaska Native language; Inupiaq is the second largest. The Athabascan culture is at the forefront of the interior region with 11 distinct languages.

Students who obtain a B.A. in Alaska Native Language may be employed as Native language instructors or language specialists for school districts or Native organizations, which could include social services in various capacities. No other university in the United States offers a B.A. in Alaska Native Languages.

Students in linguistics or anthropology may want to complete a minor in Alaska Native Language to add a distinctly Alaska emphasis to their education.

Minimum Requirements for Alaska Native Language Bachelor's Degrees: 120 credits

B.A., YUP'IK LANGUAGE AND CULTURE

The Yup'ik language and culture program strives to reinforce a Yup'ik identity that is centrally dependent on the language and culture, prepares the student for success in the world, and leads to acceptance at home. The program is based on the philosophy that a strong command of the Yup'ik language leads to a complete understanding of the Yup'ik way of life, the world around us, and our place in it.

Depending on interest, students in the program are encouraged to complete a minor in education or Alaska Native and rural development. This program is only available at Kuskokwim Campus.

Minimum Requirements for Yup'ik Language and Culture Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in Yup'ik language and culture (https://uaf.edu/academics/programs/bachelors/yupik-language-culture.php), including an overview of the program, career opportunities and more.

OCCUPATIONAL ENDORSEMENT, YUP'IK LANGUAGE COMPETENCY

The Yup'ik language competency occupational endorsement recognizes that the acquisition of Yup'ik language competency in listening, speaking, reading, writing, grammar, composition, translating and transcribing are workforce skills needed by organizations throughout the Yukon-Kuskokwim region.

The courses chosen and testing criteria for the proposed Yup'ik language competency occupational endorsement were discussed with input from Walkie Charles, UAF associate professor of Alaska Native languages; Sally Samson, assistant professor of Yup'ik language and culture, UAF Kuskokwim Campus; Catherine Moses and Rosalie Lincoln, UAF Kuskokwim Campus Yup'ik adjunct instructors in Toksook Bay, Alaska; and Sheila Wallace, Lower Kuskokwim School District Yup'ik distance delivery instructor and Kuskokwim Campus adjunct instructor. Adjunct instructor Wallace approached Kuskokwim Campus to offer Yup'ik courses as high school dual-language credit and requested the University of Alaska to establish an occupational endorsement certificate in Yup'ik language competency to create a career pathway for fluent high school Yugtun speakers. These courses will provide students with a pathway for a Yup'ik language proficiency certificate, an A.A.S. degree in Yup'ik language proficiency, and/or a B.A. in Yup'ik language and culture. The rigor in the courses helps prepare students to meet the requirements for the State of Alaska's Seal of Biliteracy, as well as the Alaska Performance Scholarship.

Minimum Requirements for Yup'ik Language Competency Occupational Endorsement: 9 credits

College of Rural and Community Development
Alaska Native Language Center (https://www.uaf.edu/anlc/)
907-474-7874

Programs

Degrees

- A.A.S., Native Language Education (p. 246)
- A.A.S., Yup'ik Language Proficiency (p. 250)
- B.A., Alaska Native Languages (p. 282)
- B.A., Yup'ik Language and Culture (p. 356)

Occupational Endorsement

- O.E.C., Yup'ik Language Competency (p. 201)

Certificates

- Certificate, Native Language Education (p. 217)
- Certificate, Yup'ik Language Proficiency (p. 221)

Minor

- Minor, Alaska Native Languages (p. 358)

Alaska Native Studies and Rural Development

B.A., M.A. Degrees, Graduate Certificate, Minors

College of Rural and Community Development
Department of Alaska Native Studies and Rural Development (https://www.uaf.edu/dansrd/)
907-474-6528 or toll-free 1-866-478-2721

B.A., ALASKA NATIVE STUDIES

Alaska Native Studies is a social science program that explores current and historical Alaska and broader circumpolar issues from the indigenous perspective. The curriculum grounds students in tribal histories and cultures, governmental policies and local Indigenous affairs. The program incorporates Native traditional knowledge, wisdom and experience into contemporary issues and studies. Graduates are prepared to make leadership contributions throughout communities of the circumpolar North. They may also continue to higher education in fields such as law, policymaking and Indigenous studies.

Students will complete a concentration in one of the following areas:

- Indigenous Rights and Advocacy
- Cultural Revitalization
- Community Resiliency
- Multidisciplinary

Graduates may find employment in many different areas including government, health and social services, performance arts, justice and cultural programs. They may also serve as cultural ambassadors to promote cross-cultural communications across the North. The B.A. degree can be earned on the Fairbanks campus or through distance delivery. The department welcomes students pursuing a second major or a minor.

Students applying for acceptance into the Alaska Native Studies program need to complete a department-specific written questionnaire in addition to general university admission requirements. Findings from this process will be used to support the department advising process and assist students in connecting with faculty and mentors.

Special application requirements and deadlines apply for distance B.A. programs.

Learn more about the bachelor's degree in Alaska Native studies (https://uaf.edu/academics/programs/bachelors/alaska-native-studies.php), including an overview of the program, career opportunities and more.

Minimum Requirements for Alaska Native Studies Bachelor's Degree: 120 credits

B.A., RURAL DEVELOPMENT

Rural development is an interdisciplinary field that teaches the history, theory and skills needed for human, social and economic development in rural communities. Rural development degree programs are designed to educate a new generation of community leaders for rural Alaska. The B.A. degree can be earned either on the Fairbanks campus or through distance delivery. Special application requirements and deadlines apply for distance B.A. degree programs. Students applying for acceptance into the Rural Development program need to complete a department-specific written questionnaire in addition to general university admission requirements. Findings from this questionnaire will be used to support the department advising process and assist students in connecting with faculty and mentors.

Students in the rural development program gain a broad understanding of Alaska's relationship to the global economy and an appreciation for sustainable development strategies. Students also learn specific tools essential for community leadership, including business plan and grant proposal writing, community visioning and planning processes, community-based research techniques, computer business applications, project management, and evaluation techniques. Graduates typically take positions with tribal and municipal governments, fisheries, tourism and other private businesses, Native corporations, regional health corporations or nonprofits and state/federal agencies.

Within the B.A. degree program, students will select and develop a concentration in one of five areas:

- The human and social development concentration is for students interested in social services, social justice, community wellness and cultural development. Graduates may find employment with tribal governments, health consortia, clinics and schools.
- The tribal and municipal governance concentration is for students interested in tribal governance and rural municipal and borough government (home rule). Students develop an understanding of the history and constitutional basis for tribal governance, various home rule governance structures, basics of federal Indian law, principles and practices of self-determination, and the mandates of the Alaska Native Claims Settlement Act. They develop skills in planning, budgeting and human resources management. Students can pursue a special interest, such as management of health programs, tribal governance programs or Alaska Native corporations, and tailor the concentration to these specifications through the choice of related courses and electives. Graduates may find employment with tribal and municipal governments and organizations, ANCSA corporations, and state and federal agencies.
- The integrated resource management concentration is designed for students interested in land use, subsistence, cultural resources and co-management. Students learn about traditional ecological knowledge, principles of natural resources management and policy, adaptive management, conservation and ecotourism, and skills for effective public/private/tribal collaboration in resource management. Management strategies for addressing climate change are explored. Graduates may find employment with ANCSA corporations, regional and tribal entities, or state and federal agencies.
- The entrepreneurship and economic development concentration is for students interested in creating sustainable economies in rural and indigenous communities, with a focus on small business development. Students learn to develop business and marketing plans, economic development planning, and basic principles of financial and human resources management for rural enterprises. Graduates find employment in ANCSA corporations, regional development organizations, economic development agencies and as local entrepreneurs.
- The multidisciplinary concentration is intended for students who wish to combine two or more rural development concentrations or combine a rural development concentration with another

discipline. Students will work closely with their advisors to select the appropriate courses for the concentration.

Minimum Requirements for Rural Development Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in rural development (https://uaf.edu/academics/programs/bachelors/rural-development.php), including an overview of the program, career opportunities and more.

M.A., RURAL DEVELOPMENT

The Department of Alaska Native Studies and Rural Development M.A. program is designed to educate leaders who understand the dynamic relationship of rural Alaska with the global economy and who have professional skills in areas of leadership, business development, administration and conflict management. Graduates typically take positions with tribal and municipal governments, fisheries, tourism, Native corporations, regional health corporations or non-profits, state/federal agencies, or other private businesses.

Graduate degree students gain a broader theoretical understanding of development processes in Alaska and the circumpolar North. Graduate students complete a thesis or applied community development project, and have opportunities for international study and research.

Students can earn the M.A. degree either on the Fairbanks campus or through distance delivery. Special application requirements and deadlines apply for distance M.A. degree programs. For more information contact the Department of Alaska Native Studies and Rural Development (https://www.uaf.edu/dansrd/) toll-free 1-866-478-2721.

Minimum Requirements for Rural Development Master's Degree: 30 credits

GRADUATE CERTIFICATE, RURAL DEVELOPMENT

The graduate certificate in rural development is intended for community development practitioners, agency and industry professionals, and current graduate students working with tribal and municipal governments, Native corporations, regional health corporations or nonprofits, state and federal agencies, or private businesses conducting work in rural areas who wish to obtain a foundation in the theory and practice of development processes in Alaska and the circumpolar North. The certificate will prepare students to conduct work related to human and economic development in rural communities with a particular focus on sustainable development strategies, community-based development, and Indigenous perspectives on development.

Minimum Requirements for Rural Development Graduate Certificate: 12 credits

Programs

Degrees

- B.A., Alaska Native Studies (p. 283)
- B.A., Rural Development (p. 351)
- M.A., Rural Development (p. 459)

Graduate Certificate

- Graduate Certificate, Rural Development (p. 410)

Minor

- Minor, Alaska Native Studies (p. 359)
- Minor, Rural Development (p. 378)

Allied Health

A.A.S. Degrees, Occupational Endorsements, Certificates

The allied health program at the UAF Community & Technical College offers a wide variety of education and training for careers in the fast-growing healthcare industry. Some programs can be completed in one semester, allowing students to obtain entry-level positions. Other programs will take more time and provide the student with the credentials to move into higher-paying careers in health care. All programs include classroom learning and hands-on experience to ensure students receive a well-rounded education. Many programs have a practicum experience in a medical office, dental office, laboratory or hospital. Allied health faculty work closely with students to match their career goals to education pathways.

The certified nurse aide training program is state approved by the Alaska Board of Nursing, and successful completion qualifies students to take the state certification exam. The medical assistant certificate program is nationally accredited through the Commission on Accreditation of Allied Health Education Programs (http://www.caahep.org) upon the recommendation of the Medical Assistant Education Review Board Commission on Accreditation of Allied Health Education Programs: 9355 113th St. N, #7709 Seminole, FL 33775.

Learn more about available certificates and degrees:

Dental Assistant (https://www.ctc.uaf.edu/programs/dental-assistant/)

- Dental Assistant (A.A.S., Certificate)

Health Care Reimbursement (https://www.ctc.uaf.edu/programs/health-care-reimbursement/)

- Health Care Reimbursement (Certificate)
- Medical Billing (O.E.C.)
- Medical Coding (O.E.C)

Medical/Dental Reception (https://www.ctc.uaf.edu/programs/medical-dental-reception/)

- Medical and Dental Reception (Certificate)
- Medical Office Reception (O.E.C.)

Medical Assistant (https://www.ctc.uaf.edu/programs/medical-assistant/)

- Medical Assistant (A.A.S., Certificate)

Medical Scribe (https://www.ctc.uaf.edu/programs/medical-scribe/)

- Medical Scribe Specialist (Certificate)
- Medical Scribe (O.E.C)

Nurse Aide (https://www.ctc.uaf.edu/programs/nurse-aide/)

- Nurse Aide (O.E.C.)

Nursing (https://www.ctc.uaf.edu/programs/nursing/)

- Licensed Practical Nurse (Certificate)
- Pre-Nursing Qualifications (Certificate)
- Nursing (B.S.)

Phlebotomy (https://www.ctc.uaf.edu/programs/phlebotomy/)

- Phlebotomy (Specialized Training)

Community and Technical College
Allied Health (https://www.ctc.uaf.edu/academics/allied-health/)
907-455-2800

Programs

Degrees

- A.A.S., Dental Assistant (p. 241)
- A.A.S., Medical Assistant (p. 246)

Occupational Endorsements

- O.E.C., Medical Billing (p. 196)
- O.E.C., Medical Coding (p. 196)
- O.E.C., Medical Office Reception (p. 197)
- O.E.C., Medical Scribe (p. 197)
- O.E.C., Nurse Aide (p. 198)

Certificates

- Certificate, Dental Assistant (p. 211)
- Certificate, Health Care Reimbursement (p. 213)
- Certificate, Licensed Practical Nurse (p. 214)
- Certificate, Medical Assistant (p. 216)
- Certificate, Medical/Dental Reception (p. 217)
- Certificate, Medical Scribe Specialist (p. 217)
- Certificate, Pre-Nursing Qualifications (p. 218)

Anthropology

B.A., M.A., Ph.D. Degrees, Minor

B.A. DEGREE

The Department of Anthropology offers a balanced and flexible program of academic courses and research in cultural anthropology, linguistic anthropology, archaeology and biological anthropology. Anthropology contributes to an understanding of the complex problems of human behavior, biology, language, cultural and social organization, and the relationship of humans to their environments. Research carried out in the field, laboratory and library emphasizes past and present modes of living and the origins and distribution of peoples and cultures throughout the world. Although special attention is given to the circumpolar North, faculty also maintain active research programs elsewhere, such as in Asia, Oceania, and elsewhere in the Americas.

Minimum Requirements for Anthropology Bachelor's Degrees: B.A.: 120 credits

Learn more about the bachelor's degree in anthropology (https://uaf.edu/academics/programs/bachelors/anthropology.php), including an overview of the program, career opportunities and more.

M.A., PH.D. DEGREES

The anthropology program offers a balanced and flexible program of academic courses and research opportunities in cultural anthropology, linguistic anthropology, archaeology and biological anthropology. Anthropology contributes to an understanding of the complex problems of human behavior, biology, language, cultural and social organization, and the relationship of humans to their environments. Research carried out in the field, laboratory and library emphasizes past and present modes of living and the origins and distribution of peoples and cultures throughout the world, with special attention to the circumpolar North.

The graduate program emphasizes general preparation in the field of anthropology. Such preparation enables graduates of the master's program to pursue more advanced training leading to a Ph.D. in anthropology, prepares them to teach anthropology within secondary education and undergraduate levels of higher education, and prepares students for careers with various levels of government in which some anthropological background or expertise is beneficial. Field research in Alaska is a common experience for graduate students in anthropology. All students must have fieldwork and laboratory experience appropriate to the discipline or subdiscipline.

The primary focus of the Ph.D. program is on the circumpolar North, although graduate students and faculty also conduct research elsewhere, in particular Asia, Oceania, and elsewhere in the Americas. The Ph.D. is available with an emphasis in any of the four subfields of anthropology.

Minimum Requirements for Anthropology Master's and Doctorate Degrees: M.A.: 30-36 credits; Ph.D.: 18 thesis credits

College of Liberal Arts
Department of Anthropology (https://www.uaf.edu/anthro/)
907-474-7288

Programs

Degrees

- B.A., Anthropology (p. 284)
- M.A., Anthropology (p. 420)
- Ph.D., Anthropology (p. 471)

Minor

- Minor, Anthropology (p. 359)

Applied Business and Accounting

A.A.S. Degrees, Occupational Endorsements, Certificates, Minors

The applied business and accounting program at the UAF Community & Technical College offers certificates and degrees in business and accounting designed to provide students with a well-rounded business education covering a wide range of related subjects. The program covers knowledge and skills in business and accounting, entrepreneurship, supervision, human resources, business law, marketing and public relations.

Both programs can be completed entirely online. Classes are taught both in-class or online by full-time faculty and adjunct instructors from the local business community who bring real-world business insights and experience to the classroom.

Learn more about available certificates and degrees:

Applied Business (https://www.ctc.uaf.edu/programs/business-applied/)

- Applied Business (A.A.S.)
- Applied Business Management (Certificate)
- Administrative Assistant (O.E.C.)
- Financial Services Representative (O.E.C.)
- Supervision and Personnel Management (O.E.C.)

Applied Accounting (https://www.ctc.uaf.edu/programs/accounting-applied/)

- Applied Accounting (A.A.S.)
- Accounting Technician (Certificate)
- Bookkeeping Technician (O.E.C.)

Community and Technical College
Applied Business and Accounting (https://www.ctc.uaf.edu/academics/applied-business-accounting/)
907-455-2800

Programs

Degrees

- A.A.S., Applied Accounting (p. 236)
- A.A.S., Applied Business (p. 236)

Occupational Endorsements

- O.E.C., Administrative Assistant (p. 191)
- O.E.C., Bookkeeping Technician (p. 192)
- O.E.C., Financial Services Representative (p. 195)
- O.E.C., Supervision and Personnel Management (p. 199)

Certificates

- Certificate, Accounting Technician (p. 206)
- Certificate, Applied Business Management (p. 208)

Minors

- Minor, Applied Accounting (p. 359)
- Minor, General Business (p. 366)
- Minor, Recreation and Guiding Management (p. 377)

Applied Management

B.A.M. Degree

B.A.M., APPLIED MANAGEMENT

The Bachelor of Applied Management online degree is designed for individuals who have completed or will complete 18-30 credit hours in an area of specialization or trade and aspire to assume middle management-level positions in their chosen field.

Applied management majors are desired in nearly every industry including, for example, aviation, automotive technology, hospitality and the growing field of healthcare. This desirability provides a unique opportunity as only a limited number of applied management bachelor degrees exist and many of those are located in for-profit institutions.

The online Bachelor of Applied Management degree provides students with the academic education required to be proficient middle managers in their career fields. It offers students with degrees and certificates, not usually designed to fulfill the requirements within a bachelor's program, the opportunity to use their skills and degrees/certificates for academic and career growth.

Minimum Requirements for Applied Management Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in applied management (https://uaf.edu/academics/programs/bachelors/applied-management.php), including an overview of the program, career opportunities and more.

Learn more about the online bachelor's degree in applied management (https://uaf.edu/academics/programs/bachelors/applied-management-online.php), including an overview of the program, career opportunities and more.

College of Business and Security Management
Applied Management Program (https://www.uaf.edu/cbsm/programs/applied-management.php)
907-474-7461

Programs

Degree

- B.A.M., Applied Management (p. 284)

Arctic and Northern Studies

B.A., M.A. Degrees, Graduate Certificate, Minor

B.A., CLIMATE AND ARCTIC SUSTAINABILITY

The B.A. in Climate and Arctic Sustainability is an interdisciplinary and innovative program that educates students on climate dynamics, as well as issues, opportunities and challenges specific to Alaska, the circumpolar North and the Arctic from a sustainability perspective. Program themes include climate change, environmental issues, Indigenous issues, subsistence, politics and history, national and international security, geography, energy resources, art and music, and literature. The degree prepares students to think critically about environmental change and the circumpolar North as a region in order to develop solutions to minimize the adverse impacts of change and work towards the sustainability of the region. The geographic location of UAF is outstanding for the study of the climate, environment and Northern issues, but students can pursue the major online as well.

Minimum Requirements for Climate and Arctic Sustainability Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in c (https://uaf.edu/academics/programs/bachelors/arctic-northern-studies.php)limate and Arctic sustainability, including an overview of the program, career opportunities and more.

M.A., ARCTIC AND NORTHERN STUDIES

Arctic and Northern Studies is an interdisciplinary program at the University of Alaska Fairbanks that focuses on the opportunities, challenges and policy issues specific to the Arctic and circumpolar North, specifically from social sciences and humanities perspectives.

Arctic and Northern Studies M.A. concentrations include:

- Arctic politics and policy
- Northern history
- Individualized

At UAF, Arctic and Northern studies students benefit from the extensive Northern expertise and research activities of UAF faculty, the Alaska and Circumpolar North collections of the UAF Rasmuson Library and the University of Alaska Museum of the North, and, of course, being located in a Northern environment. Arctic and Northern studies faculty have won major awards for excellence in teaching, research and public service.

Minimum Requirements for Arctic and Northern Studies Master's Degree: 30 credits

Learn more about the master's degree in Arctic and northern studies (https://uaf.edu/academics/programs/masters/arctic-northern-studies.php), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, ARCTIC AND NORTHERN STUDIES

The objective of the graduate certificate in Arctic and Northern Studies is to provide working professionals and others with graduate-level educational training and skills related to understanding, living and working in the circumpolar North. Through this certificate program, students will gain proficiency in environmental, political, historical, geographical, cultural, anthropological and other aspects of the North as well as knowledge of Northern peoples, including Indigenous peoples and their unique challenges and opportunities.

Minimum Requirements for Arctic and Northern Studies Graduate Certificate: 15 credits

College of Liberal Arts
Arctic and Northern Studies (https://www.uaf.edu/arctic/)
907-474-7126

Programs

Degrees

- B.A., Climate and Arctic Sustainability (p. 300)
- M.A., Arctic and Northern Studies (p. 420)
- Graduate Certificate, Arctic and Northern Studies (p. 405)

Minor

- Minor, Arctic and Northern Studies (p. 360)

Art

B.A., B.F.A., M.F.A. Degrees, Minors

B.A, B.F.A., ART

The art program encourages independent, original and creative thinking while recognizing the role and responsibility of the fine arts within the humanities.

The B.F.A. degree is professionally oriented and designed to prepare students for careers in art. It is the usual prerequisite for graduate studies in art. Admission requires a portfolio review by the art faculty, generally done in the student's junior year. Enrollment in the B.F.A. program is recommended only for students who are willing to make a considerable commitment of time and energy necessary to achieve professional competence in their major areas. Career opportunities for B.F.A. graduates include artist, designer, arts administrator, art teacher, gallery and museum administrator and computer-related fields.

Minimum Requirements for Art Bachelor's Degrees: B.A.: 120 credits; B.F.A.: 120 credits

Learn more about the bachelor's degree in art (https://uaf.edu/academics/programs/bachelors/art.php), including an overview of the program, career opportunities and more.

M.F.A., ART

The M.F.A. degree provides artists with the necessary background to compete for state, national and international positions. Career opportunities include placement in state and federal arts organizations, galleries, museums, colleges and universities. This degree includes exposure to contemporary art world issues, the historic role of the artist and northern art. The M.F.A. degree in visual art is a terminal degree. Study is two-thirds in studio art. The degree culminates in a solo gallery exhibition.

Minimum Requirements for Art Master's Degree: 60 credits

College of Liberal Arts
Department of Art (https://www.uaf.edu/art/)
907-474-7530

Programs

Degrees

- B.A., Art (p. 286)
- B.F.A., Art (p. 287)
- M.F.A., Art (p. 421)

Minors

- Minor, Art (p. 360)
- Minor, Art History (p. 360)

Atmospheric Sciences

M.S., Ph.D. Degrees, Minor

M.S., PH.D., ATMOSPHERIC SCIENCES

The field of atmospheric science covers a wide variety of disciplines involving the physical and chemical properties and processes of the atmosphere. Emerging trends in atmospheric science stress the interactions of the atmosphere with other components (e.g., land, sea ice, ocean) in the total earth system.

The UAF Geophysical Institute, the International Arctic Research Center and other university research institutes support active research programs in high-latitude atmospheric science that include faculty from biology, chemistry, physics, engineering and other departments. Current research by atmospheric sciences focuses on atmospheric chemistry and biogeochemistry, climate modeling, cloud and aerosol physics, mesoscale modeling, numerical weather prediction and aviation weather, and the upper atmosphere (stratosphere and mesosphere). In addition, scientists affiliated with the research institutes conduct research on ocean-atmosphere interactions, dynamic meteorology, micrometeorology and microclimatology, polar meteorology, radiative transfer, cryosphere-atmosphere interactions and remote sensing.

Graduate students are an integral component of this research, both in the experiments in the laboratory and the field as well as in high-performance computing. Research institutes provide excellent environments for research in atmospheric science as well as interdisciplinary research with scientists in other research areas.

Minimum Requirements for Atmospheric Sciences Degrees: M.S.: 30 credits; Ph.D.: 45 credits

M.S., PH.D., EARTH SYSTEM SCIENCE

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering
- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

MINOR, AGROMETEOROLOGY

This minor provides an opportunity for upper-level undergraduates from sciences (e.g., natural sciences and agriculture, geosciences, geography, physics), mathematics and engineering across the University of Alaska system to pursue a concentration and specialization in agrometeorology. The minor is established in the College of Natural Science and Mathematics and fostered by worldwide specialists in the fields of meteorology, climate and agriculture from the Department of Atmospheric Sciences and the Department of Natural Resources and Environment. This minor aims to provide the student with training in state-of-the-art experimental and computational methodologies and tools, as well as a deep theoretical understanding of the transdisciplinary process at the convergence and intersection between agriculture and meteorology/climate. All courses listed for this minor present a module for professional practices in the field and in computers so that the student can profile a pathway for workforce development.

With a minor in agrometeorology, the student would have a well-rounded and hands-on formation in all aspects involving agricultural systems that influence or are influenced by meteorological and climate processes. The program is fully compliant with the standard practices set by the U.S. Department of Agriculture, the U.S. National Weather Service and the World Meteorological Organization objectives in terms of seasonal analysis, forecasting activities and decision-making processes.

Minimum Requirements for Agrometeorology Minor: 24 credits

College of Natural Science and Mathematics
Department of Atmospheric Sciences (https://www.uaf.edu/atmos/)
907-474-7368

Programs

Degrees

- M.S., Atmospheric Sciences (p. 421)
- M.S., Earth System Science (p. 431)
- Ph.D., Atmospheric Sciences (p. 471)
- Ph.D., Earth System Science (p. 473)

Minor

- Minor, Agrometeorology (p. 358)

Automotive Technology

Certificate

The automotive technology program at the UAF Community & Technical College offers a certificate program designed to qualify students for entry-level positions within the automotive service and repair industry. The program emphasizes hands-on training and in-class experiences to develop students into highly skilled technicians capable of diagnosing and repairing the complex systems and electronic technology that make up today's automobiles. The program is accredited in the area of Maintenance and Light Repair (MLR) by the ASE Education Foundation.

Learn more about available certificates:

Automotive Technology (https://www.ctc.uaf.edu/programs/automotive-technology/)

- Automotive Technology (Certificate)

Community and Technical College
Automotive Technology (https://www.ctc.uaf.edu/programs/Automotive/)
907-455-2800

Programs

Certificate

- Certificate, Automotive Technology (p. 210)

Aviation

A.A.S. Degrees, Certificates, Minor

The aviation programs at the UAF Community & Technical College offer certificate and associate degree programs that prepare students for careers in aviation maintenance and professional piloting.

The aviation maintenance program is one of the only Federal Aviation Administration (FAA) certified, Part-147 school programs in the nation in which students can complete the FAA mechanic's certificate requirements with airframe and powerplant ratings in as little as one year. Graduates who pass the FAA examinations for the airframe and powerplant ratings qualify for entry-level positions in aircraft maintenance, repair, overhaul, and modification.

The professional piloting program offers a series of aviation piloting courses ranging from ground school classes for private through commercial flying, Arctic survival, weather, and aircraft maintenance.

Learn more about available certificates and degrees:

Aviation Maintenance (https://www.ctc.uaf.edu/programs/aviation-maintenance/)

- Aviation Maintenance (A.A.S.)
- Airframe and Powerplant (Cert)
- Airframe (Cert)
- Powerplant (Cert)

Professional Piloting (https://www.ctc.uaf.edu/programs/piloting-professional/)

- Professional Piloting (A.A.S.)

Community and Technical College **(**https://www.ctc.uaf.edu/**)**
Aviation Program
907-455-2800

Programs

Degrees

- A.A.S., Aviation Maintenance (p. 240)
- A.A.S., Piloting, Professional (p. 249)

Certificates

- Certificate, Airframe (p. 206)
- Certificate, Airframe and Powerplant (p. 206)
- Certificate, Powerplant (p. 206)

Minor

- Minor, Aviation Technology (p. 361)

Biology and Wildlife

B.A., B.S., M.S., Ph.D. Degrees, Minors

The Department of Biology and Wildlife offers a variety of undergraduate and graduate programs of study for students interested in the science of life.

Undergraduates may major in biological sciences or wildlife biology and conservation. The biological sciences B.A. and B.S. programs provide a broad education in biology that is foundational to careers in health, environment, life science education and research. The wildlife biology and conservation B.S. prepares students for a professional career focused on the management and stewardship of wild animal populations. Our undergraduate programs also provide excellent preparation for advanced study in graduate and professional degree programs.

Graduate students may pursue an M.S. degree in biological sciences or wildlife biology and conservation and a Ph.D. degree in biological sciences. Graduate students work closely with a small faculty committee to plan their coursework and research project. Our location offers unparalleled access to northern high-latitude ecosystems and the plants, animals, and microorganisms adapted to these environments, as well as unique opportunities to engage in health research relevant to the needs of the circumpolar North and its communities. UAF offers state-of-the-art laboratory facilities that support a wide range of biological disciplines, including molecular biology, physiology, behavior and ecology, and the chance to interact with a vibrant community of life science researchers.

College of Natural Science and Mathematics
Department of Biology and Wildlife (https://www.bw.uaf.edu/)
907-474-7671

B.A., BIOLOGICAL SCIENCES

Undergraduate majors in biological sciences may pursue either a B.A. or a B.S. degree. The B.A. degree is an excellent choice for students who wish to combine biology with another area of study, e.g. education, art, statistics or journalism. Students in the B.A. program supplement their coursework in biology and natural science with courses in the social sciences and humanities, and all students complete a minor. The student integrates these different areas of study within a cross-disciplinary capstone project. More information about the integrative capstone experience can be found on the Biology and Wildlife Department website (https://www.uaf.edu/bw/). Students in the biological sciences B.A. program may adopt an optional concentration in environmental change. The B.A. program, with or without concentration, may be completed either in person or online.

Minimum Requirements for Biological Sciences Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in biological sciences (https://uaf.edu/academics/programs/bachelors/biological-sciences.php), including an overview of the program, career opportunities and more.

B.S., BIOLOGICAL SCIENCES

Relative to the B.A. program, the B.S. in biological sciences contains more coursework in biology and other natural sciences. It provides excellent preparation for a career in health science, environmental management, field and lab biology, and life science education, or advanced study in graduate and professional degree programs. Students in the B.S. program may adopt an optional concentration in one of four sub-disciplines: cell and molecular biology, physiology, biomedical science or ecology and evolutionary biology. All students in the biological sciences B.S. conduct an original research project as part of the capstone experience. More information about the research capstone can be found on the Biology and Wildlife Department website (https://www.uaf.edu/bw/). The B.S. without concentration may be completed either in person or online; however, the concentrations currently require at least some on-campus coursework.

Minimum Requirements for Biological Sciences Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in biological sciences (https://uaf.edu/academics/programs/bachelors/biological-sciences.php), including an overview of the program, career opportunities and more.

B.S., WILDLIFE BIOLOGY AND CONSERVATION

The wildlife biology and conservation B.S. program prepares students for a professional career that involves wild animal populations and their interactions with people and the environment. Career paths include wildlife management, research, conservation, stewardship, agency administration, tourism, education, communication and consulting. Our curriculum is designed to help students meet the requirements of a Certified Wildlife Biologist, an internationally recognized certificate administered by The Wildlife Society.[1] The undergraduate wildlife program also provides a solid foundation for further study at the graduate level.

The geographic location of UAF offers students unparalleled opportunities to learn about a diversity of wildlife species and the vast northern ecosystems (arctic tundra, boreal forest, temperate coastal rainforest) that they inhabit. Many of our courses include outdoor activities that foster hands-on training. With the Arctic warming 3-4 times faster than the global average, our students have a front-row seat to observe and study the rapidly changing relationships between climate and wildlife.

Students gain real-life exposure to the wildlife profession through interactions with UAF faculty and personnel from several federal (USGS, NPS, USFWS, USFS) and state (ADFG) wildlife and conservation agencies. Students have numerous opportunities to participate in fieldwork, laboratory research and internships that provide invaluable experiences that prepare students for the next stage of their professional careers.

Minimum Requirements for Wildlife Biology and Conservation Degree: 120 credits

Learn more about the bachelor's degree in wildlife biology and conservation (https://uaf.edu/academics/programs/bachelors/wildlife-biology-conservation.php), including an overview of the program, career opportunities and more.

[1] Students interested in applying to become a Certified Wildlife Biologist with The Wildlife Society should work with their advisor to ensure that they include the necessary coursework in their degree program.

M.S., PH.D., BIOLOGICAL SCIENCES

Graduate students in the biological sciences program at UAF conduct independent research in a part of the world changing rapidly due to climate warming. The emphasis of a student's research is tailored to the

student's academic and career goals. Students are encouraged to make connections with potential mentors on the faculty before applying to the program. A list of faculty with the disciplinary focus of their research appears on the Biology and Wildlife website (https://www.uaf.edu/bw/).

A variety of facilities are available for graduate research. The department has close connections with the Bonanza Creek Long Term Ecological Research program - focused on the boreal forest - and the Toolik Field Station - focused on the Arctic. Facilities available to graduate students on the Troth Yeddha' (Fairbanks) campus include IAB Genomics Core Laboratory, IAB Research Greenhouse, Molecular Imaging Facility, Biological Research and Diagnostics Facility and the Large Animal Research Station. Students and faculty work on systematic collections in the UA Museum of the North using a variety of approaches from traditional morphology to molecular biology.

Most students in the graduate degree programs are funded through research or teaching assistantships. Research assistantships are funded by grants to individual faculty members. Applicants interested in graduate research assistantships should contact individual faculty members for availability. Teaching assistants typically lead laboratory sections of undergraduate courses. Additionally, competitive fellowships and grants are available through the Institute of Arctic Biology, the University of Alaska Foundation, the UAF Graduate School (https://uaf.edu/gradschool/current-students/funding.php) and extramural sources. Graduates of biological sciences M.S. and Ph.D. programs often go on to positions at state and federal resource agencies, research institutions and universities.

Minimum Requirements for Biological Sciences Master's and Doctoral Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Detailed information on graduate programs in biological science is available on the Biology and Wildlife Department website (https://www.uaf.edu/bw/).

M.S., PH.D., EARTH SYSTEM SCIENCE

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering
- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

M.S., WILDLIFE BIOLOGY AND CONSERVATION

The M.S. degree in wildlife biology and conservation provides students with advanced education, training, and research opportunities in the biology of wild animals and their interactions with people and the environment. The geographic location of UAF offers students unparalleled opportunities to study a diversity of wildlife species in vast northern ecosystems (temperate coastal rainforests, boreal forests, arctic tundra) and state-of-the-art facilities. With the Arctic warming 3-4 times faster than the global average, our graduate students are on the front line of research on the relationships between climate change and wildlife. Some areas of expertise within our graduate program include wildlife population dynamics, species interactions (plant-animal, predator-prey), nutrition and physiology, landscape and movement ecology, management and the human dimensions of wildlife science.

Wildlife students work closely with the Institute of Arctic Biology, Alaska Cooperative Fish and Wildlife Research Unit, UA Museum of the North, several federal (USGS, NPS, USFWS, USFS) and state (ADFG) wildlife and conservation agencies, Alaska Native and nonprofit organizations and consulting businesses. Our department, institutes and collaborating agencies often support graduate student projects and provide post-graduate employment opportunities. Most students receive research or teaching assistantships that provide stipends and reimbursement of tuition costs while pursuing their degree. Ultimately, our students gain the experience, skills and knowledge needed to be leaders in the wildlife profession. After receiving their M.S., the vast majority of our graduate students find positions with state or federal wildlife agencies, nonprofit conservation organizations or pursue a Ph.D.

Minimum Requirements for Wildlife Biology and Conservation Master's Degree: 30 credits (18-24 instructed courses and 6-12 thesis credits)

Detailed information on the graduate program in wildlife biology and conservation is available on the Biology and Wildlife Department website (https://www.uaf.edu/bw/).

GRADUATE CERTIFICATE, SCIENCE TEACHING AND OUTREACH

The certificate in science teaching and outreach is a voluntary program that prepares science graduate students for science careers that include teaching and/or communicating science to the public. It does NOT meet the requirements for earning a state teaching certificate and will not allow graduates to apply for certified positions in the K-12 school system. The science teaching and outreach certificate will enhance readiness for college-level teaching by providing hands-on training and familiarity with pedagogical theory. The certificate is expected to increase competitive ability in the higher-education job market.

Minimum Requirements for Science Teaching and Outreach Graduate Certificate: 12 credits

MINOR, BIOLOGICAL SCIENCES

The minor in biological sciences provides foundational knowledge in modern biology while allowing flexibility to tailor several courses to the student's interest.

Minimum Requirements for Wildlife Biology and Conservation Minor: 18 credits

MINOR, WILDLIFE BIOLOGY AND CONSERVATION

The minor in wildlife biology and conservation offers a minimum set of courses to provide students with an understanding of the principles upon which the management of wildlife populations is based and to familiarize students with techniques used in wildlife management and research.

Minimum Requirements for Wildlife Biology and Conservation Minor: 15 credits

Programs

Degrees

- B.A., Biological Sciences (p. 287)
- B.S., Biological Sciences (with concentration) (p. 290)
- B.S., Biological Sciences (without concentration) (p. 292)
- B.S., Wildlife Biology and Conservation (p. 354)
- M.S., Biological Sciences (p. 422)
- M.S., Earth System Science (p. 431)
- M.S., Wildlife Biology and Conservation (p. 465)
- Ph.D., Biological Sciences (p. 472)
- Ph.D., (p. 473)Earth System Science

Graduate Certificate

- Graduate Certificate, Science Teaching and Outreach (p. 411)

Minor

- Minor, Biological Sciences (p. 361)
- Minor, Wildlife Biology and Conservation (p. 380)

Business Administration

B.B.A., MBA Degrees, Minors

B.B.A., BUSINESS ADMINISTRATION

The business administration program offers professional education to students interested in finance, human resources, leadership and marketing. Competent management practices require an education that is both broad and deep. The business administration program prepares graduates to meet complex technical, economic and social problems and enables them to apply imaginative and responsible leadership to the needs of industry and government.

The undergraduate and graduate business administration programs are accredited by the Association to Advance Collegiate Schools of Business.

Minimum Requirements for Business Administration Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in business administration (https://uaf.edu/academics/programs/bachelors/business-administration.php), including an overview of the program, career opportunities and more.

Learn more about the online bachelor's degree in business administration (https://uaf.edu/academics/programs/bachelors/business-administration-online.php), including an overview of the program, career opportunities and more.

MBA, BUSINESS ADMINISTRATION

The College of Business and Security Management offers professional education applicable to the fields of management, finance, human resource management, international business, marketing, and scientific and technical management to individuals interested in entering industry or government.

The program prepares graduates to meet the complex problems of the technical, economic and social environment and enables them to provide imaginative and responsible leadership to industry and government.

The UAF program recognizes that competence in the practice of management necessitates education with both breadth and depth. The graduate program is accredited by the Association to Advance Collegiate Schools of Business.

All applications with be reviewed to determine if the applicant has the required body of knowledge to begin MBA courses. Those deficient may be required to complete prerequisite modules prior to admission or prior to enrolling in specific courses.

Minimum Requirements for Business Administration MBA: 30 credits

Learn more about the master's degree in business administration (https://uaf.edu/academics/programs/masters/mba-online.php), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, HEALTHCARE MANAGEMENT AND LEADERSHIP

The Healthcare Management & Leadership Graduate Certificate is for healthcare professionals seeking to gain specific skills in healthcare administration to advance their careers. The program includes four courses: Survey of Healthcare Administration, Healthcare Law and Ethics, Health Care Finance and Economics and Information Systems and Decision Making in Health Services. Graduates will apply foundational knowledge of the U.S. Healthcare system, effective data-driven decision-making, and managing and communicating with stakeholders to lead process improvement strategies that will better the overall health of the communities they serve.

Minimum Requirements for Healthcare Management & Leadership Graduate Certificate: 12 credits

College of Business and Security Management
Business Administration Program (https://www.uaf.edu/cbsm/programs/business-administration.php)
907-474-7461

Programs

Degrees

- B.B.A., Business Administration (p. 294)
- MBA, Business Administration (p. 423)

Graduate Certificate

- Graduate Certificate, Healthcare Management and Leadership (p. 409)

Minors

- Minor, Finance (p. 365)
- Minor, General Business (p. 366)
- Minor, Leadership (p. 372)
- Minor, Management and Organizations (p. 373)
- Minor, Marketing (p. 374)
- Minor, Sport Management (p. 379)

Chemistry and Biochemistry

B.S., M.S., B.S./M.S., Ph.D. Degrees, Minors

Our programs prepare students for employment as research chemists in federal, state, municipal, academic or industrial laboratories, and in premedicine as laboratory technicians, industry supervisors and technical sales personnel. Our programs also provide a technical base for chemistry teachers. Graduates also find positions in the environmental sciences, oceanography and related interdisciplinary fields. Many chemistry graduates elect to pursue advanced M.S., Ph.D., pharmacology or M.D. degrees.

College of Natural Science and Mathematics
Department of Chemistry and Biochemistry (https://www.uaf.edu/chem/)
907-474-5510

B.S., CHEMISTRY

The chemistry curriculum meets the American Chemical Society standards covering the basics of general, organic, inorganic, physical and analytical chemistry, and biochemistry. Undergraduate research leading to publications is strongly encouraged, and many of the laboratory-based courses have a research component built into them. The B.S. program may be completed without an optional concentration, or students can opt for an additional focus in biochemistry, environmental chemistry or forensic chemistry. The B.S. program generally prepares students for a career in chemistry or biochemistry, or for professional school. The B.S. in chemistry is an ACS-approved degree program. The environmental chemistry concentration provides courses that help students study the chemistry of the natural environment by adding geology, biology or atmospheric courses, and it prepares students for graduate studies and/or careers in the environmental industry. The biochemistry concentration provides an enhanced curriculum in biological chemistry for students seeking advanced careers in biochemistry, medicine or health sciences. Limited teaching assistantships are often available for upper-division students, which strengthen leadership and communication skills.

The bachelor's degrees in chemistry and concentrations in biochemistry and environmental chemistry provide excellent research opportunities and background for undergraduate students through connection to corresponding graduate programs.

The Chemistry and Biochemistry Department is housed in the Reichardt Building, where laboratories are equipped with research-grade instrumentation, providing hands-on experience to students for entry into graduate school or industry. Visit the Chemistry Department (https://www.uaf.edu/chem/) for more information.

Minimum Requirements for Chemistry Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in chemistry (https://uaf.edu/academics/programs/bachelors/chemistry.php), including an overview of the program, career opportunities and more.

ACCELERATED B.S./M.S., CHEMISTRY

The Chemistry B.S./M..S program with thesis or project prepares students for employment as research chemists in federal, state, municipal, academic or industrial laboratories, and in pre-medicine as laboratory technicians, industry supervisors and technical sales personnel. Graduates also find positions in the environmental sciences, oceanography and related interdisciplinary fields. Many chemistry graduates elect to pursue advanced Ph.D., pharmacology or M.D. degrees. The B.S./M.S. program will assist students in successfully preparing for post-graduate programs by helping students follow a curriculum specifically needed for developing successful licensing school applications or scientific careers while enhancing their critical thinking skill sets, scientific knowledge, writing and presentation skill, and to be overall well-rounded professionals.

The Chemistry B.S./M.S. program is designed to assist students in earning both B.S. and M.S. degrees quicker and with less cost than earning the degrees individually. This is accomplished by having 12 credits of F400- and F600-level courses count as electives in both degrees. Additionally, in the program, students begin to conduct research in a research laboratory at the beginning of their third year. This early research start will allow students to develop technical laboratory skills and to become familiar with their potential M.S. project early on in their program.

To complete the M.S. portion of this program, students will complete a research thesis or a project, in addition to the coursework. This will allow students to tailor their graduate studies to meet their interests and prospective career needs. Students pursuing an M.S. with a research thesis will conduct laboratory research and produce a thesis generally equivalent to a manuscript for a peer-reviewed journal. Students pursuing an M.S. with a project will conduct a research project that may be based solely or partly on literature review/synthesis. This can include writing a review article or a different activity as decided by the student's committee. To ensure students' success in this program, students will need to be advised very carefully by their faculty advisor and committee.

Minimum Requirements for Accelerated Mathematics B.S./M.S. Degrees: 138 credits

Learn more about the bachelor's degree in chemistry (https://uaf.edu/academics/programs/bachelors/chemistry.php), including an overview of the program, career opportunities and more.

M.S., CHEMISTRY

Graduates in chemistry qualify for employment in many fields as teachers of chemistry; supervisors in industry; technical sales personnel; research chemists in federal, state, municipal, academic or industrial laboratories; in pre-medicine; and as laboratory technicians. The rapid introduction of chemical techniques in all branches of commerce and the creation of many synthetic products have caused substantial growth in the profession. In addition to the traditional employment opportunities in chemistry, well-qualified graduates find positions in the fields of environmental sciences, oceanography, biochemistry, neuroscience, and related interdisciplinary fields. Many recipients of chemistry master's degrees continue their education to obtain Ph.D. degrees at UAF or other universities. The M.S. program also has concentrations in the departmental focal areas of biochemistry and neuroscience and environmental chemistry. The department also offers Ph.D. degrees in each of these areas.

The department offers well-equipped laboratories housing instrumentation for nuclear magnetic resonance spectrometry, infrared, ultraviolet/visible and atomic absorption spectrophotometry, mass spectrometry, gas chromatography, amino acid analysis and HPLC. Additional equipment for gas chromatography/mass spectrometry, X-ray

diffractometry, electron microscopy and liquid scintillating counters is available in cooperation with other UAF departments and institutes.

Minimum Requirements for Chemistry Master's Degree: 30 credits

PH.D., BIOCHEMISTRY AND NEUROSCIENCE

Biochemistry and neuroscience is an interdepartmental program administered by the Department of Chemistry and Biochemistry with research support through the Institute of Arctic Biology. A broad range of biomedical research experiences is available, including molecular and cellular neuroscience, proteomics, protein structure-function and molecular toxicology. The Arctic environment provides additional research opportunities in environmental biochemistry, adaptations and molecular genetics. Students seeking an M.S. degree in these research areas should see the M.S. chemistry with a concentration in biochemistry and neuroscience degree.

UAF faculty and affiliate faculty at collaborating institutions provide a rich academic environment encompassing both research and comprehensive course offerings. Students with career interests in biotechnology, pharmaceutical sciences, environmental health, genetics and biomedicine are encouraged to apply. Students are normally accepted with financial support (fellowships, research assistantships and/or teaching assistantships) along with tuition waivers.

Minimum Requirements for Biochemistry and Neuroscience Doctoral Degree: 18 thesis credits

PH.D., ENVIRONMENTAL CHEMISTRY

Environmental chemistry focuses on the chemical processes influencing the composition and chemical speciation of natural systems (air, water and soils), the chemical fate and mobility of contaminants in the environment, chemical processes that affect the toxicity and bioavailability of contaminants, and chemical aspects of contaminant remediation and pollution prevention. The common link is a focus on the underlying chemical structure, reactivity and mechanisms that dictate the extent and rates of environmentally important chemical reactions. Environmental chemistry is a challenging field, requiring core training in physical, analytical, organic and inorganic chemistry, and an understanding of how these disciplines can be applied to complex environmental systems. It also provides a quantitative and fundamental approach to understanding the processes that influence the quality of the environment.

The Department of Chemistry and Biochemistry offers B.S. and M.S. via concentrations under the chemistry degree. The program provides education and research opportunities focused on the molecular scale aspects of environmental science. The program defines three tracks to meet a wide range of student interests:

1. atmospheric chemistry,
2. aqueous/environmental geochemistry, and
3. environmental toxicology and contaminant fate.

Students may also design a custom focus area, subject to approval by their advisory committee.

Our faculty are involved in a wide range of projects from field studies of chemical transformation and transport to laboratory and modeling studies of the basic mechanisms of environmental reactions, to the development of novel chemistry useful in contaminant remediation. The program is centered in the Reichardt Building on the Fairbanks campus which houses state-of-the-art classrooms, laboratories and computer facilities to support education and research activities. Located in Interior Alaska, UAF is home to numerous research institutes and centers that focus on Arctic science and engineering and provide great opportunities for collaboration and cross-disciplinary studies focused on the chemistry of polar and sub-Arctic systems.

The Ph.D. program in environmental chemistry provides advanced training in the concepts and methods of molecular environmental sciences with the expectation that Ph.D. recipients will be acknowledged as experts in their particular topic of study. This is accomplished primarily through the Ph.D. dissertation, which is a body of independent research that presents new findings on forefront topics related to molecular processes in the environment. The Ph.D. in environmental chemistry prepares students for careers in academia or the public and private research sectors. Graduate students in the environmental chemistry program are typically supported through teaching and research assistantships or fellowships. Students interested in an M.S. degree focusing on environmental chemical problems should see the M.S. chemistry with a concentration in environmental chemistry program.

Minimum Requirements for Environmental Chemistry Doctoral Degree: 32 credits

Programs

Degrees

- B.S., Chemistry (p. 295)
- B.S./M.S., Chemistry (p. 383)
- M.S., Chemistry (p. 425)
- Ph.D., Biochemistry and Neuroscience with Biochemistry Concentration (p. 471)
- Ph.D., Biochemistry and Neuroscience with Neuroscience Concentration (p. 472)
- Ph.D., Environmental Chemistry (p. 477)

Minors

- Minor, Biochemistry (p. 361)
- Minor, Chemistry (p. 362)

Civil, Geological and Environmental Engineering

B.S., M.S., B.S./M.S., Ph.D. Degrees

Civil engineers plan, design and supervise the construction of public and private structures such as bridges, buildings, tunnels, highways, transit systems, dams, offshore structures, airports, irrigation projects and water treatment and distribution facilities. Civil engineers use critical thinking, sophisticated technology and computer-aided engineering during the design, construction, project scheduling and cost-control project phases. Civil engineers are creative problem solvers involved in community development and in addressing challenges of pollution, deteriorating infrastructure, traffic safety, energy needs, floods, earthquakes and urban planning.

Geological engineering integrates geology and engineering concepts to mitigate geohazards like landslides, ensure safe construction at a site, find and manage groundwater, and locate mineral resources. Geological engineers are also interested in what the terrain can tell us about the stability of the soil or rock underneath. The Geological Engineering program at UAF has maintained ABET accreditation since 1941. Our program prepares students for employment with industry, consulting companies and government agencies.

College of Engineering and Mines
Department of Civil, Geological and Environmental Engineering (Civil Engineering website (https://www.uaf.edu/cem/programs/civil-engineering/), Geological Engineering website (https://www.uaf.edu/cem/programs/geological-engineering/))
907-474-7241

B.S., CIVIL ENGINEERING

The mission of the civil engineering program is to provide the highest level of undergraduate education, including competency in mathematics, science and engineering fundamentals, as well as training in design, the latest engineering applications and professional practice; to provide an environment encouraging research for engineers at the undergraduate, master's and doctorate levels; and to impart a desire for lifelong learning so that engineers from our program remain atop their field throughout their careers. The civil engineering program at UAF has maintained accreditation since 1940 and is currently accredited by the Engineering Accreditation Commission of ABET.

Educational Objectives of the B.S. Civil Engineering Program

1. Our graduates use their education to pursue professional careers in civil engineering and/or related fields in the public or private sectors, and/or graduate education.
2. Our graduates possess the knowledge required to meet the challenges of civil engineering problems, including those unique to remote locations and cold regions including Alaska.
3. Our graduates demonstrate professionalism through clear communication, actively serving the community, teamwork, commitment to ethical standards, and pursuit of licensure.

In addition to general civil engineering courses, the department offers specialties in transportation, geotechnical, structures, water resources, hydrology and environmental studies.

Minimum Requirements for Civil Engineering Bachelor's Degree: 125 credits

Learn more about the bachelor's degree in civil engineering (https://uaf.edu/academics/programs/bachelors/civil-engineering.php), including an overview of the program, career opportunities and more.

B.S., GEOLOGICAL ENGINEERING

The mission of the geological engineering program is to advance and disseminate knowledge related to geologic hazard assessment; engineering site selection; construction and construction material production; groundwater and geo-environmental engineering; and mineral and energy exploration, evaluation, development and production, through creative teaching, research and public service with an emphasis on Alaska, the North and its diverse peoples.

Educational Objectives of the B.S. Geological Engineering Program:

1. Our graduates use their broad education to serve as the foundation of successful careers in geological engineering and/or related fields in the public or private sectors, and/or graduate education.
2. Our graduates possess the technical knowledge required to meet the unique challenges of geological engineering problems, especially those germane to cold regions including Alaska.
3. Our graduates demonstrate professionalism through clear communication, actively serving the community, teamwork, commitment to ethical standards, and lifelong learning.

Minimum Requirements for Geological Engineering Bachelor's Degree: 127 credits

Learn more about the bachelor's degree in geological engineering, including an overview of the program, career opportunities and more.

ACCELERATED B.S./M.S., CIVIL ENGINEERING

The civil engineering integrated B.S./M.S. program allows qualified and dedicated students to complete both B.S. and M.S. degrees in a shorter time (typically, five years instead of six) than traditional B.S. plus M.S. degrees and with less cost than earning the degrees individually. This is accomplished by having 12 credits of F400- and F600-level courses count toward both degrees. The B.S. degree is accredited by the Accreditation Board for Engineering and Technology (ABET). Students will need to apply for the B.S./M.S. option at the start of their third year in the B.S. program and form a graduate committee by the fourth year. For the M.S. portion of this integrated B.S./M.S. degree, students will select one of two tracks: environmental/water resources or civil infrastructure.

To complete the M.S. portion of this program, students will complete a research thesis or a project in addition to the coursework. This will allow students to tailor their graduate studies to meet their interests and prospective career needs. Students admitted to the B.S./M.S. program typically begin their research thesis or project during their third year. This early research start allows students to develop technical skills and to become familiar with their potential M.S. project early on in their program. Students pursuing an M.S. with a research thesis will conduct field/laboratory research and produce a thesis generally equivalent to a manuscript for a peer-reviewed journal. Students pursuing an M.S. with a project will conduct a research project that may be based solely or partly on technical analysis, meta-analysis or literature review and synthesis. This can include writing a technical report, review article or a different activity as decided by the

faculty advisor and the student committee. To ensure the success of students in this program, students will need to closely work with their faculty advisor and the graduate committee.

Minimum Requirements for Civil Engineering B.S./M.S. Degrees: 144 credits

M.S., CIVIL ENGINEERING

Civil engineers plan, design and supervise the construction of facilities essential to modern life in both the public and private sectors. These facilities vary widely in nature, size and scope: space launching facilities, offshore structures, bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, treatment and distribution facilities for water and collection and treatment facilities for wastewater.

Civil engineers use sophisticated technology and employ computer-aided engineering during project phases of design, construction, project scheduling and cost control. Civil engineers are problem solvers involved in community development and improvement. They meet the challenges of pollution, deteriorating infrastructure, traffic congestion, energy needs, floods, earthquakes, urban redevelopment and community planning. The opportunity for creativity is unlimited.

The civil engineering program at UAF began in 1922, had its first graduate in 1931 and since has graduated more than 800 men and women. Many of these graduates work in Alaska's cities, towns and villages in a wide range of responsible positions. More than 60 percent of Alaska's professional engineers practice in civil engineering. The UAF civil engineering program has been accredited since 1940 by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. All engineering programs in the department give special attention to problems of Northern regions.

In addition to general civil engineering courses, specialties are available in Arctic engineering, transportation, geotechnical, structures, water resources, hydrology, and design and construction management. Many courses emphasize principles of analysis, planning and engineering design in northern regions.

A master's degree program can include courses in environmental engineering, engineering management and other areas. An advanced degree in water and environmental science, administered within the Civil Engineering Department, is available.

Minimum Requirements for Civil Engineering Master's Degree: 30 credits

M.S., PH.D., EARTH SYSTEM SCIENCE

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering
- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

M.S., GEOLOGICAL ENGINEERING

Geological engineers apply their strong backgrounds in geology and engineering science to solve problems at the intersection of the natural and built environments. They use their knowledge and interpretation of the Earth's surface and near-subsurface to recognize and mitigate geohazards, such as landslides, floods and earthquakes; identify, develop and protect groundwater resources; locate and investigate potential sites for infrastructure and property development; and locate and harvest natural resources, such as minerals, coal, oil and gas, in an environmentally sustainable way. As part of America's Arctic University, UAF's geological engineering program provides training in recognizing and mitigating problems associated with frozen ground, such as frost heaving, thaw settlement and slope stability in a permafrost environment.

The graduate program prepares students for employment with industry, consulting companies and government agencies.

Minimum Requirements for Geological Engineering M.S. Degree: 30-33 credits

Learn more about the master's degree in geological engineering, including an overview of the program, career opportunities and more.

PH.D., ENGINEERING

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, the use of judgment and the exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor's and master's degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of the College of Engineering and Mines and offers opportunities for engineers at other UA campuses to participate.

Minimum Requirements for Engineering Doctorate Degree: 36 credits

Programs

Degrees

- B.S., Civil Engineering (p. 300)
- B.S., Geological Engineering (p. 319)
- Accelerated B.S./M.S., Civil Engineering (p. 385)
- M.S., Civil Engineering (p. 426)
- M.S., Earth System Science (p. 431)
- M.S. Geological Engineering (p. 440)
- Ph.D., Earth System Science (p. 473)
- Ph.D., Engineering (p. 477)

Communication

B.A., M.A. Degrees, Minors

B.A., COMMUNICATION

The communication program teaches students to communicate effectively and ethically in a rapidly changing world characterized by diversity in gender, culture and belief. It offers a comprehensive background in the discipline in preparation for employment or further education. Students majoring in other disciplines find communication electives valuable additions to their programs.

The program is both theoretical and pragmatic, designed to prepare students for the professional workplace or for advanced study.

Communication courses are available online and in the classroom.

Minimum Requirements for Communication Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in communication (https://uaf.edu/academics/programs/bachelors/communication.php), including an overview of the program, career opportunities and more.

M.A., PROFESSIONAL COMMUNICATION

The communication program prepares students to handle the challenges of communicating effectively and ethically in a rapidly changing world characterized by diversity in gender, cultural background and belief.

The M.A. in professional communication provides advanced education for individuals in or pursuing communication-related careers in public/nonprofit organizations, media organizations, healthcare organizations or higher education. Courses in Communication acknowledge that communication occurs between people who are diverse in a variety of ways, such as gender identity, cultural background and beliefs, and that such diversity is becoming increasingly apparent in an ever more complex and interdependent global society. The program is both theoretically and pragmatically oriented to prepare students for the professional workplace or for doctoral study in organizations.

Minimum Requirements for Professional Communication M.A. Degree: 33 credits

College of Liberal Arts
Department of Communication (https://www.uaf.edu/communication/)
907-474-6591

Programs

Degrees

- B.A., Communication (p. 306)
- M.A., Professional Communication (p. 458)

Minors

- Minor, Communication (p. 362)
- Minor, Global Studies (p. 367)

Community Based Science

A.S. Degree, Occupational Endorsements, Certificate, Minor

College of Rural and Community Development
Community Based Science Department (https://www.uaf.edu/rural/academics/departments/)
907-474-7143

ASSOCIATE OF SCIENCE

The Associate of Science degree represents the completion of a broad-based course of study with an emphasis on the sciences. This degree may serve as a stepping-stone to a science-related baccalaureate program. You may earn only one A.S. degree.

Minimum Requirements for Associate of Science Degree: 60 credits

Learn more about the associate of science degree (https://www.uaf.edu/academics/programs/associates/associate-of-science.php), including an overview of the program, career opportunities and more.

Examples of how electives can be formed into specific areas of study

Code	Title	Credits
Energy Science		
ENVI F101X	Introduction to Environmental Science	4
PHYS F102X	Energy and Society	4
Photovoltaic		
CTT F100	Construction Technology Core	3
CTT F160	Photovoltaic Systems I	5
CTT F161	Photovoltaic Systems II	5
Biomass		
CTT F100	Construction Technology Core	3
CTT F250	Current Topics in Construction Trades	2
ENVI F120	Home Energy Basics	1
Wind		
CTT F100	Construction Technology Core	3
CTT F250	Current Topics in Construction Trades	1-3
ENVI F120	Home Energy Basics	1
Energy-Efficient Construction		
CTT F100	Construction Technology Core	3
CT S201 (https://catalog.uas.alaska.edu/search/?search=CT+S201)	Cold Climate Construction [1]	3
Other		
Other areas of study related to sustainable energy		

OCCUPATIONAL ENDORSEMENT, ETHNOBOTANY

The coursework for the ethnobotany occupational endorsement program was developed with input from the students, Elders and stakeholders who participated in the ethnobotany certificate program and provides a strong interdisciplinary foundation for understanding what students are seeking from ethnobotany coursework to enhance their opportunities both in the workplace and for professional development. Currently, no other program exists in Alaska that prepares students with a basic understanding of botany and cultural uses of plants, including the skills required to collect plants in the field, conduct interviews using culturally and scientifically appropriate methods and provide hands-on opportunities to research, implement and report (online, orally and in writing) on student-designed projects.

Minimum Requirements for Ethnobotany Occupational Endorsement: 16 credits

Learn more about the ethnobotany occupational endorsement (https://www.uaf.edu/academics/programs/occupational-endorsements/ethnobotany.php), including an overview of the program, career opportunities and more.

OCCUPATIONAL ENDORSEMENT, HIGH LATITUDE RANGE MANAGEMENT

The high latitude range management occupational endorsement program combines academic and Indigenous knowledge at the local, national and international levels to offer courses that help prepare students for entry-level jobs in the field of natural resources and livestock production, including reindeer husbandry. The program operates in cooperation with regional communities and organizations with involvement from statewide industry representatives and educators as part of the program's commitment to responding to the unique needs of rural Alaska communities, particularly with respect to local resources. The Sámi Education Institute of Finland manages the international BEBO organization, which promotes the languages and cultures of reindeer herding peoples in the Arctic and extends cooperation specifically to the HLRM program.

Minimum Requirements for High Latitude Range Management Occupational Endorsement: 13 credits

OCCUPATIONAL ENDORSEMENT, RURAL SURFACE WATER QUALITY TESTING

This program provides education and training to conduct water quality monitoring and assessment by developing and following a Quality Assurance Project Plan. Coursework focuses on issues related to rural Alaska communities and provides basic academic preparation for entry-level water quality technician careers. Students gain a foundation of knowledge that prepares them to continue into a science- and engineering-related certificate, associate or bachelor's program.

Minimum Requirements for Rural Surface Water Quality Testing Occupational Endorsement: 9 credits

OCCUPATIONAL ENDORSEMENT, RURAL WASTE MANAGEMENT SPILL RESPONSE

The occupational endorsement in rural waste management and spill response provides education and training on how to handle the management of municipal waste. Emphasis is placed upon providing students with the skills and experience necessary to implement solutions to challenging solid waste stream issues facing rural waste managers. The program introduces students to best practices in waste management that are in compliance with state and federal governmental regulations. Exceptional focus is placed on workplace safety and students are assessed on proficiency in operational safety and safety planning. Upon completion of the occupational endorsement, students will be prepared

to help protect rural communities from many of the environmental risks associated with waste disposal by safely managing municipal solid and hazardous waste streams.

Minimum Requirements for Rural Waste Management Spill Response Occupational Endorsement: 10 credits

OCCUPATIONAL ENDORSEMENT, SUSTAINABLE ENERGY

Providing education and training in energy efficiency and renewable energy, the sustainable energy occupational endorsement addresses many of the energy issues that influence Alaska communities and provides the basic academic preparation for entry-level sustainable energy careers. It also serves as a stepping stone into a science- and engineering-related certificate, associate or bachelor's program.

The program is structured as 6 credits of foundation knowledge and a minimum of 6 credit electives that allow students (in consultation with their advisor) to specialize in specific areas of sustainable energy. Some examples of how the electives can be formed into specific areas of study follow. Applicants must be 16 years old to be admitted.

Minimum Requirements for Sustainable Energy Occupational Endorsement: 12 credits

Learn more about the sustainable energy occupational endorsement (https://www.uaf.edu/academics/programs/occupational-endorsements/sustainable-energy.php), including an overview of the program, career opportunities and more.

CERTIFICATE, HIGH LATITUDE RANGE MANAGEMENT

An HLRM program certificate represents the completion of 31 credits delivered via hands-on applied field, laboratory and classroom sessions, with supplementary virtual instruction. The curriculum consists of the inventory and monitoring of Northern animal and plant populations, domesticated ungulate husbandry and health, research and report writing, and the opportunity to formulate a reindeer business plan specific to community development needs. Indigenous knowledge and the application of the scientific method will be used to stimulate learning and to better prepare students for entry-level natural resource jobs or to become reindeer entrepreneurs.

Admission is open to all, especially those employed by or interested in employment with tribal, state or federal agencies or other local entities in rural Alaska that provide natural resource management services.

Students should have a high school diploma or GED and an interest in science-related fields. It is strongly recommended that students seeking admission to this program have completed two high school lab-based science courses, preferably in biology, chemistry or physics.

The HLRM certificate may serve as a bridge to a variety of natural science associate and baccalaureate programs.

Minimum Requirements for High Latitude Range Management Certificate: 31 credits

Learn more about the h (https://www.uaf.edu/academics/programs/certifcates/high-latitude-range-management.php)igh latitude range management certificate (https://www.uaf.edu/academics/programs/certifcates/high-latitude-range-management.php), including an overview of the program, career opportunities and more.

Examples of how electives can be formed into specific areas of study

Code	Title	Credits
Energy Science		
ENVI F101X	Introduction to Environmental Science	4
PHYS F102X	Energy and Society	4
Photovoltaic		
CTT F100	Construction Technology Core	3
CTT F160	Photovoltaic Systems I	5
CTT F161	Photovoltaic Systems II	5
Biomass		
CTT F100	Construction Technology Core	3
CTT F250	Current Topics in Construction Trades	2
ENVI F120	Home Energy Basics	1
Wind		
CTT F100	Construction Technology Core	3
CTT F250	Current Topics in Construction Trades	1-3
ENVI F120	Home Energy Basics	1
Energy-Efficient Construction		
CTT F100	Construction Technology Core	3
CT S201 (https://catalog.uas.alaska.edsearch/?search=CT+S201)	Cold Climate Construction [1]	3
Other		
Other areas of study related to sustainable energy		

[1] CT S201 is offered by the University of Alaska Southeast.

Programs

Degree

- Associate of Science (p. 239)

Occupational Endorsements

- O.E.C., Ethnobotany (p. 194)
- O.E.C., High Latitude Range Management (p. 195)
- O.E.C., Rural Surface Water Quality Testing (p. 199)
- O.E.C., Rural Waste Management and Spill Response (p. 199)
- O.E.C., Sustainable Energy (p. 200)

Certificate

- Certificate, High Latitude Range Management (p. 213)

Minor

- Minor, Ethnobotany (p. 365)

Computer & Information Technology Systems

A.A.S. Degree, Occupational Endorsements, Certificate, Minor

The computer and information technology systems program at the UAF Community & Technical College offers certificate and associate degree programs designed to prepare students for industry certification and careers in cybersecurity, networking and systems administration.

The associate degree teaches students how to implement, support and troubleshoot computer and information technology systems. Concentrations in computing technology, network and cybersecurity and network and system administration are offered.

Certificate programs are designed to prepare students for entry-level IT support positions and can be a starting point for the A.A.S. degree program.

Learn more about available certificates and degrees:

Information Technology (https://www.ctc.uaf.edu/programs/information-technology/)

- IT Specialist: Computing Technology (A.A.S.)
- IT Specialist: Network and Cybersecurity (A.A.S.)
- IT Specialist: Network and Systems Administration (A.A.S.)
- Computer Support Specialist (O.E.C.)
- Cybersecurity Foundations (O.E.C.)
- Information Technology Specialist (Certificate)

Community and Technical College
Computer & Information Technology Systems (https://www.ctc.uaf.edu/programs/information-technology/)
907-455-2800

Programs

Degree

- A.A.S., Information Technology Specialist (p. 244)

Occupational Endorsements

- O.E.C., Computer Support Specialist (p. 192)
- O.E.C., Cybersecurity Foundations (p. 193)

Certificate

- Certificate, Information Technology Specialist (p. 213)

Minor

- Minor, Computer Information Technology Specialist (p. 362)

Computer Science

B.A., B.S., B.S./M.S., M.S. Degrees, Minor

Computer science is the study of software development, information handling and their application to the world's problems. Computing is widely used in support of science, engineering, business, law, medicine, education and the social sciences, and offers abundant employment opportunities.

The B.A., B.S. and M.S. degrees follow the recommendations of the Association for Computing Machinery and the Institute for Electrical and Electronic Engineers. The Computing Accreditation Commission of ABET accredits the B.S. degree.

B.A., B.S., COMPUTER SCIENCE

The computer science undergraduate program introduces the fundamentals of computer programming, hardware and theory. It emphasizes the application of general principles to real-world problems. The B.S. degrees provide students with deep mathematical abilities to analyze the meaning and efficiency of programs, while the B.A. is designed to provide students with a broader background in the uses of technology. Combining solid fundamentals with modern technology enables graduates to not only make full use of today's computers but to help build the future.

Minimum Requirements for Computer Science Bachelor's Degrees: B.A.: 120 credits; B.S.: 120 credits

Learn more about the bachelor's degree in computer science (https://uaf.edu/academics/programs/bachelors/computer-science.php), including an overview of the program, career opportunities and more.

ACCELERATED B.S./M.S., COMPUTER SCIENCE

The computer science undergraduate program introduces the fundamentals of computer programming, hardware and theory. It emphasizes the application of general principles to real-world problems. Mathematics and engineering play critical roles in the core. A solid background in fundamentals enables graduates to understand the uses of today's computers and to participate in future developments.

Minimum Requirements for Computer Science B.S./M.S. Degrees: 141 credits

Learn more about the bachelor's/master's degree in computer science (https://uaf.edu/academics/programs/bachelors/computer-science-bs-ms.php), including an overview of the program, career opportunities and more.

M.S., COMPUTER SCIENCE

The M.S. program provides breadth and depth in coursework and culminates with a major unifying project. This program is available to students who have completed a B.S. degree in computer science at most institutions. Students from other universities who have completed a substantial portion of a bachelor's level computer science program may be admitted to the M.S. program. In such cases, undergraduate courses may be required to remedy deficiencies.

For admission to the M.S. computer science program, the GRE general and computer science subject exams are required.

Minimum Requirements for Computer Science Master's Degree: 30 credits

Learn more about the master's degree in computer science (https://www.cs.uaf.edu/graduate/steps-ms-degree/).

College of Engineering and Mines
Department of Computer Science (https://www.cs.uaf.edu/)
907-474-2777

Programs

Degrees

- B.A., Computer Science (p. 308)
- B.S., Computer Science (p. 308)
- Accelerated B.S./M.S., Computer Science (p. 387)
- M.S., Computer Science (p. 428)

Minor

- Minor, Computer Science (p. 362)

Construction Management

A.A.S. Degree

The construction management program at the UAF Community & Technical College offers an associate degree program that prepares students for construction management positions in the construction industry and continuing education for those already working in the industry. The program teaches students how to plan, direct and provide oversight of construction projects and coordinate and manage people, materials and equipment, budgets, schedules and contracts, and the safety of employees and the general public.

Learn more about available certificates and degrees:

Construction Management (https://www.ctc.uaf.edu/programs/construction-management/)

- Construction Management (A.A.S.)

Community and Technical College
Construction Management (https://www.ctc.uaf.edu/programs/construction-management/)
907-455-2846

Programs

Degree

- A.A.S., Construction Management (p. 240)

Counseling

M.Ed. Degree, Graduate Certificate

M.ED., COUNSELING

The University of Alaska Fairbanks' digitally-delivered graduate counseling program prepares students to become culturally responsive, effective professional counselors through coursework and supervised field placement experiences that emphasize an ecological perspective. Students who complete the school counseling track are eligible to be certified as school counselors in Alaska. Students who complete the clinical mental health counseling track are eligible for licensure as professional counselors with additional post-degree requirements. Students who complete this track are eligible to work in community and mental health agencies or private practice once licensed. Both tracks require students to complete 60 credit hours.

The Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council for Higher Education Accreditation, has granted accreditation to the following programs in the UAF School of Education Counseling Department: clinical mental health counseling (M.Ed.) and school counseling (M.Ed.).

All counseling courses must be passed with a B or better to satisfy course requirements.

Minimum Requirements for M.Ed. in School or Clinical Mental Health Counseling: 60 credits

Learn more about the master’s degree in counseling (https://uaf.edu/academics/programs/masters/school-counseling.php), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, SCHOOL COUNSELOR

The school counselor certification program prepares graduates to become certified elementary, secondary or K-12 school counselors. Applicants must currently hold a master's degree or higher in a human services area such as psychology, social work or human services.

Transfer credit from previous graduate degrees may satisfy some program requirements. Faculty members in the UAF Counseling Department determine which program requirements have been met. A course of study is designed for each admitted student based on the required courses plus additional courses to address outstanding content areas.

Those individuals wishing to become certified school counselors who do not have a master's degree or higher in a human services field such as psychology, social work or human services will complete the Master of Education in school counseling.

This certification program is approved by the State of Alaska Department of Education and Early Development. It is CACREP-aligned but not CACREP-accredited. This program is digitally delivered.

All counseling courses must be passed with a B or better to satisfy course requirements.

Minimum Requirements for School Counselor Graduate Certificate: 30 credits

School of Education
Counseling Program (https://www.uaf.edu/soe/academics.php)
907-474-7341

Programs

Degree

- M.Ed., Counseling (p. 428)

Graduate Certificate

- Graduate Certificate, School Counselor (p. 411)

Cross-Cultural Studies

M.A., M.S., Ph.D. Degrees

M.A., PH.D., INDIGENOUS STUDIES

The Indigenous studies M.A. degree program emphasizes Indigenous knowledge systems. The program is designed to provide graduate students from various fields of interest an opportunity to pursue in-depth study of the role and contributions of Indigenous knowledge in the contemporary world. Students are expected to demonstrate the ability to work effectively with Indigenous people in their studies.

Indigenous studies doctoral candidates will participate in research activities across a variety of UAF academic disciplines and applied fields. Students are encouraged to engage in comparative studies with other Indigenous peoples worldwide and to focus their dissertation research on issues of relevance to Indigenous communities. Using the interdisciplinary Ph.D. model of academic assignment, the student's home base will be in the school or college of the student's major advisor, who also serves as an affiliate faculty member for the program.

The program objectives and its curriculum center around six areas of concentration: Indigenous studies and research, Indigenous knowledge systems, Indigenous education and pedagogy, Indigenous languages, Indigenous leadership and Indigenous sustainability. Students may focus on one of these areas or draw on multiple themes in collaboration with their graduate committee to develop their areas of knowledge and dissertation research. In collaboration with the graduate committee, each student will develop a program of coursework and research that produces a unique intellectual contribution to the applied fields associated with Indigenous studies

Minimum Requirements for Indigenous Studies Degrees: M.A.: 36 credits; Ph.D.: 48 credits

M.S., PH.D., EARTH SYSTEM SCIENCE

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering
- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

College of Rural and Community Development
Center for (http://www.uaf.edu/cxcs/)Cross-Cultural Studies
907-474-1902

Programs

Degrees

- M.A., Indigenous Studies (p. 444)
- M.S., Earth System Science (p. 431)
- Ph.D., Earth System Science (p. 473)
- Ph.D., Indigenous Studies (p. 480)

Culinary Arts and Hospitality

A.A.S. Degree, Certificates

The culinary arts and hospitality program at the UAF Community & Technical College offers certificate and associate degree programs that prepare students for careers in food service and hospitality operations, including the management of restaurants, bakeries, hotels, hospitals, camps or any other facility that requires food service as part of its operation.

The associate degree program is designed to build upon the culinary arts and baking certificate programs with skills and knowledge for advancement within the food service industry. The certificate programs are foundation-level programs designed to prepare students for entry-level cooking and baking positions in the food service industry.

Learn more about available certificates and degrees:

Culinary Arts and Hospitality (https://www.ctc.uaf.edu/programs/culinary-hospitality/)

- Culinary Arts and Hospitality (A.A.S.)
- Baking and Pastry Arts (Certificate)
- Culinary Arts (Certificate)

Community and Technical College
Culinary Arts and Hospitality (https://www.ctc.uaf.edu/programs/culinary-hospitality/)
907-455-2800

Programs

Degree

- A.A.S., Culinary Arts and Hospitality (p. 240)

Certificates

- Certificate, Baking and Pastry Arts (p. 210)
- Certificate, Culinary Arts (p. 211)

Design Technology

Occupational Endorsement, Certificate

The design technology program at the UAF Community & Technical College offers certificate programs that prepare students for entry-level careers in drafting and design. The program combines focused training in computer-aided drafting with a well-rounded exposure to the professions, trades and materials common to construction in Alaska. Program coursework covers many aspects of design and construction, including building materials, codes, and civil, mechanical, electrical and structural technologies.

Learn more about available certificates:

Drafting / Design Technology (https://www.ctc.uaf.edu/programs/drafting-design-technology/)

- Drafting Technology (Certificate, O.E.C.)

Community and Technical College
Design Technology (https://www.ctc.uaf.edu/programs/drafting-design-technology/)
907-455-2800

Programs

Occupational Endorsement

- O.E.C., Drafting Technology (p. 194)

Certificate

- Certificate, Drafting Technology (p. 212)

Diesel & Heavy Equipment

Certificate

The diesel/heavy equipment program at the UAF Community & Technical College offers a certificate program that prepares students for careers in the maintenance and repair of diesel trucks, buses and heavy equipment. The program provides experience working on diesel engines, transmissions, differentials, crawler tractor undercarriages, steering and diesel systems such as fuel, electrical and air systems. The program emphasizes hands-on training and in-class experience to teach students how to perform preventative maintenance inspections, determine causes of equipment problems and make necessary repairs and adjustments from tune-ups to complete engine and equipment overhauls.

Learn more about available certificates:

Diesel/Heavy Equipment (https://www.ctc.uaf.edu/programs/diesel-heavy-equipment/)

- Diesel/Heavy Equipment (Certificate)

Community and Technical College
Diesel & Heavy Equipment (https://www.ctc.uaf.edu/programs/diesel-heavy-equipment/)
907-455-2800

Programs

Certificate

- Certificate, Diesel/Heavy Equipment (p. 211)

Early Childhood Education

A.A.S. Degree, Occupational Endorsement, Certificate, Minor

The early childhood education program at the UAF Community & Technical College offers certificate and degree programs that prepare students for a highly satisfying career nurturing young children. Programs are designed for students enrolling in college for the first time as well as for those who are educated in other subject areas but desire to retrain for employment in the early childhood education profession.

Students will gain the knowledge and skills they need to meet State of Alaska requirements for employment as administrators or teachers in licensed centers and as aides in elementary schools. The associate degree program is accredited by the Commission on Early Childhood Education Programs of the National Association for the Education of Young Children, 1313 L Street NW, Suite 500, Washington, D.C. 20005, 800-424-2460 ext. 8007.

Learn more about available certificates and degrees:

Early Childhood Education (https://www.ctc.uaf.edu/programs/early-childhood-education/)

- Early Childhood Education (A.A.S., Certificate)
- Nanny Caregiving (O.E.C.)

Community and Technical College
Early Childhood Education (https://www.ctc.uaf.edu/programs/early-childhood-education/)
907-455-2800

Programs

Degree

- A.A.S., Early Childhood Education (p. 241)

Occupational Endorsement

- O.E.C., Nanny Caregiving (p. 198)

Certificate

- Certificate, Early Childhood Education (p. 212)

Minor

- Minor, Early Childhood Education (p. 363)

Earth System Science

M.S., Ph.D. Degrees

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering
- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

Earth System Science **(**https://www.uaf.edu/ess/**)**
907-474-7565

Programs

Degrees

- M.S., Earth System Science (p. 431)
- Ph.D., Earth System Science (p. 473)

Education

School of Education

The School of Education departments are listed below.

Please visit the department pages to learn more about the education programs and courses available.

- COUNSELING PROGRAM (P. 126)
- ELEMENTARY EDUCATION PROGRAM (P. 137)
- SECONDARY EDUCATION PROGRAM (P. 174)
- SPECIAL EDUCATION PROGRAM (P. 181)

School of Education
907-474-7341

Electrical and Computer Engineering

B.S., M.S., Ph.D. Degrees, Graduate Certificates, Minor

The mission of the UAF Electrical and Computer Engineering Department is to offer the highest-quality contemporary education at the undergraduate and graduate levels and to perform research appropriate to the technical needs of the state of Alaska, the nation and the world. The curriculum is designed to ensure that fundamentals and specialized skills are acquired by the student. Our programs prepare engineering graduates to enter practice and provide the theoretical background for students entering graduate studies.

Electrical and computer engineers design and develop electrical, electronic, control and computing systems for a wide range of technologies in a variety of engineering and other fields, including aerospace, automotive, biomedical, communications, electric utility, environmental, forensics, renewable energy, resource extraction, robotics, space systems, transportation and finance. An electrical engineering degree also opens the door to opportunities in business, law and medical fields, as well as for graduate work in engineering.

Graduates of our programs find rewarding employment in and outside of Alaska after graduation, with some even forming their own start-ups. Our graduates are sought after by companies, consulting firms and government agencies that require the specialized skills of electrical and computer engineers with practical training in the specific areas mentioned above and engineering in extreme environments. A few notable companies that hire our graduates include Agilent, BAE, Boeing, GCI, General Dynamics, IBM, Lockheed Martin, MathWorks, Microsoft, Power Engineers and a number of large and small electric utilities. Federal agencies and national laboratories that hire our graduates include the FAA, JPL, LANL, NASA, NIST, NREL and NSA. Some of our graduates go on to graduate programs at UAF and other well-known universities within and outside the U.S.

Undergraduate research and design project opportunities are available at UAF in the areas of embedded systems, wireless sensor networks, wireless and wired communications, unmanned aeronautical systems, space systems engineering, waves and space physics, electrical power systems and drives, renewable energy, microgrids and engineering in extreme environments. UAF's location just 200 miles south of the Arctic Circle—as well as the only university-affiliated rocket range in the country at Poker Flat, one of six FAA centers for unmanned aeronautical systems research, and a power systems integration laboratory that fully emulates a remote microgrid—provide a world-class environment and facilities for research related to auroral activity, remote sensing, microgrids and engineering in extreme environments. These programs offer real engineering experience as well as fellowships, paid internships and scholarships.

College of Engineering and Mines
Department of Electrical Engineering (http://cem.uaf.edu/ece/) & Computer Engineering (http://cem.uaf.edu/ece/)
907-474-7137

B.S., COMPUTER ENGINEERING

The BSCpE program at UAF provides the solid foundation and fundamental understanding necessary to succeed in a world of rapidly changing technology. Students gain knowledge and receive practical hands-on experience in computer architecture and systems design, electronic and digital circuits, embedded systems and wired and wireless communications systems. The program prepares engineering graduates to enter practice and provides the theoretical background for students entering graduate studies.

Computer engineering is a discipline that includes hardware and software design and provides a deep understanding of their interrelationship. It combines electrical engineering fundamentals, like microelectronics, electrical circuits and devices, digital signal processing, network design, communications systems, computer architecture, hardware design and systems analysis, with computer science concepts, including algorithms, software, graphics and artificial intelligence. Computer engineers design, analyze, produce, operate, program and maintain computer and digital systems. They apply theories and principles of science and mathematics to the design of hardware, software, networks and processes to solve technical problems. Most importantly, they understand how the hardware affects the software and vice versa.

Over the past decades, computers have evolved into complex systems that may consist of single machines or many interconnected computers linked by a data network. In one form or another, computers now control telephone and communications systems, process control and manufacturing automation systems, financial technology systems, management information systems, augmented reality systems and biomedical devices. They are in household appliances, automobiles, transportation systems and our pockets, and they're on our wrists. To work in the constantly evolving discipline of computer systems engineering, the computer engineer must acquire competence in both digital computer hardware and the fundamentals of software engineering.

Careers in computer engineering are as wide and varied as computer systems themselves. Systems range from embedded computer systems found in consumer products or medical devices to control systems for automobiles, aircraft and trains, and to more wide-ranging applications in telecommunications, financial transactions and information systems.

Within a few years of graduation, graduates of the UAF B.S. in computer engineering program are expected to:

1. Function independently and in diverse multidisciplinary teams as technically proficient, productive and ethically responsible members of their profession.
2. Apply their fundamental understanding, acquire and apply new knowledge and skills and allocate resources to solve real-world problems, including engineering for extreme environments.
3. Effectively communicate with technical and non-technical audiences, including employers, colleagues, clients, professional organizations and the public.

These objectives serve the department, college and university missions by ensuring that all graduates of the BSCpE program have received a high-quality, contemporary education that prepares them for rewarding careers in computer engineering.

The Computer Engineering Program is accredited by the Engineering Accreditation Commission of ABET (https://www.uaf.edu/cem/about/accreditation.php).

Candidates for the B.S. degree are also required to take the State of Alaska Fundamentals of Engineering Examination in their general field, which is the first step toward professional engineering licensure.

For more information about the computer engineering program's mission, goals and educational objectives, visit the College of Engineering and Mines accreditation website (https://www.uaf.edu/cem/about/accreditation.php).

Minimum Requirements for Computer Engineering Bachelor's Degree: 127 credits

Learn more about the bachelor's degree in computer engineering (https://uaf.edu/academics/programs/bachelors/computer-engineering.php), including an overview of the program, career opportunities and more.

B.S., ELECTRICAL ENGINEERING

The BSEE program at UAF provides the solid foundation and fundamental understanding necessary to succeed in a world of rapidly changing technology, while also providing the flexibility to explore specialization areas of electrical and computer engineering. Students gain knowledge and receive practical hands-on experience in wireless and wired telecommunications, electromagnetics, electric power generation, transmission and distribution, electric machines and drives, control systems and embedded systems. Elective courses in these areas allow a student to specialize in their degree program. The program prepares engineering graduates to enter practice and provides the theoretical background for students entering graduate studies.

Graduates of our program find rewarding employment in and outside of Alaska after graduation, with some even forming their own start-ups. Our graduates are sought after by companies, consulting firms, and government agencies that require the specialized skills of electrical and computer engineers with practical training in the specific areas mentioned above and engineering in extreme environments. A few notable companies that hire our graduates include Agilent, BAE, Boeing, GCI, General Dynamics, IBM, Lockheed Martin, MathWorks, Microsoft, Power Engineers, and a number of large and small electric utilities. Federal agencies and national laboratories that hire our graduates include the FAA, JPL, LANL, NASA, NIST, NSA, and NREL. Some of our graduates go on to graduate programs at UAF and other well-known universities within and outside the US.

Within a few years of graduation, graduates of the UAF B.S. in Electrical Engineering program are expected to:

1. Function independently and in diverse multidisciplinary teams as technically proficient, productive, and ethically responsible members of their profession.
2. Apply their fundamental understanding, acquire and apply new knowledge and skills, and allocate resources to solve real-world problems, including engineering for extreme environments.
3. Effectively communicate with technical and non-technical audiences, including employers, colleagues, clients, professional organizations, and the public.

These objectives serve the department, college, and university missions by ensuring that all graduates of the BSEE program have received a high-quality, contemporary education that prepares them for rewarding careers in electrical engineering.

The Electrical Engineering Program is accredited by the Engineering Accreditation Commission of ABET (https://www.uaf.edu/cem/about/accreditation.php).

Candidates for the B.S. degree are also required to take the State of Alaska Fundamentals of Engineering Examination in their general field, which is the first step toward professional engineering licensure.

For more information about the computer engineering program's mission, goals and educational objectives, visit the College of Engineering and Mines accreditation website (https://www.uaf.edu/cem/about/accreditation.php).

Minimum Requirements for Electrical Engineering Bachelor's Degree: 125 credits

Learn more about the bachelor's degree in electrical engineering (https://uaf.edu/academics/programs/bachelors/electrical-engineering.php), including an overview of the program, career opportunities and more.

M.S., ELECTRICAL ENGINEERING

The M.S. degree includes three options: a written thesis and oral defense for students interested in research and development; a project; or a coursework-only option. UAF offers an engineering Ph.D. program for students with an approved curriculum. Capable students with undergraduate degrees in physics, mathematics or related sciences, as well as in various branches of engineering, may also be admitted for graduate study. A student with an adequate background can usually complete M.S. requirements within two years and a Ph.D. in another three years.

Graduate degree programs in electrical and computer engineering are closely connected with faculty research activities. The main areas of research include communications, radar, lidar and sonar remote sensing, instrumentation and microwave circuit design, electric power and energy systems, digital and computer engineering, nanotechnology, controls and robotics. Current research topics include high-latitude satellite communications, rocket telemetry, radio wave propagation, ultra-wide-band wireless communications, electromagnetic and acoustic wave propagation, remote biomedical and environmental instrumentation, microwave design, digital signal processing, digital and physical electronics, computer applications, remote microgrids, alternative energy and energy storage, energy distribution management and optimization, power electronics, power system stability and quality improvement, energy storage, computer-controlled systems, control theory, robotics and automation.

A number of on- and off-campus research facilities are available to students. Satellite, rocket and ground-based communication studies are carried out on campus and at Poker Flat Research Range, the only university-operated rocket range in the world. The Space Systems Engineering Laboratory provides students with hands-on experience in all aspects of space system engineering through a design/build/launch paradigm applied to balloon and rocket payloads as well as small satellites. The Alaska Center for Unmanned Aircraft Systems Integration affords opportunities to work with drones and other UAVs. Department research laboratories include microwave, wireless communications, ultra-wide-band technology, waves, power electronics/robotics, instrumentation and digital laboratories. Research opportunities in electric power and energy systems and power electronics also exist in collaboration with the Alaska Center for Energy and Power.

Alaska's environment and remote location provide unique opportunities for research, such as the use of acoustic, light and radio wave techniques for measuring fish in Alaska rivers to the geophysical properties of the aurora borealis. Remote sensing for biomedical (animal tracking)

and environmental (groundwater and air monitoring) applications is an important research area for Alaska. Electric power systems research includes issues related to isolated rural Alaska communities, analysis of larger interconnected generation, transmission and distribution systems serving major Alaska population centers and the use of alternative energy and energy storage systems.

Graduate students in electrical and computer engineering at UAF receive the highest quality contemporary education available at the graduate level and perform research appropriate to the technical needs of Alaska, the nation and the world.

Minimum Requirements for Electrical Engineering Master's Degree: 32 credits

PH.D., ENGINEERING

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, the use of judgment and the exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor's and master's degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of the College of Engineering and Mines and offers opportunities for engineers at other UA campuses to participate.

Minimum Requirements for Engineering Doctoral Degree: 36 credits

GRADUATE CERTIFICATE, AEROSPACE ENGINEERING

This program provides graduate students the opportunity to focus a portion of their studies on the discipline of aerospace engineering and to highlight this specialization on their academic transcripts. The topics within aerospace engineering may vary according to student desires and course topic availability but may include unmanned aircraft systems (UAS), as well as aeronautical systems, rocketry and space systems.

Minimum Requirements for Aerospace Engineering Graduate Certificate: 12 credits

GRADUATE CERTIFICATE, SYSTEMS ENGINEERING/ PROGRAM MANAGEMENT

This program provides graduate students the opportunity to focus a portion of their studies on the discipline of systems engineering/program management (SE/PM) and to highlight this specialization on their academic transcripts.

Minimum Requirements for Systems Engineering/Program Management Graduate Certificate: 12 credits

MINOR, AEROSPACE ENGINEERING

UAF offers an aerospace engineering minor for students interested in a career in the aerospace industry or in expanding their knowledge of applied interdisciplinary engineering. The minor includes capstone courses in aeronautics and astronautics, with tracks emphasizing either aerodynamics or space systems. Several electives allow the program to be tailored to students' desires and schedules.

Aerospace Club
UAF hosts a local student chapter of the American Institute of Aeronautics and Astronautics. The club participates in AIAA's annual Design Build Fly competition, with the flight demonstration occurring in April and rotating between Wichita, Kansas, and Tucson, Arizona. UAF's team has done very well in this international competition, being within the top 100 schools to be invited for each of the past four years and placing 23rd in the 2019 competition. For more information visit UAF's Aerospace Club's website (http://uafaiaa.weebly.com/).

Minimum Requirements for Aerospace Engineering Minor: 15 credits

Programs

Degrees

- B.S., Computer Engineering (p. 307)
- B.S., Electrical Engineering (p. 309)
- M.S., Electrical Engineering (p. 437)
- Ph.D., Engineering (p. 477)

Graduate Certificates

- Graduate Certificate, Aerospace Engineering (p. 405)
- Graduate Certificate, Systems Engineering/Program Management (p. 413)

Minor

- Minor, Aerospace Engineering (p. 358)

Elementary Education

B.A., M.Ed. Degrees, Certificate, Postbaccalaureate Certificate, Minor

The University of Alaska Fairbanks complies fully with the institutional reporting requirements mandated in Title II of the Higher Education Act Amendments of 1998. Please contact the School of Education for a copy of the report.

The School of Education prepares students from across Alaska, as well as from other states and nations, to work in urban and rural Alaska and to work with multicultural and minority — especially Alaska Native — students. To fulfill our commitment to enhancing educational opportunities for the state's rural and Native populations, faculty actively and knowledgeably utilize educational technology to deliver all School of Education programs to students in most areas of the state.

The School of Education offers bachelor's degrees in elementary education and secondary education, and postbaccalaureate programs are offered in elementary education, secondary education, counseling and special education.

Courses are available on-site and by distance delivery through the Kuskokwim, Bristol Bay, Interior Alaska, Chukchi and Northwest campuses, as well as on the Fairbanks campus. Faculty research in cross-cultural studies, curriculum and instruction, language and literacy and small rural schools supports the mission of the School of Education.

Priority for enrollment in field-based courses is given to rural students formally admitted to degree and licensure programs. All inquiries should be addressed to one of the rural campuses or to the School of Education's Certification and Advising Office.

Candidates for all School of Education programs are required to have a laptop computer. Laptops may be of any type but must have capacities that enable candidates to meet School of Education requirements. If you have questions about how a laptop purchase will fit in with your current financial aid package, please contact the UAF Financial Aid Office.

LICENSURE INFORMATION

UAF education programs are approved by the Alaska State Board of Education standards and accredited by the Council for the Accreditation of Educator Preparation (http://caepnet.org/).

The School of Education is approved by the Alaska Department of Education and Early Development to recommend its students for Alaska licensure as elementary and secondary teachers, school counselors and special education teachers.

The State of Alaska requires that all initial applicants for a teaching certificate pass a Basic Competency Exam (https://education.alaska.gov/teachercertification/praxis/) from the list of exams accepted by the Alaska State Department of Education and Early Development.

In addition, Content Area Examinations (Praxis II) (https://education.alaska.gov/teachercertification/contentareaexams/) are required for the Initial 2-3 Year, Professional and Master teaching certificates. A list of accepted exams and passing scores is available on the Alaska State Department of Education and Early Development website.

School of Education
Elementary Education Program (https://www.uaf.edu/soe/academics.php)
907-474-7341

CERTIFICATE, LOCAL KNOWLEDGE EDUCATOR

The local knowledge educator certificate is a 30-credit undergraduate certificate program intended to provide individuals interested in the teaching profession with a benchmark credential that will set them on a path to a bachelor's degree in elementary or secondary education. 27-30 of the credits in the certificate program will apply to the elementary B.A. degree, and 18 of the credits will apply to a secondary B.A. degree.

The coursework in the local knowledge educator certificate program represents a collection of courses that have low barriers to entry (i.e., no prerequisites), fulfill the general university requirements for a certificate program, and provide an individual interested in working in a non-certificated K-12-based position (e.g., as a substitute teacher or a paraprofessional) with a strong introduction to the teaching profession and content knowledge relevant to work in a school context. The collection of classes can both enhance individual knowledge of Alaska and Alaska's Indigenous cultures, as well as equip future educators with tools that will help them incorporate their own local knowledge into K-12 classrooms now and in the future.

Minimum Requirements for Local Knowledge Educator Certificate: 30 credits

B.A., ELEMENTARY EDUCATION (K-8)

The Bachelor of Arts in Elementary Education is a hands-on degree that prepares students for high-demand teaching careers in Alaska and across the country. Numerous fieldwork experiences, including a year-long internship, complement coursework in a wide range of content areas. The integrated major/minor degree requirements are designed to prepare students to meet standards that recognize, respect and build upon Alaska's cultural, linguistic and geographic factors. Completion of the B.A. in elementary education will meet the requirements for both a major and minor.

Students in the Bachelor of Arts in Elementary Education degree program are assessed relative to national standards, including the Council for Accreditation Educator Preparation (CAEP) Standards and the Interstate Teacher Assessment and Support Consortium (InTASC) Standards. Coursework, fieldwork and/or the internship can be completed anywhere in Alaska. Coursework can all be completed remotely or with a combination of modalities, including face-to-face classes in Anchorage and Fairbanks.

The interdisciplinary degree requirements provide breadth in the content areas necessary for successful teaching at an elementary level. They provide depth in the opportunities to connect theory and practice in real classroom, school and community contexts. Students completing this degree benefit from collaborative efforts with academic departments across campus and from School of Education partnerships with a wide range of Alaska's rural and urban schools and districts.

The degree has four central components:

1. subject area coursework in the designated UAF general education requirements;
2. additional subject area coursework in those areas important for successful teaching at an elementary level;
3. an integrated set of education courses and fieldwork in schools and the community to provide the foundation for a successful professional internship year; and
4. a yearlong capstone school internship with a mentor teacher, with concurrent enrollment in professional coursework that focuses on the integration and application of theory, research and practice in real school environments. Students follow the calendar of the school or district in which they complete their internship.

Minimum Requirements for Elementary Education Bachelor's Degree: 121 credits

Learn more about the bachelor's degree in elementary education (K-8) (https://uaf.edu/academics/programs/bachelors/elementary-education.php), including an overview of the program, career opportunities and more.

M.ED., ELEMENTARY EDUCATION

Following completion of the yearlong UAF postbaccalaureate elementary licensure program, students can pursue the M.Ed. degree in elementary education if they choose to do so. Fifteen specified graduate credits from the elementary licensure program can be used to meet the M.Ed. elementary education requirements. Courses are available through UAF by distance delivery and on the Fairbanks campus. Students can enroll in courses throughout the year. Licensure and master's degree requirements must be met within seven years of the beginning of the program.

Students who have completed undergraduate courses ED F110, ED F201, ED F330, ED F344 and EDSE F316 as part of their licensure program must complete additional graduate-level coursework to receive a master's degree. Please contact the School of Education Student Services Office for additional information.

Minimum Requirements for Elementary Education Master's Degree: 30-60 credits

Learn more about the master's degree in elementary education (https://uaf.edu/academics/programs/masters/elementary-education.php), including an overview of the program, career opportunities and more.

POSTBACCALAUREATE LICENSE, ELEMENTARY (K-8)

This program is offered in Fairbanks and College of Rural and Community Development campus service areas. The elementary teacher postbaccalaureate program is an intensive, year-long program designed to provide students with the coursework and internship experience necessary to meet the Alaska Teacher Standards and be eligible for licensure as an elementary teacher in Alaska. This classroom-based program is built upon the principle of partnership — a cooperative effort between interns, mentor teachers and university faculty partners.

Students begin the program in the summer with a 9-credit block of courses. Students who complete the undergraduate courses ED F110, ED F201, ED F330, ED F344 and EDSE F316 can use these to fulfill the summer requirements. During the academic year of the school district, all students complete two semesters of integrated university courses and an internship.

Students must apply through the Office of the Registrar to graduate with a certificate of completion. At the end of the school year, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska Elementary License.

Elementary applicants apply as graduate-level licensure students. They may choose to complete this licensure program as part of the M.Ed. degree in elementary education. However, application to the M.Ed. degree program should be made at the beginning of elementary postbaccalaureate coursework to avoid losing credits for the M.Ed. degree. (See M.Ed. elementary education (p. 437) options requirements.) Candidates who enter the elementary postbaccalaureate licensure program are required to have laptop computers prior to enrolling in ED F344 or ED F624.

Minimum Requirements for Elementary Education Postbaccalaureate Licensure: 39 credits

Learn more about the postbaccalaureate license in elementary education (https://uaf.edu/academics/programs/post-bachelor-certification/postbaccalaureate-certificate.php), including an overview of the program, career opportunities and more.

Programs

Degrees

- B.A., Elementary Education (K-8) (p. 310)
- M.Ed., Elementary Education (p. 437)

Certificate

- Certificate, Local Knowledge Educator (p. 215)

Postbaccalaureate Certificate

- Postbaccalaureate Certificate and Licensure, Elementary (K-8) (p. 397)

Minor

- Minor, Elementary Education (p. 363)
- Minor, General Education (p. 366)

EMS/Paramedicine

A.A.S. Degree, Occupational Endorsements, Minor

The EMS/paramedicine program at the UAF Community & Technical College offers specialized training and degree programs that prepare students for careers in emergency medical services as emergency medical technicians and paramedics. The program offers coursework and training to be nationally and state certified as an EMT and a year-long academy that prepares students for licensure as a paramedic.

The paramedicine program is accredited by the Commission on Accreditation of Allied Health Education Programs (http://www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions.

CAAHEP Contact:
Commission on Accreditation of Allied Health Education Programs
25400 US Highway 19 N., Suite 158
Clearwater, FL 33763
727-210-2350

CoAEMSP Contact:
CoAEMSP
8301 Lakeview Parkway Suite 111-312
Rowlett, TX 75088
214-703-8445

Learn more about available training and degrees:

EMS / Paramedicine (https://www.ctc.uaf.edu/programs/ems-paramedicine/)

- Paramedicine (A.A.S.)
- Advanced EMT (O.E.C.)
- Paramedic Academy (Specialized Training)

Community and Technical College
EMS / Paramedicine (https://www.ctc.uaf.edu/programs/ems-paramedicine/)
907-455-2800

Programs

Degrees

- A.A.S., Paramedicine (p. 248)

Occupational Endorsement

- O.E.C., Advanced Emergency Medical Technician (p. 191)

Minor

- Minor, Arctic Skills (p. 360)

Specialized Training

- Paramedic Academy (p. 198)

English

B.A., M.A., M.F.A, Combined M.F.A./M.A. Degrees, Minors

B.A., ENGLISH

The B.A. in English at UAF provides training in rhetorical dexterity, critical acumen and creative ingenuity — habits of mind that develop alongside intellectual inquiries concerning the production and reception of literary and non-literary texts. As effective creators and thoughtful consumers of print and digital information, students learn how to identify critical methods, analyze language in varying historical, cultural and institutional contexts, and employ research in writing and speaking for a professional audience in the humanities.

The department has a particular strength in creative writing; students will have the opportunity to attend lectures and workshops with respected visiting writers and scholars as well as resident faculty. Mindful of how language shapes problems, communities and environments, students are prepared for a variety of graduate programs and careers in diverse fields such as education, law and business.

Minimum Requirements for English Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in English (https://uaf.edu/academics/programs/bachelors/english.php), including an overview of the program, career opportunities and more.

M.A., M.F.A., M.F.A./M.A. DEGREES

The English department offers core courses in writing and literature, and upper-division courses in literature, linguistics, creative writing, technical writing and literary criticism. The department also offers a two-year M.A. degree in literature, a three-year M.F.A. degree in creative writing and an M.F.A./M.A. combined degree in creative writing and literature that can be completed in three years. Teaching assistantships are available for the three programs. The M.A. degree offers advanced study of literature and literary theory, as preparation for teaching or for entering a Ph.D. program. The M.F.A. degree is a terminal degree, culminating in the production of a publication-quality thesis manuscript of poetry, fiction, drama or creative nonfiction. The M.F.A./M.A. is a combined degree designed for qualified individuals who wish to produce a publication-quality thesis manuscript of creative writing but also would like to pursue in a systematic manner the study of literature and literary theory in preparation for college teaching or entering a Ph.D. program.

Minimum Requirements for English Degrees: M.A.: 30-36 credits; M.F.A.: 45 credits; M.F.A./M.A.: 45 credits

Learn more about the master's degree in English (https://www.uaf.edu/academics/programs/masters/english.php), including an overview of the program, career opportunities and more.

Learn more about the master's degree in creative writing (https://www.uaf.edu/academics/programs/masters/creative-writing.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Department of English (https://www.uaf.edu/english/)
907-474-7193

Programs

Degrees

- B.A., English (p. 312)
- M.A., English (p. 438)
- M.F.A., Creative Writing (p. 431)
- Combined M.F.A./M.A., Creative Writing and Literature (p. 430)

Minor

- Minor, Ancient, Medieval and Early Modern Studies (p. 359)
- Minor, Creative Writing (p. 362)
- Minor, English (p. 363)

Fire Science

A.A.S. Degree, Minor

The fire science program at the UAF Community & Technical College offers specialized training and a degree program that prepares students for a career as emergency services professionals with specific skills related to working in a municipal fire department. The program offers a unique learning environment providing the opportunity to apply classroom education through hands-on training and obtain practical vocational experience through local fire and rescue organizations.

Learn more about available training and degrees:

Fire Science (https://www.ctc.uaf.edu/programs/fire-science/)

- Fire Science: Municipal Fire Control (A.A.S.)
- Firefighter Academy (Specialized Training)

Community and Technical College
Fire Science (https://www.ctc.uaf.edu/programs/fire-science/)
907-455-2800

Programs

Degree

- A.A.S., Fire Science (p. 242)

Minor

- Minor, Fire Science (p. 365)

Fisheries and Marine Sciences

B.A., B.S., M.M.P., M.M.S, M.S., Ph.D. Degrees, Minors

College of Fisheries and Ocean Sciences
Academic Programs (https://www.uaf.edu/cfos/academics/)
907-474-7289

B.A., FISHERIES; B.S., FISHERIES AND MARINE SCIENCES

The undergraduate programs in the College of Fisheries and Ocean Sciences offer students broad education and training, in the fields of fisheries biology, ecology and human dimensions, marine biology and oceanography. In addition to rigorous scientific coursework, students work with professionals from local, state, federal, tribal, university and private organizations during a required internship or research project.

The B.S. degree in fisheries and marine sciences prepares graduates to work as professionals in fisheries and aquatic management, research, conservation, education, policy, and industry organizations. Typically, fisheries and marine sciences graduates obtain employment with state, federal, provincial, Alaska Native, Native American, university and nongovernmental organizations in Alaska and throughout North America. The program also provides a solid foundation for graduate study for students contemplating careers in advanced research, management, administration and teaching.

The B.A. degree in fisheries prepares graduates to work as professionals in fishing and seafood processing, marketing and business industries, community and tribal development organizations, subsistence research and management, social sciences and other human dimensions of fisheries in Alaska and throughout North America. Typically, fisheries graduates obtain employment with fisheries governmental agencies and nongovernmental organizations in the areas of fisheries business administration, policy, education, social science, rural development and extension. The program also provides a solid foundation for graduate study for students contemplating careers in advanced research, management, administration and teaching.

The undergraduate program is administered through the Fairbanks campus. All fisheries and marine sciences courses are offered via distance education for students in outlying areas.

Minimum Requirements for Fisheries and Marine Sciences Bachelor's Degrees: 120 credits

Learn more about the bachelor's degree in fisheries (https://uaf.edu/academics/programs/bachelors/fisheries.php), including an overview of the program, career opportunities and more.

Learn more about the bachelor's degree in fisheries and marine sciences (https://uaf.edu/academics/programs/bachelors/fisheries-marine-sciences.php), including an overview of the program, career opportunities and more.

M.S., PH.D., FISHERIES

Fisheries graduate students take classes and undertake research on a diverse set of fisheries-related topics. Program strengths include quantitative fisheries science, fisheries management and human dimensions, and biology and ecology. Students are typically based in Juneau or Fairbanks, but most courses are video-delivered to locations throughout Alaska.

Students at each location are engaged in a wide variety of research topics in marine and freshwater ecosystems. All locations have excellent laboratory facilities, access to pristine environments and healthy fisheries, and strong connections to local and tribal partners, state and federal agency scientists and managers, as well as participants in commercial, sport and subsistence fisheries.

Most students are supported as research assistants for some or all of their tenure. Agencies such as the National Atmospheric and Oceanic Administration, the U.S. Fish and Wildlife Service, and the Alaska Department of Fish and Game are collaborators on research projects and employ many of our graduates.

Minimum Requirements for Fisheries Degrees: M.S.: 30 credits; Ph.D.: 36 credits

M.S., PH.D., MARINE BIOLOGY

The marine biology graduate program focuses on the biology, ecology, physiology and biodiversity of marine organisms. Students may pursue either an M.S. or Ph.D. degree in marine biology. Our graduate students are afforded excellent opportunities for laboratory and field research. Our faculty conduct research in Fairbanks, the Kasitsna Bay Laboratory near Homer, the Juneau College of Fisheries and Ocean Sciences at Lena Point, the Seward Marine Center and the Alaska SeaLife Center. Students may conduct fieldwork in a variety of locations, including but not limited to the Beaufort and Chukchi seas, the Aleutian Islands and other coastal areas around Alaska. Our college also operates the coastal research vessel *Nanuq* and the ice-capable *Sikuliaq,* a University-National Oceanographic Laboratory System vessel.

Students considering graduate study in marine biology should have a strong background in biology, molecular biology, biochemistry, ecology, evolution or a related field. Students are admitted on the basis of their academic qualifications, research experience and the ability of the program to provide mentorship in their particular area of research interest. The Marine Biology Department is an equal-opportunity program, and we encourage students from diverse backgrounds to apply. We review requests for admission throughout the year. Students must contact potential faculty advisors before applying.

Minimum Requirements for Marine Biology Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

M.M.S., MARINE STUDIES

The M.M.S. degree offers a broad degree program, which can include topics such as marine ecology, organismal biology, ecosystem processes and oceanography. Students will select courses offered by the graduate program in marine sciences and limnology and a variety of electives, which can also be from the fisheries program or the statistics or biology and wildlife departments. While the M.M.S. degree is primarily based on a project instead of a research-oriented thesis, M.M.S. graduate students still are afforded excellent opportunities for laboratory and field experiences through the Institute of Marine Science. Laboratory facilities are available in Fairbanks, the Seward Marine Center, the Juneau Center and the Kasitsna Bay Laboratory.

Students considering an M.M.S. degree should have a strong background in the various fields of oceanography, ecology, biology, molecular biology

or biochemistry. Students are admitted on the basis of their ability and the capability of the program to meet their particular interests and needs. Faculty review requests for admission throughout the year. There is no financial support for students in this program.

Minimum Requirements for Marine Studies Master's Degree: 30 credits

M.M.P., MARINE POLICY

The design and implementation of effective marine policy entail quantitative and qualitative analyses pertinent to the oversight and management of marine resources: the study of the potential and actual social, economic, legal, environmental and ecological consequences of alternative policies; an objective exploration of what is, what was, and what could be. Graduates will be equipped with the tools and background to conduct prospective analyses of the anticipated outcomes of alternative management actions and retrospective analyses of actual outcomes of management actions.

The M.M.P. degree program engages students in a curriculum that instills an integrated background in four core dimensions of marine policy, (1) living marine resources and their management, (2) analytic methods, (3) law and policy, and (4) economics, development, and sustainability. The wide selection of courses that satisfy these core and elective requirements facilitates the individualization of the curriculum to support each student's goals. Courses are drawn from the Alaska Native Studies, Anthropology, Arctic and Northern Studies, Biology, Cross-cultural Studies, Economics, Fisheries, Geography, Marine Science and Limnology, Natural Resource Management, Political Science, Public Administration, Rural Development, and Statistics programs at UAF and UAS. Because most of these courses are already offered in remote sites through video-conferencing, this degree program serves students throughout Alaska and beyond.

The M.M.P. degree is jointly offered by UAS and UAF, with UAF acting as the lead institution. Graduates will receive a diploma indicating that the degree is awarded jointly by UAF and UAS. Applications for admission to the M.M.P. program will be processed through UAF. Enrolled students may select from various required and elective courses offered by UAF or UAS. Most of these courses can be taken in person or remotely via synchronous or asynchronous modalities. UAF tuition and fees apply to courses taken through UAF, while UAS tuition and fees apply to courses taken through UAS. M.M.P. program students are advised by the program coordinators.

Minimum Requirements for Marine Policy M.M.P.: 30 credits

M.S., PH.D., OCEANOGRAPHY

The M.S. and Ph.D. degrees are offered in several concentration areas of oceanography: physical, chemical, biological, geological and fisheries oceanography.

Oceanography is both interdisciplinary and multidisciplinary. The M.S. and Ph.D. degrees emphasize processes that influence the ocean as a system, including its circulation, composition, biological productivity and geology. Students considering graduate study in oceanography should have a strong background in physics, chemistry, biology, geology or mathematics and a working familiarity with the other subjects.

Opportunities for laboratory and fieldwork are available through the Institute of Marine Science, the research unit of the College of Fisheries and Ocean Sciences. Research facilities are located in Fairbanks, the Seward Marine Center, the Kasitsna Bay Laboratory and Juneau. Facilities include the Ocean Acidification Research Center, the Alaska Stable Isotope Facility, seaside laboratories with running seawater systems, small boats, autonomous undersea vehicles and a variety of instrumentation for research in water circulation, marine particle dynamics, nutrient and trace metal chemistry, genomics, zooplankton ecology and other fields. The College operates the R/V *Sikuliaq*, a 261-foot ice-capable oceanographic research ship owned by the National Science Foundation. Oceanography faculty and students are regular users of *Sikuliaq* and other ships for high-latitude research, not only in the Alaska region and the Arctic but also in the Antarctic/Southern Ocean, Greenland, the North Pacific and elsewhere.

Minimum Requirements for Oceanography Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Programs

Degrees

- B.A., Fisheries (p. 316)
- B.S., Fisheries and Marine Sciences (p. 313)
- M.M.P., Marine Policy (p. 447)
- M.M.S., Marine Studies (p. 451)
- M.S., Fisheries (p. 439)
- M.S., Marine Biology (p. 447)
- M.S., Oceanography (p. 454)
- Ph.D., Fisheries (p. 478)
- Ph.D., Marine Biology (p. 483)
- Ph.D., Oceanography (p. 484)

Minors

- Minor, Fisheries (p. 365)
- Minor, Marine Science (p. 373)

Foreign Languages and Literatures

B.A. Degrees, Minors

B.A., FOREIGN LANGUAGES

Open new worlds of opportunity with a degree in foreign languages at UAF. As the northernmost department of modern languages on the planet, we offer unique insights and experiences that will take you around the world and prepare you for careers in the global economy of the 21st century.

Our program gives you the opportunity to study French, German, Japanese, Russian and Spanish. Depending on your preference, you can focus your degree on one or two languages. As a foreign languages major, you'll also have exciting opportunities to study abroad and experience other cultures firsthand.

Minimum Requirements for Foreign Languages Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in foreign languages (https://uaf.edu/academics/programs/bachelors/foreign-languages.php), including an overview of the program, career opportunities and more.

B.A., JAPANESE STUDIES

Students majoring in Japanese studies are required to successfully complete at least one semester of an exchange program in Japan. Spending a full academic year abroad is strongly encouraged.

Minimum Requirements for Japanese Studies Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in Japanese studies (https://uaf.edu/academics/programs/bachelors/japanese-studies.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Department of Foreign Languages and Literatures (https://www.uaf.edu/language/)
907-474-7396

Programs

Degrees

- B.A., Foreign Languages (p. 318)
- B.A., Japanese Studies (p. 329)

Minors

- Minor, Asian Studies (p. 360)
- Minor, Foreign Languages (p. 366)
- Minor, Japanese Studies (p. 371)

General Academic & Technical Programs

A.A., A.A.S. Degrees

The general academic and technical program at the UAF Community & Technical College is the academic home for the associate of arts and the apprenticeship technologies degrees. The program also offers the recreation program and general education courses that support associate of applied science and certificate requirements.

The associate of arts degree is a rigorous program of study for the student who eventually intends to transfer to a bachelor's degree program. The degree may serve as a career starting point or stepping stone to a bachelor's program.

Apprenticeship Technologies is a degree completion program specifically designed for individuals who are in the process of completing or have completed a formal apprenticeship program and who are interested in earning a degree to prepare for leadership and management positions within their trade or occupation.

The recreation program offers classes for all levels in dance, fitness, martial arts, swimming, skiing, yoga and more. Classes are offered every semester at various locations throughout the Fairbanks community to provide students, faculty and staff, and community members an opportunity to keep active and fit while earning college credit.

Learn more about available degrees and programs:

Associate of Arts (https://www.ctc.uaf.edu/programs/associate-of-arts/)

- Associate of Arts, General Program (A.A.)

Apprenticeship Technologies (https://www.ctc.uaf.edu/programs/apprenticeship-technology/)

- Apprenticeship Technologies (A.A.S.)

Recreation Program (https://www.ctc.uaf.edu/programs/recreation/)

Community and Technical College
General Academic & Technical Programs (https://www.ctc.uaf.edu/)
907-455-2800

Programs

Degrees

Geosciences

B.S., M.S., Ph.D. Degrees, Minors

College of Natural Science and Mathematics
Department of Geosciences (https://www.uaf.edu/geosciences/)
907-474-7565

B.S., GEOSCIENCE

Graduates in geoscience have broad backgrounds in the earth sciences and firm foundations in mathematics, physics and chemistry. Four concentrations are available to allow students to pursue their own emphasis:

- geology
- paleontology
- geospatial science
- geophysics

The concentrations allow students to focus early in their studies but are flexible enough to allow students to pursue their own interests in their junior and senior years. All the concentrations prepare students for industry jobs in oil, mining and environmental consulting; jobs with agencies such as the U.S. Geological Survey, NASA, the Alaska Division of Geological and Geophysical Surveys; or graduate studies.

The geology concentration offers students a sound background in a spectrum of geological disciplines with an emphasis on current field mapping techniques essential to exploration and research. The paleontology concentration is designed to provide students with the skills necessary to locate, excavate, interpret and curate specimens for museums, agencies or universities. The geospatial sciences concentration focuses on the principles, techniques and applications of remote sensing, GIS and GPS to prepare students for careers that require geospatial data analysis and visualization. The geophysics concentration challenges students to use physics in understanding geoscience concepts, emphasizing applications in seismology, volcanology and glaciology in the context of the Alaska landscape. This concentration prepares students for graduate work in geophysics and environmental engineering fields or other disciplines that use geophysical tools such as ground-penetrating radar or exploration seismology.

Minimum Requirements for Geoscience Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in geoscience (https://uaf.edu/academics/programs/bachelors/geoscience.php), including an overview of the program, career opportunities and more.

M.S., PH.D., EARTH SYSTEM SCIENCE

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering
- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

M.S., PH.D., GEOPHYSICS

The geophysics program at UAF is closely connected with the Geophysical Institute and is optimally positioned to investigate a wide array of geophysical phenomena. Students have the option to obtain a general geophysics degree or to choose one of three concentrations to focus their studies.

Upon graduation, a student is expected to be able to:

1. address geophysical problems using the principles of conservation of energy, mass and momentum using both physical and mathematical concepts, particularly with respect to mathematical techniques such as linear algebra, vector calculus and partial differential equations;
2. explain physical processes underlying the Earth's global-scale features, including plate tectonics and the gravitational and magnetic fields;
3. describe common geophysical problems and assess the advantages and disadvantages of various theoretical, modeling or observational approaches to solving them, including identifying key assumptions underlying each approach;
4. frame well-defined scientific research questions and apply modern computational methods and observational techniques necessary to conduct the research;
5. publish and present results in peer-reviewed articles, scientific reports, and at national and international scientific meetings using oral and written skills developed through regular faculty feedback.

Minimum Requirements for Geophysics Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

M.S., PH.D., GEOSCIENCE

Graduates in geoscience have broad backgrounds in Earth sciences or geography. There are concentrations available in geology and geography,

and requirements are flexible enough to allow students to customize the curriculum.

There are about 40 professional geoscientists in residence on campus, and graduate students normally participate in the ongoing research of these professionals. Teaching and research assistantships are available to graduate students in many of these areas.

Minimum Requirements for Geoscience Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Programs

Degrees

- B.S., Geoscience (p. 320)
- M.S., Earth System Science (p. 431)
- M.S., Geophysics (p. 441)
- M.S., Geoscience (p. 442)
- Ph.D., Earth System Science (p. 473)
- Ph.D., Geophysics (p. 478)
- Ph.D., Geoscience (p. 480)

Minors

- Minor, Geology (p. 366)
- Minor, Geophysics (p. 367)
- Minor, Geospatial Sciences (p. 367)
- Minor, Paleontology (p. 376)

History

B.A. Degree, Minor

The History Department prepares students to critically analyze and interpret cultural heritage, the great problems that have faced humans throughout history and how we have sought to solve them.

If you enjoy studying and researching major cultural, social, economic and political events of the past, then a B.A. in history may be for you. Through our program, you will develop skills in oral and written presentation, research and critical thinking, and gain a greater awareness of the human condition. Our students also acquire an appreciation of the complexity of the discipline, an understanding that historical narratives are constructed, contested and always changing, and the recognition that there are varied perspectives on the past.

As liberal arts majors, history prepares students for a multitude of careers in the public, private and nonprofit sectors. History graduates may find work as educators, researchers and analysts, public relations representatives, advocates, and business professionals.

Minimum Requirements for History Bachelor's Degree: 120 credits

Learn more about the bachelor’s degree in history (https://uaf.edu/academics/programs/bachelors/history.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Department of History (https://www.uaf.edu/history/)
907-474-7126

Programs

Degree

- B.A., History (p. 322)

Minor

- Minor, History (p. 370)

Homeland Security and Emergency Management

B.S.E.M., M.S.D.M Degrees, Graduate Certificates, Minors

In a post-9/11 environment, the challenges faced by emergency management and homeland security professionals have reached unprecedented levels. As we experience an increase in the frequency, complexity and severity of human-made, natural and technological disasters, ever-increasing demands have been placed on emergency professionals, and the skill sets required to succeed. Today, more so than ever before, the integration of federal, state, and local resources, communication and collaboration has become the norm. Issues concerning terrorism, cyber-security, critical infrastructure protection and management, risk, business continuity, fire, hazardous materials, law enforcement, public health and safety are no longer domains unto themselves. They are now part of the new fabric of this highly integrated and complex environment. As a result, the demands placed on our first responders and those charged with these individuals and organizations' leadership and management roles have changed significantly.

College of Business and Security Management
Department of Homeland Security and Emergency Management (https://www.uaf.edu/cbsm/programs/hsem.php)
907-474-7461

B.S.E.M., SECURITY AND EMERGENCY MANAGEMENT

The homeland security and emergency management program focuses on developing skills to lead and manage individuals and organizations in an increasingly complex environment. The program builds upon an individual's technical capabilities derived from education, training and experience in fire, information technology, law enforcement, military, homeland security and emergency management or other related fields. This technical expertise is combined with a business administration curriculum, emergency management and homeland security-based instruction. This focus gives students the operations management knowledge to lead and manage individuals, departments or agencies daily and during times of crisis. The homeland security and emergency management degree is explicitly built to meet the needs of practitioners who provide administrative oversight, leadership or management roles within the homeland security and emergency management enterprise at the local, state, federal and international levels. The degree also provides those at the responder level the opportunity to further their education, increase their competitive advantage for promotion, and advance their operational understanding of today's highly integrated emergency management and homeland security environment.

Minimum Requirements for Security and Emergency Management B.S.E.M. Degree: 120 credits

Learn more about the bachelor's degree in homeland security and emergency management (https://uaf.edu/academics/programs/bachelors/security-emergency-management.php), including an overview of the program, career opportunities and more.

M.S.D.M., SECURITY AND DISASTER MANAGEMENT

The online master of security and disaster management program serves both aspiring and existing homeland defense/security and emergency management practitioners. The program builds upon the experience and education of those within this highly interdisciplinary enterprise, providing graduate-level education that focuses on supporting the operational and strategic needs of those leading and managing in today's highly complex world. Leveraging the education provided in the bachelor of security and emergency management degree, the master's degree requires a greater synthesis and integration of the critical thinking and analysis skills required for managers and leaders in homeland defense/security and emergency management and associated fields.

The primary objectives of the program are to: prepare students for leadership and management roles in homeland security and emergency management; identify best practices for integrating community planning, security and aspects of prevention and mitigation when preparing communities and regions for a disaster; underscore the need to adopt and manage an "all hazards" approach to preparing for and managing disasters at the tactical, operational and strategic levels of the HSEM enterprise; and develop critical thinking skills, analytical abilities and leadership/management capacity to serve at the executive level in public and private sector organizations.

Applications are reviewed on a continual basis.

Minimum Requirements for Security and Disaster Management Master's Degree: 30 credits

Learn more about the master's degree in disaster management (https://uaf.edu/academics/programs/masters/security-disaster-management.php), including an overview of the program, career opportunities and more.

OCCUPATIONAL ENDORSEMENT, HOMELAND SECURITY

The occupational endorsement in homeland security provides the essential academic preparation and sought-after critical thinking skills necessary for mid-level careers in the homeland security field. At the same time, this certificate serves as a stepping stone into homeland security and emergency management-related degree programs such as the HSEM bachelor's degree at the College of Business and Security Management.

Minimum Requirements for Homeland Security Occupational Endorsement: 12 credits

GRADUATE CERTIFICATE, ARCTIC SECURITY

The Arctic security graduate certificate gives students the education and expertise to understand and better navigate the numerous concerns surrounding the Arctic region. With the transforming Arctic and its associated climate, security, geopolitical and resilience-related developments, a thorough understanding of the region will be key to those who work within the fabric of local, state, national and international settings.

An Arctic security graduate certificate represents an endorsement of advanced academic education and a more robust understanding of the operational context of the Arctic.

Minimum Requirements for Arctic Security Graduate Certificate: 12 credits

Learn more about the graduate certificate in Arctic security (https://ecampus.uaf.edu/arctic-security-online-graduate-certificate/), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, CLIMATE SECURITY

The climate security graduate certificate provides students with the education and expertise required to understand and better navigate the numerous concerns surrounding climate-related challenges in the realm of security and disaster management. With significant shifts in global climate, new concerns in human, national and international security are emerging, creating challenges for resilience and governance. Understanding how prior climate disaster knowledge can be combined with an understanding of future models, scenarios and planning tools will be needed to navigate the unforeseen consequences and the impacts on populations. A climate security graduate certificate represents an endorsement of advanced academic education and a more robust understanding of climate-related security and resilience concerns and planning considerations.

Minimum Requirements for Climate Security Graduate Certificate: 12 credits

GRADUATE CERTIFICATE, BUSINESS CONTINUITY

The business continuity graduate certificate provides students with an in-depth overview of the processes required to build resilience and provide for disaster recovery within both public and private entities. Planning and preparing for the adverse effects of a major crisis brought on by natural disasters, cyber threats and even common emergencies are key to the survival of an organization post-event. Business continuity is an important component in having a successful business, and as such, many organizations are adapting their employee's roles to include continuity components. This certificate will help students understand those components, teach them how to develop a plan and cover best practices to survive and thrive despite a crisis or disaster. This knowledge, in turn, better prepares employees and businesses for any business disruption that may occur.

Minimum Requirements for Business Continuity Graduate Certificate: 12 credits

Learn more about the graduate certificate in business continuity (https://ecampus.uaf.edu/business-continuity-online-graduate-certificate/), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, CYBERSECURITY MANAGEMENT

The cybersecurity management graduate certificate is designed for the student who desires an in-depth overview of the important topics in providing for the cybersecurity-oriented aspects of managing cyber-related operations. The certificate provides relevant and cutting-edge education specific to the needs of individuals and their associated organizations in providing the technical capability to prevent, plan for and recover from technological incidents. Cybersecurity, a very dynamic field, requires lifelong learning. This certificate program serves as continuing professional education (CPE) for many professional certifications today. Recipients of the cybersecurity management graduate certificate are better prepared for the challenges of the cybersecurity workforce today and in the future.

Minimum Requirements for Cybersecurity Management Graduate Certificate: 12 credits

Learn more about the graduate certificate in cybersecurity management (https://ecampus.uaf.edu/cybersecurity-management-online-graduate-certificate/), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, STRATEGIC LEADERSHIP

The strategic leadership certificate program focuses on those leadership skills essential to effective strategic executive leadership. In an age of increasing complexity where greater demands are placed on executives to provide vision and pathways to the future, the ability to collaborate effectively, integrate technology, and adapt to an ever-changing environment is essential. Effective strategic leaders today must understand how to create a positive vision that constructively influences both the organization and those within it.

This certificate specifically targets those who wish to either transition into or currently serve at the senior or executive level in the public or private sectors or within nonprofits and who need to better understand the context in which they will be required to develop, collaborate on and consider strategic-level decisions.

Minimum Requirements for Strategic Leadership Graduate Certificate: 12 credits

Learn more about the graduate certificate in strategic leadership (https://uaf.edu/academics/programs/masters/strategic-leadership-graduate-certificate.php), including an overview of the program, career opportunities and more.

MINOR, MILITARY SCIENCE AND LEADERSHIP

The Army Reserve Officers' Training Program is America's primary program for training military officers. The Nanook Battalion is a cooperative effort agreed to by the Army and UAF as a means of providing junior officer leadership in the interest of national security. The goal of the program is to assist young men and women with leadership potential in obtaining commissions in the Army Reserve, National Guard or regular Army.

Military science and leadership is an approved minor for the B.A. degree. Army instructors train students in leadership, management and decision-making through academic instruction and practical experience laboratories. These instructors impart qualities necessary for the Army officer and civilian executive.

ROTC is divided into the basic course for freshmen and sophomores and the advanced course for juniors and seniors. Programs and courses can be adjusted to meet the specific needs of individual students who desire to enroll but are past their freshman year.

Basic military science courses are open to all students regardless of whether or not they intend to seek an Army commission. There is no military obligation incurred by enrolling in any of the basic courses.

Students who complete the basic course and desire to pursue the program for a commission may apply for enrollment in the advanced course. A special basic camp, two-year program is available for transfer students and others who were unable to take ROTC prior to their last two years in school. This program allows immediate acceleration into the advanced course. Students should consult the professor of

military science prior to June 1 annually for information concerning the basic camp. Students with prior military service may also apply for immediate enrollment as an advanced course student. Applicants must be physically qualified and be selected by the professor of military science. The criterion for selection is based on both academic proficiency and leadership potential.

There are many activities sponsored by the Nanook Battalion. The ROTC Color Guard team opens UAF hockey, basketball and other sporting and community events. They provide a recognized trained and dedicated guard for the national colors during the national anthem and opening ceremony. The Ranger Challenge team represents the Nanook Battalion and UAF in an annual military skill-based competition in Oregon. Army training such as Airborne School, Air Assault School, Northern Warfare Training and Mountaineering School are also offered to eligible students.

At an annual UAF ceremony, awards are presented for outstanding academic, athletic and leadership achievement, as well as excellence in ROTC skills.

Completion of the advanced program will lead to service in the Army as a commissioned officer. Students who compete for a commission are provided a monthly stipend. Advanced course students receive a monthly subsistence allowance during the school year. This allowance is tax-free. Students enrolled in military science are furnished uniforms and texts by the department. Army ROTC scholarships are available for tuition and lab fees, and provide a book allowance in addition to the stipend. Scholarships are awarded for two, three or four years on a competitive basis. Interested students should contact the Military Science Department for further details.

Minimum Requirements for Military Science and Leadership Minor: 19 credits

Programs

Degrees

- B.S.E.M., Security and Emergency Management (p. 322)
- M.S.D.M., Security and Disaster Management (p. 460)

Occupational Endorsement

- O.E.C., Homeland Security (p. 196)

Graduate Certificates

- Graduate Certificate, Arctic Security (p. 406)
- Graduate Certificate, Business Continuity (p. 407)
- Graduate Certificate, Climate Security (p. 407)
- Graduate Certificate, Cybersecurity Management (p. 408)
- Graduate Certificate, Strategic Leadership (p. 412)

Minors

- Minor, Cybersecurity (p. 363)
- Minor, Homeland Security and Emergency Management (p. 370)
- Minor, Military Science and Leadership (ROTC) (p. 374)
- Minor, Military Security Studies (p. 375)

Interdisciplinary Studies - Graduate

M.A., M.S., Ph.D. Degrees

M.A., M.S., PH.D., INTERDISCIPLINARY STUDIES

The UAF graduate Interdisciplinary Studies program provides a pathway for students who have well-defined goals and interests to earn an M.A., M.S. or Ph.D. degree that draws on multiple disciplines and does not fit in the established programs offered by the university. The program is an interdisciplinary individual program where students and faculty design an individual or unique program of study to meet the student's needs. The program draws on UAF's experience and strengths in interdisciplinary research and education. Interdisciplinary degrees meet the increased societal need for research to address complex problems that involve multiple disciplines. Students in the graduate Interdisciplinary Studies program pursue a wide range of topics. Given the place-based nature of much of UAF's scholarship, Alaska and the Arctic are common themes in their scholarship. These topics include but are not limited to the following areas: Indigenous and Western knowledge; education, language and culture; ecology and sociology; community health care; and natural resources, economics and policy.

The graduate Interdisciplinary Studies program is administered by the Graduate School and supported by UAF faculty, colleges and schools. Admission to the program is overseen by the Interdisciplinary Studies Council. Students are housed in the academic unit associated with their advisor. Prospective students identify a specific area for study and a UAF faculty member who is willing to serve as their advisor. Students are housed in the college or school of their advisor and their degree is awarded by that same college or school. Students develop a graduate study plan with their advisor and take courses from the disciplinary programs that they need to support their interdisciplinary scholarship.

Prospective students should contact the graduate school to discuss their proposed program of study before submitting an application.

Minimum Requirements for Interdisciplinary Studies Degrees: M.A. and M.S.: 30 credits; Ph.D.: 36 credits

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Graduate School & Interdisciplinary Studies
Graduate Interdisciplinary Studies (https://www.uaf.edu/gradschool/interdisciplinary/)
907-474-7464

Programs

Degrees

- M.A., Interdisciplinary Studies (p. 445)
- M.S., Interdisciplinary Studies (p. 445)
- Ph.D., Interdisciplinary Studies (p. 482)

Interdisciplinary Studies - Undergraduate

A.A.S., B.A., B.A.A.S., B.S. Degrees, Minors

Division of General Studies
Undergraduate Interdisciplinary Studies (https://www.uaf.edu/inds/)
907-474-1849

A.A.S., INTERDISCIPLINARY STUDIES

The interdisciplinary program provides flexibility to students who have educational goals that do not fit into one of the established Associate of Applied Sciences degrees offered by UAF. This A.A.S. interdisciplinary studies program is offered through a shared partnership with the Community and Technical College and the office of Undergraduate Interdisciplinary Studies. Students who are interested in an interdisciplinary studies program should meet with an advisor in the office of Undergraduate Interdisciplinary Studies or the CTC Advising Center to discuss their educational plan. Appointments can be scheduled by clicking the "schedule an appointment" link on the undergraduate interdisciplinary studies website or by calling the CTC Advising Center at 907-455-2800.

Minimum Requirements for Interdisciplinary Studies Associate Degree: 60 credits

B.A., B.A.A.S., B.S., INTERDISCIPLINARY STUDIES

The interdisciplinary studies programs provide flexibility to students who have educational goals that do not fit into one of the established majors or minors offered by the university. There are two interdisciplinary bachelor's degree tracks: Goals Option and Degree Completion. Students who are interested in an interdisciplinary studies program should meet with an advisor in the Office of Undergraduate Interdisciplinary Studies to develop their educational plan. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/).

Minimum Requirements for Interdisciplinary Studies, B.A., B.A.A.S., B.S. Degrees: 120-130 credits

Learn more about the bachelor's degree in interdisciplinary studies (https://uaf.edu/academics/programs/bachelors/interdisciplinary-studies.php), including an overview of the program, career opportunities and more.

Goals Option

An interdisciplinary studies major allows students to customize and create a major or minor that is unique and different from the majors and minors offered by UAF. Interdisciplinary studies students choose the title of their major and the courses within their major with the expert guidance of a faculty committee of at least three faculty members from at least two disciplines. One faculty member will serve as the committee chair and the advisor of the student. The committee chair must be from a baccalaureate degree-awarding department. Courses in the major must also represent at least two disciplines that focus on a shared theme. All interdisciplinary proposal forms will be reviewed by the student's faculty committee, the dean of the committee chair, as well as the director of Undergraduate Interdisciplinary Studies and the vice provost for final approval.

Degree Completion (may not be used as a double major)

The interdisciplinary studies major with a general studies concentration is a pathway to graduation for students who are unable to complete a particular major offered at UAF. Students in the general studies concentration have the flexibility to choose classes that are meaningful and relevant to their educational interests and career goals. Admission to the degree completion program requires a 2.0 cumulative GPA or higher, completion of at least 100 or more college credits, as well as a consultation with an interdisciplinary degree completion advisor. Students must submit a rationale form explaining why this program is an appropriate path to graduation for them in order to be admitted to the general studies concentration of the interdisciplinary major. Students should start their path to degree completion by meeting with an interdisciplinary advisor.

MINOR, HEALTH SCIENCES FOR PRE-PROFESSIONALS

This flexible minor supports students who intend to apply to a post-baccalaureate professional school in a health field, such as medical school, dental school or nursing. In most health professional fields any major can be completed by students for their bachelor's degree. In fact, most health professional schools don't consider applicants' majors in the admission process, but they do care about whether prerequisite courses have been taken and how well applicants performed in those courses. The UAF Health Sciences for Pre-Professionals minor allows students, regardless of their major, to take the prerequisite courses they need to apply for the health professional schools of their choice. Entering health professional schools can be competitive, so it is important to start early in your planning and research. Students considering this minor should:

- Meet with a UAF pre-professional advisor (https://uaf.edu/prehealth/get-in-touch/advising.php) to explore health careers and get help making an academic plan to help you reach your educational goals. Pre-professional advisors can approve courses for this minor that are specific to individual students' needs, targeting the prerequisite courses required for the health professional degree program they plan on applying to after graduating from UAF.
- Visit UAF's Pre-Health website (https://uaf.edu/prehealth/).
- Research specific schools that you plan on applying to. Prerequisite requirements/recommendations can vary from school to school even for the same type of professional degree.
- Be aware that a successful application to a health professional program may require elements in addition to prerequisite courses, such as appropriate experience and an interview.

For more information and pre-professional guidance, contact one of the pre-professional advisors listed on the UAF Pre-Health website (https://uaf.edu/prehealth/get-in-touch/advising.php). Courses for this minor can also be approved by advisors in the Undergraduate Interdisciplinary Studies department. Click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/) to make an appointment with an interdisciplinary advisor.

Requirements for the Health Sciences for Pre-Professionals Minor:15-29 advisor-approved credits.

MINOR, INTERDISCIPLINARY ENVIRONMENTAL CHANGE

The Interdisciplinary Environmental Change Minor provides students with an integrative understanding of the causes, impacts, and potential mitigation of anthropogenic environmental change by combining relevant knowledge, perspectives, and critical thinking skills from across the natural sciences, engineering, technology, social sciences, humanities,

and Alaska Native studies. This minor is intentionally interdisciplinary, reflective of the multidimensionality of the social-ecological issue of environmental change, and flexible to allow students to pursue their individual lines of interest within this broad field. UAF is a world leader in environmental change and Arctic research due in part to its location, where the impacts of climate change can be observed and felt at an accelerated pace, and is an ideal setting in which to engage with faculty possessing expertise in multiple dimensions of environmental change, through in-person and/or online coursework.

Minimum Requirements for Interdisciplinary Environmental Change Minor:15 credits

For more information or to apply, please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/).

MINOR, INTERDISCIPLINARY STUDIES

The interdisciplinary minor provides flexibility to students who have educational goals that do not fit into one of the established minors offered by the university. Interdisciplinary minors must include courses from at least two different disciplines that focus on a shared theme. Students must complete and Interdisciplinary Studies minor approval form where they will document the title, description and list of courses within their minor. Help with the interdisciplinary studies minor approval process is available by making an appointment with the undergraduate interdisciplinary studies department. All interdisciplinary studies minors will be reviewed by a committee appointed by the UAF vice provost for approval.

Minimum Requirements for Interdisciplinary Studies Minor: 18 credits

Programs

Degrees

- A.A.S., Interdisciplinary Studies (p. 245)
- B.A., Interdisciplinary Studies - General Studies Concentration (Degree Completion) (p. 325)
- B.A., Interdisciplinary Studies - Goals Option (p. 326)
- B.A.A.S., Interdisciplinary Studies - General Studies Concentration (Degree Completion) (p. 324)
- B.A.A.S., Interdisciplinary Studies - Goals Option (p. 327)
- B.S., Interdisciplinary Studies - General Studies Concentration (Degree Completion) (p. 324)
- B.S., Interdisciplinary Studies - Goals Option (p. 328)

Minors

- Minor - Environmental Change (p. 364)
- Minor - Interdisciplinary Studies (p. 371)
- Minor - Health Sciences for Pre-professionals (p. 368)

Journalism: Science & Environment

B.A. Degree, Minor

The science and environmental journalism program equips students with a unique skill set increasingly valued in the nation's newsrooms and other communication entities. There has never been a greater need for smart, courageous journalists with a passion for the public interest and the ability to tell stories about science, technology, health and environmental issues. Though the program focuses on science and environmental journalism, the skills learned pursuing this degree apply to a wide variety of fields both in media and in public communication.

In addition to the solid academic foundation delivered in the classroom, students receive practical experience working in media on and off campus. Students complete their required professional media internships at various radio and television stations, newspapers, public information offices and other media-related businesses and organizations in and outside Alaska.

The department runs several laboratory facilities, including a digital newsroom and photography lab, dedicated audio and video bays, an advanced video editing/digital printing lab and a photography studio.

Minimum Requirements for Journalism: Science and the Environment Bachelor's Degree: 120 credits

College of Liberal Arts
Department of Journalism: Science & Environment (https://uaf.edu/journalism/)
907-474-7761

Programs

Degree

- B.A., Journalism: Science and the Environment (p. 330)

Minor

- Minor, Journalism: Science and the Environment (p. 371)

Justice

B.A., M.A. Degrees, Graduate Certificate, Minor

The justice discipline represents a melding of theoretical and applied concepts, and both the B.A. degree in justice and the M.A. degree in justice administration reflect that dichotomy. Consequently, students explore theoretical models associated with different aspects of the criminal justice system and also study its structure and administration.

B.A., JUSTICE

The applied nature of the degree results in graduates with a B.A. in justice who can compete for positions in various justice employment fields. Justice juniors and seniors also enjoy opportunities for internships with various justice agencies.

Justice courses are available online and in the classroom.

Minimum Requirements for Justice Bachelor's Degree: 120 credits

Learn more about the bachelor’s degree in justice (https://uaf.edu/academics/programs/bachelors/justice.php), including an overview of the program, career opportunities and more.

Learn more about the online bachelor’s degree in justice (https://uaf.edu/academics/programs/bachelors/justice-online.php), including an overview of the program, career opportunities and more.

M.A., JUSTICE ADMINISTRATION

The justice discipline represents a melding of theoretical and applied concepts, and the M.A. degree in justice administration reflects that dichotomy. Consequently, students not only explore theoretical models associated with different aspects of the criminal justice system but also study its structure and administration.

The M.A. degree in justice administration has been designed as a web-based degree program in order to accommodate the needs of justice professionals for whom taking a two-year leave of absence from their profession is not feasible, or for whom relocating to the Fairbanks vicinity is not possible. The M.A. degree program has attracted justice professionals from throughout the country who have found the flexibility of a web-based format useful.

Minimum Requirements for Justice Administration Master’s Degree: 30 credits

Learn more about the master’s degree in justice administration (https://uaf.edu/academics/programs/masters/justice-administration.php), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, JUSTICE ADMINISTRATION

The graduate certificate in justice administration has been designed as a web-based degree program in order to accommodate the needs of justice professionals for whom taking a year's leave of absence from their profession is not feasible, or for whom relocating to the Fairbanks vicinity is not possible. The graduate certificate program offers candidates an opportunity to pursue graduate-level work without expending the time or resources needed for a full graduate degree.

Minimum Requirements for Justice Administration Graduate Certificate: 12 credits

College of Liberal Arts
Justice Department (https://www.uaf.edu/justice/)
907-474-5500

Programs

Degrees

- B.A., Justice (p. 331)
- M.A., Justice Administration (p. 445)

Graduate Certificate

- Graduate Certificate, Justice Administration (p. 409)

Minor

- Minor, Justice (p. 372)

Law Enforcement

Occupational Endorsement

The law enforcement program at the UAF Community & Technical College offers training and an occupational endorsement certificate that prepares students for work as law enforcement professionals. The program provides basic police training that can qualify students for certification by the Alaska Police Standards Council.

Learn more about available training and certificates:

Law Enforcement (https://www.ctc.uaf.edu/programs/law-enforcement/)

- Law Enforcement (O.E.C.)

Community and Technical College
Law Enforcement (https://www.ctc.uaf.edu/programs/law-enforcement/)
907-455-2800

Programs

Occupational Endorsement

- O.E.C., Law Enforcement Academy (p. 196)

Linguistics

B.A., Accelerated B.A./M.A., M.A. Degrees, Minor

Linguistics is the study of language and covers a variety of subjects, from theories of grammar and how we produce language to applications of linguistic knowledge in areas such as language teaching, anthropology, sociology and more.

B.A., LINGUISTICS

The undergraduate degree program provides an overview of the discipline and raises students' awareness of the many aspects of that uniquely human phenomenon, language.

Minimum Requirements for Linguistics Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in linguistics (https://uaf.edu/academics/programs/bachelors/linguistics.php), including an overview of the program, career opportunities and more.

ACCELERATED B.A., LINGUISTICS/M.A., APPLIED LINGUISTICS

The accelerated M.A. in applied linguistics provides students with a thorough background in second-language acquisition, language teaching and assessment. Graduates from the program are well prepared to teach in language classrooms, both at home and abroad, or enter the Ph.D. program of their choice.

Minimum Requirements for Linguistics Accelerated B.A./M.A. Degrees: 138 credits

Learn more about the bachelor's degree in linguistics (https://uaf.edu/academics/programs/bachelors/linguistics.php), including an overview of the program, career opportunities and more.

Learn more about the master's degree in applied linguistics (https://www.uaf.edu/academics/programs/masters/applied-linguistics.php), including an overview of the program, career opportunities and more.

M.A., APPLIED LINGUISTICS

Graduate students in applied linguistics may pursue a concentration in either language in society or second language acquisition and teacher education. Students are expected either to have or to develop proficiency in at least one language other than English, as demonstrated by a proficiency exam or a comparable measure determined by the student's graduate committee. Students pursuing certification in Second Language Acquisition and Teacher Education must demonstrate proficiency in the language they intend to teach.

Language in Society is designed for students interested in the role language plays in community and social organization. It is designed to provide theoretical and practical foundations in sociolinguistics, language and power, discourse analysis, language policy and planning, and community language revitalization.

Second language acquisition and teacher education is designed for students interested in teaching English as a second language, a foreign or Alaska Native language. It is designed to provide theoretical and practical foundations in second language acquisition, language teaching, materials development, and language assessment. Students may earn a post-certification endorsement in second language acquisition, bilingual education and literacy (SLABEL).

SLABEL is an innovative master's degree program that combines coursework in literacy with second language acquisition. Candidates will receive an interdisciplinary education that will have immediate application for K-12 language arts, English, bilingual, ELL and content-area teachers, working in increasingly complex bilingual, multilingual and multi-modal classroom environments. Candidates simultaneously earn a master's degree and a K-12 statewide endorsement based on TESOL standards, Alaska Teacher Standards and Alaska Cultural Standards. Comprehensive exams and teacher-action research are required.

Minimum Requirements for Applied Linguistics Master's Degree: 30 credits

Learn more about the master's degree in applied linguistics (https://www.uaf.edu//academics/programs/masters/applied-linguistics.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Linguistics Program (https://www.uaf.edu/linguist/)
907-474-7446

Programs

Degrees

- B.A., Linguistics (p. 331)
- B.A., Linguistics/ M.A., Applied Linguistics Accelerated Program (p. 388)
- M.A., Applied Linguistics (p. 446)

Minors

- Minor, Linguistics (p. 373)
- Minor, Teaching English to Speakers of Other Languages (p. 380)

Mathematics and Statistics

B.A., B.S., B.S./M.S., Ph.D. Degrees, Graduate Certificates, Minors

College of Natural Science and Mathematics
Department of Mathematics and Statistics (https://www.uaf.edu/dms/)
907-474-7332

B.A., B.S., MATHEMATICS

The number of new fields in which professional mathematicians find employment grows continually. This department prepares students for careers in industry, government and education.

Two concentrations are available:

- Mathematics
- Statistics

In addition to the major programs, the department provides a number of service courses in support of other programs within the university. Current and detailed information on mathematics degrees and course offerings is available from the department.

The department maintains a math lab that is available for assistance to all students studying mathematics at the baccalaureate level.

Minimum Requirements for Mathematics Bachelor's Degrees: 120 credits

Learn more about the bachelor's degree in mathematics (https://uaf.edu/academics/programs/bachelors/mathematics.php), including an overview of the program, career opportunities and more.

ACCELERATED B.S./M.S., MATHEMATICS

The combined Bachelor of Science in Mathematics and Master of Science in Mathematics program allows dedicated mathematics students to complete two degrees in a compressed time frame (typically, five years instead of six), while still maintaining the rigor and content of both degrees.

Minimum Requirements for Accelerated Mathematics B.S./M.S. Degrees: 138 credits

Learn more about the bachelor's degree in mathematics (https://uaf.edu/academics/programs/bachelors/mathematics.php), including an overview of the program, career opportunities and more.

Learn more about the master's degree in mathematics (https://www.uaf.edu/academics/programs/masters/mathematics.php), including an overview of the program, career opportunities and more.

ACCELERATED B.S., MATHEMATICS/M.S., STATISTICS AND DATA SCIENCE

The combined Bachelor of Science in Mathematics with a concentration in Statistics and Master of Science in Statistics and Data Science program allows dedicated statistics students to complete two degrees in a compressed time frame (typically, five years instead of six), while still maintaining the rigor and content of both degrees. Students will receive a B.S. in Mathematics with a concentration in Statistics, and an M.S. in Statistics and Data Science.

Minimum Requirements for Accelerated Math B.S./Statistics and Data Science M.S. Degrees: 138 credits

Learn more about the bachelor's degree in mathematics (https://uaf.edu/academics/programs/bachelors/mathematics.php), including an overview of the program, career opportunities and more.

Learn more about the master's degree in statistics and data science (https://uaf.edu/academics/programs/masters/statistics.php), including an overview of the program, career opportunities and more.

M.S., PH.D., MATHEMATICS

The number of new fields in which professional mathematicians find employment grows continually. This department prepares students for careers in industry, government and education.

The Master of Science in Mathematics prepares students for Ph.D. work, in addition to providing a terminal degree for those planning to enter industry or education. The aim of the Ph.D. program is to provide the student with the expertise to accomplish significant research in applied or pure mathematics, as well as to provide a broad and deep professional education.

In addition to the major programs, the department provides a number of service courses in support of other programs within the university. Current and detailed information on mathematics degrees and course offerings is available from the department.

Minimum Requirements for Mathematics Degrees: M.S.: 30-35 credits; Ph.D.: 18 thesis credits

Learn more about the master's degree in mathematics (https://www.uaf.edu//academics/programs/masters/mathematics.php), including an overview of the program, career opportunities and more.

M.S., STATISTICS AND DATA SCIENCE

Statistics is a collection of methods and theories used to make decisions or estimate unknown quantities from incomplete information. Statistical techniques are useful, for example, in estimating plant, animal and mineral abundances; forecasting social, political and economic trends; planning field plot experiments in agriculture; performing clinical trials in medical research; and maintaining quality control in industry. Employment opportunities are excellent for statisticians in many of these areas.

The Master of Science in Statistics and Data Science builds upon UAF's strength in the sciences and our setting in Alaska by introducing a strong quantitative alternative or supplement to existing programs. The curriculum is built around four statistics core courses and flexibility in the selection of elective courses. The core courses are designed to blend mathematical statistics coursework typical of most M.S. programs in statistics with real applications. We believe this blending provides a substantial improvement in the graduate's skills.

Graduates of this program could be labeled quantitative biologists, biometricians, quantitative geologists, geostatisticians, or mathematical statisticians depending upon their specific course work. In addition, this program prepares individuals for Ph.D.-level work in statistics or their area of application.

Minimum Requirements for Statistics and Data Science M.S.: 30 credits

Learn more about the master's degree in statistics and data science (https://uaf.edu/academics/programs/masters/statistics.php), including an overview of the program, career opportunities and more.

GRADUATE CERTIFICATE, APPLIED AND COMPUTATIONAL MATHEMATICS

The graduate certificate in applied and computational mathematics is equivalent to most of a year of coursework done by graduate students in this area. The certificate encourages a more in-depth study of mathematics beyond the undergraduate level. The focus is on mathematics that is useful in the sciences and engineering, especially on techniques that can be applied in computer programs. Furthermore, it provides students with a credential recognizing their additional mathematical expertise.

The certificate is ideal for current graduate students in disciplines other than mathematics who seek greater exposure to mathematical ideas and techniques. It is most suitable for students in the sciences and engineering. It is not suitable for students already enrolled in the M.S. in mathematics or Ph.D. in mathematics programs.

Minimum Requirements for Applied and Computational Mathematics Graduate Certificate: 12 credits

GRADUATE CERTIFICATE, STATISTICS

Statistics is a collection of methods and theories used to make decisions or estimate unknown quantities from incomplete information. Statistical techniques are useful, for example, in estimating plant, animal and mineral abundances; forecasting social, political and economic trends; planning field plot experiments in agriculture; performing clinical trials in medical research; and maintaining quality control in industry. Employment opportunities are excellent for statisticians in many of these areas.

As a postbaccalaureate program, the certificate in statistics is equivalent to a full year of graduate statistics courses and is ideal for current graduate students in disciplines other than statistics (especially the sciences). The graduate certificate in statistics encourages a more in-depth study of statistics and provides students a credential recognizing their quantitative expertise.

Graduates of this program could be labeled quantitative biologists, biometricians, quantitative geologists, geostatisticians, or mathematical statisticians depending upon their specific course work. In addition, this program prepares individuals for Ph.D.-level work in statistics or their area of application.

Minimum Requirements for Statistics Graduate Certificate: 12 credits.

Programs

Degrees

- B.A., Mathematics (p. 332)
- B.S., Mathematics (p. 335)
- Accelerated B.S./M.S., Mathematics (p. 389)
- Accelerated B.S., Mathematics/M.S., Statistics and Data Science (p. 392)
- M.S., Mathematics (p. 451)
- M.S., Statistics and Data Science (p. 464)
- Ph.D., Mathematics (p. 483)

Graduate Certificates

- Graduate Certificate, Applied and Computational Mathematics (p. 406)
- Graduate Certificate, Statistics (p. 412)

Minors

- Minor, Mathematics (p. 374)
- Minor, Statistics (p. 379)

Mechanical Engineering

B.S., B.S./M.S., M.S., Ph.D. Degrees, Minor

The mission of the mechanical engineering department at UAF is to offer the highest quality contemporary education at undergraduate and graduate levels and to perform research appropriate to the technical needs of the state of Alaska, the nation and the world.

Mechanical engineers conceive, plan, design and direct the manufacturing, distribution and operation of a wide variety of devices, machines and systems for energy conversion, environmental control, materials processing, transportation, materials handling and other purposes. Mechanical engineers are engaged in creative design, applied research, development and management. A degree in mechanical engineering also frequently forms the base for entering law, medical or business school, as well as for graduate work in engineering.

College of Engineering and Mines
Department of Mechanical Engineering (https://www.uaf.edu/cem/programs/mechanical-engineering/)
907-474-7136

B.S., B.S./M.S., MECHANICAL ENGINEERING

The objectives of the mechanical engineering program are to produce graduates who are able to compete successfully on the world stage at the professional level; deal with the significant local, regional, national and global issues facing humankind; continue to develop as engineers through lifelong learning; and serve as resources of technical knowledge for the state as well as the nation, especially with respect to northern issues. The Engineering Accreditation Commission of ABET has accredited the B.S. degree program in mechanical engineering since 1980.

Because engineering is based on mathematics, chemistry and physics, students are introduced to the basic principles in these areas during their first two years of study. The third year encompasses courses in engineering science — extensions to the basic sciences forming the foundation for engineering synthesis and design. The design project course draws on much of the student's previous learning through a simulated industrial design project. Throughout the four-year program, courses in communication, humanities and social sciences are required because mechanical engineers must be able to communicate effectively in written, oral and graphical form.

Students may choose a concentration in mechanical, aerospace or petroleum engineering. Because of UAF's unique location, special emphasis is placed on cold regions' engineering problems. The program offers a range of Arctic-related elective courses. Candidates for the B.S. degree in mechanical engineering are required to take the State of Alaska Fundamentals of Engineering examination in their general field.

Undergraduate students who plan to pursue graduate studies in engineering may also choose an accelerated degree for a master's in mechanical engineering. This program speeds the process and allows qualified mechanical engineering students to complete both a Bachelor of Science and a Master of Science degree in five years.

Minimum Requirements for Mechanical Engineering Degree: B.S.: 127 credits; B.S./M.S.: 148 credits

Learn more about the bachelor's degree in mechanical engineering (https://uaf.edu/academics/programs/bachelors/mechanical-engineering.php), including an overview of the program, career opportunities and more.

Learn more about the combined bachelor's/master's degree in mechanical engineering (https://www.uaf.edu/academics/programs/bachelors/mechanical-engineering-bs-ms.php), including an overview of the program, career opportunities and more.

M.S., MECHANICAL ENGINEERING

The mechanical engineering program prepares its graduates for careers at the professional level; maintains, as a base, ABET accreditation of the undergraduate program; provides continuing educational opportunities for graduate engineers; is a resource of technical knowledge for the state and nation; conducts research in all areas of mechanical engineering including cold regions mechanical engineering; and offers a graduate program in mechanical engineering at the M.S. level.

The educational objectives of the department are that graduates from the mechanical engineering program must be able to apply the knowledge of mathematics, science and engineering; be able to design and conduct experiments, as well as analyze and interpret data; be able to design a system, component or process to meet desired needs; be able to function on multi-interdisciplinary teams; be able to identify, formulate and solve engineering problems; understand professional and ethical responsibility; be able to communicate effectively; have the broad education necessary to understand the impact of engineering solutions in a global and societal context; recognize the need for, and be able to engage in life-long learning; understand contemporary issues; and be able to use the techniques, skills and modern engineering tools necessary for engineering practice. The department ensures that each course in the curriculum plays a meaningful role in satisfying one or more of these objectives.

Minimum Requirements for Mechanical Engineering Master's Degree: 30 credits

Learn more about the master's degree in mechanical engineering (https://www.uaf.edu/academics/programs/masters/mechanical-engineering.php), including an overview of the program, career opportunities and more.

PH.D., ENGINEERING

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, the use of judgment and the exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor's and master's degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of the College of Engineering and Mines and offers opportunities for engineers at other UA campuses to participate.

Minimum Requirements for Engineering Doctorate Degree: 36 credits

Programs

Degrees

- B.S., Aerospace Engineering (p. 277)
- B.S., Mechanical Engineering (p. 338)
- Accelerated B.S./M.S., Mechanical Engineering (p. 394)
- M.S., Mechanical Engineering (p. 452)
- Ph.D. Engineering (p. 477)

Minor

- Minor, Aerospace Engineering (p. 358)

Mining and Mineral Engineering

B.S., M.S., Ph.D. Degrees

B.S., MINING ENGINEERING

As the nation's northernmost accredited mining engineering program, our mission is to advance and disseminate knowledge for the exploration, evaluation, development and efficient production of mineral and energy resources with the assurance of the health and safety of persons involved and protection of the environment, through creative teaching, research and public service with an emphasis on Alaska, the North and its diverse peoples.

The mining engineering program emphasizes engineering as it applies to the exploration and development of mineral resources and the economics of the business of mining. The program offers specializations in exploration, mining or mineral beneficiation.

Students are prepared for job opportunities with mining and construction companies, consulting and research firms, equipment manufacturers, investment and commodity firms in the private sector, as well as with state and federal agencies.

The mining engineering program's educational objectives are to graduate competent engineers who:

- apply their engineering skills and knowledge with consideration to health, safety and the environment,
- pursue careers in mineral-related industries,
- are active among the local and professional mining communities, and
- seek professional advancement of mining engineering technology and practices.

Mining engineers may aspire to, and achieve, the highest positions in the industry: operating or engineering management, government agency director or entrepreneur. Starting salaries are among the highest in the engineering profession.

Students may initiate their mining engineering program in Anchorage and transfer to Fairbanks upon completion of their freshman or sophomore year. Anchorage students intending to transfer to Fairbanks should contact the faculty of the UAF Mining Engineering Department.

Candidates for the B.S. degree in mining engineering must take the State of Alaska Fundamentals of Engineering examination. The Fundamentals of Engineering examination is the first step toward registration as a professional engineer.

Learn more information about the mining engineering program's mission, goals and educational objectives (https://www.uaf.edu/cem/).

Minimum Requirements for Mining Engineering Bachelor's Degree: 124 credits

Learn more about the bachelor's degree in mining engineering (https://uaf.edu/academics/programs/bachelors/mining-engineering.php), including an overview of the program, career opportunities and more.

M.S., MINING ENGINEERING

The mining engineering program emphasizes engineering as it applies to the exploration and development of mineral resources and upon the economics of the business of mining. The program offers specialization in exploration, mining or mineral beneficiation.

Students are prepared for job opportunities with mining and construction companies, consulting and research firms, equipment manufacturers, investment and commodity firms in the private sector, as well as with state and federal agencies.

Mining engineers may aspire to, and achieve, the highest positions in the industry: operating or engineering management, government agency director or entrepreneur.

Minimum Requirements for Mining Engineering Master's Degree: 30-36

PH.D., ENGINEERING

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, the use of judgment and the exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor's and master's degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of the College of Engineering and Mines and offers opportunities for engineers at other UA campuses to participate.

Minimum Requirements for Engineering Doctoral Degree: 36 credits

College of Engineering and Mines
Department of Mining and Mineral Engineering (https://www.uaf.edu/cem/programs/mining-engineering/)
907-474-7388

Programs

Degrees

- B.S., Mining Engineering (p. 339)
- M.S., Mining Engineering (p. 452)
- Ph.D., Engineering (p. 477)

Minor

- Minor, Mining Engineering (p. 375)

Music

B.A., B.M., M.Mu. Degrees, Minors

B.A., B.M., MUSIC

The music curriculum is designed to satisfy cultural and professional objectives. The B.A. degree in music provides broad, liberal education options for concentrations in general music, music theory, music history and music composition. The B.M. degree in music performance offers intensive specialization for those desiring professional training in music performance.

The Music Department is a full member of the National Association of Schools of Music, the national accrediting organization.

Minimum Requirements for Music Degrees: B.A.: 120 credits; B.M.: 123 credits

Learn more about the bachelor's degree in music (https://uaf.edu/academics/programs/bachelors/music.php), including an overview of the program, career opportunities and more.

B.M., MUSIC EDUCATION

The B.M. degree in music education offers thorough preparation in teacher training and develops excellence in music performance areas. The bachelor's degree in music education offers comprehensive, personalized music training within the vibrant arts community of Fairbanks, Alaska. The program also features extensive field-based teacher training, including a semester-long internship in a school setting.

Our music education program includes teacher certification and licensure within the five-year curriculum. When you graduate, you won't need to take additional certification courses—you'll be ready to start your career as a licensed public school teacher in the state of Alaska.

Minimum Requirements for Music Education Bachelor's Degree: 130-145 credits

Learn more about the bachelor's degree in music education (https://uaf.edu/academics/programs/bachelors/music-education.php), including an overview of the program, career opportunities and more.

Notes for All Undergraduate Music Degrees

The various programs, music ensembles and organizations in the department offer opportunities for students in all academic divisions of the university. Music majors are required to earn a minimum of 4 large ensemble credits in the B.A. program, a minimum of 6 large ensemble credits in the B.M. music education program and a minimum of 8 large ensemble credits in the B.M. music performance program. Large ensembles include: MUS F117, MUS F203, MUS F205, MUS F211. Wind and percussion instrumentalists are required to take a minimum of 4 credits in MUS F205. Piano majors may substitute up to 2 credits of MUS F307.

Each student (major or non-major) who enrolls in private applied lessons must be concurrently enrolled in a large ensemble. Requirements for students registered for class lessons vary with discipline and are at the discretion of the instructor.

Attendance at recitals and concerts provides students with a variety of musical experiences that expand their regular curriculum. Registration for MUS F190 recital attendance is mandatory until majors and minors have passed the number of semesters required for their program: two semesters for the minor, four semesters for the B.A., six semesters for the B.M. in music education and eight semesters for the B.M. in music performance. All applied music students enrolled in MUS F261 or higher are required to perform in at least one Music at One program during each semester of study.

At the end of each semester, all music majors must demonstrate a satisfactory level of proficiency in performance (Performance Juries) in their applied instrumental area in order to advance to the next level of study. At the discretion of the music faculty, a student may be held at the F200 level to further prepare to pass the requirements for admission to upper-division study. Competency levels required for each degree must be achieved in one applied instrumental area.

Music students must earn a C grade or better for each music course in their major program in order for that course to count as a completed degree requirement. MUS F493 is repeatable for up to 6 credits. MUS F307, MUS F313 and MUS F317 are repeatable for credit. MUS F161-MUS F162, MUS F261–MUS F262, MUS F361–MUS F362 and MU repeatable up to 6 credits.

M.MU. DEGREE

A student's Master of Music Performance degree program is determined by the student in coordination with the student's graduate advisory committee. Each graduate student's program is designed to support the student's individual professional interests and aspirations, consistent with program requirements. The Master of Music Performance degree program emphasizes academic achievement and superior musicianship through music performance. In addition to the curriculum, recitals and concerts provide students with a variety of musical experiences and performance opportunities.

Minimum Requirements for Degree: 36 credits

College of Liberal Arts
Department of Music (https://www.uaf.edu/music/)
907-474-7555

Programs

Degrees

- B.A., Music (p. 340)
- B.M., Music (Performance) (p. 343)
- B.M., Music Education (p. 342)
- M.Mu., Music Performance (p. 453)

Minor

- Minor, Music (p. 375)

Natural Resources and Environment

B.S., M.N.R.E., M.S., Ph.D. Degrees, Graduate Certificates, Minors

College of Natural Science and Mathematics
Department of Natural Resources and Environment (https://www.uaf.edu/nre/)
907-474-7188

B.S., NATURAL RESOURCES AND ENVIRONMENT

The sustainability of society and its environment requires an interdisciplinary approach to making and implementing natural resource and environmental decisions. The natural resources and environment degree integrates knowledge in natural science, policy, economics and human values to advance the sustainable management of natural resources and agricultural systems. Students learn through a variety of approaches, including classroom instruction, hands-on laboratory experiences, and opportunities for internships and independent research under the guidance of a faculty mentor. Successful graduates will be qualified for employment in a broad range of private enterprises, government agencies and nonprofit organizations in the various natural resources fields, and will be well-equipped for graduate studies. The natural resources and environment minor strengthens students' degree programs by providing a broad introduction to how natural and social sciences, the humanities, and policy should be integrated in order to make well-founded decisions.

Minimum Requirements for Natural Resources and Environment Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in natural resources and environment (https://uaf.edu/academics/programs/bachelors/natural-resources-environment.php), including an overview of the program, career opportunities and more.

M.N.R.E., M.S., NATURAL RESOURCES AND ENVIRONMENT

The two master's degrees offered by the Department of Natural Resources and Environment are designed for students desiring careers in resources management and students planning doctoral work, as well as those wishing to be better-informed citizens. The courses and curriculum for the two degrees were developed in cooperation with groups and agencies that work professionally with resource management in Alaska. These agencies, including the Alaska Department of Natural Resources, Alaska Department of Fish and Game, Agricultural Research Service, U.S. Forest Service, Bureau of Land Management, Natural Resources Conservation Service, and U.S. Fish and Wildlife Service contribute significantly to the programs by providing guest lecturers and internship and research opportunities for students.

Because of the diversity and broad scope of the field, each degree is customized according to the student's interests and the advisory committee's recommendations. Student research projects and theses have typically been in the fields of forest management, land use planning, soil management, natural resource policy, range management, parks and recreation management, horticulture, agronomy, animal science, climate change and GIS.

A Bachelor of Science or Bachelor of Arts degree in a relevant discipline is required for acceptance into either program. Candidates should have a general familiarity with the major resource fields. The student's committee may require the student to take courses to remedy any deficiencies; these credits will not count toward the credits required for the degree.

Applicants must submit three letters of recommendation, official GRE scores, undergraduate transcripts and a statement of the applicant's goals. The latter should include information about why you are applying for the degree, why you chose UAF and DNRE, and how such a degree would fit into your career goals. Applications cannot be considered until all these items have been received by the Office of Admissions.

The M.S. degree in natural resources and environment is designed for those intending to pursue a career conducting research in management problems and/or to proceed on to a doctoral program. Thesis research in natural resources and environment is directed toward resource problems and based on hypothesis testing.

The master's degree in natural resources and environment is designed to prepare students for a management career in natural resources planning and administration; communication and public information; and/or operational innovation, improvement and impact assessment. While not requiring scientific research, the work is expected to involve critical reflection, empirical inquiry and intellectual honesty. A written product and an oral presentation demonstrating sound scholarship will be required. Final acceptance of the project will be by the student's committee and the chair of DNRE.

Minimum Requirements for Natural Resources and Environment Degrees: M.S.: 30 credits; M.N.R.E.: 35 credits

M.S., PH.D., EARTH SYSTEM SCIENCE

Earth System Science at UAF is a multidisciplinary degree program that provides the option for a disciplinary concentration in one of eight topics:

- Sustainability
- Ecosystems
- Hydrology
- Atmospheric and Climate Sciences
- Cryosphere
- Solid Earth Geophysics
- Geoscience
- Geospatial Science

The ESS program involves faculty participation from six departments and programs:

- Natural Resources and Environment
- Center for Cross-Cultural Studies
- Biology and Wildlife
- Civil, Geological, and Environmental Engineering
- Atmospheric Sciences
- Geosciences

and five research institutes:

- Institute of Agriculture/Natural Resources and Extension
- Institute of Arctic Biology
- Institute of Northern Engineering

- International Arctic Research Center
- Geophysical Institute.

Minimum Requirements for Earth System Science Degrees: M.S.: 30 credits; Ph.D.: 26-41 credits.

PH.D., NATURAL RESOURCES AND SUSTAINABILITY

The joint Ph.D. program in natural resources and sustainability prepares future leaders as academic researchers, agency professionals and analysts of nongovernmental organizations and communities for careers at the frontiers of the science of sustainability and natural resources management.

Exploring and understanding natural resource management systems require a well-defined skill set and a clear understanding of how specific problems are linked to broader cultural, ecological and geopolitical contexts. Thus, the study of natural resources and sustainability encompasses a spectrum of topics. The Ph.D. builds on the existing strengths of the Department of Natural Resources and Environment and College of Business and Security Management faculty members to educate students in specific areas while training them to be conversant in the broader range of relevant topic areas.

The program objectives and its curriculum center around three thematic areas of study:

1. resource economics,
2. resource policy and sustainability science, and
3. forest and agricultural sciences.

Each student draws on a common set of core courses, and, with his/her graduate committee, develops a program of coursework and research that produces a unique intellectual contribution to the applied field of natural resources and sustainability. Students elect to focus on one of the three thematic areas or they choose to integrate foci to develop their areas of knowledge and dissertation research.

Additional application requirement: Students are required to have a faculty sponsor upon entering the program. A letter of support from a DNRE or CBSM faculty member in addition to three letters of recommendation must be submitted with the graduate application.

Minimum Requirements for Natural Resources and Sustainability Doctorate Degree: 26 credits

GRADUATE CERTIFICATE, GEOSPATIAL SCIENCE

This graduate certificate prepares the student to harness geospatial technologies for cutting-edge applications in natural resources, geohazard management, environmental monitoring and many more. The program teaches advanced skills in Geographic Information Systems (GIS) and remote sensing, including digital mapping, radar imaging and predictive data analytics. These skills are highly sought after in the job market. They can boost careers in start-ups, consulting firms, and government agencies across a diverse range of fields, including mining, forestry, agriculture, conservation and engineering.

This graduate certificate in geospatial science is equivalent to a year of coursework done by a graduate student in this area. Its target audience consists of students and professionals seeking advanced skills and mastery of GIS and remote sensing tools and concepts. It is most suitable for students with a background in the sciences and engineering.

Minimum Requirements for Geospatial Science Graduate Certificate: 12 credits

GRADUATE CERTIFICATE, RESILIENCE AND ADAPTATION

The graduate certificate in resilience and adaptation studies is ideal for current graduate students in many disciplines. The graduate certificate encourages a more in-depth study of resilience, adaptation and sustainability, and provides students with a credential that recognizes their knowledge of resilience theory and its application to sustainable systems. The certificate prepares students for a career in academia, industry, government and non-governmental organizations by exposing them to the interdisciplinarity of complex systems. It is a defined series of courses that expose the students to the concepts of resilience and adaptation. Courses will advance knowledge and promote social-ecological research in sustainability and resilience. Students working on degrees in the STEM sciences and social sciences will broaden their disciplinary perspective through exposure to economics, ecology, sociology and anthropology to gain practical knowledge, training and integrative skills development. This certificate embodies a holistic perspective that recognizes the importance of both the social and biological dimensions of environmental sustainability and resilience. This certificate is offered by the Department of Natural Resources and Environment and will meet the needs of students and professionals.

Minimum Requirements for Resilience and Adaptation Graduate Certificate: 12 credits

Programs

Degrees

- B.S., Natural Resources and Environment (p. 344)
- M.N.R.E., Natural Resources and Environment (p. 453)
- M.S., Earth System Science (p. 431)
- M.S., Natural Resources and Environment (p. 454)
- Ph.D., Earth System Science (p. 473)
- Ph.D., Natural Resources and Sustainability (p. 483)

Graduate Certificates

- Graduate Certificate, Geospatial Science (p. 408)
- Graduate Certificate, Resilience and Adaptation (p. 410)

Minor

- Minor, Natural Resources and Environment (p. 376)
- Minor, Sustainable Agriculture (p. 379)

Paralegal Studies

A.A.S. Degree, Minor

The paralegal studies program at the UAF Community & Technical College offers an associate degree that prepares students for work in the legal services profession as a paralegal to help deliver legal services under the supervision of a practicing lawyer. The program teaches students how to conduct client and witness interviews; engage in basic fact-finding and investigation; draft correspondence, reports, pleadings, motions and other legal documents; conduct legal research; and assist in discovery and trial preparation.

The program curriculum is approved by the American Bar Association and prepares graduates to work as paralegals who are authorized to perform substantive legal work under the supervision of a lawyer. The program does not train lawyers or legal administrators. Graduates are not authorized to provide direct legal services to the public.

Learn more about available degrees:

Paralegal Studies (https://www.ctc.uaf.edu/programs/paralegal-studies/)

- Paralegal Studies (A.A.S.)

Community and Technical College
Paralegal Studies (https://www.ctc.uaf.edu/programs/paralegal-studies/)
907-455-2800

Programs

Degree

- A.A.S., Paralegal Studies (p. 247)

Minor

- Minor, Paralegal Studies (p. 376)

Petroleum Engineering

B.S., M.S., Ph.D. Degrees

The mission of the petroleum engineering program is to provide its students with quality education and training in the field of petroleum engineering through effective teaching, research and public service, with emphasis on Alaska petroleum resources.

Petroleum engineering offers a unique look at the challenging problems confronting the petroleum industry. This program requires an understanding of many disciplines including mathematics, physics, chemistry, geology and engineering science. Courses in petroleum engineering deal with drilling, formation evaluation, production, reservoir engineering, computer simulation and enhanced oil recovery. The curriculum prepares graduates to meet the demands of modern technology while emphasizing, whenever possible, the special problems encountered in Alaska. Located in one of the largest oil-producing states in the nation, the UAF petroleum engineering department offers one of the most modern and challenging degree programs available.

Learn more about the petroleum engineering program's mission, goals and educational objectives (https://www.uaf.edu/cem/programs/petroleum-engineering/).

College of Engineering and Mines
Department of Petroleum Engineering (https://www.uaf.edu/cem/programs/petroleum-engineering/)
907-474-7734

B.S., PETROLEUM ENGINEERING

The petroleum engineering program's program educational objectives are:

1. Our graduates will apply their technical knowledge and data analytics skills and have successful careers in the oil and gas industry analyzing real-world petroleum engineering problems, developing innovative solutions underpinned by data and communicating these to meet the needs of multiple stakeholders within the global community.
2. Our graduates will demonstrate professionalism, commitment to ethical standards and lifelong learning through continuing professional development during their careers.
3. Our graduates will contribute significantly to the global petroleum engineering profession and they will exemplify the behaviors, including integrity, empathy, tolerance and respect and fair dealing, necessary to become industry leaders within and beyond Alaska.

Minimum Requirements for Petroleum Engineering Bachelor's Degree: 131 credits

Learn more about the bachelor’s degree in petroleum engineering (https://uaf.edu/academics/programs/bachelors/petroleum-engineering.php), including an overview of the program, career opportunities and more.

M.S., PETROLEUM ENGINEERING

The curriculum prepares graduates to meet the demands of modern technology while emphasizing, whenever possible, the special problems encountered in Alaska. Located in one of the largest oil-producing states in the nation, the UAF petroleum engineering department offers modern and challenging degree programs.

The M.S. program is intended to provide students with an advanced treatment of petroleum engineering concepts. Students may choose either a thesis or non-thesis option. Research and teaching assistantships are available.

A doctoral degree program is offered with a concentration in petroleum engineering for qualified students. Contact the graduate program coordinator or the petroleum engineering department for more information.

Minimum Requirements for Petroleum Engineering Master's Degree: 30-36 credits

Learn more about the master’s degree in petroleum engineering (https://www.uaf.edu/academics/programs/masters/petroleum-engineering.php), including an overview of the program, career opportunities and more.

PH.D., ENGINEERING

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, the use of judgment and the exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor's and master’s degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of the College of Engineering and Mines and offers opportunities for engineers at other UA campuses to participate.

Minimum Requirements for Engineering Doctorate Degree: 36 credits

Programs

Degrees

- B.S., Petroleum Engineering (p. 345)
- M.S., Petroleum Engineering (p. 456)
- Ph.D., Engineering with Petroleum Concentration (p. 477)

Philosophy

B.A. Degree, Minor

B.A., PHILOSOPHY

The courses in philosophy are designed to confront students with foundational problems related to the human experience and to introduce students to the critical assessment of those problems, thus broadening students' perspectives and critical thinking skills for various areas of specialization in science, social science and humanities.

Minimum Requirements for Philosophy Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in philosophy (https://uaf.edu/academics/programs/bachelors/philosophy.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Department of Philosophy and Humanities (https://www.uaf.edu/philo/)
907-474-7007

Programs

Degree

- B.A., Philosophy (p. 345)

Minor

- Minor, Philosophy (p. 377)

Physics

B.S., M.S., Ph.D. Degrees, Minor

B.S., PHYSICS

Physics, together with mathematics and chemistry, provides the foundation for work in all fields of the physical sciences and engineering and contributes greatly to other disciplines such as biosciences and medicine.

The undergraduate curriculum provides a solid foundation in classical and modern physics, with emphasis on both its experimental and theoretical aspects. A student completing this curriculum can be well-prepared for advanced study in physics and related sciences, and for other careers in industry, government or the private sector that require refined abilities in problem-solving.

The physics concentration represents the classical undergraduate physics curriculum, while the applied physics concentration provides a solid foundation in general physics with the flexibility to include applied or interdisciplinary coursework, aimed at e.g., engineering physics, biophysics or oceanography.

The atmospheric physics concentration is a solid foundation at the interface of physics, climate sciences and meteorology. The computational physics concentration is relevant for students seeking careers in any areas that require expertise in computational modeling and simulation of physical systems.

The technical management concentration provides an opportunity to combine basic knowledge of physics with an aptitude for leadership in business. Declared physics majors in good standing with appropriate grades, department mentoring and approval for some courses are, upon graduation, welcome to apply to the MBA program in UAF's College of Business and Security Management.

Minimum Requirements for Physics Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in physics (https://uaf.edu/academics/programs/bachelors/physics.php), including an overview of the program, career opportunities and more.

M.S., PH.D., PHYSICS

Advanced study at the graduate level is offered in various areas of physics and applied physics, including many of the research specialties found at the UAF's Geophysical Institute. Faculty and student research programs currently emphasize space physics, infrasonics, complex dynamics of nonlinear systems, ice physics and condensed matter physics.

The M.S. degree with computational physics concentration provides expertise in advanced computing environments, in the relevant mathematical foundations and in the specific physics discipline. It is directed toward students with undergraduate academic backgrounds in physics or other closely associated fields, such as engineering, that have the appropriate physics coursework. This degree is relevant for students seeking careers in any areas that require expertise in computational modeling and simulation of physical systems.

The M.S. degree with space physics concentration focuses on the physics of upper atmospheres, ionospheres, magnetospheres and the interplanetary medium. It includes core physics courses and specialty courses in space physics, aeronomy, magnetospheric and auroral physics, and advanced plasma physics. The specialty courses support graduate research with faculty members at UAF's Geophysical Institute and include areas such as numerical simulations and time-series analysis. Additional courses such as radiative transfer and physics of fluids provide added breadth.

Minimum Requirements for Physics Degrees: M.S.: 30-33 credits; Ph.D.: 18 thesis credits

PH.D., SPACE PHYSICS

Space physics focuses on the physics of upper atmospheres, ionospheres, magnetospheres and the interplanetary medium. It includes core physics courses and specialty courses in space physics, aeronomy, magnetospheric and auroral physics, and advanced plasma physics. The specialty courses support graduate research with faculty members at UAF's Geophysical Institute, and include areas such as numerical simulations and time-series analysis. Additional courses such as radiative transfer and physics of fluids provide added breadth.

Minimum Requirements for Space Physics Doctorate Degree: 18 thesis credits

College of Natural Science and Mathematics
Department of Physics (https://www.uaf.edu/physics/)
907-474-7339

Programs

Degrees

- B.S., Physics (p. 346)
- M.S., Physics (p. 456)
- M.S., Physics with concentration in Computational Physics (p. 457)
- M.S., Physics with concentration in Space Physics (p. 458)
- Ph.D., Physics (p. 484)
- Ph.D., Space Physics (p. 484)

Minor

- Minor, Physics (p. 377)

Political Science

B.A. Degree, Minors

The Department of Political Science offers a major in political science and minors in political science and in law and society. The department also offers graduate-level political science courses in the Arctic and Northern studies M.A.program and the interdisciplinary studies Ph.D.program.

The political science discipline educates students on politics, policy and citizenship in a changing world. As the study of power, political science explains who gets what, when, where and how. It examines the struggles over claims to authority that shape our lives and our world. As the study of values, it examines why citizens obey or rebel, the nature of just societies and the ways individuals reconcile personal liberty with political authority. As the science of political behavior, it analyzes the actions of interest groups, political parties and public officials. Politics is an omnipresent force, not only in governments but in families, social organizations, schools and decision-making bodies of all types — from student councils to international institutions. A solid understanding of local, state, national and international politics will benefit all students throughout their careers.

Courses are offered in the political science fields of American politics, public policy and law, comparative politics, international politics and political theory. The department also offers specialized classes in environmental policy and politics, Indigenous studies and Arctic and Northern studies. In addition to course offerings and faculty expertise, the department presents real-world opportunities for students to apply their learning. Those include numerous internship and scholarship opportunities in Alaska and the rest of the United States. Students can participate in the Model United Nations and Model Arctic Council, join the Political Science Department honor society, Pi Sigma Alpha, aid faculty as research assistants or create their own research projects, and take part in numerous other department projects such as bringing speakers to campus or hosting roundtables on important issues. Graduate students may also serve as teaching or research assistants.

B.A., POLITICAL SCIENCE

The political science B.A. has led students to graduate work in the social sciences; employment in the media and public relations; teaching at high school and university levels; and careers in business corporations and nonprofits at the state and national levels. Political science provides a broad understanding of the formation, application and change of the law, as well as research techniques and standards of argumentation essential to legal practice. Political science is the premier major for students desiring to go to law school and also prepares students for work in various fields of government. Alaska offers job prospects for political science graduates as managers in state and local governments and as legislators and legislative staff members. Graduates are also qualified to work outside of Alaska in numerous public and private sector jobs.

Minimum Requirements for Political Science Bachelor's Degree: 120 credits

Learn more about the bachelor’s degree in political science (https://uaf.edu/academics/programs/bachelors/political-science.php), including an overview of the program, career opportunities and more.

College of Liberal Arts

Department of Political Science (https://www.uaf.edu/polisci/)
907-474-7609

Programs

Degree

- B.A., Political Science (p. 348)

Minors

- Minor, Environmental Politics (p. 364)
- Minor, Law and Society (p. 372)
- Minor, Political Science (p. 377)

Process Technology

A.A.S. Degree, Occupational Endorsement, Certificate

The process technology program at the UAF Community & Technical College offers certificates and degrees that prepare students for employment as an operations technician in the process industry, which includes oil and gas production, mining and milling, transportation and refining, chemical manufacturing, power generation, utilities, wastewater treatment facilities maintenance and food processing.

Process technology graduates will develop the knowledge and skills required to monitor, control and troubleshoot the process technologies used in process and manufacturing industries. Instrumentation technology graduates will develop specialized knowledge sought-after by the industry to fill instrumentation technician positions worldwide. Mining mill operations program completers will receive an MSHA Surface New Miner Certification certificate and be prepared for mill operator positions in the mining industry.

Learn more about available certificates and degrees:

Process Technology (https://www.ctc.uaf.edu/programs/process-technology/)

- Process Technology (A.A.S.)
- Instrumentation Technology (Certificate)
- Mining Mill Operations (O.E.C.)

Community and Technical College
Process Technology (https://www.ctc.uaf.edu/programs/process-technology/)
907-455-2800

Programs

Degree

- A.A.S., Process Technology (p. 248)

Occupational Endorsement

- O.E.C., Mining Mill Operations (p. 197)

Certificate

- Certificate, Instrumentation Technology (p. 214)

Psychology

B.A., B.S. Degrees, Minor

The Department of Psychology offers B.A. and B.S. degrees in psychology. The department's focus is to provide breadth and depth in the science and profession of psychology with a commitment to honoring diversity and promoting human welfare. The curriculum develops cross-cultural knowledge, critical thinking, imagination, creativity, ethical principles and concern for social justice, as well as respect for and knowledge of diverse points of view that include feminist, multicultural, indigenous, and gay and lesbian perspectives.

In addition to active engagement in the classroom, students can participate in research and community service. Programs in psychology facilitate an understanding of the human experience as an interaction of biological, psychological, social and cultural processes.

Graduates of the undergraduate program in psychology have been successful in gaining entrance to graduate school in a variety of fields including psychology, medicine, business and law. Graduation with an undergraduate psychology degree has allowed students to become employed in a variety of entry-level human services and business positions.

Minimum Requirements for Psychology Bachelor's Degrees: 120 credits

Learn more about the bachelor's degree in psychology (https://uaf.edu/academics/programs/bachelors/psychology.php), including an overview of the program, career opportunities and more.

Learn more about the online bachelor's degree in psychology (https://uaf.edu/academics/programs/bachelors/psychology-online.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Department of Psychology (https://www.uaf.edu/psych/)
907-474-7007

Programs

Degrees

- B.A., Psychology (p. 349)
- B.S., Psychology (p. 350)

Minor

- Minor, Psychology (p. 377)

Secondary Education

B.A., M.Ed. Degrees, Certificate, Postbaccalaureate Licensure, Minor

The University of Alaska Fairbanks School of Education prepares students from across Alaska, as well as from other states and nations, to work in urban and rural Alaska and with multicultural and diverse students, specifically thinking effortfully about culturally-rooted instruction in Alaska Native communities. To fulfill our commitment to enhancing educational opportunities for the state's rural and Alaska Native populations, faculty actively and knowledgeably utilize educational technology to deliver all School of Education programs to students across the state.

The School of Education offers bachelor's degrees in elementary education and secondary education and postbaccalaureate programs are offered in elementary education, secondary education, counseling and special education.

Courses are available on-site and by distance delivery through the Kuskokwim, Bristol Bay, Interior Alaska, Chukchi and Northwest Campuses, as well as on the Troth Yeddha' Campus in Fairbanks. Faculty research in cross-cultural studies, curriculum and instruction, teacher retention and mobility, and rural schools supports the mission of the School of Education.

Priority for enrollment in field-based courses is given to rural students formally admitted to degree and licensure programs. All inquiries should be addressed to one of the rural campuses or to the School of Education's Certification and Advising Office.

Candidates for all School of Education programs are required to have a laptop computer. Laptops may be PC or Mac and must have capacities that enable candidates to meet School of Education requirements. If you have questions about how a laptop purchase will fit in with your current financial aid package, please contact the UAF Financial Aid Office.

The University of Alaska Fairbanks complies fully with the institutional reporting requirements mandated in Title II of the Higher Education Act Amendments of 1998. Please contact the School of Education for a copy of the report.

LICENSURE INFORMATION

UAF education programs are approved by the Alaska State Board of Education and accredited by the Council for the Accreditation of Educator Preparation (http://caepnet.org/).

The School of Education is approved by the Alaska Department of Education and Early Development to recommend its students for Alaska licensure as elementary and secondary teachers, school counselors and special education teachers.

The State of Alaska requires that all initial applicants for a teaching certificate pass a Basic Competency Exam (BCE) (https://education.alaska.gov/teachercertification/praxis/) from the list of exams accepted by the Alaska State Department of Education and Early Development.

In addition, Content Area Examinations (Praxis II) (https://education.alaska.gov/teachercertification/contentareaexams/) are required for the Initial 2-3 Year, Professional and Master teaching certificates. A list of accepted exams and passing scores is available on the website of the Alaska State Department of Education and Early Development.

School of Education
Secondary Education Program (https://www.uaf.edu/soe/academics.php)
907-474-7341

B.A., SECONDARY EDUCATION

The requirements for a secondary school teaching certificate include completion of both a major in an academic subject area appropriate to teaching in the secondary school and the professional education sequence. The degree is awarded as a B.A. with a double major in the academic content area and secondary education. Upon declaration of a major in secondary education, students are assigned an advisor in the School of Education to plan the completion of the teaching major and the education sequence of courses.

The teaching major must be in an academic subject area approved for the State of Alaska secondary school teaching certificate and available as a B.A. degree: art, biology, English, French, German, history, mathematics, political science or Spanish.

Minimum Requirements for Education Bachelor's Degree: 121 credits

Learn more about the bachelor's degree in secondary education (https://uaf.edu/academics/programs/bachelors/secondary-education.php), including an overview of the program, career opportunities and more.

M.ED., SECONDARY EDUCATION

The Master of Education in Secondary Education program with graduate postbaccalaureate teacher licensure offers a pathway for college graduates to earn a teaching certificate and obtain knowledge and skills in practice-based pedagogy. Courses are available on campus at the University of Alaska Fairbanks and by distance delivery across the state of Alaska. The program provides disciplinary and multicultural approaches to teaching students in the diverse contexts of Alaska's educational settings. Students participate in intensive, mentored and supervised experiences in secondary classrooms, which include one semester of part-time student teaching and one semester of full-time student teaching.

Students admitted to the M.Ed. in secondary education are concurrently admitted to the secondary postbaccalaureate licensure program. The M.Ed. in secondary education may not be earned without completing the requirements for both programs. Please also refer to the Postbaccalaureate License, Secondary Education overview below for additional information on this degree pathway.

Minimum Requirements for Secondary Education Master's Degree: 36 credits

Learn more about the master's degree in secondary education (https://uaf.edu/academics/programs/masters/secondary-education.php), including an overview of the program, career opportunities and more.

POSTBACCALAUREATE LICENSE, ART K-12

Offered across the state of Alaska, this is an intensive, classroom-based K-12 art teacher licensure program (34 credits) that prepares postbaccalaureate candidates for K-12 art teaching positions. The program is specifically designed to prepare candidates to teach in multicultural settings in Alaska. The content will specifically identify and discuss current issues of art education and apply Alaska Content/ Performance Standards and Frameworks as well as National Standards for Art Education.

At the end of the program, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska initial teaching license and will receive certificates of completion from UAF.

Candidates who enter the K-12 art licensure program are required to have use of/own a laptop computer before they begin their internship in the fall semester.

Minimum Requirements for K-12 Art Licensure: 33 credits

POSTBACCALAUREATE LICENSE, ART K-12 TOWARD M.ED., SECONDARY EDUCATION

Offered across the state of Alaska, this is an intensive, classroom-based K-12 art teacher program (34 credits) that prepares postbaccalaureate candidates for K-12 art teaching positions. The program is specifically designed to prepare candidates to teach in multicultural settings in Alaska. The content will specifically identify and discuss current issues of art education and apply Alaska content/performance standards and frameworks as well as National Standards for Art Education.

Candidates who apply as graduate applicants may simultaneously pursue teacher licensure and the M.Ed. secondary education degree. Additional coursework will be required. (See requirements for M.Ed. Secondary Education (p. 459).)

At the end of the program, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska initial teaching license and will receive certificates of completion from UAF.

Candidates who enter the K-12 art licensure program are required to have use of/own a laptop computer before they begin their internships in the fall semester of their internship year.

For program options and professional field experience information, please see the information listed in the catalog for the secondary postbaccalaureate licensure program (p. 399).

Admission to the K-12 art licensure program toward M.Ed. in secondary education includes meeting the requirements of the UAF Graduate School and the UAF School of Education. Candidates take five of the licensure courses at the F600 level.

For information on the application process, acceptance to the program and professional field experience, please refer to the secondary postbaccalaureate licensure program toward M.Ed. (p. 400) section.

Minimum Requirements for Art K-12 Licensure Program toward M.ED, Secondary Education: 33 credits

Learn more about the postbaccalaureate license in secondary education (https://uaf.edu/academics/programs/post-bachelor-certification/postbaccalaureate-certificate.php), including an overview of the program, career opportunities and more.

POSTBACCALAUREATE LICENSE, SECONDARY EDUCATION

This program is offered across the state of Alaska.

This is an intensive, classroom-based secondary licensure program (31 credits) that prepares postbaccalaureate candidates for secondary (grades 7-12) teaching positions. The program is specifically designed to prepare candidates to teach in multicultural settings in Alaska. Contained specifically in EDSC F457 is content that addresses multicultural issues in general and Alaska rural issues in particular, and is a fundamental component of the course work within the program. When funding is available, secondary program candidates are afforded the opportunity to participate in a rural practicum.

Student learning outcomes for the program are aligned with the InTASC Model Core Teaching Standards (https://ccsso.org/resource-library/intasc-model-core-teaching-standards-and-learning-progressions-teachers-10/).

Students must apply to graduate with a certificate of completion through the Office of the Registrar's Graduation Services. At the end of the program, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska initial teaching license.

Candidates who enter the secondary postbaccalaureate licensure program are required to have use of/own a laptop computer before they begin their internships in the fall semester of their professional year.

Minimum Requirements for Secondary postbaccalaureate Licensure: 30 credits

Learn more about the postbaccalaureate license in secondary education (https://uaf.edu/academics/programs/post-bachelor-certification/postbaccalaureate-certificate.php), including an overview of the program, career opportunities and more.

Program Options: Fast-Track, Two-Year or Teaching While Training

Fast-track Option

The fast-track option is an intensive three-semester program that allows candidates (one-year unpaid interns) to complete the secondary licensure program as full-time students in 12 months. Candidates take classes “summer-fall-spring.” The academic year-long internship is completed during the fall and spring semesters.

Two-year Option

The two-year option allows candidates (two-year unpaid interns) to complete the secondary postbaccalaureate licensure program as part-time students over a period of 18-24 months. The last semester of the program requires full-time placement at a public school site.

Teaching-while-training Option

The teaching-while-training option is for candidates (teacher interns) who have secured a teaching position with an Alaska school district. Generally, this option is available only to those candidates in areas of teacher shortage. Candidates complete the secondary postbaccalaureate licensure program over a period of 24 months.

Upon Acceptance to the Program

The School of Education has a systematic procedure for monitoring the progress of education students from admission through completion of their professional education program to determine if they should continue the program, be advanced to the secondary teaching internship and eventually be recommended for a teaching license. In assessing candidate progress in knowledge, skills and disposition, faculty will review grades, observations, evaluations, faculty recommendations, demonstrated academic competence and recommendations from the appropriate school professionals. Systematic approaches are used to assist education candidates who are making unsatisfactory progress in their programs but still maintain the potential for successful completion.

The following are specific criteria for entry to the secondary teaching internship:

- successful completion of summer program courses;
- approval of faculty to enter the secondary education internship;
- some school districts may require candidates to pass a general physical exam and require additional shot records;
- some school districts require completion of district substitute training which may include a fee, a fingerprint card and Alaska State Trooper background check; and
- State of Alaska certificate of student teaching authorization, fingerprint cards and money order submitted in accordance with the directions from the Alaska Department of Education & Early Development by June 1 (the fee is non-refundable once submitted to the State of Alaska).

Professional Field Experiences

The secondary postbaccalaureate licensure program includes a comprehensive internship experience in an educational setting. Internship placements are arranged and supervised by university faculty in partnership with the principals and faculty from the public schools. University coursework and classroom practice are closely linked and communication about performance in both the coursework and classroom practice is shared among the partners. Internships follow the K-12 school year calendar and not the university academic year calendar.

Performance in the internship must meet stated competencies and individual outcomes. Performance evaluations determine the candidate's progress toward meeting the InTASC Model Core Teaching Standards (https://ccsso.org/resource-library/intasc-model-core-teaching-standards-and-learning-progressions-teachers-10/), the International Society for Technology in Education's Standards for Educators (https://www.iste.org/standards/for-educators/) and performance guidelines of content area-specific professional teaching organizations.

It is expected that candidates will demonstrate appropriate professional characteristics with respect to their actions, attitudes, and performance. Teacher candidates are required to adhere to the characteristics of professionalism as published in the UAF SOE Secondary Education Handbook and to abide by the State of Alaska Code of Ethics of the Education Profession. Unacceptable academic performance, an unprofessional attitude, unsatisfactory field reports, violation of professional ethics or other factors may result in removal from the field experience and denial of the Institutional Recommendation for teacher certification.

Internship placements are made in partnership with participating school districts, which may request additional information and/or preparation from candidates according to the district's established policies and practices. Because cooperating districts also determine the number of placements available for candidates, placement may become competitive if the number of applicants exceeds the number of spaces. Districts also reserve the right to refuse or terminate placements when candidates do not meet a minimum standard of performance. Thus, while the university will make every effort to identify appropriate field experiences, admission to the secondary postbaccalaureate licensure program does not guarantee an internship placement.

POSTBACCALAUREATE LICENSE TOWARD M.ED., SECONDARY EDUCATION

This program is offered across the state of Alaska.

This is an intensive, classroom-based secondary licensure program (31 credits) that prepares postbaccalaureate candidates for secondary (grades 7-12) teaching positions. The program is specifically designed to prepare candidates to teach in the varied settings of Alaska. Content that addresses multicultural issues in general, and Alaska rural issues in particular, is contained specifically in EDSC F657 and is a fundamental component of the coursework within the program. When funding is available, secondary program candidates are afforded the opportunity to participate in a rural practicum.

Student outcomes for the program are aligned with the InTASC Model Core Teaching Standards (https://tinyurl.com/Intasc-Oct-2019/).

Candidates may simultaneously pursue teacher licensure and the Master of Education in secondary education degree. (See requirements for M.Ed. Secondary Education (p. 459).)

At the end of the program, students successfully meeting all of the program requirements are eligible to apply for an Alaska initial teaching license and will receive a certificate of completion from UAF. Students must apply to graduate with a certificate of completion through the Office of the Registrar's Graduation Services. At the end of the program, if students have successfully met all of the program requirements, they will be eligible to apply for an Alaska initial teaching license.

Candidates who enter the secondary postbaccalaureate licensure program are required to have use of/own laptop computers before they begin their internships in the fall semester of their internship year. Candidates are expected to be proficient in word processing, spreadsheet creation and use of presentation software.

Minimum Requirements for Secondary postbaccalaureate Licensure Program Toward M.Ed., Secondary: 30-33 credits

Learn more about the postbaccalaureate license in secondary education (https://uaf.edu/academics/programs/post-bachelor-certification/postbaccalaureate-certificate.php), including an overview of the program, career opportunities and more.

Program Options: Fast-Track, Two-Year or Teaching While Training

Fast-track Option

The fast-track option is an intensive three-semester program that allows candidates (one-year unpaid interns) to complete the secondary certificate and licensure program as full-time students in 12 months. Candidates take classes in summer, fall and spring. The academic-

year-long internship is completed during the fall and spring semesters. Completion of the M. Ed. degree will take additional time.

Two-year Option
The two-year option allows candidates (two-year unpaid interns) to complete the secondary postbaccalaureate certificate and licensure program as part-time students over a period of 18-24 months. The last semester of the program requires full-time placement at a public school.

Teaching-while-training Option
The teaching while training option is for candidates (teacher interns) who have secured a teaching position with an Alaska school district. Generally, this option is available only to those candidates in areas of teacher shortage. Candidates complete the secondary postbaccalaureate licensure program over a period of 24 months.

Upon Acceptance to the Program

The School of Education has a systematic procedure for monitoring the progress of education students from admission through completion of their professional education program to determine if they should continue the program, be advanced to the secondary teaching internship and eventually be recommended for a teaching license. In assessing candidate progress in knowledge, skills and disposition, faculty will review grades, observations, faculty recommendations, demonstrated academic competence and recommendations from the appropriate school professionals. Systematic approaches are used to assist education candidates who are making unsatisfactory progress in their programs but still maintain the potential for successful completion.

The following are specific criteria for entry to the secondary teaching internship:

- successful completion of summer program courses;
- approval of faculty to enter the secondary education internship;
- some school districts may require candidates to pass a general physical exam and require additional shot records;
- some school districts require completion of district substitute training which may include a fee, a fingerprint card and AST background check; and
- State of Alaska certificate of student teaching authorization, fingerprint cards and money order submitted in accordance with the directions from the Alaska Department of Education and Early Development by June 1 (the fee is non-refundable once submitted to the State of Alaska).

Professional Field Experiences

The secondary postbaccalaureate licensure program includes a comprehensive internship experience in an educational setting. Internship placements are arranged and supervised by university faculty in partnership with the principal and staff from the public school. University coursework and classroom practice are closely linked and communication about performance in both the coursework and classroom practice is shared among the partners. Internships follow the K-12 school year calendar and not the university academic year calendar.

Performance in the internship must meet stated competencies and individual outcomes. Performance evaluations determine the candidate's progress toward meeting the InTASC Model Core Teaching Standards (https://ccsso.org/resource-library/intasc-model-core-teaching-standards-and-learning-progressions-teachers-10/) and the International Society for Technology in Education's Standards for Educators (https://www.iste.org/standards/for-educators/) for All Teachers and performance guidelines of Specialty Performance Organizations.

It is expected that candidates will demonstrate appropriate professional characteristics with respect to their actions, attitudes and performance. Teacher candidates are required to adhere to the characteristics of professionalism as published in the Secondary Postbaccalaureate Licensure Handbook and to abide by the State of Alaska Code of Ethics of the Education Profession. Unacceptable academic performance, an unprofessional attitude, unsatisfactory field reports, violation of professional ethics or other factors that may result in removal from the field experience and denial of the institutional recommendation for teacher certification.

Internship placements are made in partnership with participating school districts, which may request additional information and/or preparation from candidates according to the district's established policies and practices. Because cooperating districts also determine the number of placements available for candidates, placement may become competitive if the number of applicants exceeds the number of spaces. Districts also reserve the right to refuse or terminate placements when candidates do not meet a minimum standard of performance. Thus, while the University will make every effort to identify appropriate field experiences, admission to the secondary postbaccalaureate licensure program does not guarantee an internship placement.

Programs

Degrees

- B.A., Secondary Education (p. 353)
- M.Ed., Secondary Education (p. 459)

Postbaccalaureate Licenses

- Postbaccalaureate License, Art K-12 (p. 398)
- Postbaccalaureate License, Art K-12 toward M.Ed., Secondary Education (p. 397)
- Postbaccalaureate License, Secondary Education (p. 399)
- Postbaccalaureate License toward M.Ed., Secondary Education (p. 400)

Minor

- Minor, Secondary Education (p. 378)

Social and Human Development

A.A.S., B.A. Degrees, Certificate, Minor

College of Rural and Community Development
Department of Social and Human Development (https://www.uaf.edu/rural/academics/departments/)
907-474-7143

A.A.S., HUMAN SERVICES

Students in the human services program receive skills-based training within a foundation of theory. After completing foundation courses, students select an area of concentration from the following: addiction counseling, behavioral health or interdisciplinary concentration. Students learn interviewing and assessment, case management, crisis intervention, group counseling techniques and other specific skills needed within their concentration area.

The program prepares students for entry-level positions in human services agencies. Persons with a strong desire to help others, a sincere respect for humankind and a commitment to their own personal growth may find this field rewarding. They must be emotionally stable, flexible and interested in working with people of diverse social, cultural and economic backgrounds from themselves. Recovery from life traumas and addictions can be a positive attribute if the student has successfully worked through specific issues and is willing to continue personal growth.

Students who complete an addictions concentration are eligible for certification as chemical dependency counselor technicians through the Alaska Commission for Behavioral Health Certification.

Each concentration is available to B.A. degree students as a minor. Option 1: The B.A. degree student must complete the concentration and three HUMS elective credits. Concentrations provide students with the skills needed for employment. See minor requirements. Option 2: Complete HUMS-approved elective credits (18 credits of electives must be approved by the human services program head).

Minimum Requirements for Human Services A.A.S. Degree: 63 credits

B.A., CHILD DEVELOPMENT AND FAMILY STUDIES

This program provides the necessary preparation for early childhood professionals who wish to advance their knowledge and career opportunities with specialized study in administration, curriculum and teaching, or family support.

The child development and family studies program meets professional preparation standards developed by the National Association for the Education of Young Children. These six core standards and field experience expectations guide the Child Development and Family Studies B.A. program content and outline a set of common expectations for professional knowledge, skills and dispositions within the field of early care and education in conjunction with family studies.

The program supports students who desire a strong foundation in the field of early childhood development. Students are required to complete the program major and one of the specialized concentration areas: administration within the early childhood field, curriculum and teaching, or family support. Students entering the child development and family studies B.A. program with an A.A. or A.A.S. degree specializing in early childhood from a regionally accredited college or university will receive 20 transfer credits toward the program major. Any additional courses will need to be evaluated on an individual basis.

Flexible course delivery fosters successful completion for early childhood professionals living in both rural and urban areas of Alaska. All program and concentration area courses must be completed with a minimum C- grade or better, with the exclusion of all clinical practice coursework, which must be completed with a B grade or better. Completion of the Child Development and Family Studies B.A. will meet the requirements for both a major and a minor.

Minimum Requirements for Child Development and Family Studies Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in child development and family studies (https://uaf.edu/academics/programs/bachelors/child-development-family-studies.php), including an overview of the program, career opportunities and more.

CERTIFICATE, RURAL HUMAN SERVICES

The rural human services program is designed to develop strong and healthy rural Alaska Native individuals, families and communities. The RHS program provides entry-level training for students preparing for careers as natural helpers/healers in village-based public, private and volunteer human service organizations. The curriculum draws extensively from Indigenous knowledge and wisdom about health and well-being and reflects a strong multicultural orientation that validates, incorporates and builds on Indigenous values and principles.

The certificate program is a concentrated course of study focused on rural behavioral health services. Both the Alaska Division of Behavioral Health and the Alaska Native Tribal Health Consortium have designated many of the credits earned through the RHS program as satisfying credentialing training requirements.

The certificate program provides additional credentials for service providers who work in related fields and would like additional training in rural behavioral health services. Providers who may want such training could include health aides, family service workers, correctional workers and teachers. The RHS program is offered as a closed cohort with monthly, week-long intensives for two academic years.

Admission is open to anyone employed by a regional Native health corporation or local entity providing village-based human services, or to individuals recognized by their communities as natural helpers/healers. A high school diploma or GED and/or previous training or work experience in the delivery of village-based human services are recommended but not required.

This degree program is delivered collaboratively within the UA system.

Minimum Requirements for Rural Human Services Certificate: 32 credits

Learn more about the certificate in rural human services (https://uaf.edu/academics/programs/certifcates/rural-human-services.php), including an overview of the program, career opportunities and more.

Programs

Degrees

- A.A.S., Human Services (p. 242)
- B.A., Child Development and Family Studies (p. 297)

Certificate

- Certificate, Rural Human Services (p. 220)

Minor

- Minor, Human Services (p. 370)

Specialized Training

- Alaska Chemical Dependency Counselor Certification (p. 208)

Social Work

B.A. Degree, Minor

B.A., SOCIAL WORK

Rooted in core social work values, generalist social work practitioners are educated to promote the health and well-being of individuals, families, groups, organizations and communities, emphasizing the diversity and uniqueness of rural Alaska, as it interconnects with our global society.

This program is committed to creating a community of critical thinkers dedicated to becoming competent, culturally grounded and environmentally conscious professionals engaged in lifelong learning and research that honors diverse ways of knowing. Students prepare for generalist social work practice with individuals, families, groups, organizations and communities; to integrate the values and ethics of the social work profession into generalist practice and to apply critical thinking to inform and communicate professional judgments; to engage diversity in generalist practice to advance human rights and social, economic and environmental justice; to understand biopsychosocial-spiritual and cultural functioning applied across all client systems; to conduct research and scholarship, with an emphasis on the circumpolar North that contributes to individual and community well-being, and to become global citizens who advocate for and promote environmental sustainability.

Graduates in social work qualify for beginning practice positions in child welfare, mental health, services for the aged, family agencies, youth programs, health services, Native corporations and other social agencies. Social work applies knowledge in the behavioral sciences to deal with the emotional and social problems of individuals, families and communities.

The curriculum includes a liberal arts base, foundation requirements in the behavioral sciences, and sequences in social policy and services, practice methods and field instruction. A major emphasis is the preparation of the student for beginning social work practice with rural and Alaska Native populations.

Students learn to engage people on a personal level and are placed in a social service agency as part of their coursework during their senior year. Students must apply to participate in a senior field placement and are required to complete a minimum of 400 hours over the course of two semesters in a social service agency practicing the skills learned in the program.

The UAF baccalaureate social work program is accredited by the Council on Social Work Education. This degree program is delivered collaboratively within the UA system.

Minimum Requirements for Social Work Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in social work (https://uaf.edu/academics/programs/bachelors/social-work.php), including an overview of the program, career opportunities and more.

College of Liberal Arts
Department of Social Work (https://www.uaf.edu/socwork/)
907-474-7240

Programs

Degree

- B.A., Social Work (p. 354)

Minor

- Minor, Social Work (p. 378)

Special Education

M.Ed. Degree, Postbaccalaureate Certificate

The University of Alaska Fairbanks complies fully with the institutional reporting requirements mandated in Title II of the Higher Education Act Amendments of 1998. Please contact the School of Education for a copy of the report.

The School of Education prepares students from across Alaska, as well as from other states and nations, to work in urban and rural Alaska and to work with multicultural and minority — especially Alaska Native — students. To fulfill our commitment to enhancing educational opportunities for the state's rural and Native populations, faculty actively and knowledgeably utilize educational technology to deliver all School of Education programs to students in most areas of the state.

The School of Education offers bachelor's degrees in elementary education and secondary education; and postbaccalaureate programs are offered in elementary education, secondary education, counseling and special education.

Courses are available on-site and by distance delivery through the Kuskokwim, Bristol Bay, Interior Alaska, Chukchi and Northwest campuses, as well as on the Fairbanks campus. Faculty research in cross-cultural studies, curriculum and instruction, language and literacy, and small rural schools supports the mission of the School of Education.

Priority for enrollment in field-based courses is given to rural students formally admitted to degree and licensure programs. All inquiries should be addressed to one of the rural campuses or to the School of Education's Certification and Advising Office.

Candidates for all School of Education programs are required to have a laptop computer. Laptops may be of any type but must have capacities that enable candidates to meet School of Education requirements. If you have questions about how a laptop purchase will fit in with your current financial aid package, please contact the UAF Financial Aid Office.

LICENSURE INFORMATION

UAF education programs are approved by the Alaska State Board of Education standards and accredited by the Council for the Accreditation of Educator Preparation (http://caepnet.org/).

The School of Education is approved by the Alaska Department of Education and Early Development to recommend its students for Alaska licensure as elementary and secondary teachers, school counselors and special education teachers.

The State of Alaska requires that all initial applicants for a teaching certificate pass a Basic Competency Exam (BCE) (https://education.alaska.gov/teachercertification/praxis/) from the list of exams accepted by the Alaska State Department of Education and Early Development.

In addition, Content Area Examinations (Praxis II) (https://education.alaska.gov/teachercertification/contentareaexams/) are required for the Initial 2-3 Year, Professional, and Master teaching certificates. A list of accepted exams and passing scores is available on the website of the Alaska State Department of Education and Early Development.

School of Education
Special Education Program (https://www.uaf.edu/soe/academics.php)
907-474-7341

M.ED., SPECIAL EDUCATION

The Master of Education in special education degree program prepares K-12 special educators at the graduate level with specific training in the areas of disabilities, assessment, intervention strategies, current law and the implementation of programs including the development of legally defensible documents related to the federal Individuals with Disabilities Education Act.

Graduates will have mastery of the Council for Exceptional Children Initial K-12 Preparation Standards released in 2020. (https://exceptionalchildren.org/standards/initial-practice-based-professional-preparation-standards-special-educators/)

The program will provide individuals who already possess or are eligible for, a current Alaska teaching certificate or a bachelor's degree and the necessary prerequisites with specific training in special education. The program prepares K-12 special education teachers who can effectively understand state and national education issues and respond appropriately. Special education candidates will progress through a series of developmentally sequenced field experiences for all ages, types and levels of abilities including collaborative opportunities.

An option is available for individuals who are already certified special education teachers or individuals who want the special education knowledge and master's degree to perform professional duties that do not include being a special education classroom instructor. These individuals will not complete special education clinical practice, and no institutional recommendation for special education teacher certification will be issued.

The M.Ed. in special education provides development in collaboration/consultation models and program development in multicultural settings. Completion of this program meets the requirements for Alaska licensure as a K-12 special education teacher. For special education teacher certification in the state of Alaska, a passing score on the Praxis II Special Education: Core Knowledge and Applications test (#5354) is required.

Learn more about the master's degree in special education (https://www.uaf.edu/academics/programs/masters/special-education.php), including an overview of the program, career opportunities and more.

POSTBACCALAUREATE CERTIFICATE, SPECIAL EDUCATION K-12

Prepares K-12 special educators at the graduate level with specific training in the areas of disabilities, assessment, intervention strategies, current law and the implementation of programs including the development of legally defensible federal IDEA documents.

Graduates will have mastery of the Council for Exceptional Children's (CEC) 2020 Initial Practice-Based Professional Preparation Standards for Special Educators. (https://exceptionalchildren.org/standards/initial-practice-based-professional-preparation-standards-special-educators/)

The program will provide individuals who already possess, or are eligible for, a current Alaska teaching certificate or a bachelor's degree and the

necessary prerequisites, with specific training in special education. The program prepares K-12 special education teachers who can effectively understand state and national education issues and respond appropriately. Special education candidates will progress through a series of developmentally sequenced field experiences for all ages, types and levels of abilities, including collaborative opportunities.

The program provides development in collaboration/consultation models and program development in multicultural settings. Completion of this program meets the requirements for Alaska licensure as a K-12 special education teacher.

Minimum Requirements for Special Education K-12 Postbaccalaureate Certificate: 39-42 credits

Learn more about the postbaccalaureate certificate in special education (https://www.uaf.edu/academics/programs/post-bachelor-certification/postbaccalaureate-certificate.php), including an overview of the program, career opportunities and more.

MINOR, SPECIAL EDUCATION

The minor in special education is designed for students pursuing teacher certification through the UAF B.A. in elementary education or the B.A. in secondary education. It leads to an additional teaching endorsement in K-12 special education. Students will progress through a series of developmentally sequenced field experiences with various age groups, types and levels of disability, and collaborative opportunities. Students are assessed relative to national and state standards, including the Council for Accreditation of Educator Preparation (CAEP) standards and the Council for Exceptional Children's (CEC) 2020 Initial Practice-Based Professional Preparation Standards for Special Educators.

Completion of the minor in special education meets the requirements for Alaska licensure as a special education teacher only if it is completed concurrently with a teacher certification program in elementary or secondary education. For special education teacher certification in the state of Alaska, a passing score on the Praxis II Special Education: Core Knowledge and Applications test (#5354) is required.

Minimum Requirements for Special Education Minor: 24 credits

Programs

Degree

- M.Ed., Special Education (p. 462)

Postbaccalaureate Certificate

- Postbaccalaureate Certificate, Special Education K-12 (p. 401)

Minor

- Minor, Special Education (p. 378)

Courses

Theater and Film

B.A. Degree, Minor

B.A., FILM AND PERFORMING ARTS

The Theatre and Film Department teaches courses in media and performing arts, technology, theory and criticism. The department recognizes the importance of the role of the fine and performing arts within the humanities program of a liberal arts education. Courses in film and performing arts help develop students' original, creative and critical thinking while developing mastery in technical or dramatic skills.

A degree in film and performing arts gives students a critical understanding of the history, theory and technologies of cinema, new media arts and theatre arts while giving them opportunities, tools and resources for careers in media and performing arts industries, to pursue graduate study, or become media or theatre artists. Students take a shared group of classes in performance, production design and filmmaking, and then choose either a film or theatre concentration.

Film concentration: Through an interdisciplinary approach to film and media studies, the program produces media-literate professionals who can play a leading role in an increasingly information-centered world where every profession will require skilled media creators. Film students have opportunities to produce their own creative, time-based content for a variety of multimedia applications. Emphasis is placed on the cultures, lifestyles and environments of Alaska and the North and the unique opportunities they afford for skilled media creators and artists.

Theatre concentration: Students become well-rounded and prepared artists who can contribute their design, technical and performance skills to stage and screen work. The theatre concentration emphasizes stage and screen practicum work, so students learn through hands-on experience on stage and screen sets. These experiences provide unique opportunities for creative expression and workforce development.

Classes and productions are open to film and performing arts majors, theatre or film minors, and students in other fields.

Minimum Requirements for Film and Performing Arts Bachelor's Degree: 120 credits

Learn more about the bachelor's degree in film and performing arts (https://uaf.edu/academics/programs/bachelors/film-performing-arts.php), including an overview of the program, career opportunities and more.

Minor

The integrated arts minor allows students to explore all three arts disciplines offered at UAF: art, film and performing arts, and music. After taking an introductory course in each department, students will then take electives in each discipline.

Minimum Requirements for Integrated Arts Minor: 18 credits

College of Liberal Arts
Department of Theatre and Film (https://www.uaf.edu/theatrefilm/)
907-474-6590

Programs

Degree

- B.A., Film and Performing Arts (p. 312)

Minors

- Minor, Film (p. 365)
- Minor, Theatre (p. 380)
- Minor, Integrated Arts (p. 371)

Tribal Governance

A.A.S. Degree, Occupational Endorsement, Certificate, Minor

A.A.S., CERTIFICATE, MINOR, TRIBAL GOVERNANCE

The Department of Tribal Governance provides skills and knowledge needed for positions within tribal, local and community governments and organizations across Alaska. In response to the broad variety of job-related skills needed by tribal leaders, councils, administrators and staff, the tribal governance A.A.S., certificate and minor programs allow students to tailor their education for specific employment-related skills. The Department of Tribal Governance provides students with fundamental knowledge of tribal governance, law, policy and management through academic and hands-on education and training in subject areas important to tribal governments. Students work closely with their academic advisor to choose courses in one or more areas of study that target their employment needs.

Students entering either the certificate or A.A.S. degree program will meet with a faculty advisor to discuss program content, requirements and planning.

Minimum Requirements for Tribal Governance Certificate: 30 credits; for A.A.S. Degree: 60 credits

Minimum Requirement for Tribal Governance Minor: 15 credits

Learn more about the certificate and associate degree in tribal governance (https://www.uaf.edu/academics/programs/associates/tribal-governance.php), including an overview of the programs, career opportunities and more.

OCCUPATIONAL ENDORSEMENT, TRIBAL JUSTICE

The occupational endorsement in tribal justice provides education specific to tribal courts and tribal justice in Alaska, preparing tribal court judges, clerks and administrators for employment in the tribal justice field. The endorsement also provides a pathway for continuing education for tribal justice professionals in Alaska. Applicants must be 16 years old to be admitted.

Minimum Requirements for Tribal Justice Occupational Endorsement: 9 credits

College of Rural and Community Development
Department of Tribal Governance (https://tribal.uaf.edu/)
907-474-7143

Programs

Degree

- A.A.S., Tribal Governance (p. 249)

Occupational Endorsement

- O.E.C., Tribal Justice (p. 200)

Certificate

- Certificate, Tribal Governance (p. 220)

Minor

- Minor, Tribal Governance (p. 380)

Veterinary Medicine

DVM Degree

A Doctor of Veterinary Medicine (DVM) degree, in conjunction with the passage of the North American Veterinary Licensing Examination and state licensing examinations, allows one to become a practicing veterinarian. Veterinarians are trained to diagnose diseases, perform surgery, formulate treatment plans, and prescribe medication to animals. In addition to caring for pets, livestock, and exotic/wild animals, veterinarians are employed in many other sectors, including research, the armed forces, and in protecting the safety of our food supply.

The University of Alaska Fairbanks, in conjunction with Colorado State University (CSU) offers a 2+2 combined DVM professional program. Students in this program complete the first two (non-clinical) years of a DVM degree at UAF, and then complete their training (including clinical training) in Fort Collins, CO, at CSU. Students in our program qualify to take the NAVLE, and earn their DVM from CSU.

Students must have completed the necessary prerequisites for CSU as outlined here (https://vetmedbiosci.colostate.edu/dvm/admission-requirements/), and must apply for our 2+2 program using the Veterinary Medical College Application Service (https://vmcas.liaisoncas.com/applicant-ux/). Learn more about our veterinary medicine program here (https://www.uaf.edu/vmed/).

O.H.M. Degree

One Health encompasses the relationship between human health, animal health and the health of the environment, holding that these entities are inextricably linked to the extent that none can be optimal unless they are all optimal. One Health is interdisciplinary and inclusive; it invites the full participation of community members working together with scientists, health practitioners, tribal leaders, and government agency personnel to identify problems and create realistic, sustainable solutions to those problems.

The One Health Master's degree program educates students to use a constructionist approach to address issues in the circumpolar North that are at the intersection of human, animal and environmental health. By concentrating in either community advocacy or biomedical sciences, graduates of the program will be able to engage key stakeholders to develop and implement realistic management plans that can then be implemented in communities across the circumpolar North.

Minimum Requirements for One Health Master's Degree: 30 credits

Learn more about the master's degree in one health (https://uaf.edu/academics/programs/masters/one-health.php), including an overview of the program, career opportunities and more.

College of Natural Science and Mathematics
Veterinary Medicine Program (https://www.uaf.edu/vmed/)
Center for One Health Research (https://www.uaf.edu/onehealth/)
907-474-1928

Programs

Degree

- O.H.M., One Health (p. 455)

Welding & Materials Technology

Occupational Endorsement

The welding and materials technology program at the UAF Community & Technical College offers an occupational endorsement that provides a cornerstone for skills and knowledge essential to entry-level positions and being successful in the welding industry. The program's curriculum is aligned with the American Welding Society SENSE (School Excelling through National Skill Standards Education) program, allowing students to earn four separate welding process certificates and an AWS SENSE Entry-Level I certificate.

Learn more about available certificates and degrees:

Welding & Materials Technology (https://www.ctc.uaf.edu/programs/welding-materials-technology/)

- Entry-Level Welding (O.E.C.)

Community and Technical College
Welding & Materials Technology (https://www.ctc.uaf.edu/programs/welding-materials-technology/)
907-455-2800

Programs

Occupational Endorsement

- O.E.C., Welding, Entry-level (p. 201)

Women, Gender and Sexuality Studies

Minor

Women, gender and sexuality studies offer an interdisciplinary minor focusing on women, gender and sexuality in historical and contemporary experiences. In addition, the minor offers students the opportunity to study multiple issues related to gender, such as masculinities, femininities and sexualities. In addition to an introductory course and a theory course focusing on women's studies, the minor draws from a variety of other disciplines, including Alaska Native studies, anthropology, communication, education, English, foreign languages, history, journalism, justice, linguistics, literature, music, philosophy, political science, psychology, social work and sociology. The particular strength of the program lies in being interdisciplinary, with diverse course offerings and inquiry into gender and sexuality issues. The multiple voices and perspectives provide a broad understanding of issues related to women, gender and sexuality. The minor helps students prepare for a variety of personal and career pursuits, as gender issues and women are involved in every aspect of the human experience.

Minimum Requirements for Women, Gender and Sexuality Studies Minor: 15 credits

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College of Liberal Arts
Department of Women, Gender and Sexuality Studies (https://www.uaf.edu/women/)
907-474-6249

Programs

Minor

- Minor, Women, Gender and Sexuality Studies (p. 381)

Workforce Development

Occupational Endorsements

O.E.C., BASIC CARPENTRY

The occupational endorsement in basic carpentry is a starting point for both a career in the construction industry and pursuing a certificate and degree in construction trades technology. Training consists of basic construction safety, introduction to hand and power tools, construction mathematics, floor systems, roof framing, and window and exterior door installation. Students develop a basic understanding of how to communicate, understand, anticipate and complete the work on a construction job site. Applicants must be 16 years old to be admitted.

Minimum Requirements for Basic Carpentry Occupational Endorsement: 14.5 credits

Learn more about the occupational endorsement in basic carpentry (https://www.uaf.edu/academics/programs/occupational-endorsements/basic-carpentry.php), including an overview of the program, career opportunities and more.

O.E.C., CONTENT CREATION

The occupational endorsement in content creation provides education and training to prepare students to enter the online content creation space. Training will emphasize skills needed to develop an online presence, business and self-employment, personal finance, basic computer and peripheral support, troubleshooting, and managing groups of people. Students will be equipped with skill sets enabling them to enter into various digital content creation platforms such as streaming, vlogging and other social media sites with the preparation and principles to run their accounts as an effective business.

Minimum Requirements for Content Creation Occupational Endorsement: 16 credits

Learn more about the occupational endorsement in content creation (https://www.uaf.edu/academics/programs/occupational-endorsements/content-creation.php), including an overview of the program, career opportunities and more.

O.E.C., FACILITY MAINTENANCE

The facility maintenance program trains participants in dealing with challenges unique to rural Alaska structures. Training consists of identifying, troubleshooting and customizing solutions to a building or home, learning the importance of working with community advocates, tracking and analyzing past maintenance trends, and developing strategies for future maintenance needs.

Minimum Requirements for Facility Maintenance Occupational Endorsement: 18 credits

Learn more about the occupational endorsement in facility maintenance (https://www.uaf.edu/academics/programs/occupational-endorsements/facility-maintenance.php), including an overview of the program, career opportunities and more.

O.E.C., WILDLAND FIRE SCIENCE

The wildland fire science occupational endorsement provides students with the knowledge and skills to perform at the first level of wildland fire management. This includes managing a squad on a wildland fire crew, correct methods of operation for wildland fire chainsaws and pumps, and working around fire helicopters and aircraft. Completion of this program can lead to employment in the field, provide a foundation for wildland fire management, including in- and out-of-state wildland fire assignments, and act as a stepping stone to the Associate of Applied Science degree in wildland fire control. Completion of the wildland fire science occupational endorsement will create a well-rounded entry-level firefighter capable of filling positions on wildland fires. Applicants must be at least 18 years old to be admitted.

Minimum Requirements for Wildland Fire Science Occupational Endorsement: 11 credits

Learn more about the occupational endorsement in wildland fire science (https://www.uaf.edu/academics/programs/occupational-endorsements/wildland-fire-science.php), including an overview of the program, career opportunities and more.

College of Rural and Community Development
Workforce Development Department (https://www.uaf.edu/rural/academics/departments/)
907-474-7143

Programs

Occupational Endorsements

PROGRAMS BY DEGREE TYPE

Academic Programs by Degree Type

Academic programs can be browsed by degree type:

Occupational Endorsements

How to Earn an Occupational Endorsement

Occupational endorsement programs are designed to give students occupational training in a specific field. These programs are 9-29 credit hours. Credits completed for the occupational endorsement may be applied to other undergraduate degree programs where applicable.

Students must submit the OE completion form before the end of the term that requirements are being finished. For spring completion May 1, summer completion Aug. 1 and fall completion on Dec. 1. Forms submitted after the last day of the semester are applied to the following term. The endorsement will be posted to the official transcript upon successfully completing all the requirements. The department issues a certificate of completion for their Occupational Endorsement.

How to Earn an Occupational Endorsement

To earn an occupational endorsement submit a free application for admission. More details about the application process are available on the Admission to OEC page.

There are three sets of requirements to complete the endorsement:

- general university requirements, (p. 190)
- occupational endorsement requirements (p. 190) and
- program (major) requirements (p. 191).

These requirements are all described in this section of the catalog. Requirements for each program major are found in the Occupational Endorsement Programs section.

General University Requirements for Occupational Endorsements

Occupational endorsements require at least 9 semester credits at the 100 level or above. A minimum of a 2.0 cumulative GPA is required in all work in the occupational endorsement. In addition, students must earn a minimum C- grade in courses required for the occupational endorsement. Some programs may require higher GPAs for major coursework.

Unless otherwise specified by the appropriate academic unit, a course may be taken more than once toward fulfilling endorsement requirements. However, credit hours for such courses count only once toward the total credits required for the endorsement.

Students seeking an occupational endorsement do not apply for graduation. Certifying students have met all major requirements is the responsibility of the department faculty, who will notify the Office of the Registrar.

If a student wants to use correspondence study credits from a school other than UAF to satisfy degree requirements, they must have the approval of those courses by the dean of the school or college from which they will graduate; otherwise, they take the risk the courses will not be accepted.

RESIDENCE CREDIT

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit.

Transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered residence credit. None of these types of credit can be applied to UAF residency requirements.

RESIDENCY REQUIREMENT

Most universities have residency requirements that call for a certain number of credits toward a degree to be earned at the degree-granting school. At UAF, the residency requirement for occupational endorsements is 30 percent of the program.

Occupational Endorsement Requirements

In order to earn an occupational endorsement, students must be admitted to the program and complete the requirements listed in the program section of this chapter. A minimum of 9 credits is required to earn an occupational endorsement. At least 30 percent of the program must be completed in residence at UAF. Additional residency credit requirements may be established to meet discipline or accreditation standards.

You must have a cumulative GPA of at least 2.0 in all coursework. Some occupational endorsement programs require higher GPAs.

Students may elect to complete their program under the requirements of the catalog in effect at the time of formal acceptance to an occupational endorsement program or the catalog in effect at the time of completion. Courses for occupational endorsement must be completed within five years of formal acceptance into the program. Admission will expire if requirements are not completed in five years. The student must reapply for admission and meet the admission and program requirements in effect at the time of formal acceptance. Program requirements may require completion in less than five years.

Students may earn more than one occupational endorsement by completing all requirements for each additional program. Additional occupational endorsements must differ by 3 or more credits.

Occupational Endorsement Programs

Administrative Assistant O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 104)

Minimum Requirements for Administrative Assistant Occupational Endorsement: 16 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Administrative Assistant Program Requirements		
Complete the following:		
ABUS F102A	Keyboarding: Touch Typing	1
or ABUS F102C	Keyboarding: Document Formatting	
ABUS F154	Human Relations	3
ABUS F170	Business English	3
or ABUS F271	Business Communications	
ABUS F182	Office Procedures	3
Complete 6 credits from the following:		6
ABUS F183	Professional Skills for Job Hunt	
ABUS F199	Practicum in Applied Business	
CIOS F130	Word Processing	
CIOS F135	Microcomputer Spreadsheets	
CIOS F150	Computer Business Applications	
Total Credits		**16**

Advanced Emergency Medical Technician O.E.C.

Admission Requirements

Complete the following admission requirements:

- 18 years of age or older
- State- or federal-issued ID
- Documentation of health insurance
- Documentation of the following immunizations:
  - Hepatitis B
  - Measles - must have two doses of vaccine or a positive titer
  - Mumps – must have two doses of vaccine or a positive titer
  - Rubella – must have one dose of vaccine or a positive titer
  - Two-step - Tuberculosis skin test (current within one year of AEMT clinical)
  - Varicella – must have two doses of vaccine or a positive titer
  - Influenza – Must show proof of vaccine to perform clinicals during the flu season

Program Requirements

< Back to Department (p. 139)

Minimum Requirements for Advanced Emergency Medical Technician Occupational Endorsement: 16 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Advanced Emergency Medical Technician Program Requirements		
Complete the following:		
EMS F170	EMT: Emergency Medical Technician I	6
EMS F270	Advanced Emergency Medical Technician	10
Total Credits		**16**

Basic Carpentry O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 188)

Minimum Requirements for Basic Carpentry Occupational Endorsement: 14.5 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Basic Carpentry Program Requirements		
Complete the following:		
CTT F100	Construction Technology Core	3
or CTT F101 and CTT F102 and CTT F103	Basic Construction Safety and Introduction to Hand and Power Tools and Introduction to Blueprint Reading	
CTT F106	Construction Measuring	3
CTT F110	Residential Carpentry I	8.5
or CTT F111 and CTT F112 and CTT F113 and CTT F114	Materials and Tools Used in the Trade and Floor Systems, Wall and Ceiling Framing and Roof Framing, Windows and Exterior Doors and Introduction to Concrete Materials and Forms	
Total Credits		**14.5**

Bookkeeping Technician O.E.C.

Admission Requirements

Complete the following admissions requirement:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 104)

Minimum Requirements for Bookkeeping Technician Occupational Endorsement: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Bookkeeping Technician Program Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F141	Payroll Accounting	3
ABUS F201	Principles of Accounting II	3
ABUS F203	Accounting Capstone	3
ABUS F220	Microcomputer Accounting: QuickBooks	3
Total Credits		**15**

Computer Support Specialist O.E.C.

Program Requirements

< Back to Department (p. 123)

Minimum Requirements for Computer Support Specialist Occupational Endorsement: 16 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Computer Support Specialist Program Requirements		
Complete the following:		
CITS F203	Information Technology Support Fundamentals	4
CITS F204	Introduction to Computer Networks	3
CITS F212	Server Operating Systems	3
CITS F261	Computer and Network Security	3
CITS F281	Professional Practices in IT	3
Total Credits		**16**

Road Maps

< Back to Department (p. 123)

Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
CITS F203	Information Technology Support Fundamentals	4
CITS F204	Introduction to Computer Networks	3
	Credits	**7**
Spring		
CITS F212	Server Operating Systems	3
CITS F261	Computer and Network Security	3
CITS F281	Professional Practices in IT	3
	Credits	**9**
	Total Credits	**16**

Program Learning Outcomes

< Back to Department (p. 123)

Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Students will develop the ability to analyze, troubleshoot, and solve technical problems related to computer technology and technical skills related to securely configuring, maintaining, and supporting PC, mobile, and IoT device operating systems and hardware.
- Students will develop the ability to analyze, troubleshoot and solve technical problems related to computer and network technology, and technical skills related to securely installing, managing, and supporting devices, protocols, and services within a network infrastructure will be developed.
- Students will develop the ability to analyze, troubleshoot and solve technical problems related to computer and server operating systems, and technical skills related to securely deploying, administering, and troubleshooting server operating systems and infrastructure services.
- Students will develop professional skills essential to meeting the diverse technical support needs of non-technical computer users

Content Creation O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 188)

Minimum Requirements for Content Creation Occupational Endorsement: 16 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Content Creation Program Requirements		
Complete the following:		
ABUS F189	The Business of Gaming and Content Creation	3
BA F151X	Introduction to Business	3
CITS F203	Information Technology Support Fundamentals	4
COM F121X	Introduction to Interpersonal Communication	3
FLPA F280	Video Storytelling: Content Creation	3
Total Credits		**16**

Cybersecurity Foundations O.E.C.

Program Requirements

< Back to Department (p. 123)

Minimum Requirements for Cybersecurity Foundations Occupational Endorsement: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Cybersecurity Foundations Program Requirements		
Complete the following:		
CITS F204	Introduction to Computer Networks	3
CITS F205	Introduction to Coding and Programming	3
CITS F212	Server Operating Systems	3
CITS F261	Computer and Network Security	3
CITS F262	Cybersecurity Defense and Countermeasures	3
CITS F263	Network Security Penetration Testing	3
Total Credits		**18**

Road Maps

< Back to Department (p. 123)

Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
CITS F204	Introduction to Computer Networks	3
CITS F205	Introduction to Coding and Programming	3
CITS F261	Computer and Network Security	3
	Credits	**9**
Spring		
CITS F212	Server Operating Systems	3

CITS F262	Cybersecurity Defense and Countermeasures	3
CITS F263	Network Security Penetration Testing	3
	Credits	**9**
	Total Credits	**18**

Program Learning Outcomes

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Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Demonstrate knowledge and skills related to installing, configuring, securing, and troubleshooting the devices, protocols, and services within a network infrastructure.
- Demonstrate knowledge and skills related to installing, configuring, maintaining, and securing server operating systems, including how to configure and administer network accounts, resources, and common services deployed on server operating systems.
- Demonstrate an ability to interpret and write basic programming constructs such as if-then statements, loop control, functions, arrays, simple input-output, searching, and recursion.
- Demonstrate advanced cybersecurity knowledge and skills related to analyzing internal and external security threats, technical vulnerability testing and examination techniques, developing security policies, and implementing security measures to protect information within an enterprise.

Drafting Technology O.E.C.

Admission Requirements

Complete the following admission requirements:

- Students must have completed the university application process.

Program Requirements

< Back to Department (p. 129)

Minimum Requirements for Drafting Technology Occupational Endorsement: 18 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Drafting Technology Program Requirements		
Complete the following:		
CM F102	Methods of Building Construction	3
DRT F140	Architectural Drafting	3
DRT F170	Beginning CAD	3
DRT F210	Intermediate CAD	3
Complete two of the following:		6
CM F123	Codes and Standards	
DRT F145	Structural Drafting	
DRT F150	Civil Drafting	
DRT F155	Mechanical and Electrical Drafting	
DSGN F130	Modeling, Assembly & 3D Animation: Autodesk Inventor	
Total Credits		**18**

Ethnobotany O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 121)

Minimum Requirements for Ethnobotany Occupational Endorsement: 17 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Ethnobotany Program Requirements		
Complete the following:		
BIOL F190	Introduction to Alaska Flora	2
EBOT F100	Introduction to Ethnobotany	3
EBOT F200	Seminar in Ethnobotany	2
EBOT F210	Ethical Wildcrafting	1
EBOT F220	Research Methods for Ethnobotanists	2
EBOT F250	Applied Ethnobotany Fall	2
EBOT F251	Applied Ethnobotany Spring	2
EBOT/ANTH F336	Ethnomycology [1]	3
Total Credits		**17**

[1] Or advisor-approved elective(s)

Facility Maintenance O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 188)

Minimum Requirements for Facility Maintenance Occupational Endorsement: 18 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Facility Maintenance Program Requirements		
Complete the following:		
CTT F100	Construction Technology Core	3
or CTT F101 and CTT F102 and CTT F103	Basic Construction Safety and Introduction to Hand and Power Tools and Introduction to Blueprint Reading	
CTT F106	Construction Measuring [1]	3
CTT F131	Interior Repairs	1
CTT F132	Flooring Installation	1
CTT F133	Cabinet Installation with Countertops	1
CTT F135	Boiler Troubleshooting and Burner Repair	2
CTT F137	Appliance Troubleshooting and Repair	2
CTT F138	Residential Heating Controls	2
CTT F141	Door and Window Installation	1
CTT F153	Plumbing Piping and Tools	2
Total Credits		**18**

[1] Or another advisor-approved F100-level mathematics course.

Financial Services Representative O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 104)

Minimum Requirements for Financial Services Representative Occupational Endorsement: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the general university requirements. (p. 190)		
Financial Services Representative Program Requirements		
Complete the following:		
ABUS F154	Human Relations	3
or ABUS F175	Customer Service	
ABUS F155	Business Math (or MATH F100-level or above)	3
ABUS F233	Financial Management	3
Complete 6 credits from the following:		6
ABUS F160	Principles of Banking	
ABUS F161	Personal and Business Finance	
ABUS F234	Introduction to Investing	
Total Credits		**15**

High Latitude Range Management O.E.C.

Admission Requirements

Complete the following admission requirements:

- Admission is open to students with a high school diploma or GED.

Program Requirements

< Back to Department (p. 121)

Minimum Requirements for High Latitude Range Management Occupational Endorsement: 13 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
High Latitude Range Management Program Requirements		
Complete the following:		
HLRM F120	History of Domesticated Alaskan Ungulates	1
HLRM F130	Research Field Logistics	2
HLRM F140	High Latitude Range Management	2
HLRM F150	Alaskan Ungulate Husbandry	2
HLRM F160	Meat Production	2
HLRM F170	Health Issues in Domesticated Ungulates	2
HLRM F201	Field Techniques for Range Management	2
Total Credits		**13**

Homeland Security O.E.C.

Program Requirements

< Back to Department (p. 149)

Minimum Requirements for Homeland Security Occupational Endorsement: 12 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Homeland Security Program Requirements		
Complete the following:		
HSEM F120	Introduction to Emergency Management	3
or HSEM F121	Introduction to Homeland Security	
Complete at least 9 credits from the following:		9
HSEM F223	Terrorism: A Global Threat	
HSEM F225	Intelligence Analysis and Security Management	
HSEM F227	Transportation and Border Security	
HSEM F231	The Threat of Weapons of Mass Destruction	
HSEM F233	Critical Infrastructure Protection	
Total Credits		**12**

Law Enforcement Academy O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 21 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 157)

Minimum Requirements for Law Enforcement Occupational Endorsement: 17 credits

LAW ENFORCEMENT CERTIFICATION BY THE ALASKA POLICE STANDARDS COUNCIL

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Law Enforcement Program Requirements		
Complete the following:		
LE F110	Cultural and Behavioral Strategies for Law Enforcement Officers	1
LE F115	Enforcement Skills for Law Enforcement Officers	4
LE F120	Law Enforcement Operations	4
LE F125	Basic Police Procedures	4
LE F205	Criminal Law for Police	4
Total Credits		**17**

Medical Billing O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Medical Billing Occupational Endorsement: 12 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Medical Billing Program Requirements		
Complete the following:		
HLTH F100	Medical Terminology	3
HLTH F130	Medical Office Technology	3
HLTH F236	Outpatient Health Care Reimbursement	3
HLTH F237	Inpatient Health Care Reimbursement	3
Total Credits		**12**

Medical Coding O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Medical Coding Occupational Endorsement: 15 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Medical Coding Program Requirements		
Complete the following:		
HLTH F100	Medical Terminology	3
HLTH F130	Medical Office Technology	3
HLTH F208	Human Diseases	3
HLTH F238	Medical Coding I [1]	3
HLTH F239	Medical Coding II [1]	3
Total Credits		**15**

[1] Must complete HLTH F238 and HLTH F239 with a B grade or better.

Medical Office Reception O.E.C.

Admission Requirements

Complete the following admission requirements:

- Prerequisites for the program include a high school diploma or GED.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Medical Office Reception Occupational Endorsement: 13 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Medical Office Reception Program Requirements		
Complete the following:		
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F118	Medical Law and Ethics	2
HLTH F126	Administrative Procedures for the Healthcare Worker	3
HLTH F130	Medical Office Technology	3
Total Credits		**13**

Medical Scribe O.E.C.

Admission Requirements

Prerequisites:

- High school graduation or GED; ALEKS placement into HLTH F116; Accuplacer placement into or completion of WRTG F110; or permission of instructor.
- Student must be in good physical condition and have documentation of the following immunizations: two varicella, two MMR, three Hepatitis B vaccines and a two-step PPD within previous 12 months or titers to prove immunity to above diseases.

Complete the following admission requirements:

- Be at least 18 years old by the first day of the semester in which you are admitted.
- Students should complete the UAF application process.
- Complete FAFSA for financial aid, if needed.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Medical Scribe Occupational Endorsement: 17 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Medical Scribe Program Requirements		
Complete the following:		
ABUS F102A	Keyboarding: Touch Typing	1
ABUS F102B	Keyboarding: Skill Building	1
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F114	Fundamentals of Anatomy and Physiology	4
HLTH F118	Medical Law and Ethics	2
HLTH F122	First Aid and CPR for the Health Care Provider	0
HLTH F124	Introduction to Medical Scribe Specialist	2
HLTH F260	Medical Scribe Specialist Practicum	2
Total Credits		**17**

Note: See your advisor if you are not sure which catalog year to use.

Mining Mill Operations O.E.C.

Admission Requirements

Complete the following admission requirements:

- This program is open to those who have a high school diploma or GED.

Program Requirements

< Back to Department (p. 172)

Minimum Requirements for Mining Mill Operations Occupational Endorsement: 17 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Mining Mill Operations Program Requirements		
Complete the following:		
AMIT F129	Surface Mine Safety	1
AMIT F130	Surface Mining Operations	3
AMIT F135	Introduction to Mining Systems and Equipment	4
AMIT F145	Introduction to Mineral Beneficiation	3
PRT F110	Introduction to Occupational Safety, Health and Environmental Awareness	3
PRT F140	Industrial Process Instrumentation I	3
Total Credits		**17**

Nanny Caregiving O.E.C.

Program Requirements

< Back to Department (p. 131)

Minimum Requirements for Nanny Caregiving Occupational Endorsement: 20 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Nanny Caregiving Program Requirements		
Complete the following:		
ECE F101	Early Childhood Professionalism	3
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	3
ECE F107X	Child Development II: The Preschool and Primary Years	3
ECE F110	Safe, Healthy Learning Environments	3
ECE F119	Curriculum I: Principles and Practices	3
ECE F130	Culture, Learning and the Young Child	2
ECE F140	Positive Social and Emotional Development	3
Total Credits		**20**

Nurse Aide O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Nurse Aide Occupational Endorsement: 9 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Nurse Aide Program Requirements		
Complete the following:		
HLTH F107	Nurse Aide Training	9
or HLTH F111 and HLTH F113	Personal Care Attendant Training and Personal Care Attendant to Nursing Assistant Bridge	
Total Credits		**9**

Paramedic Academy Specialized Training

Admission Requirements

Complete the following admission requirements:

- Be at least 18 years old by the first day of the semester in which you are admitted;
- Complete BIOL classes to match paramedic A.A.S.

Information for the application packets for the paramedic academy may be found on the EMS / Paramedicine (https://www.ctc.uaf.edu/programs/ems-paramedicine/) website. Applications will be reviewed by the program director and medical director. In keeping with certification requirements, class size is limited to 20 students. Applicants must have a current EMT basic certification (or have completed EMS F170), and have completed HLTH F114.

Specialized Training Requirements

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Code	Title	Credits
Paramedic Academy Specialized Training Requirements		
Complete the following:		
EMS F181	Clinical Rotation I	4
EMS F183	Clinical Rotation II	4
EMS F280	Paramedicine I	12
EMS F282	Paramedicine II	12
EMS F283	Paramedic Internship	12
Total Credits		**44**

Rural Surface Water Quality Testing O.E.C.

Admission Requirements

Complete the following admission requirements:

- Admission is open to students with a high school diploma or GED.

Program Requirements

< Back to Department (p. 121)

Minimum Requirements for Rural Surface Water Quality Testing Occupational Endorsement: 10 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Rural Surface Water Quality Testing Program Requirements		
Complete the following:		
ABUS F183	Professional Skills for Job Hunt	1-3
CIOS F150	Computer Business Applications	1-3
ENVI F101X	Introduction to Environmental Science	4
ENVI F110	Introduction to Water Quality I: Measurement	1
ENVI F111	Introduction to Water Quality II: Monitoring and Assessment	1
ENVI F112	Introduction to Water Quality III: Data Quality Assurance	1
ENVI F160	Internship in Environmental Studies	1-2
Total Credits		**10-15**

Rural Waste Management and Spill Response O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 121)

Minimum Requirements for Rural Waste Management Spill Response Occupational Endorsement: 10 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Rural Waste Management Spill Response Program Requirements		
Complete the following:		
ABUS F183	Professional Skills for Job Hunt	1
ENVI F110	Introduction to Water Quality I: Measurement	1
ENVI F115	Rural Solid and Hazardous Waste Management	1
ENVI F116	Rural Alaska Landfill Operator	1
ENVI F117	Community Spill Response	1
FIRE F110	Introduction to Hazardous Waste Operations and Emergency Response	3
Complete 2 credits from the following:		2
CIOS F135	Microcomputer Spreadsheets	
CTT F130	Introduction to Facility Maintenance	
ENVI F130	Introduction to the National Environmental Policy Act	
ENVI F160	Internship in Environmental Studies	
ENVI F260	Field Techniques for Environmental Technicians	
HLTH F122	First Aid and CPR for the Health Care Provider	
RD F250	Grant Writing for Community Development	
Advisor-approved elective		
Total Credits		**10**

Supervision and Personnel Management O.E.C.

Admission Requirements

This program is open to those who have completed the university application process.

Program Requirements

< Back to Department (p. 104)

Minimum Requirements for Supervision and Personnel Management Occupational Endorsement: 15 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the general university requirements. (p. 190)		
Supervision and Personnel Management Program Requirements		
Complete the following:		
ABUS F154	Human Relations	3
ABUS F179	Fundamentals of Supervision	3
ABUS F231	Introduction to Personnel [1]	3
ABUS F232	Contemporary Management Issues	3
or ABUS F277	Dynamics of Leadership	
ABUS F242	Employment Law	3
Total Credits		**15**

[1] ABUS F231 is a variable credit course. Students must take a total of 3 credits.

Sustainable Energy O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 121)

Minimum Requirements for Sustainable Energy Occupational Endorsement: 12 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Sustainable Energy Program Requirements		
Complete the following:		
ENVI F220	Introduction to Sustainable Energy	3
Complete one of the following:		3
CTT F106	Construction Measuring	
MATH F105	Intermediate Algebra	
TTCH F131	Mathematics for the Trades	
Electives		
Complete 6 credits from the following:		6
CT S201 (https://catalog.uas.alaska.edu/search/?search=CT+S201)	Cold Climate Construction [1]	
CTT F100	Construction Technology Core	
ENVI F120	Home Energy Basics	
ENVI F121	Building Ventilation and Energy	
ENVI F122	Energy Efficient Building Design and Simulation	
ENVI F170	Solar Energy Basics	
ENVI F173	Basics of Small Wind Systems	
ENVI F174	Basics of Heat Pump Systems	
ENVI F175	Introduction to Biomass Energy Systems	
ENVI F180	Alaska Utility Lecture Series	
PHYS F102X	Energy and Society	
ENVI F101X	Introduction to Environmental Science	
RE A110 (https://catalog.uaa.alaska.edu/search/?search=RE+A110)	Introduction to Solar Photovoltaic Systems [2]	
RE A130 (https://catalog.uaa.alaska.edu/search/?search=RE+A130)	Introduction to Small Wind Systems [2]	
RE A150 (https://catalog.uaa.alaska.edu/search/?search=RE+A150)	Basics of Ground-Source Heat Pump Systems [2]	
or other, advisor-approved electives		
CTT F160	Photovoltaic Systems I	
CTT F161	Photovoltaic Systems II	
CTT F250	Current Topics in Construction Trades	
Total Credits		**12**

[1] CT S201 is offered by the University of Alaska Southeast.

[2] RE A110, RE A130 and RE A150 are offered by the University of Alaska Anchorage.

Tribal Justice O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 184)

Minimum Requirements for Tribal Justice Occupational Endorsement: 9 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Tribal Justice Program Requirements		
Complete the following:		
TG F110	Tribal Court Development for Alaska Tribes	1
TG F111	Children's Topics in Tribal Justice	1
TG F112	Federal Indian Law for Alaska Tribes	1
TG F113	Tribal Code Development	1
TG F114	Tribal Justice Responses to Community and Domestic Violence	1
TG F115	Tribal Court Administration	1
TG F116	Juvenile Justice in Tribal Court	1
TG F117	Tribal Court Enforcement of Decisions	1
TG F118	Tribal Community and Restorative Justice	1
Total Credits		**9**

Welding, Entry-level O.E.C.

Admission Requirements

Complete the following admissions requirements:

- Be at least 16 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 186)

Minimum Requirements for Entry-level Welding Occupational Endorsement: 24 credits

Students must earn a C or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Entry-level Welding Program Requirements		
Complete the following:		
TTCH F131	Mathematics for the Trades	3
WMT F103	Welding I	3
WMT F105	Welding II	3
WMT F130	Shielded Metal Arc Welding	3
WMT F140	Metal Fabrication	3
WMT F150	Gas Tungsten Arc Welding	3
WMT F160	Gas Metal Arc Welding	3
WMT F290	Welding Proficiency Maintenance	3
Total Credits		**24**

Wildland Fire Science O.E.C.

Admission Requirements

Complete the following admission requirements:

- Be at least 18 years old by the first day of the semester in which you are admitted.

Program Requirements

< Back to Department (p. 188)

Minimum Requirements for Wildland Fire Science Occupational Endorsement: 11 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		
Complete the occupational endorsement requirements. (p. 190)		
Wildland Fire Science Program Requirements		
Complete the following:		
WFS F151	Wildland Firefighter I	3
WFS F152	Wildland Firefighter II	3
WFS F153	Wildland Firefighter III	2
WFS F157	Wildland Air Operations	3
Total Credits		**11**

Yup'ik Language Competency O.E.C.

Admission Requirements

Complete the following admission requirements:

- Have at least basic conversational Yup'ik skills based on the UAF Yup'ik proficiency test or Yup'ik WorldSpeak assessment.

Program Requirements

< Back to Department (p. 98)

Minimum Requirements for Yup'ik Language Competency Occupational Endorsement: 9 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 190)		
Occupational Endorsement Requirements		

Complete the occupational endorsement requirements. (p. 190)		
Yup'ik Language Competency Program Requirements		
Complete the following:		
YUP F130	Beginning Yup'ik Grammar	3
YUP F208	Yup'ik Composition	3
YUP F240	Introduction to Reading and Writing Yup'ik	3
Total Credits		**9**

Certificates

How to Earn a Certificate

Certificate programs are for students preparing for entry-level employment or upgrading in a specific occupation.

To earn a UAF certificate, three sets of requirements must be satisfied: general university requirements; certificate requirements; and program (major) requirements. These requirements are all described in this section of the catalog. Requirements for each program major are found in the Certificate Programs (p. 206) section.

If a degree program is delivered collaboratively within the UA system (e.g., information technology specialist, early childhood education, human services, rural human services), then the credits earned from each UA institution will be counted toward fulfillment of the degree requirements and fulfillment of the minimum institutional residency requirements. Institutional residency requirements are the minimum number of credits that must be earned from the campus where the degree is earned.

CATALOG YEAR AND TIME LIMITS

UAF defines catalog year as beginning in the fall and ending at the conclusion of the summer semester. For example, the 2023-2024 catalog year includes fall 2023, spring 2024 and summer 2024.

The certificate must be completed within five years from the term admitted. A student may change their catalog year if they were an enrolled student in a degree-seeking program during the academic year selected. If a student is not enrolled for a semester or more, or if enrolled through the non-degree student registration process, a student isn't considered enrolled as a degree student during that time.

MAJORS

A certificate major is declared when upon admittance.

Students enrolled in a certificate program who want to declare a bachelor's degree major must apply for admission to a degree program following the standard admission process for bachelor's degree programs. For more information on admission requirements visit How to Earn a Bachelor's Degree (p. 252).

- **Changing a Major**
  Undergraduate students may change majors by completing a change of major form available from the Office of the Registrar forms page (https://www.uaf.edu/reg/forms/). A change of major becomes effective the semester it is submitted. Students who wish to change majors from one level to another level (e.g., from a certificate to a bachelor's degree) must apply for admission to the degree program following the standard admission process.

CONCENTRATIONS

An area of emphasis, including the major core courses within a student's certificate program, is termed a concentration. Some programs at UAF require a concentration, others do not. A student may only earn one certificate or degree in a specific discipline once. Using different concentrations within a certificate or degree program to count as different degrees is not allowed.

SECOND CERTIFICATE

To receive an additional certificate, the requirements for each certificate must be completed. It is not required to complete any additional credits beyond the requirements for each certificate.

EXCEPTIONS TO CERTIFICATE REQUIREMENTS

Occasionally an undergraduate student may request an exception to an academic requirement, policy or regulation. Requests for an academic exception must be approved by petition. If a student submits a petition on the basis of a disability, the coordinator of Disability Services will be consulted. Undergraduate petition forms are available on the Office of the Registrar's forms page (https://www.uaf.edu/reg/forms/). Forms must be returned to the Office of the Registrar with the required approval signatures. The Office of the Registrar will note the completed petition in DegreeWorks once the appropriate person or committee has made a decision. Academic petitions fall into three categories, and each involves different processes:

- **General Education Requirement Petitions**
  If a petition deals with baccalaureate general education requirements or the Associate of Arts or Science library science requirement, the advisor and the head of the department of the academic area involved must grant approval. Submit the signed petition to the Office of the Registrar. It will then be forwarded to the chair of the Faculty Senate General Education Requirement Committee for consideration.
- **Major or Minor Degree Requirement Petitions**
  If the goal is to waive or substitute courses within a major or a minor's requirements, approval signatures from the advisor and the department or program head of the major or minor area. Submit the signed petition to the Office of the Registrar.
- **Petitions for Other Requirements**
  If the petition deals with general university and/or specific requirements for the certificate, degree or other academic policies, approval is needed from the advisor and the dean or director of the college or school in which the major is located. Submit the signed petition to the Office of the Registrar. It will then be forwarded to the provost for consideration.

RESIDENCE CREDIT

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit.

Transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered residence credit. None of these types of credit can be applied to UAF residency requirements.

UAF residence credit takes precedence over any nonresident credit. For example, if a student has AP credit for a course, but takes the same courses at UAF, the AP credit will be excluded and the UAF course will be applied to the degree requirements.

RESIDENCY REQUIREMENT

Most universities have residency requirements that call for a certain number of credits toward a certificate or degree to be earned at the degree-granting school. At UAF, the residency requirement for certificates is 15 resident credits.

ALASKA NATIVE-THEMED REQUIREMENTS

The Alaska Native-themed requirement is a degree requirement for all baccalaureate, associate of arts and associate of science degrees. The requirement may be met by taking a designated Alaska Native-themed course anywhere in the student's course of study, including general education requirements, major requirements, minor requirements and electives.

GRADUATION

- **Responsibility**
  It is the student's responsibility to meet all requirements for graduation. Students are encouraged to work with their advisor and use DegreeWorks throughout their college career to ensure they are on track to graduate.
- **Application for Graduation**
  A formal application and non-refundable fee for graduation are required to be filed with the Office of the Registrar. Application prior to the semester planned for graduation is encouraged. If the application is filed by the published deadline the graduation application fee is $50. Late application for graduation is available by the published late graduation deadline for the semester. The fee for a late application is $80. Applications for graduation filed after the late deadline are processed for graduation the following semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and repay the fee.
- **Diplomas and Commencement**
  UAF issues diplomas to graduates three times a year: in September following summer sessions, in February at the end of the fall semester and in June at the end of the spring semester. Students who complete degree requirements for UA Board of Regents-approved academic programs during the academic year are invited to participate in the annual commencement ceremony at the end of the spring semester.
  Names of students receiving degrees/certificates appear in the commencement program and are released to the media unless a written request to withhold is submitted to the Office of the Registrar. Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

General University Requirements for Certificates

At least 30 semester credits for a certificate, including transfer credits, must be earned at the 100-level or above. At least 15 semester credits applicable to any certificate must be earned at UAF. A minimum cumulative GPA of 2.0 is required in all work as well as in the major field. A C- grade or higher must be earned in all courses required for a degree unless otherwise specified by the program major (major, minor, general education requirements and degree requirements). Some majors require higher GPAs for major coursework.

Unless otherwise specified by the appropriate academic unit, a course may be taken more than once toward completing a degree, certificate or major requirements. However, credit hours for such courses count only once toward the total credits required for the degree or certificate.

	Certificate	Associate Degree
Minimum number of credits required	30 credits	60 credits
Credits that must be earned at UAF (residence credit)	15 credits	15 credits
Grade point average required	2.0 cumulative and in major	2.0 cumulative and in major
Minimum grades required for major	No grade lower than C- in courses required for major. Some departments have higher requirements	No grade lower than C- in courses required for major. Some departments have higher requirements
Catalog year that can be used to meet requirements	May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; five-year limit on catalog year	May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; five-year limit on catalog year
Second degree requirements		Only one A.A. degree may be earned; 12 credits beyond first A.A.S. degree and all requirements for the second degree must be met

Certificate Requirements

Certificate programs vary in length; however, a student can usually complete them in one year. Certificates are awarded in specific occupational fields with an emphasis on entering the job market. These certificates can serve as the basis for additional education and are the first step toward an Associate of Applied Science degree. For specific major requirements, refer to the Certificate Programs (p. 206) section.

If a student's degree program is delivered collaboratively within the UA system, credits earned from each UA institution will be counted toward the fulfillment of the degree requirements and fulfillment of the minimum institutional residency requirements.

A student may enroll in any course for which they are eligible. To earn a certificate, a student must formally be admitted to a certificate program and must earn at least 30 credits, including transfer credit. Fifteen semester hours must be residence credits.

A student must have a cumulative GPA of at least 2.0 in the major and overall. A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major. Some majors require higher GPAs for major coursework.

Programs of study for which certificates are granted must contain a recognizable body of instruction in the program-related areas of communication, computation and human relations. Where indicated the communication, computation and human relations requirements may be embedded within the program curriculum or taught in blocks of specialized instruction. Each approach, however, will have clearly identified content that is pertinent to the general program of study.

Note: Students planning to go on to an associate's or bachelor's degree need to work closely with their advisors and are encouraged to select courses meeting general education requirements and courses designated within majors and minors. Courses with an X designator count toward the baccalaureate general education requirements.

CERTIFICATE REQUIREMENTS

Code	Title	Credits
Communication		**2-3**
Complete one of the following:		
ABUS F170	Business English	
ABUS F271	Business Communications	
COM F121X	Introduction to Interpersonal Communication	
COM F131X	Fundamentals of Oral Communication: Group Context	
COM F141X	Fundamentals of Oral Communication: Public Context	
DEVS F104	University Communications	
DEVS F105	Academic Reading for College	
WRTG F111X	Writing Across Contexts	
WRTG F211X	Writing and the Humanities	
WRTG F212X	Writing and the Professions	
WRTG F213X	Writing and the Sciences	
WRTG F214X	Arguing Across Contexts	
Other program-approved discipline-based communication course or discipline-based courses with embedded communication content.		
Computation		**2-3**
Complete one of the following:		
Any course at the F100-level or above in mathematical sciences (computer science, math or statistics).		
ABUS F155	Business Math	
ECE F117	Practical Math Skills	
HLTH F116	Mathematics in Health Care	
HUMS F117	Practical Math Skills	
MATH F105	Intermediate Algebra	
TTCH F131	Mathematics for the Trades	
Other program-approved discipline-based computation course or discipline-based courses with embedded computation content.		
Human Relations		**2-3**
Complete one of the following:		
ABUS F154	Human Relations	
ANL F287	Teaching Methods for Alaska Native Languages	
ANTH F100X	Individual, Society and Culture	
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	
ECE F107X	Child Development II: The Preschool and Primary Years	
ED/PSY F245	Child Development	
HLTH F106	Human Behavior in Health Care	
HUMS F120	Cultural Diversity in Human Services	
RHS F110 and RHS F115	Cross-cultural Bridging Skills and Issues of Personal Development	
SOC F101X	Introduction to Sociology	
Other program-approved discipline-based human relations or discipline-based courses with embedded human relations content.		
Major Specialty		
At least 21 hours of major specialty courses		21
Electives to Total		**30**

Certificate Programs

Accounting Technician Certificate

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Minimum Requirements for Accounting Technician Certificate: 30 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		8-9
As part of the certificate requirements, complete the following:		
Communication		
ABUS F170	Business English	
or ABUS F271	Business Communications	
or WRTG F111X	Writing Across Contexts	
Computation		
ABUS F155	Business Math (or MATH at the 100 level or above)	
Human Relations		
ABUS F154	Human Relations (or other UAF certificate-approved human relations course)	
Accounting Technician Program Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F141	Payroll Accounting	3
ABUS F201	Principles of Accounting II	3
or ABUS F235	Fund Accounting for Nonprofits	
ABUS F203	Accounting Capstone	3
ABUS F210	Income Tax	3
ABUS F220	Microcomputer Accounting: QuickBooks	3
BA F151X	Introduction to Business	3
Total Credits		**30**

Airframe and Powerplant Certificate

This is a one-year program, usually starting at the beginning of September. Entry at other times is allowed only with departmental approval. A personal background check and drug test will be required prior to acceptance into the airframe and powerplant, airframe or powerplant certificate programs.

Airframe Certificate Requirements

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Minimum Requirements for Airframe Certificate: 31 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Airframe Program Requirements		
Complete the following:		
AFPM F145	Basic Mathematics	1
AFPM F146	Basic Electricity	2
AFPM F147	Physics for Mechanics	0.5
AFPM F148	Aircraft Drawing	1
AFPM F149	Fluid Lines and Fittings	0.5
AFPM F150	Materials and Processes	2
AFPM F151	Cleaning and Corrosion Control	1
AFPM F152	Federal Aviation Regulations	1
AFPM F153	Weight and Balance	1
AFPM F154	Ground Operations and Servicing	0.5
Airframe Structures Requirements		
Complete the following:		
AFPM F261	Nonmetallic Structures	1
AFPM F262	Aircraft Coverings	1
AFPM F263	Aircraft Finishes	0.5
AFPM F264	Sheet Metal Structures	3
AFPM F265	Aircraft Welding	1.5
AFPM F266	Assembly and Rigging	1.5
AFPM F267	Airframe Inspections	0.5
AFPM F270	Airframe Testing	0.5
Airframe Systems and Components Requirements		
Complete the following:		
AFPM F230	Aircraft Electrical Systems	2.5
AFPM F253	Transport Category Aircraft	1
AFPM F254	Ice and Rain Control Systems	0.5
AFPM F256	Communications and Navigation Systems	0.5
AFPM F258	Cabin Atmosphere Control Systems	1
AFPM F259	Hydraulic and Pneumatic Systems	1.5
AFPM F260	Aircraft Landing Gear Systems	1.5
Combined Systems and Components Requirements		
Complete the following:		
AFPM F251	Fuel Systems	1.5
AFPM F255	Fire Protection Systems	0.5
AFPM F257	Instrument Systems	0.5
Total Credits		**31**

[1] As part of the certificate requirements, the communication, computation and human relations contents are embedded in the major required courses for this program.

Powerplant Certificate Requirements

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Minimum Requirements for Powerplant Certificate: 31 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Powerplant Program Requirements		
Complete the following:		
AFPM F145	Basic Mathematics	1
AFPM F146	Basic Electricity	2
AFPM F147	Physics for Mechanics	0.5
AFPM F148	Aircraft Drawing	1
AFPM F149	Fluid Lines and Fittings	0.5
AFPM F150	Materials and Processes	2
AFPM F151	Cleaning and Corrosion Control	1
AFPM F152	Federal Aviation Regulations	1
AFPM F153	Weight and Balance	1
AFPM F154	Ground Operations and Servicing	0.5
Powerplant Theory and Maintenance Requirements		
Complete the following:		
AFPM F235	Aircraft Reciprocating Engines	4.5
AFPM F240	Turbine Engines	2
AFPM F271	Powerplant Inspections	0.5
AFPM F272	Powerplant Testing	0.5
Powerplant and Systems Components Requirements		
Complete the following:		
AFPM F231	Powerplant Electrical Systems	1.5
AFPM F244	Lubricating Systems	1.5
AFPM F245	Ignition Systems	2
AFPM F246	Fuel Metering Systems	2
AFPM F248	Induction Systems	0.5
AFPM F249	Powerplant Cooling Systems	0.5
AFPM F250	Powerplant Exhaust Systems	0.5
AFPM F252	Propellers	2
Combined Systems and Components Requirements		
Complete the following:		
AFPM F251	Fuel Systems	1.5
AFPM F255	Fire Protection Systems	0.5
AFPM F257	Instrument Systems	0.5
Total Credits		**31**

[1] As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

Note: This is a one-year program, usually starting at the beginning of September. Entry at other times is allowed only with departmental approval. A personal background check and drug test will be required prior to acceptance into the airframe and powerplant, airframe or powerplant certificate programs.

Airframe and Powerplant Certificate Requirements

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Minimum Requirements for Airframe and Powerplant Certificate: 49 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Airframe and Powerplant Program Requirements		
Complete the following:		
AFPM F145	Basic Mathematics	1
AFPM F146	Basic Electricity	2
AFPM F147	Physics for Mechanics	0.5
AFPM F148	Aircraft Drawing	1
AFPM F149	Fluid Lines and Fittings	0.5
AFPM F150	Materials and Processes	2
AFPM F151	Cleaning and Corrosion Control	1
AFPM F152	Federal Aviation Regulations	1
AFPM F153	Weight and Balance	1
AFPM F154	Ground Operations and Servicing	0.5
Airframe Structures Requirements		
Complete the following:		
AFPM F261	Nonmetallic Structures	1
AFPM F262	Aircraft Coverings	1
AFPM F263	Aircraft Finishes	0.5
AFPM F264	Sheet Metal Structures	3
AFPM F265	Aircraft Welding	1.5
AFPM F266	Assembly and Rigging	1.5
AFPM F267	Airframe Inspections	0.5
AFPM F270	Airframe Testing	0.5
Airframe Systems and Components Requirements		
Complete the following:		
AFPM F230	Aircraft Electrical Systems	2.5
AFPM F253	Transport Category Aircraft	1
AFPM F254	Ice and Rain Control Systems	0.5
AFPM F256	Communications and Navigation Systems	0.5
AFPM F258	Cabin Atmosphere Control Systems	1
AFPM F259	Hydraulic and Pneumatic Systems	1.5
AFPM F260	Aircraft Landing Gear Systems	1.5
Powerplant Theory and Maintenance Requirements		
Complete the following:		
AFPM F235	Aircraft Reciprocating Engines	4.5
AFPM F240	Turbine Engines	2
AFPM F271	Powerplant Inspections	0.5

AFPM F272	Powerplant Testing	0.5
Powerplant Systems and Components Requirements		
Complete the following:		
AFPM F231	Powerplant Electrical Systems	1.5
AFPM F244	Lubricating Systems	1.5
AFPM F245	Ignition Systems	2
AFPM F246	Fuel Metering Systems	2
AFPM F248	Induction Systems	0.5
AFPM F249	Powerplant Cooling Systems	0.5
AFPM F250	Powerplant Exhaust Systems	0.5
AFPM F252	Propellers	2
Combined Systems and Components Requirements		
Complete the following:		
AFPM F251	Fuel Systems	1.5
AFPM F255	Fire Protection Systems	0.5
AFPM F257	Instrument Systems	0.5
Total Credits		**49**

[1] As part of the certificate requirements, the communication, computation and human relations contents are embedded in the major required courses for this program.

Alaska Chemical Dependency Counselor Certification

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ALASKA CHEMICAL DEPENDENCY COUNSELOR CERTIFICATION

The Alaska Commission for Behavioral Health Certification has approved the following courses for up to 45 training hours each toward certification or recertification of chemical dependency counselors in the state of Alaska.

Code	Title	Credits
HUMS F125X	Introduction to Addictive Processes	3
HUMS F205	Basic Principles of Group Counseling	3
HUMS F210	Crisis and Grief Counseling	3
HUMS F215	Individual Interviewing	3
HUMS F260	History of Alcohol in Alaska	1
HUMS F301	Ethics in Human Service	3
HUMS F305	Substance Abuse Counseling	3
Total Credits		**19**

Note: Chemical dependency counselors currently certified by the Alaska Commission for Behavioral Health Certification are eligible for transfer credit toward the human services degree. Contact the human services program advisor at 907-474-5439 for more information.

Applied Business Management Certificate

Program Requirements

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Minimum Requirements for Applied Business Management Certificate: 30-36 credits

CONCENTRATIONS: COMPUTER APPLICATIONS (P. 209), FINANCE (P. 209), GENERAL BUSINESS (P. 209), HUMAN RESOURCES (P. 209), MARKETING (P. 209), OFFICE ADMINISTRATION (P. 209), PUBLIC MANAGEMENT (P. 209), RECREATIONAL GUIDING (P. 209), RETAIL MANAGEMENT (P. 209) **AND** TOURISM (P. 210)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		8-9
As part of the certificate requirements, complete the following:		
Communication		
Complete one of the following:		
ABUS F170	Business English	
ABUS F271	Business Communications	
WRTG F111X	Writing Across Contexts	
Computation		
ABUS F155	Business Math (or any MATH course at the F100 level or above)	
or MATH F105	Intermediate Algebra	
Human Relations [1]		
ABUS F154	Human Relations (recommended)	
Applied Business Management Program Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F161	Personal and Business Finance	3
BA F151X	Introduction to Business	3
Concentration		
Complete one of the following:		12-18
Computer Applications		
Finance		
General Business		
Human Resources		
Marketing		
Office Administration		
Public Management		
Recreational Guiding		
Retail Management		
Tourism		
Electives		
Additional student-selected electives		0-1
Total Credits		**30-36**

[1] A.A.S. Approved Course

Concentrations

COMPUTER APPLICATIONS

Code	Title	Credits
Complete the following:		
CIOS F130	Word Processing	3
CIOS F135	Microcomputer Spreadsheets	3
CIOS F146	Using Internet Tools and Technologies	3
or CITS F220	Implementing Internet Tools and Technologies	
CIOS F240	Microcomputer Databases	3
Total Credits		**12**

FINANCE

Code	Title	Credits
Complete the following:		
ABUS F160	Principles of Banking	3
ABUS F210	Income Tax	3
ABUS F233	Financial Management	3
ABUS F234	Introduction to Investing	3
Total Credits		**12**

GENERAL BUSINESS

Code	Title	Credits
Complete the following:		
ABUS F179	Fundamentals of Supervision	3
or BA F307	Introductory Human Resources Management	
ABUS F201	Principles of Accounting II	3
or ABUS F210	Income Tax	
or ABUS F220	Microcomputer Accounting: QuickBooks	
or ABUS F235	Fund Accounting for Nonprofits	
ABUS F232	Contemporary Management Issues	3
or ECON F101X	Principles of Microeconomics	
or ECON F102X	Principles of Macroeconomics	
ABUS F260	Marketing Practices	3
or ABUS F263	Public Relations	
or BA F343	Principles of Marketing	
Total Credits		**12**

HUMAN RESOURCES

Code	Title	Credits
Complete the following:		
ABUS F141	Payroll Accounting	3
ABUS F179	Fundamentals of Supervision	3
ABUS F231	Introduction to Personnel	3
or BA F307	Introductory Human Resources Management	
ABUS F242	Employment Law	3
or BA F317	Employment Law	
Total Credits		**12**

MARKETING

Code	Title	Credits
Complete the following:		
ABUS F175	Customer Service	3
ABUS F178	Professionalism	3
Complete one of the following:		3
ABUS F260	Marketing Practices	
ABUS F263	Public Relations	
BA F343	Principles of Marketing	
CIOS F2xx-level graphics or web design elective		3
Total Credits		**12**

OFFICE ADMINISTRATION

Code	Title	Credits
Complete the following:		
ABUS F170	Business English	3
ABUS F182	Office Procedures	3
Complete six credits from the following:		6
ABUS F183	Professional Skills for Job Hunt	
ABUS F199	Practicum in Applied Business	
CIOS F130	Word Processing	
CIOS F135	Microcomputer Spreadsheets	
CIOS F150	Computer Business Applications	
Total Credits		**12**

PUBLIC MANAGEMENT

Code	Title	Credits
Complete the following:		
ABUS F235	Fund Accounting for Nonprofits	3
PS F100X	Political Economy	3
PS F101X	Introduction to American Government and Politics	3
or ABUS F232	Contemporary Management Issues	
PS F212	Introduction to Public Administration	3
Total Credits		**12**

RECREATIONAL GUIDING

Code	Title	Credits
Complete the following:		
ABUS F175	Customer Service	3
NRM F161	Wilderness Leadership Education	3
Complete one of the following:		3
EMS F152	Emergency Trauma Training First Responder	
More advanced Emergency First Responder Training		
RECR electives		3
Total Credits		**12**

RETAIL MANAGEMENT

Code	Title	Credits
Complete the following:		
ABUS F179	Fundamentals of Supervision [1]	3
or BA A231	Fundamentals of Supervision	

ABUS F231	Introduction to Personnel	3
ABUS F260	Marketing Practices [1]	3
or BA A260	Marketing Practices	
BA A266 (https://catalog.uaa.alaska.edu/search/?search=BA+A266)	Retailing Management	3
CIOS F150	Computer Business Applications [1]	3
or CIOS A103	Introduction to Personal Computers	
Complete one of the following:		3
CIOS A261A (https://catalog.uaa.alaska.edu/search/?search=CIOS+A261A)	Interpersonal Skills in Organization [1]	
COM F121X	Introduction to Interpersonal Communication	
COM F131X	Fundamentals of Oral Communication: Group Context	
COM F141X	Fundamentals of Oral Communication: Public Context	
COMM A111 (https://catalog.uaa.alaska.edu/search/?search=COMM+A111)	Fundamentals of Oral Communication [1]	
COMM A237 (https://catalog.uaa.alaska search/?search=COMM+A237)	Interpersonal Communication [1]	
JOUR F101X	Media and Culture	
Total Credits		**18**

[1] Courses offered via distance delivery from the University of Alaska Anchorage.

TOURISM

Code	Title	Credits
Complete the following:		
ABUS F158	Introduction to Tourism	3
ABUS F175	Customer Service	3
ABUS F199	Practicum in Applied Business	3
Complete one of the following:		3
ABUS F256	Small Hotel, Bed and Breakfast, and Lodge Operations	
ABUS F267	Transportation and Logistics Management	
ABUS F269	Food and Beverage Management	
Total Credits		**12**

Note: Other courses specific to individual education and career goals may be substituted with program approval.

Automotive Technology Certificate

Program Requirements

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Minimum Requirements for Automotive Technology Certificate: 34 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Automotive Technology Program Requirements		
Complete the following:		
AUTO F102	Introduction to Automotive Technology	3
AUTO F110	Basic Electrical Systems	3
AUTO F122	Engine Theory and Diagnosis	3
AUTO F131	Automotive Electrical II	3
AUTO F150	Brake Systems	4
AUTO F162	Suspension Alignment	4
AUTO F190	Automotive Practicum I	4
AUTO F202	Auto Fuel and Emissions Systems	4
AUTO F222	Automotive Engine Performance	3
AUTO F227	Automotive Electrical III	3
Total Credits		**34**

[1] As part of the certificate requirements, the communication, computation and human relations content are embedded in the major required courses for this program.

Culinary Arts and Hospitality Certificate

The culinary arts and hospitality program prepares students for careers in this ever-expanding field. Graduates can seek employment in various food service operations or in the management of restaurants, bakeries, hotels, hospitals, camps or any other facility that requires food service as part of its operation. Certificates in culinary arts or baking and pastry arts are offered.

Baking and Pastry Arts Certificate Requirements

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Minimum Requirements for Baking and Pastry Arts Certificate: 30 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		

Complete the certificate requirements. (p. 204) [1]		6-9
Baking and Pastry Arts Program Requirements		
Complete the following:		
CAH F101	Introduction to the Culinary Field	1
CAH F140	Culinary I: Principles and Techniques	4
CAH F146	Introduction to Baking and Pastry	4
CAH F150	Food Service Sanitation	2
CAH F248	Intermediate Baking and Pastry	4
Complete 6-9 credits from the following:		6-9
CAH F117	Introduction to Cake Decorating	
CAH F154	Food and Beverage Service	
CAH F160	Principles of Nutrition	
CAH F161	Pastry Tube Art	
CAH F171	Fundamentals of Baking	
CAH F176	Techniques of Healthy Cooking	
CAH F180	Artisan Breads	
CAH F181	International Breads	
CAH F230	Menu Planning	
Total Credits		**30**

[1] As part of the certificate requirements, CAH F256 is recommended to complete the computation requirement and CAH F255 is recommended to complete the human relations requirement.

Culinary Arts Certificate Requirements

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Minimum Requirements for Culinary Arts Certificate: 30 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		6-9
Culinary Arts Program Requirements		
Complete the following:		
CAH F101	Introduction to the Culinary Field	1
CAH F140	Culinary I: Principles and Techniques	4
CAH F146	Introduction to Baking and Pastry	4
CAH F150	Food Service Sanitation	2
Complete 10-13 credits from the following:		10-13
CAH F141	Culinary II: Stocks, Soups and Sauces	
CAH F154	Food and Beverage Service	
CAH F160	Principles of Nutrition	
CAH F170	Gourmet Cooking	
CAH F172	Gourmet Asian Cooking	
CAH F174	Vegetarian Cooking	
CAH F175	Protein Fabrication	
CAH F176	Techniques of Healthy Cooking	
CAH F230	Menu Planning	
CAH F242	Culinary III: Vegetables and Starch	
CAH F243	Culinary IV: A la Carte Cookery	
CAH F250	Garde Manger	
Total Credits		**30**

[1] As part of the certificate requirements, CAH F256 is recommended to complete the computation requirement and CAH F255 is recommended to complete the human relations requirement.

Dental Assistant Certificate

Program Requirements

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Minimum Requirements for Dental Assistant Certificate: 37 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		9
As part of the certificate requirements, complete the following:		
Communication		
WRTG F111X	Writing Across Contexts	
Computation		
HLTH F116	Mathematics in Health Care	
Human Relations		
HLTH F106	Human Behavior in Health Care	
Dental Assistant Program Requirements		
Complete the following:		
DA F100	Introduction to Dental Assisting	3
DA F150	Dental Radiography	4
DA F152	Dental Materials and Applications	4
DA F153	Anatomy for Dental Assistants	3
DA F251	Beginning Chairside for Dental Assistants	4
DA F252	Advanced Chairside for Dental Assistants	4
DA F254	Dental Assistant Practicum	4
HLTH F110	Professional Skills for the Workplace	2
HLTH F122	First Aid and CPR for the Health Care Provider	0
Total Credits		**37**

Diesel/Heavy Equipment Certificate

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Minimum Requirements for Diesel/Heavy Equipment Certificate: 34 credits

Students must earn a C or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Diesel/Heavy Equipment Program Requirements		
Complete the following:		
DSLT F101	Safety Including Rigging and Lifting	1
DSLT F103	Basic Equipment and Truck Operation	1
DSLT F105	Preventive Maintenance	3
DSLT F107	Basic Electrical Systems	3
DSLT F110	Basic Industrial Fabrication	2
DSLT F111	Diesel Emissions	2
DSLT F123	Heavy Duty Braking Systems	3
DSLT F201	Manual Transmissions and Differentials	3
DSLT F202	Heavy Duty Automatic Transmissions	2
DSLT F210	Heavy Equipment Fabrication	2
DSLT F254	Engine	6
MECN F103	Advanced Electrical Systems	3
MECN F210	Hydraulics	3
Total Credits		**34**

[1] As part of the certificate requirements, the communication, human relations and computation contents are embedded in the major required courses for this program.

Drafting Technology Certificate

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Minimum Requirements for Drafting Technology Certificate: 30 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		6-9
Drafting Technology Program Requirements		
Complete the following:		
CM F102	Methods of Building Construction	3
DRT F140	Architectural Drafting	3
DRT F170	Beginning CAD	3
DRT F210	Intermediate CAD	3
Complete 6 credits from the following or program coordinator-approved courses:		6
DRT F145	Structural Drafting	
DRT F150	Civil Drafting	
DRT F155	Mechanical and Electrical Drafting	
DRT F260	Drafting Internship	
DRT F270	Advanced CAD	
DSGN F130	Modeling, Assembly & 3D Animation: Autodesk Inventor	
Complete 3 credits from the following or program coordinator-approved courses:		3
CM F123	Codes and Standards	
CM F213	Civil Technology	
CM F142	Mechanical and Electrical Technology	
CM F231	Structural Technology	
Electives		
Additional student-selected electives		0-3
Total Credits		**30**

Early Childhood Education Certificate

Program Requirements

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Minimum Requirements for Early Childhood Education Certificate: 34 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		9
As part of the certificate requirements, complete the following:		
Communication		
WRTG F111X	Writing Across Contexts	
Computation		
ECE F117	Practical Math Skills	
or any other math course at the F100 level or above.		
Human Relations		
ECE F107X	Child Development II: The Preschool and Primary Years	
Early Childhood Education Program Requirements		
Complete the following:		
ECE F101	Early Childhood Professionalism	3
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	3
ECE F110	Safe, Healthy Learning Environments	3
ECE F119	Curriculum I: Principles and Practices	3
ECE F132	Young Child and the Family	1
or LS F101X	Library Information and Research	
or ECE F249	Current Issues in Early Childhood Education	
ECE F140	Positive Social and Emotional Development	3
ECE F170	Practicum I	3
or ECE F115	Responsive and Reflective Teaching	
or ECE F299	Practicum for CDAs	

ECE F213	Curriculum: Thinking, Reasoning and Discovery	3
or ECE F214	Infants and Toddlers	
ECE F229X	Foundations in Nutrition and Physical Wellness	3
Total Credits		**34**

Health Care Reimbursement Certificate

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Minimum Requirements for Health Care Reimbursement Certificate: 33 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Health Care Reimbursement Program Requirements		
Complete the following:		
WRTG F111X	Writing Across Contexts	3
or ABUS F271	Business Communications	
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F114	Fundamentals of Anatomy and Physiology	4
HLTH F116	Mathematics in Health Care	3
HLTH F126	Administrative Procedures for the Healthcare Worker	3
HLTH F130	Medical Office Technology	3
HLTH F208	Human Diseases	3
HLTH F236	Outpatient Health Care Reimbursement	3
HLTH F238	Medical Coding I	3
HLTH F239	Medical Coding II	3
Total Credits		**33**

[1] As part of the certificate requirements, the communication, computation and human relations content are embedded in the major required courses for this program.

High Latitude Range Management Certificate

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Minimum Requirements for High Latitude Range Management Certificate: 31 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		9
As part of the certificate requirements, complete the following:		
Communication		
WRTG F111X	Writing Across Contexts	
Computation		
MATH F113X	Numbers and Society	
or ABUS F155	Business Math	
Human Relations		
ANTH F100X/ SOC F101X	Individual, Society and Culture	
or ABUS F154	Human Relations	
High Latitude Range Management Program Requirements		
Complete the following:		
BIOL F104X	Natural History of Alaska	4
HLRM F120	History of Domesticated Alaskan Ungulates	1
HLRM F130	Research Field Logistics	2
HLRM F140	High Latitude Range Management	2
HLRM F150	Alaskan Ungulate Husbandry	2
HLRM F160	Meat Production	2
HLRM F170	Health Issues in Domesticated Ungulates	2
HLRM F201	Field Techniques for Range Management	2
HLRM F205	Report Writing in Range Management	2
NRM F101	Natural Resources Conservation and Policy	3
Total Credits		**31**

Information Technology Specialist Certificate

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Minimum Requirements for Information Technology Specialist Certificate: 30 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		7-9
As part of the certificate requirements, complete the following:		
Human Relations		
ANTH F100X	Individual, Society and Culture	

or ABUS F154	Human Relations	
or SOC F101X	Introduction to Sociology	
Information Technology Specialist Program Requirements		
Complete the following:		
CITS F203	Information Technology Support Fundamentals	4
CITS F204	Introduction to Computer Networks	3
CITS F212	Server Operating Systems	3
CITS F261	Computer and Network Security	3
Complete 8-9 credits from the following or program coordinator-approved courses:		8-9
CIOS F128	Microcomputer Operating Systems	
CIOS F130	Word Processing	
CIOS F135	Microcomputer Spreadsheets	
CIOS F150	Computer Business Applications	
CIOS F189	Microcomputer Applications: Topics [2]	
CIOS F233	Desktop Publishing	
CIOS F240	Microcomputer Databases	
CIOS F255	Digital Graphics	
CIOS F258	Digital Photography	
CITS F201	Operating Systems Support	
CITS F219	Operating Systems: Topics [1]	
CITS F220	Implementing Internet Tools and Technologies	
CITS F221	Graphics and Multimedia for the Web	
CITS F222	Website Design	
CITS F240	System and Network Services Administration	
CITS F241	Networking and LAN Infrastructure Basics	
CITS F242	Routing and Switching Essentials	
CITS F262	Cybersecurity Defense and Countermeasures	
CITS F263	Network Security Penetration Testing	
CITS F265	Directory Services Administration	
CITS F282	IT Troubleshooting Skills	
CITS F289	Information Technology: Topics	
Pass a certification review requiring students to demonstrate proficiency in the following skill areas: operating systems, hardware, and network support and troubleshooting. [2]		
Electives		
Additional student-selected electives		0-2
Total Credits		**30-31**

[1] May be repeated for different topics.

[2] Prior to graduation, all students are required to pass a certification review that includes a hands-on scenario task and the development and presentation of a portfolio of work.

Instrumentation Technology Certificate

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Minimum Requirements for Instrumentation Technology Certificate: 32 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		6-9
Instrumentation Technology Program Requirements		
ELT F101	Basic Electronics: DC Physics	4
ELT F102	Basic Electronics: AC Physics	4
ELT F246	Electronic Industrial Instrumentation	3
PRT F140	Industrial Process Instrumentation I	3
PRT F144	Industrial Process Instrumentation II	3
PRT F240	Industrial Process Instrumentation III	3
PRT F248	Valve Maintenance and Instrumentation	3
Electives		
Additional student-selected electives		0-3
Total Credits		**32**

Licensed Practical Nurse Certificate

Admission Requirements

Complete the following admission requirements:

Prerequisites: Placement in WRTG F111X and MATH F105.

Recommended: HLTH F100 and HLTH F208.

Students will complete an LPN application and be interviewed.

Students will be required to:

- submit a background check from the State Troopers.
- complete a state background check prior to starting clinical hours in a healthcare facility.
- maintain a 2.5 GPA in all required LPN classes.

Program Requirements

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Minimum Requirements for Licensed Practical Nurse Certificate: 31 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Licensed Practical Nurse Program Requirements		
Complete the following:		

HLTH F114	Fundamentals of Anatomy and Physiology	4
LPN F100	Foundations of the Professional Licensed Practical Nurse	3
LPN F102	Licensed Practical Nurse Skills I	3
LPN F120	Licensed Practical Nurse Clinical I	2
LPN F140	Nursing Across the Lifespan for the Licensed Practical Nurse	3
LPN F142	Licensed Practical Nurse Skills II	2
LPN F160	Licensed Practical Nurse Clinical II	3
LPN F180	Leadership, Delegation & Scope of Practice for the Licensed Practical Nurse	3
LPN F182	Licensed Practical Nurse Skills III	2
LPN F190	Licensed Practical Nurse Clinical III	3
LPN F248	Pharmacology for the Licensed Practical Nurse	3
Total Credits		**31**

[1] As part of the certificate requirements, the communication, computation and human relations content are embedded in the major required courses for this program.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
HLTH F114	Fundamentals of Anatomy and Physiology	4
LPN F100	Foundations of the Professional Licensed Practical Nurse	3
LPN F102	Licensed Practical Nurse Skills I	3
LPN F120	Licensed Practical Nurse Clinical I	2
	Credits	**12**
Spring		
LPN F140	Nursing Across the Lifespan for the Licensed Practical Nurse	3
LPN F142	Licensed Practical Nurse Skills II	2
LPN F160	Licensed Practical Nurse Clinical II	3
LPN F248	Pharmacology for the Licensed Practical Nurse	3
	Credits	**11**
Summer		
LPN F180	Leadership, Delegation & Scope of Practice for the Licensed Practical Nurse	3
LPN F182	Licensed Practical Nurse Skills III	2
LPN F190	Licensed Practical Nurse Clinical III	3
	Credits	**8**
	Total Credits	**31**

The LPN program will prepare students to work in healthcare facilities under the supervision of a Registered Nurse or Physician. The curriculum consists of three categories: lecture, skills and clinical hours (hours in a healthcare facility). The combination of the three will provide the students with a comprehensive understanding of the role and scope of practice of the professional LPN. This includes the knowledge, skills and hands-on practice in a healthcare facility necessary for a student to not only gain the knowledge and skills needed but the practice required to become an effective member of the healthcare team. Upon completion of the program, the LPN graduates will be prepared to pass the NCLEX-PN.

Program Learning Outcomes

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Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Demonstrate and provide safe, effective and appropriate nursing care within the scope of practice of a Practical Nurse.
- Demonstrate professional, effective, and culturally competent communication skills with peers, patients, families and other healthcare professionals.
- 100% of LPN graduates will take NCLEX-PN exam.
- 80% or more of the LPN graduates will pass the NCLEX-PN.

Local Knowledge Educator Certificate

Admission Requirements

Complete the following admission requirements:

For admission to certificate programs, official documentation must be provided showing that the applicant:

1. is at least 18 years old, or
2. has a high school diploma, or
3. has a General Educational Development (GED) diploma.

Applicants under the age of 18 who will not have a high school diploma or GED before the start of their first semester are not admissible but may take courses as a nondegree student. Please note that in order to qualify for federal financial aid, students must have either a high school diploma or a GED.

TRANSFER STUDENTS

Transfer students are eligible for admission if they left their previous accredited institution(s) in good standing. Admission status will be

determined on an individual basis if a student attended an unaccredited/non-regionally accredited post-secondary institution.

HIGH SCHOOL STUDENTS

High school students may take classes at UAF. There are two enrollment options for students interested in certificate or associate degree programs: Secondary Student Enrollment and TECH PREP. Both have specific registration requirements but do not require admission to UAF.

HOME-SCHOOLED STUDENTS

Home-schooled students may be admitted to an associate or certificate program if the student is at least 18 years old, holds a GED, graduated from a state-sponsored correspondence program with a high school diploma, or with the approval of the director of admissions.

Program Requirements

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Minimum Requirements for Local Knowledge Educator Certificate: 30 credits

Students must earn a C or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		6-9
As part of the certificate requirements, complete the following:		
Communication		
WRTG F111X	Writing Across Contexts	
or COM F121X	Introduction to Interpersonal Communication	
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
Computation		
MATH F151X	College Algebra for Calculus	
or ECE F117	Practical Math Skills	
or MATH F105	Intermediate Algebra	
or MATH F122X	Essential Precalculus with Applications	
Human Relations		
ED F245	Child Development	
Local Knowledge Educator Program Requirements		
Complete the following:		
ANL F141X	Beginning Dene / Athabascan I [1]	3-5
ANL F287	Teaching Methods for Alaska Native Languages [2,3]	3
or ED F486	Media Literacy	
ANS F161X	Introduction to Alaska Native Performance	3
or ANS F223X	Alaska Native Music	
or ANS F202X	Aesthetic Appreciation of Alaska Native Performance	
ANS F242X	Indigenous Cultures of Alaska	3
or HIST F115	Alaska, Land and Its People	
ED F100	Language, Education, Linguistics	3
ED F111	Teaching for Alaska's Future	3
ED F206	Core Practices in Place and Arts-Based Teaching	3
or ED F204	Literature for Children	
Total Credits		**30**

1 Or another 3-5 credit Alaska Native Language course ending in X
2 Or RAHI Local Languages Preservation Class
3 Can substitute for ED F486 Media Literacy

Medical Assistant Certificate

< Back to Department (p. 102)

Minimum Requirements for Medical Assistant Certificate: 36 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		9
As part of the certificate requirements, complete the following:		
Communications		
Complete the following:		
WRTG F111X	Writing Across Contexts [1]	
Computation		
Complete one of the following:		
HLTH F116	Mathematics in Health Care (preferred)	
MATH F105	Intermediate Algebra	
MATH at the 100 level or higher		
Human Relations		
Complete one of the following:		
ABUS F154	Human Relations	
HLTH F106	Human Behavior in Health Care	
Medical Assistant Program Requirements		
HLTH F122	First Aid and CPR for the Health Care Provider [2]	0
MA F100	Medical Terminology	3
MA F114	Fundamentals of Anatomy and Physiology (preferred)	4
or BIOL F100X	Human Biology	
MA F142	Clinical Procedures I	4
MA F144	Administrative Procedures for the Medical Assistant	5
MA F244	Clinical Procedures II	4
MA F247	Introduction to Pharmacology	3
MA F268	Medical Assisting Practicum	4

or MA F261 and MA F267	Medical/Dental Office Reception Practicum and Medical Assisting Practicum Completion	
Total Credits		**36**

[1] Fulfills the written communications requirement.
[2] Complete course or submit current First Aid and CPR for the healthcare provider card.

Medical Scribe Specialist Certificate

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Minimum Requirements for Medical Scribe Specialist Certificate: 32 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		9
As part of the certificate requirements, complete the following:		
Communication		
WRTG F111X	Writing Across Contexts	
or ABUS F271	Business Communications	
Computation		
HLTH F116	Mathematics in Health Care	
Human Relations		
HLTH F106	Human Behavior in Health Care [1]	
Medical Scribe Specialist Program Requirements		
Complete the following:		
ABUS F102A	Keyboarding: Touch Typing	1
ABUS F102B	Keyboarding: Skill Building	1
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F114	Fundamentals of Anatomy and Physiology	4
HLTH F118	Medical Law and Ethics	2
HLTH F122	First Aid and CPR for the Health Care Provider	0
HLTH F124	Introduction to Medical Scribe Specialist	2
HLTH F236	Outpatient Health Care Reimbursement	3
HLTH F260	Medical Scribe Specialist Practicum	2
MA F247	Introduction to Pharmacology	3
Total Credits		**32**

[1] Or other approved human relations courses.

Medical/Dental Reception Certificate

Admission Requirements

Complete the following admission requirements:

- Prerequisites for the program include a high school diploma or GED.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Medical/ Dental Reception Certificate: 30 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		9
As part of the certificate requirements, complete the following:		
Communications		
ABUS F271	Business Communications	
or WRTG F111X	Writing Across Contexts	
Computation		
HLTH F116	Mathematics in Health Care (or MATH at the F100 level or above)	
Human Relations		
HLTH F106	Human Behavior in Health Care	
Medical/Dental Reception Program Requirements		
Complete the following:		
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F118	Medical Law and Ethics	2
HLTH F122	First Aid and CPR for the Health Care Provider [1]	0
HLTH F126	Administrative Procedures for the Healthcare Worker	3
HLTH F130	Medical Office Technology	3
HLTH F208	Human Diseases	3
HLTH F236	Outpatient Health Care Reimbursement	3
HLTH F261	Medical/Dental Office Reception Practicum	2
Total Credits		**30**

[1] Complete the course or submit First Aid and CPR for the healthcare provider's cards.

Native Language Education Certificate

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Minimum Requirements for Native Language Education Certificate: 30 credits

CONCENTRATIONS: ATHABASCAN (P. 218), INUPIAQ (P. 218), YUP'IK (P. 218)

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Native Language Education Program Requirements		
Concentration		
Complete one of the following:		30
Athabascan		
Inupiaq		
Yup'ik		
Total Credits		**30**

[1] As part of the certificate requirements, the communication, computation and human relations content is embedded in some of the major required courses for this program.

Concentrations

ATHABASCAN

Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Code	Title	Credits
Athabascan Concentration Requirements		
Complete the following:		
ANL F108	Beginning Athabascan Literacy	3
ANL F208	Advanced Athabascan Literacy	3
ANL F251X	Introduction to Athabascan Linguistics	3
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
Complete 6 credits from each of the following practicums:		12
ANL F199	Practicum in Native Language Education	
ED F299	Practicum in Education	
Total Credits		**30**

INUPIAQ

Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Code	Title	Credits
Inupiaq Concentration Requirements		
Complete the following:		
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
INU F118	Inupiaq Orthography	3
INU F218	Inupiaq Composition	3
Inupiaq linguistics elective		3
Complete 6 credits from each of the following practicums:		12
ANL F199	Practicum in Native Language Education	
ED F299	Practicum in Education	
Total Credits		**30**

YUP'IK

Demonstrate advanced oral and aural proficiency in Yup'ik.

Code	Title	Credits
Yup'ik Concentration Requirements		
Complete the following:		
ANL F199	Practicum in Native Language Education	3
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
ED F299	Practicum in Education	3
YUP F109	Central Yup'ik Orthography	3
YUP F130	Beginning Yup'ik Grammar	3
YUP F208	Yup'ik Composition	3
YUP F250	Yup'ik Literature for Children	3
YUP F251	Teaching Beginning Yup'ik Reading and Writing	3
Total Credits		**30**

Pre-nursing Qualifications Certificate

Program Requirements

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Minimum Requirements for Pre-Nursing Qualifications Certificate: 33-34 credits

OPTIONAL CONCENTRATIONS: A.A.S. IN NURSING PREPARED CONCENTRATION (P. 219), B.S.N. PREPARED CONCENTRATION (P. 219)

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		
As part of the certificate requirements, complete the following:		12-13
Communications		
COM F121X	Introduction to Interpersonal Communication	
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F111X	Writing Across Contexts	
Computation		
MATH F105	Intermediate Algebra	
or MATH F151X	College Algebra for Calculus	
Human Relations		
PSY F101X	Introduction to Psychology	
Pre-Nursing Qualifications Program Requirements		
Complete the following:		
BIOL F111X	Human Anatomy and Physiology I	4
BIOL F112X	Human Anatomy and Physiology II	4
BIOL F240X	Beginnings in Microbiology	4
HLTH F203	Science of Nutrition	3
PSY F240	Psychology of Development	3
WRTG F213X	Writing and the Sciences	3
Total Credits		**33-34**

OPTIONAL CONCENTRATIONS

A.A.S. in Nursing Prepared Concentration

Code	Title	Credits
Complete the following:		
Chemistry [1]		
CHEM F100X	Chemistry in Complex Systems	4
or CHEM F103X	Introduction to General Chemistry	
Total Credits		**4**

[1] A CHEM course is required for A.A.S. in Nursing Prepared Concentration only if chemistry with laboratory course is not taken and passed in high school

B.S.N. Prepared Concentration

Code	Title	Credits
Complete the following:		
ANS F161X	Introduction to Alaska Native Performance	3
or ANS F202X	Aesthetic Appreciation of Alaska Native Performance	
or ANS F223X	Alaska Native Music	
CHEM F103X	Introduction to General Chemistry	4
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	4
HLTH A151 (https://catalog.uaa.alaska.edu/search/?search=HLTH+A151)	Breaking Trail on Your Health and Social Services Career	3
MATH F151X	College Algebra for Calculus [2]	0-4
PHIL F102X	Introduction to Philosophy	3
or PHIL F104X	Logic and Reasoning	
PHIL F322X	Ethics	3
STAT F200X	Elementary Statistics	3
Total Credits		**23-27**

[2] MATH F151X is required as part of B.S.N. Prepared Concentration if not taken as part of the Certificate Computation Requirements.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

ROAD MAP FOR STUDENTS PREPARING FOR A.A.S. IN NURSING

Course	Title	Credits
First Year		
Fall		
Certificate Requirements		
BIOL F111X	Human Anatomy and Physiology I	4
HLTH F203	Science of Nutrition	3
MATH F105	Intermediate Algebra	3
PSY F101X	Introduction to Psychology	3
WRTG F111X	Writing Across Contexts	3
	Credits	**16**
Spring		
Certificate Requirements		
BIOL F112X	Human Anatomy and Physiology II	4
BIOL F240X	Beginnings in Microbiology	4
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
PSY F240	Psychology of Development	3
WRTG F213X	Writing and the Sciences	3
	Credits	**17**
Summer		
Concentration		

CHEM F100X or CHEM F103X	Chemistry in Complex Systems [1] or Introduction to General Chemistry	4
	Credits	**4**
	Total Credits	**37**

[1] A CHEM course is required for A.A.S. in Nursing Prepared Concentration only if chemistry with laboratory course is not taken and passed in high school.

ROAD MAP FOR STUDENTS PREPARING FOR B.S.N.

Course	Title	Credits
First Year		
Fall		
Certificate Requirements		
BIOL F111X	Human Anatomy and Physiology I	4
HLTH F203	Science of Nutrition	3
MATH F105	Intermediate Algebra	3
PSY F101X	Introduction to Psychology	3
WRTG F111X	Writing Across Contexts	3
	Credits	**16**
Spring		
Certificate Requirements		
BIOL F112X	Human Anatomy and Physiology II	4
CHEM F103X	Introduction to General Chemistry	4
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
PSY F240	Psychology of Development	3
WRTG F213X	Writing and the Sciences	3
	Credits	**17**
Second Year		
Fall		
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	4
HLTH A151 (https://catalog.uaa.alaska.edu/search/?search=HLTH+A151)	Breaking Trail on Your Health and Social Services Career	3
PHIL F102X or PHIL F104X	Introduction to Philosophy or Logic and Reasoning	3
MATH F151X	College Algebra for Calculus	4
	Credits	**14**
Spring		
ANS F161X or ANS F202X or ANS F223X	Introduction to Alaska Native Performance or Aesthetic Appreciation of Alaska Native Performance or Alaska Native Music	3
BIOL F240X	Beginnings in Microbiology	4
PHIL F322X	Ethics	3
STAT F200X	Elementary Statistics	3
	Credits	**13**
	Total Credits	**60**

Rural Human Services Certificate

Program Requirements

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Minimum Requirements for Rural Human Services Certificate: 32 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		7-9
As part of the certificate requirements, complete the following:		
Human Relations		
RHS F110 and RHS F115	Cross-cultural Bridging Skills and Issues of Personal Development	
Rural Human Services Program Requirements		
Complete the following:		
RHS F120	Family Systems I [1]	2
RHS F130	Processes of Community Change	2
RHS F140	Alaska Native Values and Principles	1
RHS F150	Introduction to Rural Counseling [1]	2
RHS F220	Family Systems II [1]	2
RHS F250	Rural Counseling II [1]	2
RHS F260	Addictions: Intervention and Treatment [1]	2
RHS F265	Interpersonal Violence [1]	2
RHS F275	Introduction to Recovery and Mental Illness	2
RHS F285	Case Management [1]	2
RHS F287	Rural Human Services Practicum	4
RHS F290	Grief and Healing [1]	2
Total Credits		**32-34**

[1] The Alcohol and Drug Abuse Certification review board has approved these courses to apply toward certification or recertification of substance abuse counselors in the State of Alaska.

Note: Students spend time in intensive study at selected delivery sites.

Tribal Governance Certificate

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Minimum Requirements for Tribal Governance Certificate: 30 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204)		6-9
Tribal Governance Program Requirements		
Complete the following:		
TG F101	Introduction to Tribal Government in Alaska	3
TG F105	Introduction to Managing Tribal Governments	3
TG F199	Tribal Management Practicum I	3
Complete 12 credits of the following:		12
TG F102	Essentials of Tribal Government	
TG F103	Introduction to Tribal Administration	
TG F110	Tribal Court Development for Alaska Tribes	
TG F111	Children's Topics in Tribal Justice	
TG F112	Federal Indian Law for Alaska Tribes	
TG F114	Tribal Justice Responses to Community and Domestic Violence	
TG F115	Tribal Court Administration	
TG F116	Juvenile Justice in Tribal Court	
TG F117	Tribal Court Enforcement of Decisions	
TG F118	Tribal Community and Restorative Justice	
TG F120	Introduction to Tribal Natural Resources Stewardship	
TG F140	Introduction to Geospatial Data	
TG F141	Practical GIS for Rural Alaska	
TG F142	Practical GIS Project Design	
TG F221	Tribal Participation in Federal Fish and Wildlife Management Systems	
TG F222	Tribal Participation in State Fish and Game Management Systems	
TG F225	Cross Connections: Adapting and Integrating Principles of Management and Conservation	
TG F250	Current Topics in Tribal Government	
or up to 9 credits from the optional course list		
Total Credits		**30**

OPTIONAL COURSE LIST

Code	Title	Credits
Any course in: Alaska Native Languages (ANL, INU, YUP), Alaska Native Studies, Applied Arts, Applied Business, Environmental Studies, High Latitude Range Management, Human Services, Rural Development, Rural Human Services, and/or: [1]		
ACNS F125	Our Changing Climate: Past, Present, Future	
ACNS F205	Leadership, Citizenship and Choice	
BA F151X	Introduction to Business	
BIOL F104X	Natural History of Alaska	
ECON F111X	The Economy of Rural Alaska	
FISH F110	Fish and Fisheries in a Changing World	
NRM F101	Natural Resources Conservation and Policy	
NRM F204	Public Lands Law and Policy	
PS F100X	Political Economy	
PS F263	Alaska Native Politics	
PSY F101X	Introduction to Psychology	
SWK F103X	Introduction to Social Work	

[1] Course substitutions relevant to Tribal Governance may be made with the approval of the Tribal Governance faculty advisor.

Yup'ik Language Proficiency Certificate

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Minimum Requirements for Yup'ik Language Proficiency Certificate: 30 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 204)		
Certificate Requirements		
Complete the certificate requirements. (p. 204) [1]		
Yup'ik Language Proficiency Program Requirements		
Complete the following:		
YUP F130	Beginning Yup'ik Grammar	3
YUP F208	Yup'ik Composition	3
YUP F240	Introduction to Reading and Writing Yup'ik	3
Complete one from the following sequences:		12
YUP F103 and YUP F104 and YUP F203 and YUP F204	Conversational Central Yup'ik I and Conversational Central Yup'ik II and Conversational Central Yup'ik III and Conversational Central Yup'ik IV	
YUP F121 and YUP F122 and YUP F123	Elementary Central Yup'ik Apprenticeship I and Elementary Central Yup'ik Apprenticeship II and Elementary Central Yup'ik Apprenticeship III	
Complete one from the following sequences:		9
YUP F205 and YUP F206 and YUP F223	Regaining Fluency in Yup'ik and Regaining Fluency in Yup'ik II and Intermediate Central Yup'ik Apprenticeship III	

YUP F221	Intermediate Central Yup'ik
and YUP F222	Apprenticeship I
and YUP F223	and Intermediate Central Yup'ik Apprenticeship II and Intermediate Central Yup'ik Apprenticeship III
Total Credits	**30**

[1] As part of the certificate requirements, the communication, computation and human relations contents are embedded in some of the major required courses for this program.

Associate Degrees

How to Earn an Associate Degree

To earn a UAF degree, three sets of requirements must be satisfied: general university requirements, degree requirements and program (major) requirements. These requirements are all described in this section of the catalog. Requirements for each program major are found in the Associate Degree Programs (p. 236) section.

If a degree program is delivered collaboratively within the UA system (e.g., information technology specialist, early childhood education, human services, rural human services), then the credits earned from each UA institution will be counted toward fulfillment of the degree requirements and fulfillment of the minimum institutional residency requirements. Institutional residency requirements are the minimum number of credits that must be earned from the campus where the degree is earned.

CATALOG YEAR AND TIME LIMITS

UAF defines catalog year as beginning in the fall and ending at the conclusion of the summer semester. For example, the 2023-2024 catalog year includes fall 2023, spring 2024 and summer 2024.

The associate degree must be completed within five years from the term admitted. A student may change their catalog year if they were an enrolled student in a degree-seeking program during the academic year selected. If a student is not enrolled for a semester or more, or if enrolled through the non-degree student registration process, a student isn't considered enrolled as a degree student during that time.

MAJORS

A major is declared upon admittance to UAF as an associate degree undergraduate student.

Students enrolled in an associate degree who want to declare a bachelor's degree major must apply for admission to a degree program following the standard admission process for bachelor's degree programs. (See admission requirements in How to Earn a Bachelor's Degree (p. 252).)

- **Changing a Major**
  Undergraduate students may change majors by completing a change of major form available from the Office of the Registrar forms page (https://www.uaf.edu/reg/forms/). If a change of major is submitted after courses have started for the term, it will be applied for the following semester. Students who wish to change majors from one level to another level (e.g., from an associate degree to a bachelor's degree) must apply for admission to the degree program following the standard admission process.

CONCENTRATIONS

An area of emphasis, including the major core courses within a student's degree program, is termed a concentration. Some programs at UAF require a concentration, others do not. A student may only earn one degree in a specific discipline once. Using different concentrations within a degree program to count as different degrees is not allowed.

SECOND ASSOCIATE DEGREE

To receive a second Associate of Applied Science degree, at least 12 credit hours beyond the first associate degree must be earned, as well as completion of all requirements for the major. As long the additional 12-hour requirement has been completed, a student may be awarded two degrees in one semester.

EXCEPTIONS TO DEGREE REQUIREMENTS

Occasionally an undergraduate student may request an exception to an academic requirement, policy or regulation. Requests for an academic exception must be approved by petition. If a student submits a petition on the basis of a disability, the coordinator of Disability Services will be consulted. Undergraduate petition forms are available at the Office of the Registrar or on the Office of the Registrar's forms page (https://www.uaf.edu/reg/forms/). Forms must be returned to the Office of the Registrar with the required approval signatures. The Office of the Registrar will note the completed petition in DegreeWorks once the appropriate person or committee has made a decision. Academic petitions fall into three categories, and each involves different processes:

- **General Education Requirement Petitions**
  If a petition deals with baccalaureate general education requirements or the Associate of Arts or Science library science requirement, the advisor and the head of the department of the academic area involved must grant approval. Submit the signed petition to the Office of the Registrar. It will then be forwarded to the chair of the Faculty Senate Core/General Education Requirement Curriculum Review Committee for consideration.
- **Major or Minor Degree Requirement Petitions**
  If the goal is to waive or substitute courses within a major or a minor's requirements, approval signatures from the advisor and the department or program head of the major or minor area. Submit the signed petition to the Office of the Registrar.
- **Petitions for Other Requirements**
  If the petition deals with general university and/or specific requirements for the degree or other academic policies, approval is needed from the advisor and the dean or director of the college or school in which the major is located. Submit the signed petition to the Office of the Registrar. It will then be forwarded to the provost for consideration.

RESIDENCE CREDIT

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit.

Transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered residence credit. None of these types of credit can be applied to UAF residency requirements.

UAF residence credit takes precedence over any nonresident credit. For example, if a student has AP credit for a course, but takes the same courses at UAF, the AP credit will be excluded and the UAF course will be applied to the degree requirements.

RESIDENCY REQUIREMENT

Most universities have residency requirements that call for a certain number of credits toward a degree to be earned at the degree-granting school. At UAF, the residency requirement for an associate degree is 15 resident credits.

ALASKA NATIVE-THEMED REQUIREMENTS

The Alaska Native-themed requirement is a degree requirement for all baccalaureate, associate of arts and associate of science degrees. The requirement may be met by taking a designated Alaska Native-themed

course anywhere in the student's course of study, including general education requirements, major requirements, minor requirements and electives.

GRADUATION

- **Responsibility**
  It is the student's responsibility to meet all requirements for graduation. Students are encouraged to work with their advisor and use DegreeWorks throughout their college career to ensure they are on track to graduate.
- **Application for Graduation**
  A formal application and non-refundable fee for graduation are required to be filed with the Office of the Registrar. Application prior to the semester planned for graduation is encouraged. If the application is filed by the published deadline the graduation application fee is $50. Late application for graduation is available by the published late graduation deadline for the semester. The fee for a late application is $80. Applications for graduation filed after the late deadline are processed for graduation the following semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and repay the fee.
- **Diplomas and Commencement**
  UAF issues diplomas to graduates three times a year: in September following summer sessions, in February at the end of the fall semester and in June at the end of the spring semester. Students who complete degree requirements for UA Board of Regents-approved academic programs during the academic year are invited to participate in the annual commencement ceremony at the end of the spring semester.
  Names of students receiving degrees/certificates appear in the commencement program and are released to the media unless a written request to withhold is submitted to the Office of the Registrar. Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.
- **Graduation with Honors**
  Graduation with Latin honors is a tribute that recognizes academic achievement. Honors graduates have earned a cumulative GPA of 3.5 or higher in all college work. If a student's overall cumulative GPA is 3.5 or higher, a student graduates with the distinction of cum laude; 3.75 or higher, magna cum laude; 3.9 or higher, summa cum laude. For students to be considered for graduation with Latin honors, they must have:
  - 3.5 cumulative GPA in all attempted UAF credits, and
  - UAF residence credit of 15 semester hours for an associate degree.

Once those requirements are met, Latin honors can be determined.

General University Requirements for Associate Degrees

At least 30 semester credits for a certificate and 60 semester credits for an associate degree, including transfer credits, must be earned at the 100-level or above. At least 15 semester credits applicable to any certificate or associate degree must be earned at UAF. A minimum cumulative GPA of 2.0 is required in all work as well as in the major field. A C- grade or higher must be earned in all courses required for a degree unless otherwise specified by the program major (major, minor, general education requirements and degree requirements). Some majors require higher GPAs for major coursework.

Unless otherwise specified by the appropriate academic unit, a course may be taken more than once toward fulfilling degree, certificate or major requirements. However, credit hours for such courses count only once toward total credits required for the degree or certificate.

	Certificate	Associate Degree
Minimum number of credits required	30 credits	60 credits
Credits that must be earned at UAF (residence credit)	15 credits	15 credits
Grade point average required	2.0 cumulative and in major	2.0 cumulative and in major
Minimum grades required for major	No grade lower than C- in courses required for major. Some departments have higher requirements	No grade lower than C- in courses required for major. Some departments have higher requirements
Catalog year that can be used to meet requirements	May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; five-year limit on catalog year	May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; five-year limit on catalog year
Second degree requirements		Only one A.A. degree may be earned; 12 credits beyond first A.A.S. degree and all requirements for the second degree must be met

Associate Degree Requirements

GENERAL ASSOCIATE DEGREE REQUIREMENTS

- At least 60 semester hours, including transfer credits, must be completed to earn a UAF associate degree.
- At least 15 credits applicable to any associate degree must be UAF resident credits.

ASSOCIATE OF APPLIED SCIENCE (A.A.S.) REQUIREMENTS

Minimum Requirements for Degree: 60 credits

The Associate of Applied Science degree is for students preparing for entry-level employment or upgrading in a specific occupation. This degree is not intended for transfer into a four-year degree program. However, some courses within the A.A.S. degree may be accepted in a four-year bachelor's program. (Each course is considered on an individual basis.)

A.A.S. degrees are awarded in specific occupational fields with an emphasis on entering the job market. This degree, usually seen as a terminal degree, can serve as the basis for additional education. For specific major requirements, see the Associate Degree Programs (p. 236) section.

Students planning to go on to a bachelor's degree need to work closely with their advisors and are encouraged to select courses meeting general education requirements and courses designated within majors and minors. Only courses with an X designator count towards the baccalaureate general education requirements (GER).

Students must have a cumulative GPA of at least 2.0 in their major and overall. A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major. Some majors require higher GPAs for major coursework.

All credits for the A.A.S. degree must be at the F100 level or above and be distributed as follows:

Code	Title	Credits
Communication		**9**
Complete the following:		
ABUS F271	Business Communications	
or WRTG F211X	Writing and the Humanities	
or WRTG F212X	Writing and the Professions	
or WRTG F213X	Writing and the Sciences	
or WRTG F214X	Arguing Across Contexts	
COM F121X	Introduction to Interpersonal Communication	
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F111X	Writing Across Contexts	
Computation		**3**
Complete one of the following:		
Any course at the F100 level or above in mathematical sciences (computer science, math or statistics)		
ABUS F155	Business Math	
ECE F117	Practical Math Skills	
HLTH F116	Mathematics in Health Care	
HUMS F117	Practical Math Skills	
MATH F105	Intermediate Algebra	
TTCH F131	Mathematics for the Trades	
Other program-approved discipline-based computation course or discipline-based course with embedded computation content		
Human Relations		**3**
Complete one of the following:		
ABUS F154	Human Relations	
ANL F287	Teaching Methods for Alaska Native Languages	
ANTH F100X/SOC F101X	Individual, Society and Culture	
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	
ECE F107X	Child Development II: The Preschool and Primary Years	
ED/PSY F245	Child Development	
HLTH F106	Human Behavior in Health Care	
HUMS F120	Cultural Diversity in Human Services	
RHS F110 and RHS F115	Cross-cultural Bridging Skills and Issues of Personal Development	

Other program-approved discipline-based human relations course or discipline-based course with embedded human relations content	
Major Specialty	
At least 30 hours of major specialty courses	30
Electives to total	**60**

ASSOCIATE OF ARTS (A.A.) REQUIREMENTS

Minimum Requirements for Degree: 60 credits

The Associate of Arts degree represents the completion of broad-based college study. This degree may serve as a starting point in a student's career or as a stepping stone to a bachelor's program. Only one A.A. degree may be earned.

Students planning to go on to a bachelor's degree are advised to select courses meeting remaining general education requirements and courses designated within bachelor's degree majors and minors.

Students must have a cumulative GPA of at least 2.0 in their major and overall. Students must earn a C- grade or higher in all courses required for their degree unless otherwise specified by their major (major, minor, general education requirements and degree requirements). Some majors require higher GPAs for major coursework.

The curriculum of the Associate of Arts degree consists of all courses required to meet the UAF baccalaureate general education requirements, with the following exception:

All credits for the A.A. degree must be at the F100 level or above, with 20 credits at the F200 level or above, and be distributed as follows:

Code	Title	Credits
General education requirement credits		35-40
A.A. degree requirements		3-4
General electives		19-24
Total Credits		**60**

General Education Requirements - 35-40 credits

Code	Title	Credits
Communication		**9**
Complete the following:		
COM F121X	Introduction to Interpersonal Communication	
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F111X	Writing Across Contexts	
WRTG F211X	Writing and the Humanities	
or WRTG F212X	Writing and the Professions	
or WRTG F213X	Writing and the Sciences	
or WRTG F214X	Arguing Across Contexts	
Arts		**3**
Complete one of the following:		
ART F105X	Beginning Drawing	
ANS/FLPA F161X	Introduction to Alaska Native Performance	
ANS F202X	Aesthetic Appreciation of Alaska Native Performance	
ANS/MUS/ACNS F223X	Alaska Native Music	
ART F200X	Explorations in Art	
ART F261X	History of World Art I	
ART F262X	History of World Art II	
ENGL/FLPA F217X	Introduction to the Study of Film	
FLPA F105X	History of the Cinema	
FLPA F121X	Fundamentals of Acting	
FLPA F200X	Discovering Stage & Screen	
FLPA F215X	Dramatic Literature and History	
HUM F201X	Unity in the Arts	
MUS F103X	Music Fundamentals	
MUS F125X	Enjoying Jazz	
MUS F200X	Explorations in Music	
Humanities		**3-5**
Complete one of the following:		
ANL F251X	Introduction to Athabascan Linguistics	

ANL F255X	Introduction to Alaska Native Languages	
ENGL/FL F200X	World Literature	
ENGL F201X	Texts and Contexts	
ENGL F270X	Introduction to Creative Writing	
JOUR F101X	Media and Culture	
LING F101X	Nature of Language	
LING F216X	Languages of the World	
PHIL F102X	Introduction to Philosophy	
PHIL F104X	Logic and Reasoning	
RELG F221X	Religions of the World	
OR complete one of the following languages:		
ANL F141X	Beginning Dene / Athabascan I	
ANL F142X	Beginning Dene / Athabascan II	
ASLG F101X	American Sign Language I	
ASLG F202X	American Sign Language II	
CHNS F101X	Elementary Chinese I	
CHNS F102X	Elementary Chinese II	
FREN F101X	Elementary French I	
FREN F102X	Elementary French II	
GER F101X	Elementary German I	
GER F102X	Elementary German II	
INU F111X	Elementary Inupiaq I	
INU F112X	Elementary Inupiaq II	
JPN F101X	Elementary Japanese I	
JPN F102X	Elementary Japanese II	
LAT F101X	Beginning Latin I	
LAT F102X	Beginning Latin II	
RUSS F101X	Elementary Russian I	
RUSS F102X	Elementary Russian II	
SPAN F101X	Elementary Spanish I	
SPAN F102X	Elementary Spanish II	
YUP F101X	Elementary Central Yup'ik I	
YUP F102X	Elementary Central Yup'ik II	
Social Sciences		**6**
Complete two courses from the following in two different disciplines:		
ACCT F261X	Principles of Financial Accounting	
ANS F111X	History of Colonization in Alaska: The Indigenous Response	
ANS F242X	Indigenous Cultures of Alaska	
ANTH F100X	Individual, Society and Culture	
ANTH F101X	Introduction to Anthropology	
ANTH F111X	Ancient Civilizations	
ANTH F211X	Fundamentals of Archaeology	
BA F151X	Introduction to Business	
BA F254X	Personal Finance (s)	
BA/SPRT F281X	Introduction to Sport Management	
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	
ECE F107X	Child Development II: The Preschool and Primary Years	
ECE F210X	Child Guidance	
ECON F101X	Principles of Microeconomics	
ECON F102X	Principles of Macroeconomics	
ECON F111X	The Economy of Rural Alaska	
ECON F120X	Introduction to Economic Analysis	

ECON F235X	Introduction to Natural Resource Economics	
HIST F100X	Modern World History	
HIST F102X	Western Civilization Since 1500	
HIST F110X	History of Alaska Natives from Contact to the Present	
HIST F122X	East Asian Civilization	
HIST F132X	History of the U.S.	
HUMS/JUST F125X	Introduction to Addictive Processes	
JUST F110X	Introduction to Justice	
JUST F251X	Criminology	
PS F100X	Political Economy	
PS F101X	Introduction to American Government and Politics	
PS F201X	Comparative Politics	
PS F221X	International Politics	
PSY F101X	Introduction to Psychology	
RD F200X	Rural Development in the North	
SOC F101X	Introduction to Sociology	
SOC F201X	Social Problems and Solutions	
SWK F103X	Introduction to Social Work	
WGS F201X	Introduction to Women, Gender and Sexuality Studies	
Additional Arts/Humanities/Social Science		**3-5**
Complete one additional course from the arts, humanities or social science courses listed above.		
Mathematics		**3-4**
Complete one of the following:		
MATH F113X	Numbers and Society	
MATH F122X	Essential Precalculus with Applications [1]	
MATH F151X	College Algebra for Calculus [1]	
MATH F152X	Trigonometry	
MATH F156X	Precalculus	
MATH F230X	Essential Calculus with Applications [2,3]	
MATH F251X	Calculus I [2,3]	
MATH F252X	Calculus II [3]	
MATH F253X	Calculus III [3]	
STAT F200X	Elementary Statistics	
Natural Sciences		**16**
Complete two of the following:		
ATM F101X	Weather and Climate of Alaska	
BIOL F100X	Human Biology	
BIOL F103X	Biology and Society	
BIOL F104X	Natural History of Alaska	
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
BIOL F120X	Introduction to Human Nutrition	
CHEM F100X	Chemistry in Complex Systems	
CHEM F103X	Introduction to General Chemistry	
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F111X	Introduction to Environmental Chemistry of the Arctic	
ENVI F101X	Introduction to Environmental Science	
GEOS F101X	The Dynamic Earth	

GEOS F106X	Life in the Age of Dinosaurs	
GEOS F111X	Earth and Environment: Elements of Physical Geography	
GEOS F112X	The History of Earth and Life	
GEOS F120X	Glaciers, Earthquakes and Volcanoes: Past, Present and Future	
MBI/OCN F111X	The Oceans	
PHYS F102X	Energy and Society	
PHYS F115X	Physical Sciences	
PHYS F123X	College Physics I	
PHYS F124X	College Physics II	
PHYS F165X	Introduction to Astronomy	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
PHYS F213X	Elementary Modern Physics	
Concentration Specialty		**15**
Complete 15 credits of concentration specialty courses as approved by the department		
Total Credits		**58-63**

1 Credit may be earned for either MATH F122X or MATH F151X, but not both.
2 Credit may be earned for either MATH F230X or MATH F251X, but not both.
3 Or any math course having one of these as a prerequisite.

A.A. Degree Requirements - 3-4 credits

Code	Title	Credits
Library and Information Research		
Complete one of the following prior to junior standing:		0-1
LS F101X	Library Information and Research	
Successful completion of library skills competency test		
Alaska Native-themed Requirement		
During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.		3
Complete the Alaska Native-themed requirements. (p. 275)		
Total Credits		**3-4**

ASSOCIATE OF SCIENCE (A.S.) REQUIREMENTS

Minimum Requirements for Degree: 60 credits

The Associate of Science degree represents the completion of a broad-based course of study with an emphasis in the sciences. This degree may serve as a stepping stone to a science-related baccalaureate program. A student may earn only one A.S. degree.

A student must have a cumulative GPA of at least 2.0 in their major and overall. Students must earn a C- grade or higher in all courses required for their degree unless otherwise specified by their major (major, minor, general education requirements and degree requirements). Some majors require higher GPAs for major coursework.

General Education Requirements - 35-40 credits

Code	Title	Credits
Communication		**9**
Complete the following:		
COM F121X	Introduction to Interpersonal Communication	
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F111X	Writing Across Contexts	
WRTG F211X	Writing and the Humanities	
or WRTG F212X	Writing and the Professions	
or WRTG F213X	Writing and the Sciences	
or WRTG F214X	Arguing Across Contexts	
Arts		**3**
Complete one of the following:		
ART F105X	Beginning Drawing	
ANS/FLPA F161X	Introduction to Alaska Native Performance	
ANS F202X	Aesthetic Appreciation of Alaska Native Performance	
ANS/MUS/ACNS F223X	Alaska Native Music	
ART F200X	Explorations in Art	
ART F261X	History of World Art I	
ART F262X	History of World Art II	
ENGL/FLPA F217X	Introduction to the Study of Film	
FLPA F105X	History of the Cinema	
FLPA F121X	Fundamentals of Acting	
FLPA F200X	Discovering Stage & Screen	
FLPA F215X	Dramatic Literature and History	
HUM F201X	Unity in the Arts	
MUS F103X	Music Fundamentals	
MUS F125X	Enjoying Jazz	
MUS F200X	Explorations in Music	
Humanities		**3-5**
Complete one of the following:		
ANL F251X	Introduction to Athabascan Linguistics	
ANL F255X	Introduction to Alaska Native Languages	
ENGL/FL F200X	World Literature	
ENGL F201X	Texts and Contexts	
ENGL F270X	Introduction to Creative Writing	
JOUR F101X	Media and Culture	
LING F101X	Nature of Language	
LING F216X	Languages of the World	
PHIL F102X	Introduction to Philosophy	
PHIL F104X	Logic and Reasoning	
RELG F221X	Religions of the World	
OR complete one of the following languages:		
ANL F141X	Beginning Dene / Athabascan I	

ANL F142X	Beginning Dene / Athabascan II	
ASLG F101X	American Sign Language I	
ASLG F202X	American Sign Language II	
CHNS F101X	Elementary Chinese I	
CHNS F102X	Elementary Chinese II	
FREN F101X	Elementary French I	
FREN F102X	Elementary French II	
GER F101X	Elementary German I	
GER F102X	Elementary German II	
INU F111X	Elementary Inupiaq I	
INU F112X	Elementary Inupiaq II	
JPN F101X	Elementary Japanese I	
JPN F102X	Elementary Japanese II	
LAT F101X	Beginning Latin I	
LAT F102X	Beginning Latin II	
RUSS F101X	Elementary Russian I	
RUSS F102X	Elementary Russian II	
SPAN F101X	Elementary Spanish I	
SPAN F102X	Elementary Spanish II	
YUP F101X	Elementary Central Yup'ik I	
YUP F102X	Elementary Central Yup'ik II	
Social Sciences		**6**
Complete two courses from the following in two different disciplines:		
ACCT F261X	Principles of Financial Accounting	
ANS F111X	History of Colonization in Alaska: The Indigenous Response	
ANS F242X	Indigenous Cultures of Alaska	
ANTH F100X	Individual, Society and Culture	
ANTH F101X	Introduction to Anthropology	
ANTH F111X	Ancient Civilizations	
ANTH F211X	Fundamentals of Archaeology	
BA F151X	Introduction to Business	
BA F254X	Personal Finance (s)	
BA/SPRT F281X	Introduction to Sport Management	
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	
ECE F107X	Child Development II: The Preschool and Primary Years	
ECE F210X	Child Guidance	
ECON F101X	Principles of Microeconomics	
ECON F102X	Principles of Macroeconomics	
ECON F111X	The Economy of Rural Alaska	
ECON F120X	Introduction to Economic Analysis	
ECON F235X	Introduction to Natural Resource Economics	
HIST F100X	Modern World History	
HIST F102X	Western Civilization Since 1500	
HIST F110X	History of Alaska Natives from Contact to the Present	
HIST F122X	East Asian Civilization	
HIST F132X	History of the U.S.	
HUMS/JUST F125X	Introduction to Addictive Processes	
JUST F110X	Introduction to Justice	
JUST F251X	Criminology	
PS F100X	Political Economy	
PS F101X	Introduction to American Government and Politics	
PS F201X	Comparative Politics	

PS F221X	International Politics	
PSY F101X	Introduction to Psychology	
RD F200X	Rural Development in the North	
SOC F101X	Introduction to Sociology	
SOC F201X	Social Problems and Solutions	
SWK F103X	Introduction to Social Work	
WGS F201X	Introduction to Women, Gender and Sexuality Studies	
Additional Arts/Humanities/Social Science		**3-5**
Complete one additional course from the arts, humanities or social science courses listed above.		
Mathematics		**3-4**
Complete one of the following:		
MATH F113X	Numbers and Society	
MATH F122X	Essential Precalculus with Applications [1]	
MATH F151X	College Algebra for Calculus [1]	
MATH F152X	Trigonometry	
MATH F156X	Precalculus	
MATH F230X	Essential Calculus with Applications [2,3]	
MATH F251X	Calculus I [2,3]	
MATH F252X	Calculus II [3]	
MATH F253X	Calculus III [3]	
STAT F200X	Elementary Statistics	
Natural Sciences		**16**
Complete four of the following: [4]		
ATM F101X	Weather and Climate of Alaska	
BIOL F100X	Human Biology	
BIOL F103X	Biology and Society	
BIOL F104X	Natural History of Alaska	
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
BIOL F120X	Introduction to Human Nutrition	
CHEM F100X	Chemistry in Complex Systems	
CHEM F103X	Introduction to General Chemistry	
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F111X	Introduction to Environmental Chemistry of the Arctic	
ENVI F101X	Introduction to Environmental Science	
GEOS F101X	The Dynamic Earth	
GEOS F106X	Life in the Age of Dinosaurs	
GEOS F111X	Earth and Environment: Elements of Physical Geography	
GEOS F112X	The History of Earth and Life	
GEOS F120X	Glaciers, Earthquakes and Volcanoes: Past, Present and Future	
MBI/OCN F111X	The Oceans	
PHYS F102X	Energy and Society	
PHYS F115X	Physical Sciences	
PHYS F123X	College Physics I	
PHYS F124X	College Physics II	
PHYS F165X	Introduction to Astronomy	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	

PHYS F213X	Elementary Modern Physics	
Concentration Specialty		**15**
Complete 15 credits of concentration specialty courses as approved by the department		
Total Credits		**58-63**

1 Credit may be earned for either MATH F122X or MATH F151X, but not both.
2 Credit may be earned for either MATH F230X or MATH F251X, but not both.
3 Or any math course having one of these as a prerequisite.

A.S. Degree Requirements - 3-4 credits

Code	Title	Credits
Library and Information Research		
Complete one of the following prior to junior standing:		0-1
LS F101X	Library Information and Research	
Successful completion of library skills competency test		
Alaska Native-themed Requirement		
During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.		3
Complete the Alaska Native-themed requirements. (p. 275)		
Total Credits		**3-4**

Associate Degree Programs

Applied Accounting A.A.S.

Program Requirements

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Minimum Requirements for Applied Accounting A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements [1]		
Complete the A.A.S. degree requirements. (p. 226)		15
Applied Accounting Program Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F141	Payroll Accounting	3
ABUS F175	Customer Service	3
or ABUS F179	Fundamentals of Supervision	
ABUS F201	Principles of Accounting II	3
ABUS F202	Principles of Accounting III	3
ABUS F203	Accounting Capstone	3
ABUS F210	Income Tax	3
ABUS F220	Microcomputer Accounting: QuickBooks	3
ABUS F233	Financial Management	3
ABUS F235	Fund Accounting for Nonprofits	3
or ABUS F160	Principles of Banking	
BA F151X	Introduction to Business	3
CIOS F135	Microcomputer Spreadsheets	3
or CIOS F240	Microcomputer Databases	
Department-recommended electives		9
Total Credits		**60**

[1] As part of the A.A.S. degree requirements, it is recommended, though not required, that students complete ABUS F154 for the human relations requirement and ABUS F155 for the computation requirement.

Applied Business A.A.S.

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Minimum Requirements for Applied Business A.A.S. Degree: 60 credits

CONCENTRATIONS: ADMINISTRATIVE MANAGEMENT (P. 237), APPLIED MANAGEMENT (P. 237), COMPUTER APPLICATIONS (P. 237), ENTREPRENEURSHIP (P. 237), FINANCE (P. 237), HEALTH CARE MANAGEMENT (P. 237), HUMAN RESOURCES (P. 237), MANAGEMENT (P. 238), MARKETING (P. 238), PUBLIC MANAGEMENT (P. 238), RECREATION AND GUIDING MANAGEMENT (P. 238), **AND** TOURISM (P. 238)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226) [1]		15
Applied Business Program Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F161	Personal and Business Finance	3
ABUS F175	Customer Service	3
or ABUS F183	Professional Skills for Job Hunt	
ABUS F179	Fundamentals of Supervision	3
or BA F307	Introductory Human Resources Management	
BA F151X	Introduction to Business	3
Complete one of the following:		3
ABUS F232	Contemporary Management Issues	
or ABUS F277	Dynamics of Leadership	
ECON F101X	Principles of Microeconomics	
ECON F102X	Principles of Macroeconomics	
Complete one of the following:		3
ABUS F241	Applied Business Law I	
ABUS F242	Employment Law	
BA F317	Employment Law	
Complete one of the following:		3
ABUS F260	Marketing Practices	
ABUS F263	Public Relations	
BA F343	Principles of Marketing	
Concentration		
Complete one of the following:		21
Administrative Management		
Applied Management		
Computer Applications		
Entrepreneurship		
Finance		
Health Care Management		
Human Resources		
Management		
Marketing		
Public Management		

Recreation and Guiding Management	
Tourism	
Total Credits	**60**

[1] As part of the A.A.S. degree requirements, it is recommended that students complete ABUS F154 for the human relations requirement.

Concentrations

ADMINISTRATIVE MANAGEMENT

Code	Title	Credits
Administrative Management Concentration Requirements		
ABUS F102C	Keyboarding: Document Formatting	1
ABUS F116	Using 10-Key Calculators	1
ABUS F134	Alphabetic Filing	1
ABUS F170	Business English	3
ABUS F182	Office Procedures	3
ABUS F264	Filing/Records Management	3
ABUS, CIOS or CITS electives appropriate to skill level		3
Complete 6 credits from the following:		6
ABUS F183	Professional Skills for Job Hunt	
ABUS F199	Practicum in Applied Business	
CIOS F130	Word Processing	
CIOS F135	Microcomputer Spreadsheets	
CIOS F150	Computer Business Applications	
Total Credits		**21**

APPLIED MANAGEMENT

Code	Title	Credits
Applied Management Concentration Requirements		
Complete one of the following:		21
A university-approved certificate		
A professional, technical or vocational license or certification issued by government or industry and 21 department-approved electives		
Total Credits		**21**

COMPUTER APPLICATIONS

Code	Title	Credits
Computer Applications Concentration Requirements		
Complete the following:		
CIOS F130	Word Processing	3
CIOS F135	Microcomputer Spreadsheets	3
CIOS F146	Using Internet Tools and Technologies	3
or CITS F220	Implementing Internet Tools and Technologies	
CIOS F233	Desktop Publishing	3
or CIOS F255	Digital Graphics	
CIOS F240	Microcomputer Databases	3
ABUS, ACCT, BA, CITS or CIOS electives		6
Total Credits		**21**

ENTREPRENEURSHIP

Code	Title	Credits
Entrepreneurship Concentration Requirements		
Complete the following:		
ABUS F233	Financial Management	3
or ABUS F234	Introduction to Investing	
ABUS F265	Current and Emerging Trends in Applied Marketing	3
ABUS F272	Small-Business Planning	3
ABUS F273	Entrepreneurship and Small Business	3
ABUS F274	Business in the Digital World	3
ABUS, ACCT, BA, CITS or CIOS electives		3
Complete one of the following:		3
ABUS F201	Principles of Accounting II	
ABUS F210	Income Tax	
ABUS F220	Microcomputer Accounting: QuickBooks	
ABUS F235	Fund Accounting for Nonprofits	
Total Credits		**21**

FINANCE

Code	Title	Credits
Finance Concentration Requirements		
Complete the following:		
ABUS F160	Principles of Banking	3
ABUS F201	Principles of Accounting II	3
ABUS F210	Income Tax	3
ABUS F220	Microcomputer Accounting: QuickBooks	3
ABUS F233	Financial Management	3
ABUS F234	Introduction to Investing	3
ABUS F272	Small-Business Planning	3
Total Credits		**21**

HEALTH CARE MANAGEMENT

Code	Title	Credits
Health Care Management Concentration Requirements		
Complete the following:		
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F132	Administrative Procedures I	2
HLTH F208	Human Diseases	3
HLTH F234	Administrative Procedures II	4
HLTH F235	Medical Coding	4
HLTH F236	Outpatient Health Care Reimbursement	3
Total Credits		**21**

HUMAN RESOURCES

Code	Title	Credits
Human Resources Concentration Requirements		
Complete the following:		
ABUS F141	Payroll Accounting	3
ABUS F178	Professionalism	3

ABUS F231	Introduction to Personnel	3
or BA F307	Introductory Human Resources Management	
ABUS F242	Employment Law	3
or BA F317	Employment Law	
CIOS F135	Microcomputer Spreadsheets	3
CIOS F240	Microcomputer Databases	3
ABUS, ACCT, BA or CIOS electives		3
Total Credits		**21**

MANAGEMENT

Code	Title	Credits
Management Concentration Requirements		
Complete the following:		
ABUS, ACCT, BA, ECON, MATH or STAT or other department-approved electives		21
Recommended courses include:		
ABUS F201	Principles of Accounting II	
ABUS F202	Principles of Accounting III	
BA F254X	Personal Finance (s)	
ECON F101X	Principles of Microeconomics	
ECON F102X	Principles of Macroeconomics	
ECON F120X	Introduction to Economic Analysis	
ECON F227	Introductory Statistics for Economics and Business	
MATH F122X	Essential Precalculus with Applications	
MATH F230X	Essential Calculus with Applications	
STAT F200X	Elementary Statistics	
Total Credits		**21**

MARKETING

Code	Title	Credits
Marketing Concentration Requirements		
Complete the following:		
ABUS F178	Professionalism	3
ABUS F265	Current and Emerging Trends in Applied Marketing	3
ABUS F274	Business in the Digital World	3
CIOS F233	Desktop Publishing	3
or CIOS F255	Digital Graphics	
CIOS or CITS F200 level or above Internet or web design elective		3
ABUS, BA or CIOS electives		6
Total Credits		**21**

PUBLIC MANAGEMENT

Code	Title	Credits
Public Management Concentration Requirements		
Complete the following:		
ABUS F235	Fund Accounting for Nonprofits	3
PS F100X	Political Economy	3
PS F101X	Introduction to American Government and Politics	3
PS F212	Introduction to Public Administration	3
ABUS, ACCT, CIOS or PS electives		6
Complete one of the following:		3
ABUS F242	Employment Law	
BA F317	Employment Law	
PS F403	Public Policy	
Total Credits		**21**

RECREATION AND GUIDING MANAGEMENT

Code	Title	Credits
Recreation and Guiding Management Concentration Requirements		
Complete the following:		
ABUS F158	Introduction to Tourism	3
EMS F257	Arctic Survival	3
or NRM F361	Advanced Wilderness Leadership Education	
NRM F101	Natural Resources Conservation and Policy	3
NRM F161	Wilderness Leadership Education	3
RECR electives		6
Complete one of the following:		3
EMS F152	Emergency Trauma Training First Responder	
EMS F195	Special Topics	
More advanced Emergency First Responder Training		
Total Credits		**21**

TOURISM

Code	Title	Credits
Tourism Concentration Requirements		
Complete the following:		
ABUS F158	Introduction to Tourism	3
ABUS F199	Practicum in Applied Business	3
ABUS F265	Current and Emerging Trends in Applied Marketing	3
ABUS F273	Entrepreneurship and Small Business	3
Complete 3 credits from the following electives:		3
ABUS F256	Small Hotel, Bed and Breakfast, and Lodge Operations	
ABUS F267	Transportation and Logistics Management	
ABUS F269	Food and Beverage Management	
Complete one of the following elective options:		6
Option 1		
ABUS, ACCT, BA, CAH or CIOS electives		
Option 2		
ABUS F299	Practicum in Applied Business (Study Abroad)	
Foreign Language		
Total Credits		**21**

Apprenticeship Technologies A.A.S.

Program Requirements

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Minimum Requirements for Apprenticeship Technologies A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
As part of the A.A.S. requirements, complete the following:		
Communication		
COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F111X	Writing Across Contexts	
WRTG F212X	Writing and the Professions	
Computation		
Complete one of the following:		
MATH F105	Intermediate Algebra	
STAT F200X	Elementary Statistics	
Any MATH course at the 100 level or higher		
Human Relations		
Complete one of the following:		
ABUS F154	Human Relations	
ANTH F100X	Individual, Society and Culture	
SOC F101X	Introduction to Sociology	
Apprenticeship Technologies Program Requirements		
Safety, computer, business, technical or other advisor-approved courses linked to an identified education or career pathway		6
Approved apprenticeship program transfer of credit maximum		38
Electives to total 60 credits		
Total Credits		**59**

Associate of Arts

Program Requirements

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Minimum Requirements for Associate of Arts Degree: 60 credits

Students must earn a C- grade or better in each course.

All credits for the A.A. degree must be at the F100 level or above, with 20 credits at the F200 level or above, and be distributed as follows:

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
General Education Requirements		
Complete the general education requirements. (p. 272) [1]		35-40
A.A. Degree Requirements		
Complete the A.A. degree requirements. (p. 228) [1]		3-4
General Electives		
Complete the following:		
General Electives [1]		19-24
Total Credits		**60**

[1] Students planning to go on to a bachelor's degree should meet with their advisor to select courses satisfying the general education requirements and the major and/or minor requirements in both the A.A. and the desired bachelor's degree.

Students must have a cumulative GPA of at least 2.0 in their major and overall. Students must earn a C- grade or higher in all courses required for their degree unless otherwise specified by their major (major, minor, general education requirements and degree requirements). Some majors require higher GPAs for major coursework.

Associate of Science

Admission Requirements

Complete the following admission requirements:

- cumulative GPA of at least 2.0 in major and overall GPA.
- a C- grade or higher in all courses required for student's degree, unless otherwise specified by the specific major.

Program Requirements

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Minimum Requirements for Associate of Science Degree: 60 credits

CONCENTRATIONS: ETHNOBOTANY (P. 240), GENERAL SCIENCE (P. 240)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
A.S. Degree Requirements		
Complete the A.S. degree requirements. (p. 232) [1]		1-4
Concentration		
Complete one of the following: [1]		15-17
Ethnobotany		
General Science		
Electives		

Additional student-selected electives	0-9
Total Credits	**60-61**

[1] All credits for the A.S. degree must be at the F100 level or above with 20 credits at the F200 level or above. Variation in credits depends on the concentration area.

Concentrations

ETHNOBOTANY

Code	Title	Credits
Ethnobotany Concentration Requirements		
Complete the following:		
Complete 17 credits of Ethnobotany courses		17
Total Credits		**17**

GENERAL SCIENCE

Code	Title	Credits
General Science Concentration Requirements		
Complete the following:		
Science-focused area of study in natural science, mathematics, statistics, engineering, computer science or from a Bachelor of Science degree area as determined in coordination with your advisor		15
Total Credits		**15**

Aviation Maintenance A.A.S.

Program Requirements

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Minimum Requirements for Aviation Maintenance A.A.S.: 64 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Aviation Maintenance Program Requirements		
Complete the Airframe and Powerplant certificate requirements. (p. 207)		49
Total Credits		**64**

Construction Management A.A.S.

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Minimum Requirements for Construction Management A.A.S.: 62 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		13
As part of the A.A.S. requirements, complete the following:		
Communication		
WRTG F111X	Writing Across Contexts	
WRTG F212X	Writing and the Professions	
or WRTG F213X	Writing and the Sciences	
COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
Computation		
MATH F151X	College Algebra for Calculus	
Human Relations		
The human relations content is embedded in some of the major required courses for this program.		
Construction Management Program Requirements		
ABUS F101	Principles of Accounting I	3
ABUS F201	Principles of Accounting II	3
CM F102	Methods of Building Construction	3
CM F123	Codes and Standards	3
CM F142	Mechanical and Electrical Technology	3
CM F163	Building Construction Cost Estimating	3
CM F201	Construction Project Management	3
CM F202	Project Planning and Scheduling	3
CM F205	Construction Safety	3
CM F213	Civil Technology	3
CM F231	Structural Technology	3
CM F263	Civil Construction Cost Estimating	3
CM F299	Construction Management Internship	3
DRT F170	Beginning CAD	3
MATH F152X	Trigonometry	3
PHYS F123X	College Physics I	4
Total Credits		**62**

Culinary Arts and Hospitality A.A.S.

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Minimum Requirements for Culinary Arts and Hospitality A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226) [1]		15
Culinary Arts and Hospitality Program Requirements		
Complete the following:		

CAH F101	Introduction to the Culinary Field	1
CAH F140	Culinary I: Principles and Techniques	4
CAH F141	Culinary II: Stocks, Soups and Sauces	4
CAH F146	Introduction to Baking and Pastry	4
CAH F150	Food Service Sanitation	2
CAH F154	Food and Beverage Service	2
CAH F160	Principles of Nutrition	2
CAH F175	Protein Fabrication	3
CAH F199	Culinary Arts Externship	2
CAH F230	Menu Planning	1
CAH F242	Culinary III: Vegetables and Starch	4
CAH F243	Culinary IV: A la Carte Cookery	4
CAH F248	Intermediate Baking and Pastry	4
CAH F250	Garde Manger	4
CAH F253	Storeroom Purchasing and Receiving	2
CAH F256	Restaurant and Hospitality Cost Management	2
Total Credits		**60**

[1] As part of the degree requirement, CAH F255 is recommended to complete the human relations requirement.

Dental Assistant A.A.S.

Program Requirements

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Minimum Requirements for Dental Assistant A.A.S.: 61 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
As part of the A.A.S. requirements, complete the following:		
Communication		
COM F121X	Introduction to Interpersonal Communication	
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F111X	Writing Across Contexts	
WRTG F213X	Writing and the Sciences	
Human Relations		
HLTH F106	Human Behavior in Health Care	
Computation		
HLTH F116	Mathematics in Health Care	
Dental Assistant Program Requirements		
Complete one of the following:		
DA F100	Introduction to Dental Assisting	3
DA F150	Dental Radiography	4
DA F152	Dental Materials and Applications	4
DA F153	Anatomy for Dental Assistants	3
DA F251	Beginning Chairside for Dental Assistants	4
DA F252	Advanced Chairside for Dental Assistants	4
DA F254	Dental Assistant Practicum	4
HLTH F100	Medical Terminology	3
HLTH F110	Professional Skills for the Workplace	2
HLTH F114	Fundamentals of Anatomy and Physiology	4
HLTH F118	Medical Law and Ethics	2
HLTH F122	First Aid and CPR for the Health Care Provider [1]	0
HLTH F203	Science of Nutrition	3
HLTH F208	Human Diseases	3
MA F247	Introduction to Pharmacology	3
Total Credits		**61**

[1] Or First Aid/CPR card.

Early Childhood Education A.A.S.

Program Requirements

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Minimum Requirements for Early Childhood Education A.A.S. Degree: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
As part of the A.A.S. requirements, complete the following:		
Human Relations		
ECE F107X	Child Development II: The Preschool and Primary Years	
Early Childhood Education Program Requirements		
Complete the following:		
ECE F101	Early Childhood Professionalism	3
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	3
ECE F110	Safe, Healthy Learning Environments	3
ECE F119	Curriculum I: Principles and Practices	3
ECE F130	Culture, Learning and the Young Child	2
ECE F132	Young Child and the Family	1
or LS F101X	Library Information and Research	
or ECE F249	Current Issues in Early Childhood Education	

ECE F140	Positive Social and Emotional Development	3
ECE F170	Practicum I	3
or ECE F299	Practicum for CDAs	
ECE F210X	Child Guidance	3
ECE F213	Curriculum: Thinking, Reasoning and Discovery	3
ECE F214	Infants and Toddlers	3
ECE F229X	Foundations in Nutrition and Physical Wellness	3
ECE F235	Screening, Assessment and Recording	3
ECE F240	Inclusion of Children with Special Needs	3
ECE F242	Child and Family Ecology	3
ECE F270	Practicum II	3
Total Credits		**60**

Fire Science A.A.S.

Program Requirements

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Minimum Requirements for Fire Science A.A.S.: 60 credits

Students must earn a C- or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Fire Science Program Requirements [1]		
Complete the following:		
FIRE F101	Principles of Emergency Services	3
FIRE F105	Fire Prevention	3
FIRE F121	Fire Behavior and Combustion	3
FIRE F131	Firefighter I, Series I	3
FIRE F133	Firefighter I, Series II	3
FIRE F135	Firefighter I, Series III	3
FIRE F137	Firefighter I, Series IV	3
FIRE F206	Building Construction for Fire Protection	3
FIRE F214	Fire Protection Systems	3
FIRE F220	Emergency Services Safety, Health and Survival	3
Program Electives		
Complete 15 credits from the following:		15
EMS F170	EMT: Emergency Medical Technician I	
FIRE F107	Strategy and Tactics	
FIRE F117	Rescue Practices	
FIRE F143	Firefighter Internship, Series 1	
FIRE F145	Firefighter Internship, Series 2	
FIRE F147	Firefighter Internship, Series 3	
FIRE F151	Wildland Firefighter I	
FIRE F202	Fire Protection Hydraulics and Water Supply	
FIRE F210	Fire Administration I	
FIRE F232	Firefighter II	
FIRE F244	Firefighter Internship, Series 4	
FIRE F246	Firefighter Internship, Series 5	
FIRE F248	Firefighter Internship, Series 6	
Total Credits		**60**

[1] Students completing the A.A.S. in fire science will automatically complete a concentration in municipal fire control.

Note: Program electives must be approved by the student's advisor.

Human Services A.A.S.

Program Requirements

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Minimum Requirements for Human Services A.A.S.: 63 credits

CONCENTRATIONS: ADDICTIONS COUNSELING (P. 243), BEHAVIORAL HEALTH (P. 243) AND INTERDISCIPLINARY CONCENTRATION (P. 243)

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Human Services Program Requirements		
Complete the following:		
HUMS F101	Introduction to Human Services	3
or SWK F103X	Introduction to Social Work	
HUMS F102	Standards of Practice	2
HUMS F120	Cultural Diversity in Human Services	3
HUMS F125X	Introduction to Addictive Processes	3
HUMS F202	Standards of Practice II	1
HUMS F215	Individual Interviewing	3
HUMS F232	Human Service Practicum I	3
HUMS F233	Human Service Practicum II	3
HUMS F301	Ethics in Human Service	3
or SWK F220	Ethics, Values and Social Work Practice	
PSY F101X	Introduction to Psychology	3
Concentration		
Complete one of the following:		15-21
Addictions Counseling		
Behavioral Health		
Interdisciplinary Concentration		
Electives		

Additional student-selected electives	0-6
Total Credits	**63**

Concentrations

ADDICTIONS COUNSELING

Code	Title	Credits
Addictions Counseling Concentration Requirements		
Complete the following:		
HUMS F105	Personal Awareness and Growth	3
HUMS F205	Basic Principles of Group Counseling	3
or HUMS F210	Crisis and Grief Counseling	
HUMS F250	Current Issues in Human Services (or any 1-credit course approved by the human services program)	1
HUMS F260	History of Alcohol in Alaska	1
HUMS F261	Substance Abuse Assessment: ASAM PPC II	1
HUMS F263	Fetal Alcohol Spectrum Disorder	1
HUMS F266	Co-occurring Disorders	2
HUMS F305	Substance Abuse Counseling	3
Complete one of the following family courses:		2-3
ECE F342	Family Relationships	
HUMS F140	Family Dynamics	
PSY F240	Psychology of Development	
RHS F120	Family Systems I	
Total Credits		**17-18**

BEHAVIORAL HEALTH

Code	Title	Credits
Behavioral Health Concentration Requirements		
Complete the following:		
HUMS F205	Basic Principles of Group Counseling	3
HUMS F210	Crisis and Grief Counseling	3
HUMS F280	Prevention and Community Development	3
HUMS F290	Case Management	3
HUMS F305	Substance Abuse Counseling	3
PSY F240	Psychology of Development	3
or PSY F245	Child Development	
Elective credits (approved by human services program coordinator)		3
If the student is a social work or justice major, then select one of the following in place of an elective:		
Social Work Majors:		
SWK F103X	Introduction to Social Work	
Justice Majors:		
JUST F110X	Introduction to Justice	
Total Credits		**21**

INTERDISCIPLINARY CONCENTRATION

a. The interdisciplinary concentration option is made available to students based on their individual needs and goals for specific vocational preparation. The interdisciplinary concentration will include 12 credits at the F200 level or above from the disciplines of social work, psychology, sociology, justice or human services. Three credits from these disciplines can be at the F100 level.

b. The interdisciplinary concentration will be reviewed and approved by the human services program coordinator, another human services faculty member and a faculty member representing at least one other discipline. Criteria for the approval of the interdisciplinary concentration are based on the candidate's identified vocational and curricular needs.

Examples:

- HUMS or other acceptable courses that meet a student's specific need: Workforce Specialty, Family Specialty, Restorative Justice, etc.
- Courses or a certificate from within the UA system (UAA, RHS, PWSCC, etc.) that are aligned with the human services degree program.

Below is a sample of courses that could be used to fulfill an interdisciplinary concentration in restorative justice for the human services degree.

Code	Title	Credits
HUMS F210	Crisis and Grief Counseling	3
HUMS F290	Case Management	3
JUST F110X	Introduction to Justice	3
JUST F251X	Criminology	3
SOC F201X	Social Problems and Solutions	3
Total Credits		**15**

For Students with the Rural Human Services Certificate

Up to 27 credits accepted as a block of courses.

MINIMUM REQUIREMENTS FOR HUMAN SERVICES A.A.S. DEGREE: 63 CREDITS

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Human Services Program Requirements		
Complete the following:		
HUMS F101	Introduction to Human Services	3
or SWK F103X	Introduction to Social Work	
HUMS F301	Ethics in Human Service	3
or SWK F220	Ethics, Values and Social Work Practice	
PSY F101X	Introduction to Psychology	3
PSY F240	Psychology of Development	3
Complete three of the following:		9
HUMS F205	Basic Principles of Group Counseling	
HUMS F250	Current Issues in Human Services	
HUMS F280	Prevention and Community Development	
HUMS F290	Case Management	

HUMS F305	Substance Abuse Counseling	
Total Credits		**36**

Information Technology Specialist A.A.S.

Program Requirements

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Minimum Requirements for Information Technology Specialist A.A.S.: 60 credits

CONCENTRATIONS: COMPUTING TECHNOLOGY (P. 244), NETWORK AND CYBERSECURITY (P. 245), AND NETWORK AND SYSTEM ADMINISTRATION (P. 245)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
As part of the A.A.S. requirements, complete the following:		
Computation		
ABUS F155	Business Math	
or MATH F105	Intermediate Algebra	
or any course at the F100 level or above in mathematical sciences (computer science, math or statistics)		
Human Relations		
ABUS F154	Human Relations	
or ANTH F100X	Individual, Society and Culture	
or SOC F101X	Introduction to Sociology	
Information Technology Specialist Program Requirements		
Complete the following:		
CITS F204	Introduction to Computer Networks	3
CITS F205	Introduction to Coding and Programming	3
or CS F103	Introduction to Computer Programming	
or CS F201	Computer Science I	
CITS F212	Server Operating Systems	3
CITS F261	Computer and Network Security	3
CITS F281	Professional Practices in IT	3
CITS F284	Independent Project	3
or CITS F285	Cooperative Work Experience	
Additional 6 credits from CIOS, CITS or CS electives		6
Concentration		
Complete one of the following:		21-22
Computing Technology		
Network and Cybersecurity		
Network and System Administration		
Pass a certification review requiring students to demonstrate proficiency in the following skill areas: network support and troubleshooting; system administration; cybersecurity; independent thinking; human relations and support; and professional practices. [1]		
Total Credits		**60-61**

[1] Prior to graduation, all students are required to pass a certification review that includes a hands-on scenario task and the development and presentation of a portfolio of work.

Note: Upon admission to the certificate or degree program, each student will be assigned a mentor/committee chair who will be responsible for determining the student's current level of competency in the various skill areas; assisting the student in determining the courses/experiences necessary for gaining competency in the deficient skill areas; setting up the student's committee to consist of the mentor and at least one other individual who may be a UA faculty member, an adjunct faculty member, or an expert in the student's community; arranging for practical experiences in the student's community; and organizing the committee's final assessment of the student's work and recommending award of the certificate or degree.

Concentrations

COMPUTING TECHNOLOGY

Code	Title	Credits
Computing Technology Concentration Requirements		
Complete 21-22 credits from the following or from program coordinator-approved courses:		21-22
CITS F201	Operating Systems Support	
CITS F203	Information Technology Support Fundamentals	
CITS F219	Operating Systems: Topics	
CITS F220	Implementing Internet Tools and Technologies	
CITS F221	Graphics and Multimedia for the Web	
CITS F222	Website Design	
CITS F240	System and Network Services Administration	
CITS F241	Networking and LAN Infrastructure Basics	
CITS F242	Routing and Switching Essentials	
CITS F243	Intermediate Networking and LAN Infrastructure	
CITS F245	Cloud Computing Foundations	
CITS F262	Cybersecurity Defense and Countermeasures	
CITS F263	Network Security Penetration Testing	
CITS F265	Directory Services Administration	
CITS F282	IT Troubleshooting Skills	
CITS F289	Information Technology: Topics	
Total Credits		**21-22**

NETWORK AND CYBERSECURITY

Code	Title	Credits
Network and Cybersecurity Concentration Requirements		
Complete the following:		
CITS F241	Networking and LAN Infrastructure Basics	4
CITS F242	Routing and Switching Essentials	4
CITS F243	Intermediate Networking and LAN Infrastructure	4
CITS F245	Cloud Computing Foundations	3
CITS F262	Cybersecurity Defense and Countermeasures	3
CITS F263	Network Security Penetration Testing	3
Total Credits		**21**

NETWORK AND SYSTEM ADMINISTRATION

Code	Title	Credits
Network and System Administration Concentration Requirements		
Complete the following:		
CITS F240	System and Network Services Administration	3
CITS F241	Networking and LAN Infrastructure Basics	4
CITS F242	Routing and Switching Essentials	4
CITS F243	Intermediate Networking and LAN Infrastructure	4
CITS F245	Cloud Computing Foundations	3
CITS F265	Directory Services Administration	3
Total Credits		**21**

Interdisciplinary Studies A.A.S.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES A.A.S.

1. Students who are interested in an interdisciplinary studies program should meet with an advisor in the Office of Undergraduate Interdisciplinary Studies or the CTC Advising Center to develop their educational plan. Appointments can be scheduled by clicking the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/) or by calling the CTC Advising Center at 907-455-2800.

2. If you are not currently an active UAF student, are attending as a nondegree student, or are admitted to a different degree level, you need to apply for admission with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in an associate degree program at UAF, you do not need to reapply for admission and can skip this step.

3. Create a draft of your interdisciplinary studies major plan, including its title, courses to be included, a written description and a capstone. You can work on a draft directly on the Interdisciplinary Studies Associate of Applied Science - Goals Option Approval Form. Students are also encouraged to use a plan ahead worksheet or spreadsheet to lay out a path to graduation.

4. Contact faculty (three minimum) to serve on your interdisciplinary committee. One faculty member will serve as the chair/advisor. The faculty chair should be affiliated with an academic unit that provides the degree level you are seeking. You should arrange a committee meeting for all members to meet and discuss your proposal. At this meeting, the committee will review your interdisciplinary proposal and provide feedback to help you choose your title and proposed courses.

5. After receiving feedback and advice from your faculty committee, you will fill out or edit your drafted Interdisciplinary Studies Associate Degree - Goals Option Approval Form. The form must be submitted electronically to the Office of Undergraduate Interdisciplinary Studies, and will then be routed for electronic signatures by you, each of your committee members and the dean of the Community and Technical College as well as the director of undergraduate interdisciplinary studies and vice provost for final approval.

6. Once your interdisciplinary studies packet is approved, you will be notified by email and your DegreeWorks will be updated to show your new major's courses. You will work with your committee chair as your primary academic advisor going forward.

7. Any changes to the approved curriculum are made only with the approval of your faculty committee chair and submitted on a UAF Undergraduate Petition form and signed by all necessary parties. Petitions should be submitted to the undergraduate interdisciplinary studies office for the director to consider for final approval.

8. The approved title of your major will appear on the transcript and diploma when you graduate as "Your Title: Interdisciplinary Studies."

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Program Requirements

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Minimum Requirements for Interdisciplinary Studies A.A.S.: 60 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Interdisciplinary Studies Program Requirements		
Select coursework from more than one discipline to create a cohesive body of knowledge for a minimum of 30 credits. Courses must be approved by three faculty, the dean of UAF Community and Technical College, the director of undergraduate interdisciplinary studies and the UAF vice provost.		30
Total Credits		**45**

See the Admission Requirements (p. 245) tab for more information on the approval process for the program requirements for the interdisciplinary studies major.

Note: Any changes to an approved interdisciplinary proposal need to be approved by the chair of your committee by petition and by the vice provost.

Medical Assistant A.A.S.

Program Requirements

< Back to Department (p. 102)

Minimum Requirements for Medical Assistant A.A.S. Degree: 63 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Medical Assistant Program Requirements		
HLTH F110	Professional Skills for the Workplace	2
HLTH F118	Medical Law and Ethics	2
HLTH F122	First Aid and CPR for the Health Care Provider [1]	0
HLTH F124	Introduction to Medical Scribe Specialist	2
HLTH F130	Medical Office Technology	3
HLTH F203	Science of Nutrition	3
HLTH F208	Human Diseases	3
HLTH F236	Outpatient Health Care Reimbursement	3
MA F100	Medical Terminology	3
MA F114	Fundamentals of Anatomy and Physiology (preferred)	4
or BIOL F100X	Human Biology	
MA F142	Clinical Procedures I	4
MA F144	Administrative Procedures for the Medical Assistant	5
MA F244	Clinical Procedures II	4
MA F247	Introduction to Pharmacology	3
MA F268	Medical Assisting Practicum	4
or MA F261 and MA F267	Medical/Dental Office Reception Practicum and Medical Assisting Practicum Completion	
Approved HLTH, CIOS, ABUS, HUMS electives		3
Total Credits		**63**

[1] Complete course or submit current first aid and CPR for the healthcare provider card.

Native Language Education A.A.S.

Program Requirements

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Minimum Requirements for Native Language Education A.A.S.: 60 credits

CONCENTRATIONS: ATHABASCAN (P. 246), INUPIAQ (P. 246), YUP'IK (P. 247)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Native Language Education Program Requirements		
Complete one of the following concentrations:		25-30
Athabascan		
Inupiaq		
Yup'ik		
Electives		
Additional student-selected electives		15-20
Total Credits		**60**

Concentrations

ATHABASCAN

Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Code	Title	Credits
Athabascan Concentration Requirements		
Complete the following:		
ANL F108	Beginning Athabascan Literacy	3
ANL F208	Advanced Athabascan Literacy	3
ANL F251X	Introduction to Athabascan Linguistics	3
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
ED F299	Practicum in Education	1-3
Complete 6 credits from the following:		6
ANL F199	Practicum in Native Language Education	
Total Credits		**25-27**

INUPIAQ

Candidates must demonstrate proficiency or complete a two-semester sequence in the language of the degree.

Code	Title	Credits
Inupiaq Concentration Requirements		
Complete the following:		
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3

ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
ED F299	Practicum in Education	6
INU F118	Inupiaq Orthography	3
INU F218	Inupiaq Composition	3
Inupiaq linguistics elective		3
Complete 6 credits from the following:		6
ANL F199	Practicum in Native Language Education	
Total Credits		**30**

YUP'IK

Demonstrate advanced oral/aural proficiency in Yup'ik.

Code	Title	Credits
Yup'ik Concentration Requirements		
Complete the following:		
ANL F199	Practicum in Native Language Education	3
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
ED F299	Practicum in Education	3
YUP F109	Central Yup'ik Orthography	3
YUP F208	Yup'ik Composition	3
YUP F250	Yup'ik Literature for Children	3
YUP F251	Teaching Beginning Yup'ik Reading and Writing	3
Total Credits		**27**

Paralegal Studies A.A.S.

Admission Requirements

Complete the following admission requirements:

- Complete WRTG F111X with a grade of C or better prior to admission to the program.

Program Requirements

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Minimum Requirements for Paralegal A.A.S.: 60 credits

Note: The program curriculum is approved by the American Bar Association. Graduates are not authorized to provide direct legal services to the public. The paralegal studies program provides training for paralegals who are authorized to perform substantive legal work under the supervision of a lawyer. The program does not train lawyers or legal administrators.

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Paralegal Program Requirements		
Complete the following:		
JUST F110X	Introduction to Justice	3
or PS F101X	Introduction to American Government and Politics	
PLS F102	Introduction to Paralegal Studies	3
PLS F105	Ethics for Paralegals	3
PLS F201	Practical Paralegal Skills	3
PLS F210	Civil Procedure	3
PLS F240	Family Law	3
PLS F260	Legal Technology	3
PLS F270	Constitutional Law for Paralegals	3
PLS F280	Legal Research and Writing for Paralegals	3
PLS F285	Advanced Legal Writing	3
PLS F299	Paralegal Studies Internship	3
Complete four of the following:		12
PLS F203	Torts	
PLS F213	Criminal Law for Paralegals	
PLS F215	Contracts/Real Property	
PLS F241	Applied Business Law I	
PLS F242	Employment and Administrative Law	
PLS F250	Probate Law	
Elective	Any F200-level or higher JUST course	
Total Credits		**60**

Note: Students interested in the paralegal studies degree should consult the program coordinator before enrolling in paralegal courses. Transfer credits for paralegal courses completed at other institutions are subject to approval by the program coordinator. No more than 15 credit hours of paralegal courses completed at other institutions will be applied toward completion of the A.A.S. degree in paralegal studies at UAF.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
ABUS F154	Human Relations (or department-approved Human Relations course)	3
ABUS F155	Business Math (or MATH F105 or higher)	3
JUST F110X or PS F101X	Introduction to Justice or Introduction to American Government and Politics	3
PLS F102	Introduction to Paralegal Studies	3
WRTG F111X	Writing Across Contexts	3
	Credits	**15**
Spring		
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
PLS F105	Ethics for Paralegals	3
PLS F201	Practical Paralegal Skills	3
PLS F215	Contracts/Real Property (or department-approved elective)	3
PLS F241	Applied Business Law I (or department-approved elective)	3
	Credits	**15**
Second Year		
Fall		
PLS F210	Civil Procedure	3
PLS F240	Family Law	3
PLS F260	Legal Technology	3
PLS F270	Constitutional Law for Paralegals	3
PLS F280	Legal Research and Writing for Paralegals	3
	Credits	**15**
Spring		
PLS F203	Torts (or department-approved elective)	3
PLS F250	Probate Law (or department-approved elective)	3
PLS F285	Advanced Legal Writing	3
PLS F299	Paralegal Studies Internship	3
WRTG F212X	Writing and the Professions	3
	Credits	**15**
	Total Credits	**60**

Program Learning Outcomes

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Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Perform legal research using both print and computer-assisted methods.
- Produce professional-quality documents, including letters, fact memorandum, pleadings, contracts, wills and similar documents.
- Conduct client and witness interviews.
- Engage in basic fact-finding and investigation.
- Assist in case management, discovery, and trial preparation.
- Apply substantive and procedural law to a reasoned analysis of the matter.
- Demonstrate proficiency in use of legal technology, including electronic filing, case management and billing software.
- Recognize the ethical obligations of a paralegal and comply with the applicable rules of professional responsibility.

Paramedicine A.A.S.

Admission Requirements

- Applicants must have a current EMT basic certification (or have completed EMS F170) and have completed HLTH F114 (or BIOL F111X and BIOL F112X) .

Program Requirements

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Students must earn a C- grade or better in each course.

Minimum Requirements for Paramedicine A.A.S.: 69-73 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (http://catalog.uaf.edu/certificates-associate/)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (http://catalog.uaf.edu/certificates-associate/summary-of-certificate-and-associate-degree-requirements/#associateofappliedsciencetext)		
Paramedicine Program Requirements		
EMS F170	EMT: Emergency Medical Technician I	6
EMS F181	Clinical Rotation I	4
EMS F183	Clinical Rotation II	4
EMS F280	Paramedicine I	12
EMS F282	Paramedicine II	12
EMS F283	Paramedic Internship	12
HLTH F114	Fundamentals of Anatomy and Physiology	4-8
or BIOL F111X and BIOL F112X	Human Anatomy and Physiology I and Human Anatomy and Physiology II	

Process Technology A.A.S.

Program Requirements

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Minimum Requirements for Process Technology A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Process Technology Program Requirements [1]		
Physical Science		
Complete one of the following:		4
PHYS F102X	Energy and Society	
PHYS F115X	Physical Sciences	
PHYS F123X	College Physics I	
PHYS F124X	College Physics II	
or 4 credits of program coordinator–approved natural science courses		
Chemistry		
Complete one of the following:		4
CHEM F100X	Chemistry in Complex Systems	
CHEM F103X	Introduction to General Chemistry	
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F111X	Introduction to Environmental Chemistry of the Arctic	
or 4 credits of program coordinator-approved natural science courses		
Complete the following:		
PRT F101	Introduction to Process Technology	3
PRT F110	Introduction to Occupational Safety, Health and Environmental Awareness	3
PRT F130	Process Technology I: Equipment	4
PRT F140	Industrial Process Instrumentation I	3
PRT F144	Industrial Process Instrumentation II	3
PRT F230	Process Technology II: Systems	4
PRT F231	Process Technology III: Operations	4
PRT F250	Process Troubleshooting	3
PRT F255	Quality Concepts for the Process Industry	1
Complete 9 credits from the following or program coordinator-approved courses:		9
AMIT F129	Surface Mine Safety	
AMIT F130	Surface Mining Operations	
AMIT F135	Introduction to Mining Systems and Equipment	
AMIT F145	Introduction to Mineral Beneficiation	
CIOS F150	Computer Business Applications	
ELT F101	Basic Electronics: DC Physics	
ELT F102	Basic Electronics: AC Physics	
ELT F246	Electronic Industrial Instrumentation	
PRT F120	Water Quality Management for Process Industries	
PRT F160	Oil and Gas Exploration and Production I	
PRT F240	Industrial Process Instrumentation III	
PRT F248	Valve Maintenance and Instrumentation	
PRT F275	Process Technology Internship	
Total Credits		**60**

[1] Students must earn a C grade or better in each course.

Professional Piloting A.A.S.

Program Requirements

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Minimum Requirements for Professional Piloting A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Professional Piloting Program Requirements		
Complete the following:		
AVTY F100	Private Pilot Ground School	4
AVTY F102	Commercial Ground Instruction	3
AVTY F155	Preventive Maintenance (or AFPM advisor-approved course(s))	3
AVTY F200	Instrument Ground School	4
AVTY F231	Arctic Survival	3
AVTY F235	Elements of Weather	3
Program-approved major specialty electives [1]		15
General electives		10
Total Credits		**60**

[1] See the webpage or contact department for a suggested list of courses, many of which the applicant may obtain credit for based on experience or ratings.

Tribal Governance A.A.S.

Program Requirements

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Minimum Requirements for Tribal Governance A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Tribal Governance Program Requirements		
Complete the following:		
TG F101	Introduction to Tribal Government in Alaska	3
TG F105	Introduction to Managing Tribal Governments	3
TG F199	Tribal Management Practicum I	3
TG F201	Tribal Government in Alaska II	3
TG F205	Managing Tribal Governments II	3
TG F299	Tribal Management Practicum II	3
Complete 27 credits from the following:		27
TG F102	Essentials of Tribal Government	
TG F103	Introduction to Tribal Administration	
TG F110	Tribal Court Development for Alaska Tribes	
TG F111	Children's Topics in Tribal Justice	
TG F112	Federal Indian Law for Alaska Tribes	
TG F114	Tribal Justice Responses to Community and Domestic Violence	
TG F115	Tribal Court Administration	
TG F116	Juvenile Justice in Tribal Court	
TG F117	Tribal Court Enforcement of Decisions	
TG F118	Tribal Community and Restorative Justice	
TG F120	Introduction to Tribal Natural Resources Stewardship	
TG F140	Introduction to Geospatial Data	
TG F141	Practical GIS for Rural Alaska	
TG F142	Practical GIS Project Design	
TG F221	Tribal Participation in Federal Fish and Wildlife Management Systems	
TG F222	Tribal Participation in State Fish and Game Management Systems	
TG F225	Cross Connections: Adapting and Integrating Principles of Management and Conservation	
TG F250	Current Topics in Tribal Government	
or up to 18 credits from the optional course list		
Total Credits		**60**

OPTIONAL COURSE LIST

Code	Title	Credits
Any course in: Alaska Native Languages (ANL, INU, YUP), Alaska Native Studies, Applied Arts, Applied Business, Environmental Studies, High Latitude Range Management, Human Services, Rural Development, Rural Human Services, and/or: [1]		
ACNS F125	Our Changing Climate: Past, Present, Future	
ACNS F205	Leadership, Citizenship and Choice	
BA F151X	Introduction to Business	
BIOL F104X	Natural History of Alaska	
ECON F111X	The Economy of Rural Alaska	
FISH F110	Fish and Fisheries in a Changing World	
NRM F101	Natural Resources Conservation and Policy	
NRM F204	Public Lands Law and Policy	
PS F100X	Political Economy	
PS F263	Alaska Native Politics	
SWK F103X	Introduction to Social Work	

[1] Course substitutions relevant to Tribal Governance may be made with the approval of the Tribal Governance faculty advisor.

Yup'ik Language Proficiency A.A.S.

Program Requirements

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Minimum Requirements for Yup'ik Language Proficiency A.A.S.: 60 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 225)		
A.A.S. Degree Requirements		
Complete the A.A.S. degree requirements. (p. 226)		15
Yup'ik Language Proficiency Program Requirements		
Complete the following:		
YUP F130	Beginning Yup'ik Grammar	3
YUP F208	Yup'ik Composition	3
YUP F240	Introduction to Reading and Writing Yup'ik	3
Complete one of the following sequences:		12
YUP F103 and YUP F104 and YUP F203 and YUP F204	Conversational Central Yup'ik I and Conversational Central Yup'ik II and Conversational Central Yup'ik III and Conversational Central Yup'ik IV	
YUP F121 and YUP F122 and YUP F123	Elementary Central Yup'ik Apprenticeship I and Elementary Central Yup'ik Apprenticeship II and Elementary Central Yup'ik Apprenticeship III	
Complete one of the following sequences:		9
YUP F205 and YUP F206 and YUP F223	Regaining Fluency in Yup'ik and Regaining Fluency in Yup'ik II and Intermediate Central Yup'ik Apprenticeship III	

YUP F221 and YUP F222 and YUP F223	Intermediate Central Yup'ik Apprenticeship I and Intermediate Central Yup'ik Apprenticeship II and Intermediate Central Yup'ik Apprenticeship III	
Total Credits		**45**

Bachelor's

How to Earn a Bachelor's Degree

To earn a UAF degree, satisfy the following sets of requirements:

- general university requirements (p. 255)
- general education requirements (p. 272)
- degree requirements (p. 255)
- program (major) requirements (p. 272)

If a degree program is delivered collaboratively within the UA system, credits earned from each UA institution will be counted toward the fulfillment of degree requirements and the minimum institutional residency requirements. Contact Admissions to bring any credit from another UA system in. Credits do not transfer automatically. Institutional residency requirements are the minimum number of credits that must be earned from the campus where the degree is earned.

MAJORS

A major may be declared when a student is admitted to UAF as a degree-seeking undergraduate student. If a major isn't chosen the student be enrolled as an exploratory studies student.

A major from UAF consists of a minimum of 30 credits, at least 12 of which have to be earned at UAF.

Students must have a cumulative GPA of at least 2.0 in their major and overall. A grade of C- or higher is required for all courses for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified. Some majors require higher GPAs for major coursework.

Students enrolled in a bachelor's degree program who want to declare or add an associate degree or certificate program major can complete an Add/Change of Major form.

- **Changing a Major**
  Undergraduate students may change majors by completing an Add/Change of Major form available from the Office of the Registrar or online at the registrar's website (https://www.uaf.edu/reg/forms.php). A change of major becomes effective after it is processed by the Office of the Registrar. Graduating seniors must have a change of major submitted prior to their bachelor's degree being awarded.

CONCENTRATIONS

A concentration is an area of emphasis within a student's major. Some majors at UAF require a concentration, others do not. A student may only earn one degree in a specific discipline once. Using different concentrations within a degree program to count as a different degree is not allowed. Double concentrations are permitted with departmental approval.

MINORS

A minor is a component of a bachelor's degree in an area of study in addition to the student's major. A student can choose a minor that complements their major or use this as an opportunity to explore an additional area of interest. Students can declare a minor when submitting an admission application or by filling out the Declaration of Minor form through the Office of the Registrar (https://www.uaf.edu/reg/forms.php).

Minor Requirements

- A minor from UAF consists of a minimum of 15 credits, at least 3 of which have to be earned at UAF.
- Some minors may require department approval.
- Students must earn a C- or higher in each course required for the minor unless otherwise noted.
- Students must earn a cumulative GPA of at least 2.0 (C) in the minor.
- The same academic catalog year must be used for the bachelor's degree and minor.
- An Associate of Applied Science degree or certificate of at least 30 credits earned at any accredited college or university may be used to meet requirements for a minor in the Bachelor of Arts degree.
- Students must satisfactorily complete the requirements for a minor before the bachelor's degree can be awarded.

The Bachelor of Arts degree requires a minor. A minor is optional for the following degrees unless otherwise noted by the major:

- Bachelor of Applied Arts and Sciences
- Bachelor of Applied Management
- Bachelor of Business Administration
- Bachelor of Fine Arts
- Bachelor of Music
- Bachelor of Science
- Bachelor of Security and Emergency Management
- Bachelor of Sport and Recreation Business

Students may use the What-If (https://www.uaf.edu/reg/files/grad/DegreeWorks-What_If.pdf) feature in DegreeWorks to review minor requirements and how credits already earned apply to the requirements. Results in DegreeWorks will be more accurate once the student's minor has been declared.

SECOND BACHELOR'S DEGREE

UAF graduates who want to earn a second bachelor's degree must complete at least 24 hours of credit beyond the first bachelor's degree. Students must meet all general university requirements, degree requirements and major requirements for both degrees.

Students who earned a bachelor's degree from another college or university must be accepted for admission as transfer students. All general university requirements (including residency requirements), degree and major requirements must be met. Students who graduated from a regionally accredited college or university, however, will be considered to have completed the equivalent of the UAF baccalaureate general education requirements.

DOUBLE DEGREES OR MAJOR

Students who want to earn more than one UAF bachelor's degree must complete all general requirements as well as all major and minor requirements (if any) for all degrees. At least 24 semester credit hours beyond the total required for the first degree need to be earned before any additional degrees can be awarded. For two degrees completed at the same time, students may follow requirements from two different catalogs.

Differences Between Double Degrees and Double Major

	Double Majors	Double Degrees
Degree(s) earned	One bachelor's degree is earned. The Bachelor of Arts degree requires the completion of two majors rather than a major and a minor. Majors are selected from those approved for the B.A. degree. The Bachelor of Science degree requires the completion of a double major instead of a single major. Majors are selected from those approved for the B.S. degree.	More than one bachelor's degree is earned. Can be the same degree (e.g., two BAs) or different degrees, (e.g., B.A. and B.S., B.B.A. and B.S., B.F.A. and B.A., etc.). Each degree is independent of the other. If requirements for one degree are not completed as scheduled, the other degree may be awarded if all requirements are met.
Graduation application	A single graduation application and fee are required.	A separate graduation application and fee are required for each degree.
Catalog year	A single catalog is followed for both majors to meet requirements.	Different catalogs may be followed to meet the requirements for each degree.
General university requirements and major requirements	All general university requirements and all major requirements for both majors must be met.	All general university requirements as well as all major and minor requirements (if any) must be met for each degree.
Credit hours required	If one major is from a program that requires 120 total credits and the other major is from a program that requires 130 total credits, the 130 total credits must be completed.	At least 24 semester credit hours beyond the total required for the first degree must be completed before an additional degree can be awarded.

DEGREE POLICIES

Residence Credit

Residence credit is course credit earned through any unit of UAF. Formal classroom instruction, correspondence study, distance-delivered courses, individual study or research at UAF are all considered residence credit.

Transfer credit, advanced placement credit, credit for prior learning, military service credit and credit granted through nationally prepared examinations are not considered resident credit. None of these types of credit can be applied to UAF residency requirements.

UAF residence credit takes precedence over any nonresident credit. For example, if a student has AP credit for a course, but takes the same courses at UAF, the AP credit will be excluded and the UAF course will be applied to the degree requirements.

Residency Requirement

Most universities have residency requirements that call for a certain number of credits toward a degree to be earned at the degree-granting school. At UAF, the residency requirement for bachelor's degrees is 30 resident credits.

Degree Requirements and Time Limits

A student may complete degree requirements in effect and published in the UAF catalog in any one of the previous seven academic years in which the student is enrolled as a degree student for a bachelor's degree. A student is considered enrolled in a degree program when they have completed the registration procedure. If not enrolled for a semester or more, or if enrolled through the non-degree student registration process, a student isn't considered enrolled as a degree student during that time.

Exceptions to Degree Requirements

Occasionally an undergraduate student may request an exception to an academic requirement or regulation. Requests for an academic exception must be approved by petition. If a student submits a petition on the basis of a disability, the coordinator of Disability Services will be consulted. Petition forms are available at the Office of the Registrar or online at the registrar's website. Forms need to be returned to the Office of the Registrar with the required signatures of approval. The Office of the Registrar will notify note the petition in DegreeWorks once the appropriate person or committee has made a decision. Academic petitions fall into three categories and each involves different processes:

General Education Requirements Petitions

If a petition deals with baccalaureate general education requirements or baccalaureate degree ethics or library science requirements, the student's advisor and the head of the department of the academic area involved must grant approval. Submit the signed petition to the Office of the Registrar. It will then be forwarded to the chair of the Faculty Senate General Education Requirements Committee for consideration.

Major or Minor Degree Requirement Petitions

If wanting to waive or substitute courses within a major or minor requirement, a student needs approval signatures from their advisor and the department or program head of their major or minor area. Submit the signed petition to the Office of the Registrar.

Petitions for Other Requirements

If a petition deals with general university and/or specific requirements for a student's degree or other academic policies, approval is needed from the advisor and the dean or director of the college or school in which the major is located. Submit the signed petition to the Office of the Registrar. It will then be forwarded to the provost for consideration.

Reserving Courses for Graduate Programs

Seniors who have only a few remaining requirements for a bachelor's degree may take courses at the F400 or F600 graduate course level and have them reserved for an advanced degree. Courses reserved for use toward a graduate program cannot be counted toward requirements for the bachelor's degree.

To reserve one or more courses, students must be in their final year of an undergraduate program. Submit a written request to the Office of the Registrar during the first four weeks of the semester. The request should identify which semester courses are desired to be reserved for graduate

study and not counted toward the bachelor's degree. Reserving courses does not, however, assure that a graduate advisory committee will accept them as part of a student's eventual graduate program.

Graduate-level courses will automatically be reserved for graduate degrees unless approved by petition to be used toward the undergraduate program.

GRADUATION

Responsibility

It is the student's responsibility to meet all requirements for graduation. Students are encouraged to communicate regularly with their academic advisor and to use DegreeWorks throughout their college career to ensure they are on track to graduate.

Application for Graduation

Students need to formally apply for graduation. An application for graduation and a nonrefundable fee must be filed with the Office of the Registrar. We encourage students to apply the semester prior to the semester they plan to graduate. If the application is filed by the published deadline, the graduation application fee is $50. If the deadline is missed, a student can submit a late application for graduation by the published late graduation deadline for that semester. The fee for a late application is $80. Applications for graduation filed after the late deadline are processed for graduation the following semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and repay the fee.

Diplomas and Commencement

UAF issues diplomas to graduates three times a year: in September, January and June. Students who complete degree requirements for UA Board of Regents-approved academic programs during the academic year are invited to participate in the annual commencement ceremony at the end of the spring semester.

Names of students receiving degrees/certificates appear in the commencement program and are released to the media unless a student submits a written request to the graduation department not to do so. (See Information Release and FERPA (p. 84).)

Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

Graduation with Honors

Graduation with Latin honors is a tribute that recognizes academic achievement. Candidates who have earned a minimum of 30 credits in residence at UAF and a minimum institutional grade point average of 3.50 at the bachelor's level will graduate with honors.

GPA calculations for graduation with honors do not include:

- Credits that were excluded due to retaking a course or through the Fresh Start Program
- Noncredit courses, transfer credits, and credit by examination

Please see Grading System (p. 91) and Grade Point Average Computation (p. 92) for more information on how the UAF Institutional GPA is calculated. Students who meet these academic criteria will graduate according to one of the following honor levels:

Honor	UAF Grade Point Average (GPA)
Summa Cum Laude	3.90 or higher
Magna Cum Laude	3.75-3.89
Cum Laude	3.50-3.74

These designations are effective for all who graduate in fall 2021 going forward and will not be retroactively applied to anyone who graduated prior to the fall 2021 semester.

General University Requirements for Bachelor's Degrees

For a UAF bachelor's degree, a student must earn at least 120 semester credits, including transfer credits, at the 100 level or above. Of these, 39 credits must be upper-division (300 level or above), of which 24 must be UA residence credits and 15 must be UAF credits.

At least 30 semester credits applicable to any bachelor's degree must be earned at UAF. Transfer students need to earn at least 24 upper-division semester credits at UA, of which 15 must be UAF credits. Transfer students must earn at least 12 semester credits in the major and at least 3 semester credits in the minor. A student must earn a C- grade or higher in all courses required for the degree unless otherwise specified by the major (major, minor, general education requirements and degree requirements).

Unless otherwise specified, a course may be used more than once toward fulfilling degree, certificate, major and minor requirements. Credit hours for these courses count only once toward the total credits required for the degree or certificate.

Since WRTG F211X, WRTG F212X, WRTG F213X and WRTG F214X are writing courses, any will satisfy the second half of the requirement in written communication for the bachelor's degree. A student can not enroll in WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X without first fulfilling the WRTG F111X requirement. (See UAF Advanced Placement Credit — English (p. 47).)

Minimum number of credits	120 credits
Credits earned at UAF (residence credit)	30 credits
Upper-division credit (courses with numbers between F300 and F499)	39 credits total (some degrees require more); 24 of the 39 must be earned at UA and 15 at UAF
Additional UAF credit that must be earned by transfer students	12 credits in the major; 3 credits in the minor
Grade point average	2.0 cumulative and 2.0 in both the major and minor
Minimum grades for major	No grade lower than C- in courses required for the major. Some majors require higher GPAs for major coursework.
Catalog year that can be used to determine requirements	May use any catalog in effect when enrolled as a degree-seeking student, regardless of major; seven-year limit on catalog year
Second degree	24 credits beyond the first bachelor's degree and all requirements for the second degree must be met

Bachelor's Degree Requirements and Types

GENERAL EDUCATION REQUIREMENTS

Undergraduate bachelor's study at UAF is characterized by a common set of learning experiences known as the General Education Requirements.

If a student has completed a bachelor's degree, Associate of Arts degree or Associate of Science degree from a regionally accredited institution, they will be considered to have completed the equivalent of the general education requirements when they have been officially accepted to an undergraduate degree program at UAF.

See the **General Education Requirements** tab for more information:

General Education Requirements Details (p. 272)

ALASKA NATIVE-THEMED REQUIREMENT

The Alaska Native-themed requirement is a degree requirement for all baccalaureate, associate of arts and associate of science degrees. The requirement may be met by taking a designated Alaska Native-themed course anywhere in the student's course of study, including general education requirements, major requirements, minor requirements and electives.

See the **Alaska Native-themed Requirement** tab for more information:

Alaska Native-themed Requirements Details (p. 275)

Types of Bachelor's Degrees

General education requirements must be completed by all students. In addition to the general education requirements, each degree type (e.g., B.A., B.B.A.) may have specific required courses.

BACHELOR OF APPLIED ARTS AND SCIENCES (B.A.A.S.) REQUIREMENTS

The B.A.A.S. degree is designed for students with technical or vocational backgrounds who want to enhance their experiences with more advanced academic pursuits.

The B.A.A.S. interdisciplinary degree program offers qualified applicants the opportunity to expand upon their vocational or technical education. An A.A.S. degree from an accredited institution of higher education, or equivalent, is one of the degree program requirements. See the Applied Arts and Sciences in the bachelor's degree program section.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	No additional humanities unless required by major or minor
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	No additional social sciences unless required by major or minor
Other	One additional Arts, Humanities or Social Sciences from the lists above.	ENGL F314 or an alternative upper division writing elective. Electives can be approved by the Undergraduate Interdisciplinary Studies department.
Ethics		Complete one from the following: BA F323X, COM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X

Mathematics	Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite	One course at the F100 level or above from math, computer sciences, statistics or an approved discipline-based course that was used to meet an A.A.S. computation requirement. Approved courses include ABUS F155, MATH F105, ECE F117, HLTH F116, HUMS F117, TTCH F131 or any course with embedded computation content approved by the interdisciplinary program.
Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	No additional natural science unless required by the major
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		Minimum of 30 credits of interdisciplinary studies and an Associate of Applied Science degree
Minor Complex		
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

BACHELOR OF APPLIED MANAGEMENT (B.A.M.) REQUIREMENTS

The B.A.M. online degree is designed for individuals who have completed 21-30 credit hours in an area of specialization or trade and aspire to assume middle-management-level positions in their chosen field.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	
Other	One additional Arts, Humanities or Social Sciences from the lists above.	
Ethics		BA F323X
Mathematics	MATH F122X	

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		At least 33
Minor Complex		Optional: at least 15 cr
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major.
- Courses beyond 30 credits in a major complex may be used to fulfill the B.A.M. degree requirements in ethics.

BACHELOR OF ARTS (B.A.) REQUIREMENTS

The B.A. degree emphasizes written and oral communication skills, creative thinking, critical analyses of texts, understanding cultures, and a working knowledge of social, political and historical contexts. The degree is typically pursued by students whose major areas of study are directed toward humanities, arts and social science disciplines.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	Humanities and social sciences (18 credits): Any combination of courses at the F100 level or above with a minimum of 6 credits in humanities and 6 credits in social sciences or up to 12 credits of a non-English language taken at the university level and at least 6 credits of social sciences
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	See above
Ethics		Complete one from the following: BA F323X, COM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X
Mathematics	Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X or STAT F200X or any math course having one of these as a prerequisite	

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	No additional natural science unless required by the major or minor
Other	One additional Arts, Humanities or Social Sciences from the lists above.	
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		At least 30 cr
Minor Complex		Required: at least 15 cr
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major.
- Department requirements for majors and minors may exceed the minimums indicated.
- Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses. Courses beyond 30 credits in a major complex and 15 credits in a minor complex may be used to fulfill the B.A. degree requirements in ethics, humanities, mathematics or social sciences. Courses used to fulfill requirements for a minor may be used at the same time to fill major or general distribution requirements if so designated.
- Students who hold a bachelor's degree from a regionally accredited institution are not required to complete the minor complex.

Minors

Minors are offered in many subject areas. Requirements for minors are listed in the degree program sections. See a list of all bachelor's degree programs, including minors, here (http://catalog.uaf.edu/programs/).

An Associate of Applied Science (A.A.S.) degree or certificate of at least 30 credits earned at any regionally accredited college or university may be used to meet the requirements for a minor for the Bachelor of Arts (B.A.) degree. Students who hold a bachelor's degree from a regionally accredited institution are not required to complete the minor complex.

Double Majors

If a student is a Bachelor of Arts degree candidate, they may complete two majors rather than a major and a minor. Majors must be selected from those approved for the Bachelor of Arts degree. All general requirements plus all requirements for both majors will need to be completed. If completing a double major, both majors will need to be officially declared either when admitted or through the change of major procedure. The degree requirements will need to be followed from a single catalog for both majors.

BACHELOR OF BUSINESS ADMINISTRATION (B.B.A.) REQUIREMENTS

The B.B.A. degree is the undergraduate equivalent of an MBA. Students explore a wide spectrum of business-related issues to develop advanced business, management and administration skills required in organizational settings at senior levels, and to accelerate high-level career development in the workplace.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	
Other	Complete one additional Arts, Humanities or Social Sciences from the lists above.	Complete the following: ACCT F261X; ACCT F262; AIS F101; ECON F101X; ECON F102X; ECON F227; and choose an additional ECON course at any level.
Ethics		BA F323X
Mathematics	MATH F122X	

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	No additional natural science required
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		At least 24-33 cr
Minor Complex		Optional: at least 15 cr
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- All majors must earn a C- grade or higher in the general education, degree, department and major-specific, minor and specific math and statistics requirements.
- Department requirements for majors and minors may exceed the minimums indicated.
- Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses.
- Courses beyond 30 credits in a major complex may be used to fulfill the B.B.A. degree requirements in ethics.

BACHELOR OF FINE ARTS (B.F.A.) REQUIREMENTS

The B.F.A. degree has a rigorous curriculum designed to prepare talented students for professional careers in the arts.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	Humanities (12 cr): Any combination of courses at the F100 level or above.
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	
Ethics		Complete one from the following: BA F323X, COM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X
Mathematics	Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite	

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	
Other	One additional Arts, Humanities or Social Sciences from the lists above.	
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		At least 30 cr
Minor Complex		Optional: at least 15 cr
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major.
- Department requirements for majors and minors may exceed the minimums indicated.
- Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses. Courses beyond 30 credits in a major complex and 15 credits in a minor complex may be used to fulfill the B.A. degree requirements in ethics, humanities, mathematics or social sciences. Courses used to fulfill requirements for a minor may be used at the same time to fill major or general distribution requirements if so designated.
- Students who hold a bachelor's degree from a regionally accredited institution are not required to complete the minor complex.

Minors

Minors are offered in many subject areas. Requirements for minors are listed in the degree program sections. See a list of all bachelor's degree programs, including minors, here.

An Associate of Applied Science (A.A.S.) degree or certificate of at least 30 credits earned at any regionally accredited college or university may be used to meet the requirements for a minor for the Bachelor of Arts (B.A.) degree. Students who hold a bachelor's degree from a regionally accredited institution are not required to complete the minor complex.

Double Majors

If a student is a Bachelor of Arts degree candidate, they may complete two majors rather than a major and a minor. Majors must be selected from those approved for the Bachelor of Arts degree. All general requirements plus all requirements for both majors will need to be completed. If completing a double major, both majors need to be officially declared either when admitted or through the change of major procedure. Degree requirements need to be followed from a single catalog for both majors.

BACHELOR OF MUSIC (B.M.) REQUIREMENTS

The B.M. degree encourages the acquisition of skills and display of talent in music, with special emphasis on aesthetic performance and understanding.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	No additional humanities unless required by the major
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	No additional social sciences unless required by the major
Other	One additional Arts, Humanities or Social Sciences from the lists above.	
Ethics		Complete one from the following: BA F323X, COM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X
Mathematics	Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite	

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	No additional natural science required
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		85 or more cr
Minor Complex		Optional: at least 15 cr
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major.
- Department requirements for majors and minors may exceed the minimums indicated.

BACHELOR OF SCIENCE (B.S.) REQUIREMENTS

The B.S. degree emphasizes oral and written communication skills and analytical skills for examining and solving problems. The degree is typically pursued by students whose major areas of study are directed toward natural sciences, mathematics, statistics, engineering, computer science and some social science fields.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	No additional humanities unless required by major or minor
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	No additional social sciences unless required by major or minor
Other	One additional Arts, Humanities or Social Sciences from the lists above.	
Ethics		Complete one from the following: BA F323X, COM F300X, JUST F300X, NRM F303X, PHIL F322X, PS F300X
Mathematics	Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite	One 3-credit course at the F100 level or above from computer sciences or statistics, or math course from MATH F113X or above. A 3-credit calculus course must be included in general education requirements or B.S. requirements

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	One-year sequence in one natural science beyond the general education requirements—8 cr (Total natural science courses used to meet general education requirements and B.S. requirements must represent at least two different natural sciences.)
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		At least 30 cr
Minor Complex		Optional: at least 15 cr
Total Required	35-40 cr	120 cr*

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major.
- * Department requirements for majors and minors may exceed the minimums indicated, and most B.S. degree programs require 130 credits.
- Of the above, at least 39 credits must be taken in upper-division (300-level or higher) courses. Courses beyond 30 credits in a major complex and 15 credits in a minor complex may be used to fulfill the B.S. degree requirements in ethics, mathematics or natural science. Courses used to fulfill requirements for a minor may be used at the same time to fill major or general distribution requirements if so designated.

Double Majors

As a Bachelor of Science degree candidate, completion of a double major instead of a single major should be considered. Majors must be selected from those approved for the Bachelor of Science degree. All general requirements will need to be completed plus all requirements for both majors. If completing a double major, both majors need to be officially declared either when admitted or through the change of major procedure. Degree requirements need to be followed from a single catalog for both majors.

Optional Minor

Students may elect to complete a minor with the B.S. degree under the following circumstances:

1. A student must declare their minor before the beginning of their final semester in the B.S. degree program. Complete a declaration of minor form and file it with the Office of the Registrar by the end of registration.
2. Any minor approved for the B.A. degree may serve as a minor for the B.S. degree. All general and specific requirements for minors are the same as those listed for B.A. degree minors, including that courses used to meet minor requirements may not be used to meet major or general distribution requirements unless so designated. The catalog used for the minor must be the same as the catalog used for the major and general degree requirements.
3. A student must satisfactorily complete the requirements for the minor before a B.S. degree will be awarded. The minor will be listed on the transcript along with the B.S. degree.

BACHELOR OF SECURITY AND EMERGENCY MANAGEMENT (B.S.E.M.) REQUIREMENTS

The B.S.E.M. degree prepares students for professional careers responding to natural and man-made disasters, forming crisis management plans and ensuring public safety. Students with backgrounds ranging from first responders and military to applied vocational skills will graduate ready to start or advance in careers in emergency management, homeland security, public safety and emergency services.

Requirement Type	General Education Requirements	Degree Specific Requirements
Communication	Complete the following: COM F121X, COM F131X or COM F141X; WRTG F111X; and WRTG F211X, WRTG F212X, WRTG F213X or WRTG F214X.	
Library and Information Research		LS F101X or successful completion of library skills competency test
Arts	Complete one of the following: ANS F161X/ FLPA F161X, ANS F202X, ANS F223X/ MUS F223X/ACNS F223X, ART F105X, ART F200X, ART F261X, ART F262X, ENGL F217X/FLPA F217X, FLPA F105X, FLPA F121X, FLPA F200X, FLPA F215X, HUM F201X, MUS F103X, MUS F125X, MUS F200X	
Humanities	Complete one of the following: ANL F141X, ANL F142X, ANL F251X, ANL F255X, ASLG F101X, ASLG F202X, CHNS F101X, CHNS F102X, ENGL F200X/FL F200X, ENGL F201X, ENGL F270X, FREN F101X, FREN F102X, GER F101X, GER F102X, INU F111X, INU F112X, JOUR F101X, JPN F101X, JPN F102X, LAT F101X, LAT F102X, LING F101X, LING F216X, PHIL F102X, PHIL F104X, RELG F221X, RUSS F101X, RUSS F102X, SPAN F101X, SPAN F102X, YUP F101X, YUP F102X	No additional humanities unless required by major or minor
Social Sciences	Complete two of the following courses in two different disciplines: ACCT F261X, ANS F111X, ANS F242X, ANTH F100X, ANTH F101X, ANTH F111X, ANTH F211X, BA F151X, BA F254X, BA F281X/SPRT F281X, ECE F104X, ECE F107X, ECE F210X, ECE F229X ECON F101X, ECON F102X, ECON F111X, ECON F120X, ECON F235X, HIST F100X, HIST F102X, HIST F110X, HIST F122X, HIST F132X, HUMS F125X/JUST F125X, JUST F110X, JUST F251X, , NRM F111X, PS F100X, PS F101X, PS F201X, PS F221X, PSY F101X, PSY F123X, RD F200X, SOC F101X, SOC F201X, SWK F103X, WGS F201X	No additional social science unless required by major or minor
Other	One additional Arts, Humanities or Social Sciences from the lists above.	
Ethics		BA F323X
Mathematics	Complete one from the following: MATH F113X, MATH F122X, MATH F151X, MATH F152X, MATH F156X, MATH F230X, MATH F251X, MATH F252X, MATH F253X, or STAT F200X or any math course having one of these as a prerequisite	

Natural Sciences	Complete two of the following: ATM F101X, BIOL F100X, BIOL F103X, BIOL F104X, BIOL F111X, BIOL F112X, BIOL F115X, BIOL F116X, BIOL F120X, BIOL F240X, CHEM F100X, CHEM F103X, CHEM F104X, CHEM F105X, CHEM F106X, CHEM F111X, ENVI F101X, ES F100X + ES F100L, GEOS F101X, GEOS F102X, GEOS F106X, GEOS F111X, GEOS F112X, GEOS F120X, MBI F111X/ OCN F111X, PHYS F102X, PHYS F115X, PHYS F123X, PHYS F124X, PHYS F165X, PHYS F211X, PHYS F212X, PHYS F213X, WLF F104X	No additional natural science required
Alaska Native-themed		During the completion of coursework, 3 credits of Alaska Native-themed course(s) must be completed. See Alaska Native-themed courses chart for available courses.[1]
Major Complex		At least 78 cr
Minor Complex		Optional: at least 15 cr
Total Required	35-40 cr	120 cr

[1] For a summary of the Alaska Native-themed courses see the Alaska Native-themed requirements (p. 275) tab.

Notes

- A minimum C- grade or higher is required in all courses required for the degree (major, minor, general education requirements and degree requirements) unless otherwise specified by the major.
- Courses beyond 30 credits in a major complex may be used to fulfill the B.S.E.M. degree requirements in ethics.

Bachelor's Degree Programs
General Education Requirements

Undergraduate bachelor's study at UAF is characterized by a common set of learning experiences known as the General Education Requirements. If a student has completed a bachelor's degree, an associate of arts degree or an associate of science degree from a regionally accredited institution, they will be considered to have completed the equivalent of the general education requirements when they have been officially accepted to an undergraduate degree program at UAF.

Courses that satisfy the GER have course numbers ending with X. For example, WRTG F111X and COM F141X meet specific GER communication requirements. Courses used to satisfy general education requirements can also be used to satisfy minor requirements. Natural science and mathematics credits used to satisfy general education requirements can also be used to satisfy major requirements. If additional courses are added to GER in later catalog years, students may use them to fulfill a specific GER in this catalog year. Students must earn a C- grade or higher in each course used to meet a baccalaureate GER.

GENERAL EDUCATION OBJECTIVE AND LEARNING OUTCOMES

General education objective and learning outcomes for undergraduate students seeking baccalaureate degrees at the University of Alaska Fairbanks:

1. Build knowledge of human institutions, sociocultural processes, and the physical and natural world through the study of the natural and social sciences, technologies, mathematics, humanities, histories, languages and the arts.
   - Competence will be demonstrated for the foundational information in each subject area, its context and significance, and the methods used in advancing each.
2. Develop intellectual and practical skills across the curriculum, including inquiry and analysis, critical and creative thinking, problem solving, written and oral communication, information literacy, technological competence, and collaborative learning.
   - Proficiency will be demonstrated across the curriculum through critical analysis of proffered information, well-reasoned solutions to problems or inferences drawn from evidence, effective written and oral communication, and satisfactory outcomes of group projects.
3. Acquire tools for effective civic engagement in local through global contexts, including ethical reasoning, intercultural competence, and knowledge of Alaska and Alaska issues.
   - Facility will be demonstrated through analyses of issues including dimensions of ethics, human and cultural diversity, conflicts and interdependencies, globalization and sustainability.
4. Integrate and apply learning, including synthesis and advanced accomplishment across general and specialized studies, adapting them to new settings, questions and responsibilities, and forming a foundation for lifelong learning.
   - Preparation will be demonstrated through the production of a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation and reflection.

General Education Requirements at a Glance

Minimum Requirements for General Education Requirements: 35-40 credits

Refer to tables below for specific courses.

Code	Title	Credits
Communication (p. 273)		9
Arts (p. 273)		3
Humanities (p. 273)		3-5
Social Sciences (p. 273)		6
Additional Arts/Humanities/Social Sciences (p.)		3-5
Mathematics (p. 274)		3-4
Natural Sciences (p. 274)		8
Total Credits		**35-40**

COMMUNICATION - 9 CREDITS

Code	Title	Credits
Complete the following:		
WRTG F111X	Writing Across Contexts	3
COM F121X	Introduction to Interpersonal Communication	3
or COM F131X	Fundamentals of Oral Communication: Group Context	
or COM F141X	Fundamentals of Oral Communication: Public Context	
WRTG F211X	Writing and the Humanities	3
or WRTG F212X	Writing and the Professions	
or WRTG F213X	Writing and the Sciences	
or WRTG F214X	Arguing Across Contexts	
Total Credits		**9**

ARTS - 3 CREDITS

Code	Title	Credits
Complete one of the following:		3
ANS/FLPA F161X	Introduction to Alaska Native Performance	
ANS F202X	Aesthetic Appreciation of Alaska Native Performance	
ANS/MUS/ACNS F223X	Alaska Native Music	
ART F105X	Beginning Drawing	
ART F200X	Explorations in Art	
ART F261X	History of World Art I	
ART F262X	History of World Art II	
ENGL/FLPA F217X	Introduction to the Study of Film	
FLPA F105X	History of the Cinema	
FLPA F121X	Fundamentals of Acting	
FLPA F200X	Discovering Stage & Screen	
FLPA F215X	Dramatic Literature and History	
HUM F201X	Unity in the Arts	
MUS F103X	Music Fundamentals	
MUS F125X	Enjoying Jazz	
MUS F200X	Explorations in Music	
Total Credits		**3**

HUMANITIES - 3-5 CREDITS

Code	Title	Credits
Complete one of the following:		3-5
ANL F251X	Introduction to Athabascan Linguistics	
ANL F255X	Introduction to Alaska Native Languages	
ENGL/FL F200X	World Literature	
ENGL F201X	Texts and Contexts	
ENGL F270X	Introduction to Creative Writing	
JOUR F101X	Media and Culture	
LING F101X	Nature of Language	
LING F216X	Languages of the World	
PHIL F102X	Introduction to Philosophy	
PHIL F104X	Logic and Reasoning	
RELG F221X	Religions of the World	
OR take one of the following languages:		
ANL F141X	Beginning Dene / Athabascan I	
ANL F142X	Beginning Dene / Athabascan II	
ASLG F101X	American Sign Language I	
ASLG F202X	American Sign Language II	
CHNS F101X	Elementary Chinese I	
CHNS F102X	Elementary Chinese II	
FREN F101X	Elementary French I	
FREN F102X	Elementary French II	
GER F101X	Elementary German I	
GER F102X	Elementary German II	
INU F111X	Elementary Inupiaq I	
INU F112X	Elementary Inupiaq II	
JPN F101X	Elementary Japanese I	
JPN F102X	Elementary Japanese II	
LAT F101X	Beginning Latin I	
LAT F102X	Beginning Latin II	
RUSS F101X	Elementary Russian I	
RUSS F102X	Elementary Russian II	
SPAN F101X	Elementary Spanish I	
SPAN F102X	Elementary Spanish II	
YUP F101X	Elementary Central Yup'ik I	
YUP F102X	Elementary Central Yup'ik II	
Total Credits		**3-5**

SOCIAL SCIENCES - 6 CREDITS

Code	Title	Credits
Complete two of the following in two different disciplines:		6
ACCT F261X	Principles of Financial Accounting	
ANS F111X	History of Colonization in Alaska: The Indigenous Response	
ANS F242X	Indigenous Cultures of Alaska	
ANTH F100X	Individual, Society and Culture	
ANTH F101X	Introduction to Anthropology	
ANTH F111X	Ancient Civilizations	
ANTH F211X	Fundamentals of Archaeology	
BA F151X	Introduction to Business	
BA F254X	Personal Finance (s)	
BA/SPRT F281X	Introduction to Sport Management	
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	
ECE F107X	Child Development II: The Preschool and Primary Years	
ECE F210X	Child Guidance	
ECE F229X	Foundations in Nutrition and Physical Wellness	
ECON F101X	Principles of Microeconomics	
ECON F102X	Principles of Macroeconomics	
ECON F111X	The Economy of Rural Alaska	
ECON F120X	Introduction to Economic Analysis	

ECON F235X	Introduction to Natural Resource Economics
HIST F100X	Modern World History
HIST F102X	Western Civilization Since 1500
HIST F110X	History of Alaska Natives from Contact to the Present
HIST F122X	East Asian Civilization
HIST F132X	History of the U.S.
HUMS/JUST F125X	Introduction to Addictive Processes
JUST F110X	Introduction to Justice
JUST F251X	Criminology
NRM F111X	Introduction to Sustainability Science
PS F100X	Political Economy
PS F101X	Introduction to American Government and Politics
PS F201X	Comparative Politics
PS F221X	International Politics
PSY F101X	Introduction to Psychology
PSY F123X	Sleepless in Alaska: Sleep, Health and You
RD F200X	Rural Development in the North
SOC F101X	Introduction to Sociology
SOC F201X	Social Problems and Solutions
SWK F103X	Introduction to Social Work
WGS F201X	Introduction to Women, Gender and Sexuality Studies
Total Credits	**6**

MATHEMATICS - 3-4 CREDITS

Code	Title	Credits
Complete one of the following:		3-4
MATH F113X	Numbers and Society	
MATH F122X	Essential Precalculus with Applications [1]	
MATH F151X	College Algebra for Calculus [1]	
MATH F152X	Trigonometry	
MATH F156X	Precalculus	
MATH F230X	Essential Calculus with Applications [2,3]	
MATH F251X	Calculus I [2,3]	
MATH F252X	Calculus II [3]	
MATH F253X	Calculus III [3]	
STAT F200X	Elementary Statistics	
Total Credits		**3-4**

1. Credit may be earned for either MATH F122X or MATH F151X but not both.
2. Credit may be earned for either MATH F230X or MATH F251X but not both.
3. Or any math course having one of these as a prerequisite.

NATURAL SCIENCES - 8 CREDITS

Code	Title	Credits
Complete two of the following: [1]		8
ATM F101X	Weather and Climate of Alaska	
BIOL F100X	Human Biology	
BIOL F103X	Biology and Society	
BIOL/WLF F104X	Natural History of Alaska	
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
BIOL F120X	Introduction to Human Nutrition	
BIOL F240X	Beginnings in Microbiology	
CHEM F100X	Chemistry in Complex Systems	
CHEM F103X	Introduction to General Chemistry	
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F111X	Introduction to Environmental Chemistry of the Arctic	
ENVI F101X	Introduction to Environmental Science	
ES F100X and ES F100L	Engineering Alaska - An Introduction to Engineering and Makerspace Alaska - A Laboratory Introduction to Engineering	
GEOS F101X	The Dynamic Earth	
GEOS F102X	Wicked Maps for Wicked Problems: Geographic Information Systems Across Disciplines	
GEOS F106X	Life in the Age of Dinosaurs	
GEOS F111X	Earth and Environment: Elements of Physical Geography	
GEOS F112X	The History of Earth and Life	
GEOS F120X	Glaciers, Earthquakes and Volcanoes: Past, Present and Future	
MBI F111X	The Oceans	
OCN F111X	The Oceans	
PHYS F102X	Energy and Society	
PHYS F115X	Physical Sciences	
PHYS F123X	College Physics I	
PHYS F124X	College Physics II	
PHYS F165X	Introduction to Astronomy	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
PHYS F213X	Elementary Modern Physics	
SCIA F101L	Natural Science Lab Course	
Total Credits		**8**

1. Some degrees (Associate of Science (p. 225)) might require more. Please be sure to verify with an academic advisor.

Alaska Native-themed Requirement

The Alaska Native-themed (ANT) requirement is a degree requirement for all bachelor's, associate of arts and associate of science degrees.

Students may choose from a number of courses to meet the total 3-credit hour Alaska Native-themed degree requirement. These courses explore Alaska Native peoples and cultures through at least one of the following: values, language, art, knowledge, governance, subsistence, experience and ways of life. This requirement does not add to the total number of credits required for General Education Requirement (GER) or degree completion. Although the Alaska Native-themed course requirement is separate from GERs, some ANT courses are also GERs. These courses are marked with an "X" and can count toward both a GER and ANT.

The University of Alaska Fairbanks is proud to acknowledge the Alaska Native nations upon whose traditional lands its seven campuses reside. In Fairbanks, the Troth Yeddha' Campus is located on the traditional lands of the Ch'eno Xwut'ana (Dena) people of the lower Tanana River, and the branch campuses and extension offices are hosted on Indigenous lands throughout the state. UAF is federally designated as an Alaska Native Serving Institution, with over 20 percent of the student body being Alaska Native and/or American Indian.

To fulfill UAF's mission and to honor the first peoples of Alaska, all incoming undergraduate students learn about Alaska Native peoples and their perspectives and worldviews through the Alaska Native-themed course requirement. This requirement was developed through the efforts of the statewide Alaska Native Studies Council and was supported by the UAF student government and the UAF Faculty Senate.

Alaska Native-themed Courses

Code	Title	Credits
Complete three credits from the following courses:		
ANS F112/RD F110	Alaska Native Claims Settlement Act: Land Claims in the 21st Century	1
ANS/RD F113	Alaska Natives, Indigenous Peoples and International Laws	1
ANS/RD F114	Alaska Natives, Indigenous Peoples and North American Legal Systems	1
ANS/FLPA F161X	Introduction to Alaska Native Performance	3
ANS/ACNS/MUS F223X	Alaska Native Music	3
ANS/ART F268	Alaska Native Art Studio I	3
ANS/RD F315	Tribal People and Development	3
ANS/PS F325	Alaska Native and Comparative Tribal Self-Government	3
ANS/ENGL F349	Narrative Art of Alaska Native Peoples (in English translation)	3
ANS/FLPA F361	Advanced Alaska Native Performance	3
ANS/ART/ANTH F365	Alaska Native Art History	3
ANS/ART F368	Alaska Native Art Studio II	3
ANS/FLPA F381	Indigenous World in Film	3
ANS/RD F401	Cultural Knowledge of Native Elders	3
ANS/ED F420	Alaska Native Education	3
ANS/PS F425	Federal Indian Law and Alaska Natives	3
ANS/ED F461	Native Ways of Knowing	3
ANS/ART F468	Alaska Native Art Studio III	3
ART/ANS/ANTH F367	Inuit Art	3
ANS F101	Introduction to Alaska Native Studies	3
ANS F111X	History of Colonization in Alaska: The Indigenous Response	3
ANS F150	Topics in Alaska Regional Cultural History	3
ANS F160	Alaska Native Dance	1
ANS F202X	Aesthetic Appreciation of Alaska Native Performance	3
ANS F242X	Indigenous Cultures of Alaska	3
ANS F250	Current Alaska Native Leadership Perspectives	3
ANS F251	Practicum in Alaska Native Cultural Expression	1-3
ANS F300	Alaska Native Writers Workshop	3
ANS F310	Alaska Native and Comparative Indigenous Land Settlements	3
ANS F329	Indigenous Alaska Native Language and Culture Revitalization	3
ANS F350	Cross-cultural Communication: Alaska Perspectives	3
ANS F351	Advanced Practicum in Alaska Native Cultural Expression	1-3
ANS F360	Advanced Alaska Native Dance	1
ANS F375	Native American Religion and Philosophy	3
ANS F458	The Politics of Indigenous Identity	3
ANS F467	Tribal Responses to Violence: Safety, Justice and Advocacy	3
ANS F475	Alaska Native Social Change	3
ANL F101	Introduction to Alaska Native Language Study	3
ANL F108	Beginning Athabascan Literacy	1-3
ANL F121	Conversational Alaska Native Language I	1-3
ANL F122	Conversational Alaska Native Language II	1-3
ANL F141X	Beginning Dene / Athabascan I	5
ANL F142X	Beginning Dene / Athabascan II	5
ANL F150	Interpretive Communication	1
ANL F151	Interethnic Communications	3
ANL F199	Practicum in Native Language Education	3
ANL F208	Advanced Athabascan Literacy	1-3
ANL F221	Intermediate Conversational Alaska Native Language	1-3
ANL F241	Intermediate Dene / Athabascan I	3
ANL F242	Intermediate Dene / Athabascan II	3
ANL F251X	Introduction to Athabascan Linguistics	3
ANL F255X	Introduction to Alaska Native Languages	3

ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F287	Teaching Methods for Alaska Native Languages	3
ANL F288	Curriculum and Materials Development for Alaska Native Languages	3
ANL F289	Practicum in Native Language Education II	3,4
ANL F315	Alaska Native Languages: Inuit-Aleut	3
ANL F316	Alaska Native Languages: Indian Languages	3
ANL F401	Alaska Native Language Apprenticeship	5
ANL F402	Alaska Native Language Apprenticeship II	5
ANL F452	Principles of Linguistic Analysis for Alaska Native Languages	3
ANTH F102/ EBOT F100	Introduction to Ethnobotany	3
ANTH F242	Native Cultures of Alaska	3
ANTH F383	History and Cultures of Northern Dené	3
BA F391	Alaska Native Corporations: A Historical and Contemporaneous Perspective	3
EBOT F100	Introduction to Ethnobotany	3
ECON F111X	The Economy of Rural Alaska	3
HIST F110X	History of Alaska Natives from Contact to the Present	3
HSEM F461	Human Security in Alaska	3
INU F106	Introduction to Inupiaq	1
INU F111X	Elementary Inupiaq I	5
INU F112X	Elementary Inupiaq II	5
INU F115	Conversational Inupiaq I	1-3
INU F116	Conversational Inupiaq II	1-3
INU F118	Inupiaq Orthography	3
INU F211	Intermediate Inupiaq I	3
INU F212	Intermediate Inupiaq II	3
INU F218	Inupiaq Composition	3
INU F417	Advanced Inupiaq	3
JUST F340	Rural Justice in Alaska	3
PSY F430	Rural and Alaska Native Psychology	3
RD F245	Fisheries and Marine Wildlife Development in Rural Alaska	3
RD F255	Rural Alaska Land Issues	3
RD F265	Perspectives on Subsistence in Alaska	3
RD F430	Indigenous Economic Development and Entrepreneurship	3
RD F465	Community Healing and Wellness	3
RD F470	The Alaska Native Claims Settlement Act: Pre-1971 to Present	3
TG F101	Introduction to Tribal Government in Alaska	3
TG F102	Essentials of Tribal Government	1
TG F105	Introduction to Managing Tribal Governments	3
TG F112	Federal Indian Law for Alaska Tribes	1
TG F120	Introduction to Tribal Natural Resources Stewardship	3
TG F201	Tribal Government in Alaska II	3
TG F205	Managing Tribal Governments II	3
YUP F101X	Elementary Central Yup'ik I	5
YUP F102X	Elementary Central Yup'ik II	5
YUP F103	Conversational Central Yup'ik I	1-3
YUP F104	Conversational Central Yup'ik II	3
YUP F109	Central Yup'ik Orthography	3
YUP F121	Elementary Central Yup'ik Apprenticeship I	4
YUP F122	Elementary Central Yup'ik Apprenticeship II	4
YUP F123	Elementary Central Yup'ik Apprenticeship III	4
YUP F130	Beginning Yup'ik Grammar	3
YUP F131	Beginning Yup'ik Grammar II	3
YUP F155	Conversational Siberian Yupik I	1-3
YUP F156	Conversational Siberian Yupik II	1-3
YUP F158	Siberian Yupik Orthography	1-3
YUP F201	Intermediate Central Yup'ik I	3
YUP F202	Intermediate Central Yup'ik II	3
YUP F203	Conversational Central Yup'ik III	3
YUP F204	Conversational Central Yup'ik IV	3
YUP F205	Regaining Fluency in Yup'ik	3
YUP F206	Regaining Fluency in Yup'ik II	3
YUP F208	Yup'ik Composition	3
YUP F221	Intermediate Central Yup'ik Apprenticeship I	3
YUP F222	Intermediate Central Yup'ik Apprenticeship II	3
YUP F223	Intermediate Central Yup'ik Apprenticeship III	3
YUP F230	Introduction to Interpreting and Translating I	3
YUP F231	Introduction to Interpreting and Translating II	3
YUP F240	Introduction to Reading and Writing Yup'ik	3
YUP F250	Yup'ik Literature for Children	3
YUP F251	Teaching Beginning Yup'ik Reading and Writing	3
YUP F260	St. Lawrence Island Yupik I	3
YUP F261	St. Lawrence Island Yupik II	3
YUP F301	Advanced Central Yup'ik	3
YUP F330	Yup'ik Literature/Yupiit Quliraitnek Igaryaraq	3
YUP F375	Yup'ik Philosophy/Umyuarteqsaraq	3
YUP F415	Additional Topics in Advanced Yup'ik	3
YUP F488	Documenting Yup'ik Traditions/ Caliarkaq	3

Accounting B.B.A.

< Back to Department (p. 97)

Minimum Requirements for Accounting B.B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
MATH F122X	Essential Precalculus with Applications	
B.B.A. Degree Requirements		
Complete the B.B.A. degree requirements. (p. 262) [1]		23
As part of the B.B.A. requirements, complete the following:		
BA F323X	Business Ethics	
Accounting Program Requirements		
Complete the following:		
ACCT F330	Income Tax	3
ACCT F342	Managerial Cost Accounting	3
ACCT F361	Intermediate Accounting I	3
ACCT F362	Intermediate Accounting II	3
ACCT F452	Auditing	3
or ACCT F472	Internal and Government Auditing	
AIS F316	Accounting Information Systems	3
AIS F324	Advanced MS Excel	1
AIS F342	MS Excel for Finance	1
BA F308	Professional Development: How to Prepare for a Job and Other Survival Skills	1
BA F309	Professional Development: Finding a Career	1
or BA F310	Professional Development: Being Successful in Your Career	
BA F325	Financial Management	3
BA F330	The Legal Environment of Business	4
BA F343	Principles of Marketing	3
BA F360	Operations Management	3
BA F390	Organizational Theory and Behavior	3
or BA F391	Alaska Native Corporations: A Historical and Contemporaneous Perspective	
BA F462	Corporate Strategy	3
HSEM F415	Cybersecurity in the 21st Century: Technology and Ethics	3
or HSEM F416	Cybersecurity Management	
or HSEM F417	Cybersecurity Resiliency	
or HSEM F418	Cybercrime, Fraud and Law	
HSEM F445	Business Continuity and Crisis Management	3
Complete four from the following:		12
ACCT F401	Advanced Accounting	
ACCT F404	Advanced Cost Accounting and Controllership	
ACCT F414	Governmental and Nonprofit Accounting	
ACCT F430	Advanced Taxes	
ACCT F472	Internal and Government Auditing	
BA F454	Student Investment Fund	
or BA F421	Business Analytics	
Electives		
Additional student-selected electives		0-3
Total Credits		**120-122**

[1] As part of the B.B.A. degree requirements (p. 262), BA F462 fulfills the baccalaureate capstone requirement.

Note: The B.B.A. degree requires 50 percent of the accounting, business administration and economics credits to be earned at UAF. Twenty-four out of the last 30 credits earned must be taken at UAF.

Aerospace Engineering B.S.

Program Requirements

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Minimum Requirements for Aerospace Engineering B.S.: 131 credits

CONCENTRATIONS: AERONAUTICS (P. 278), SPACE SYSTEMS - ASTRONAUTICS (P. 278), UNMANNED AIRCRAFT SYSTEMS (P. 278), GENERAL (P. 278)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (http://catalog.uaf.edu/graduate/general-university-requirements-phd/)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
CHEM F105X and CHEM F105L	General Chemistry I and Chemistry F105X Lab	
ES F100X and ES F100L	Engineering Alaska - An Introduction to Engineering and Makerspace Alaska - A Laboratory Introduction to Engineering	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X and PHYS F211L	General Physics I and PHYS F211X Laboratory	

PHYS F212X and PHYS F212L	General Physics II and PHYS F212X Laboratory	
Aerospace Engineering Program Requirements		
Complete the following:		
AERO/ME F451	Aerodynamics	3
AERO/ME F452	Introduction to Astrodynamics	3
EE F102	Introduction to Electrical and Computer Engineering	3
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
EE F253	Circuit Theory	3
EE F354	Engineering Signal Analysis	3
EE F461	Communication Systems and Networks	4
EE F471	Automatic Control	3
or ME F409	Controls	
EE F481	Electrical and Computer Engineering Design I	1
or ME F486	Senior Design	
EE F482	Electrical and Computer Engineering Design II	3
or ME F487	Design Project	
ES F201	Computer Techniques	3
ES F209	Statics	3
ES F210	Dynamics	3
ES F301	Engineering Analysis	3
or EE F301	Analytical Methods for Electrical and Computer Engineers	
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
ME F408	Mechanical Vibrations	3
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Concentration		
Complete one of the following:		12-13
Aeronautical Engineering		
Space Systems - Astronautics		
Unmanned Aircraft Systems		
General		
Total Credits		**131-135**

Concentrations

AERONAUTICAL ENGINEERING

Code	Title	Credits
Aeronautical Engineering Concentration Requirements		
Complete the following:		
AERO/ME F450	Theory of Flight	3
AERO/ME F453	Propulsion Systems	3
ME F313	Mechanical Engineering Thermodynamics	3
Technical Electives		
Complete 3-4 credits from the technical electives list		3-4
Total Credits		**12-13**

SPACE SYSTEMS - ASTRONAUTICS CONCENTRATION

Code	Title	Credits
Space Systems - Astronautics Concentration Requirements		
Complete the following:		
EE F303	Electric Power Systems and Machines	4
EE F333	Electronic Devices	4
EE F444	Embedded Systems Design	4
Total Credits		**12**

UNMANNED AIRCRAFT SYSTEMS CONCENTRATION

Code	Title	Credits
Unmanned Aircraft Systems Concentration Requirements		
Complete the following:		
AERO F654	UAS Systems Design	3
AERO F656	Aerospace Systems Engineering	3
AERO F658	Unmanned Aircraft Systems (UAS) Operations	3
Technical Electives		
Complete 3-4 credits from the technical electives list		3-4
Total Credits		**12-13**

GENERAL

Code	Title	Credits
Technical Electives		
Complete 12 credits from the technical electives list		12
Total Credits		**12**

Electives

TECHNICAL ELECTIVES

Code	Title	Credits
The following courses satisfy technical electives for the aerospace engineering major.		
AERO/ME F450	Theory of Flight	
AERO/ME F453	Propulsion Systems	
AERO F654	UAS Systems Design	
AERO F656	Aerospace Systems Engineering	
AERO F658	Unmanned Aircraft Systems (UAS) Operations	
CS F453	Robotics & 3D Printing	
CS F463	Cryptography and Data Security	
CS F465	Computer and Network Security	
EE F303	Electric Power Systems and Machines	
EE F333	Electronic Devices	
EE F404	Electric Power Systems Analysis	
EE F443	Computer Engineering Analysis and Design	
EE F444	Embedded Systems Design	
EE F451	Digital Signal Processing	
EE F607	Electric Motor Drives	

ESM F422	Engineering Decisions
GEOS F416	Applied Geophysics
GEOS F422	Geoscience Applications of Remote Sensing
ME F313	Mechanical Engineering Thermodynamics
ME F405	Computer Aided Design
ME F406	Computer Aided Manufacturing
ME F441	Heat and Mass Transfer
STAT F300	Statistics

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

AEROSPACE ENGINEERING B.S. WITH AERONAUTICAL ENGINEERING CONCENTRATION

Course	Title	Credits
Freshman		
Fall		
CHEM F105X and CHEM F105L	General Chemistry I and Chemistry F105X Lab	4
COM F131X or COM F131X or COM F141X	Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
ES F100X and ES F100L	Engineering Alaska - An Introduction to Engineering and Makerspace Alaska - A Laboratory Introduction to Engineering	4
ES F201	Computer Techniques	3
MATH F251X	Calculus I	4
	Credits	**18**
Spring		
EE F102	Introduction to Electrical and Computer Engineering	3
MATH F252X	Calculus II	4
PHYS F211X	General Physics I	4
WRTG F111X	Writing Across Contexts	3
AHSSE		3
	Credits	**17**
Sophomore		
Fall		
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
ES F209	Statics	3
MATH F253X	Calculus III	4
WRTG F212X/F213X/ F214X	Writing and the Professions	3
	Credits	**18**
Spring		
EE F253	Circuit Theory	3
ES F210	Dynamics	3
ES F346	Introduction to Thermodynamics	3
LS F101X	Library Information and Research	1
MATH F302	Differential Equations	3
PHYS F212X and PHYS F212L	General Physics II and PHYS F212X Laboratory	4
	Credits	**17**
Junior		
Fall		
ES/EE F301	Engineering Analysis	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ME F408	Mechanical Vibrations	3
AHSSE		3
	Credits	**16**
Spring		
AERO/ME F451	Aerodynamics	3
EE F471/ME F409	Automatic Control	3
ME F313	Mechanical Engineering Thermodynamics	3
AHSSE		3
AHSSE		3
	Credits	**15**
Senior		
Fall		
AERO/ME F450	Theory of Flight	3
AERO/ME F452	Introduction to Astrodynamics	3
EE F354	Engineering Signal Analysis	3
EE F481/ME F486	Electrical and Computer Engineering Design I	1
AHSSE		3
Tech Elective		3
	Credits	**16**
Spring		
AERO/ME F453	Propulsion Systems	3
EE F461	Communication Systems and Networks	4
EE F482/ME F487	Electrical and Computer Engineering Design II	3
AHSSE		3
	Credits	**13**
	Total Credits	**130**

AEROSPACE ENGINEERING B.S. WITH SPACE SYSTEMS - ASTRONAUTICS CONCENTRATION

Course	Title	Credits
Freshman		
Fall		
CHEM F105X and CHEM F105L	General Chemistry I and Chemistry F105X Lab	4
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
ES F100X and ES F100L	Engineering Alaska - An Introduction to Engineering and Makerspace Alaska - A Laboratory Introduction to Engineering	4
ES F201	Computer Techniques	3
MATH F251X	Calculus I	4
	Credits	**18**
Spring		
EE F102	Introduction to Electrical and Computer Engineering	3
MATH F252X	Calculus II	4
PHYS F211X	General Physics I	4
WRTG F111X	Writing Across Contexts	3
AHSSE		3
	Credits	**17**
Sophomore		
Fall		
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
ES F209	Statics	3
MATH F253X	Calculus III	4
WRTG F212X/F213X/F214X	Writing and the Professions	3
	Credits	**18**
Spring		
EE F253	Circuit Theory	3
ES F210	Dynamics	3
ES F346	Introduction to Thermodynamics	3
LS F101X	Library Information and Research	1
MATH F302	Differential Equations	3
PHYS F212X and PHYS F212L	General Physics II and PHYS F212X Laboratory	4
	Credits	**17**
Junior		
Fall		
EE F333	Electronic Devices	4
ES/EE F301	Engineering Analysis	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ME F408	Mechanical Vibrations	3
	Credits	**17**
Spring		
AERO/ME F451	Aerodynamics	3
EE F444	Embedded Systems Design	4
EE F471/ME F409	Automatic Control	3
AHSSE		3
AHSSE		3
	Credits	**16**
Senior		
Fall		
AERO/ME F452	Introduction to Astrodynamics	3
EE F303	Electric Power Systems and Machines	4
EE F354	Engineering Signal Analysis	3
EE F481/ME F486	Electrical and Computer Engineering Design I	1
AHSSE		3
	Credits	**14**
Spring		
EE F461	Communication Systems and Networks	4
EE F482/ME F487	Electrical and Computer Engineering Design II	3
AHSSE		3
AHSSE		3
	Credits	**13**
	Total Credits	**130**

AEROSPACE ENGINEERING B.S. WITH UNMANNED AIRCRAFT SYSTEMS CONCENTRATION

Course	Title	Credits
Freshman		
Fall		
CHEM F105X and CHEM F105L	General Chemistry I and Chemistry F105X Lab	4
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
ES F100X and ES F100L	Engineering Alaska - An Introduction to Engineering and Makerspace Alaska - A Laboratory Introduction to Engineering	4
ES F201	Computer Techniques	3
MATH F251X	Calculus I	4
	Credits	**18**
Spring		
EE F102	Introduction to Electrical and Computer Engineering	3
MATH F252X	Calculus II	4
PHYS F211X	General Physics I	4
WRTG F111X	Writing Across Contexts	3
AHSSE		3
	Credits	**17**

Sophomore		
Fall		
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
ES F209	Statics	3
MATH F253X	Calculus III	4
WRTG F212X/F213X/ F214X	Writing and the Professions	3
	Credits	**18**
Spring		
EE F253	Circuit Theory	3
ES F210	Dynamics	3
ES F346	Introduction to Thermodynamics	3
LS F101X	Library Information and Research	1
MATH F302	Differential Equations	3
PHYS F212X and PHYS F212L	General Physics II and PHYS F212X Laboratory	4
	Credits	**17**
Junior		
Fall		
AERO F654	UAS Systems Design	3
ES/EE F301	Engineering Analysis	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ME F408	Mechanical Vibrations	3
	Credits	**16**
Spring		
AERO/ME F451	Aerodynamics	3
EE F471/ME F409	Automatic Control	3
AHSSE		3
AHSSE		3
AHSSE		3
	Credits	**15**
Senior		
Fall		
AERO/ME F452	Introduction to Astrodynamics	3
AERO F656	Aerospace Systems Engineering	3
EE F354	Engineering Signal Analysis	3
EE F481/ME F486	Electrical and Computer Engineering Design I	1
AHSSE		3
Tech Elective		3
	Credits	**16**
Spring		
AERO F658	Unmanned Aircraft Systems (UAS) Operations	3
EE F461	Communication Systems and Networks	4
EE F482/ME F487	Electrical and Computer Engineering Design II	3
AHSSE		3
	Credits	**13**
	Total Credits	**130**

AEROSPACE ENGINEERING B.S. WITH GENERAL CONCENTRATION

Course	Title	Credits
Freshman		
Fall		
CHEM F105X and CHEM F105L	General Chemistry I and Chemistry F105X Lab	4
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
ES F100X and ES F100L	Engineering Alaska - An Introduction to Engineering and Makerspace Alaska - A Laboratory Introduction to Engineering	4
ES F201	Computer Techniques	3
MATH F251X	Calculus I	4
	Credits	**18**
Spring		
EE F102	Introduction to Electrical and Computer Engineering	3
MATH F252X	Calculus II	4
PHYS F211X	General Physics I	4
WRTG F111X	Writing Across Contexts	3
AHSSE		3
	Credits	**17**
Sophomore		
Fall		
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
ES F209	Statics	3
MATH F253X	Calculus III	4
WRTG F212X/F213X/ F214X	Writing and the Professions	3
	Credits	**18**
Spring		
EE F253	Circuit Theory	3
ES F346	Introduction to Thermodynamics	3
ES F210	Dynamics	3
LS F101X	Library Information and Research	1
MATH F302	Differential Equations	3
PHYS F212X and PHYS F212L	General Physics II and PHYS F212X Laboratory	4
	Credits	**17**
Junior		
Fall		
ES/EE F301	Engineering Analysis	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ME F408	Mechanical Vibrations	3
AHSSE		3
	Credits	**16**

Spring		
AERO/ME F451	Aerodynamics	3
EE F471/ME F409	Automatic Control	3
AHSSE		3
AHSSE		3
Tech Elective		3
	Credits	**15**
Senior		
Fall		
AERO/ME F452	Introduction to Astrodynamics	3
EE F354	Engineering Signal Analysis	3
EE F481/ME F486	Electrical and Computer Engineering Design I	1
AHSSE		3
Tech Elective		3
Tech Elective		3
	Credits	**16**
Spring		
EE F461	Communication Systems and Networks	4
EE F482/ME F487	Electrical and Computer Engineering Design II	3
AHSSE		3
Tech Elective		3
	Credits	**13**
	Total Credits	**130**

Alaska Native Languages B.A.

Program Requirements

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Minimum Requirements for Alaska Native Language B.A.: 121 credits

CONCENTRATIONS: INUPIAQ (P. 282), YUP'IK (P. 282)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
As part of the B.A. requirements, complete the following:		
Alaska Native Language Program Requirements		
Complete the following:		
ANL F101	Introduction to Alaska Native Language Study	3
ANL F256	Introduction to Alaska Native Languages: History, Status and Maintenance	3
ANL F315	Alaska Native Languages: Inuit-Aleut	3
or ANL F316	Alaska Native Languages: Indian Languages	
ANS F329	Indigenous Alaska Native Language and Culture Revitalization	3
LING F101X	Nature of Language	3
Electives		
Complete three of the following:		9
ANL F287	Teaching Methods for Alaska Native Languages	
ANL F401	Alaska Native Language Apprenticeship	
ANS F349	Narrative Art of Alaska Native Peoples (in English translation)	
ANS F401	Cultural Knowledge of Native Elders	
ANS F461	Native Ways of Knowing	
ANTH F242	Native Cultures of Alaska	
ED F456	Orientation to Teaching in Rural Alaska	
LING F303	Language Acquisition	
LING F410	Theory and Methods of Second Language Teaching	
LING F450	Language Policy and Planning	
MUS F223X	Alaska Native Music	
Advisor approved elective		
Concentration [1]		
Complete one of the following:		22
Inupiaq		
Yup'ik		
Capstone		
Complete one of the following:		3
INU F417	Advanced Inupiaq	
YUP F415	Additional Topics in Advanced Yup'ik	
Total Credits		**121-126**

[1] Students will select a specific Alaska Native Language concentration in collaboration with program faculty. The concentration and course sequencing must be endorsed and approved by the Alaska Native Language Center department chair.

Concentrations

INUPIAQ

Code	Title	Credits
Inupiaq Concentration Requirements		
Complete the following:		
INU Courses	F100 level and above	22
Total Credits		**22**

YUP'IK

Code	Title	Credits
Yup'ik Concentration Requirements		
Complete the following:		
YUP Courses	F100 level and above	22
Total Credits		**22**

Program Learning Outcomes

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Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Ability to speak an Alaska Native Language at a high proficiency level and knowledge of the written language.
- Familiarity and incorporation of Alaska Native Language and Literature.
- Understanding, comprehension and utilization of the Alaska Native Language grammar.
- Students' everyday use of the language learned.

Alaska Native Studies B.A.

Program Requirements

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Minimum Requirements for Alaska Native Studies B.A.: 126 credits

CONCENTRATIONS: COMMUNITY RESILIENCY, (P. 283) CULTURAL REVITALIZATION, (P. 283) INDIGENOUS RIGHTS AND ADVOCACY, (P. 284) MULTIDISCIPLINARY (P. 284)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Upper-division Credits - complete 39 credits [1]		
Alaska Native Studies Program Requirements		
Complete the following:		
ANS F101	Introduction to Alaska Native Studies	3
ANS F111X	History of Colonization in Alaska: The Indigenous Response	3
ANS F242X	Indigenous Cultures of Alaska [2]	3
ANS F350	Cross-cultural Communication: Alaska Perspectives	3
ANS F401	Cultural Knowledge of Native Elders	3
ANS F478	Alaska Native Studies Senior Thesis [3]	3
RD F225	Applied Communication Skills	3
RD F245	Fisheries and Marine Wildlife Development in Rural Alaska	3
RD F340	Community Research Toolbox	3
RD F465	Community Healing and Wellness	3
RD F474	Applied Community Research	3
Complete 6 ANL/ANS/RD/TG elective credits		6
Concentration		
Complete one of the following:		15
Community Resiliency		
Cultural Revitalization		
Indigenous Rights and Advocacy		
Multidisciplinary		
Total Credits		**126-131**

1 Non-Fairbanks campus students choosing a minor other than rural development must verify that the required courses can be accessed via distance before declaring that minor. Courses used in the concentration area may be double-counted for the minor.

2 May not be counted toward an Alaska Native studies major if used to fulfill general education requirements.

3 Fulfills the baccalaureate capstone requirement. Students may substitute RD F475 with the department chair's approval.

Concentrations

COMMUNITY RESILIENCY

Code	Title	Credits
Community Resiliency Concentration Requirements		
Complete the following:		
ANS F325	Alaska Native and Comparative Tribal Self-Government	3
ANS F458	The Politics of Indigenous Identity	3
ANS F467	Tribal Responses to Violence: Safety, Justice and Advocacy	3
Complete an additional 6 credits from Alaska Native studies, rural development, tribal governance, fisheries and/or natural resource management. [4]		6
Total Credits		**15**

4 Recommended subject areas. Course substitutions relevant to the concentration area may be made with the approval of the rural development faculty advisor.

CULTURAL REVITALIZATION

Code	Title	Credits
Cultural Revitalization Concentration Requirements		
Complete the following:		
ANS F329	Indigenous Alaska Native Language and Culture Revitalization	3
ANS F461	Native Ways of Knowing	3
RD F425	Cultural Resource Issues	3
Complete an additional 6 credits from Alaska Native studies, rural development, tribal governance, ethnobotany and/or Alaska Native languages. [4]		6
Total Credits		**15**

4 Recommended subject areas. Course substitutions relevant to the concentration area may be made with the approval of the rural development faculty advisor.

INDIGENOUS RIGHTS AND ADVOCACY

Code	Title	Credits
Indigenous Rights and Advocacy Concentration Requirements		
Complete the following:		
ANS F425	Federal Indian Law and Alaska Natives	3
ANS F475	Alaska Native Social Change	3
RD F470	The Alaska Native Claims Settlement Act: Pre-1971 to Present	3
Complete an additional 6 credits from Alaska Native studies, rural development and/or tribal governance [4]		6
Total Credits		**15**

[4] Recommended subject areas. Course substitutions relevant to the concentration area may be made with the approval of the rural development faculty advisor.

MULTIDISCIPLINARY

Code	Title	Credits
Multidisciplinary Concentration Requirements		
Complete the following:		
Complete 15 credits from two or more existing concentrations. Courses must include at least 9 credits from the required course lists of the existing concentrations as approved by a department advisor.		15
Total Credits		**15**

Anthropology B.A.

Program Requirements

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Minimum Requirements for Anthropology B.A.: 120 Credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Anthropology Program Requirements		
Foundations of Anthropology		
Complete the following:		
ANTH F211X	Fundamentals of Archaeology	3
ANTH F215	Fundamentals of Social/Cultural Anthropology	3
ANTH F221	Fundamentals of Biological Anthropology	3
ANTH F260	Fundamentals of Linguistic Anthropology: Language in Culture and Communication	3
ANTH F384	History of Anthropology	3
ANTH F411	Senior Seminar in Anthropology	3
Anthropological Methods		
Complete 6 credits from the following courses:		6
ANTH F370	Virtual Ethnographic Field School	
ANTH F405	Archaeological Method and Theory	
ANTH F415	Zooarchaeology and Taphonomy	
ANTH F422	Human Osteology	
ANTH F424	Analytical Techniques	
ANTH F470	Oral Sources: Issues in Documentation	
ANTH F485	Discourse in Society: Analyzing Language in Social Context	
Anthropological Topics		
Complete 12 credits of other Anthropology Courses, at least 9 of which are at the F300 or F400 level		12
Total Credits		**108-113**

NOTE: On occasion, faculty may offer courses trial courses, special topics or seminars that would fulfill the methods or topics requirements. If so, students should consult with an anthropology faculty advisor on which requirement it meets and how to have it count toward the BA degree.

Applied Management B.A.M.

Program Requirements

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Minimum Requirements for Applied Management B.A.M.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
MATH F122X	Essential Precalculus with Applications	
B.A.M. Degree Requirements		
Complete the B.A.M. degree requirements. (p. 258)		4
As part of the B.A.M. requirements, complete the following:		
BA F323X	Business Ethics	
Applied Management Program Requirements		
Complete the following:		
Complete 18-30 credit hours in a single specialized technical area or trade		18-30
AIS F101	Effective Personal Computer Use	1
AIS F310	Management of Information Systems	3
or AIS F316	Accounting Information Systems	
BA F307	Introductory Human Resources Management	3
BA F330	The Legal Environment of Business	4
BA F343	Principles of Marketing	3
BA F490	Services Marketing Strategy	3

or BA F360	Operations Management	
BAM F308	Professional Development: How to Prepare for a Job and Other Survival Skills	1
BAM F309	Professional Development: Finding a Career	1
BAM F320	Management	3
BAM F352	Accounting and Finance	3
BAM F435	Entrepreneurship [1]	3
BAM F462	Project Management	3
ECON F227	Introductory Statistics for Economics and Business	3
or STAT F200X	Elementary Statistics	
HSEM F416	Cybersecurity Management	3
or HSEM F415	Cybersecurity in the 21st Century: Technology and Ethics	
or HSEM F417	Cybersecurity Resiliency	
or HSEM F418	Cybercrime, Fraud and Law	
HSEM F445	Business Continuity and Crisis Management	3
Complete one of the following:		3
BA F390	Organizational Theory and Behavior	
BA F391	Alaska Native Corporations: A Historical and Contemporaneous Perspective [2]	
HSEM F461	Human Security in Alaska [2]	
Total Credits		**100-117**

[1] Or any advisor-approved F300- or F400-level BA course.

[2] Note that BA F391 or HSEM F461 may be used to satisfy the Alaska Native-themed (p. 275) requirement.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
General Education Requirements		
COM F121X or COM F131X or COM F141X	Introduction to Interpersonal Communication or Fundamentals of Oral Communication: Group Context or Fundamentals of Oral Communication: Public Context	3
MATH F122X	Essential Precalculus with Applications	3
WRTG F111X	Writing Across Contexts	3
Degree Requirement		
LS F101X	Library Information and Research	1
Program Requirements		
Technical Training 1		3
Technical Training 2		3
	Credits	**16**
Spring		
General Education Requirements		
WRTG F212X	Writing and the Professions	3
Program Requirements		
AIS F101	Effective Personal Computer Use	1
Technical Training 3		3
Technical Training 4		3
Technical Training 5		3
Degree Requirement		
Elective		3
	Credits	**16**
Second Year		
Fall		
General Education Requirements		
ART F200X	Explorations in Art	3
ECON F111X	The Economy of Rural Alaska	3
Program Requirements		
STAT F200X or ECON F227	Elementary Statistics or Introductory Statistics for Economics and Business	3
Technical Training 6		3
Technical Training 7		3
	Credits	**15**
Spring		
General Education Requirements		
BA F151X	Introduction to Business	3
PHIL F104X	Logic and Reasoning	3
Natural Science GER Requirement		4
Program Requirements		
Technical Training 8		3
Technical Training 9		3
	Credits	**16**
Third Year		
Fall		
General Education Requirements		
BA F254X	Personal Finance (s)	3
Natural Science GER Requirement		4
Degree Requirement		
BA F323X	Business Ethics	3
Program Requirements		
AIS F310 or AIS F316	Management of Information Systems or Accounting Information Systems	3
BA F343	Principles of Marketing	3
	Credits	**16**

Spring		
Program Requirements		
BA F307	Introductory Human Resources Management	3
BA F308	Professional Development: How to Prepare for a Job and Other Survival Skills	1
BA F330	The Legal Environment of Business	4
BA F390 or BA F391 or HSEM F461	Organizational Theory and Behavior or Alaska Native Corporations: A Historical and Contemporaneous Perspective or Human Security in Alaska	3
BAM F320	Management	3
General Education Requirements		
Elective		3
	Credits	**17**

Fourth Year

Fall		
Program Requirements		
BA F309	Professional Development: Finding a Career	1
BAM F352	Accounting and Finance	3
HSEM F445	Business Continuity and Crisis Management	3
Degree Requirement		
Elective		3
Elective		3
	Credits	**13**

Spring		
Program Requirements		
BA F490 or BA F360	Services Marketing Strategy or Operations Management	3
BAM F435	Entrepreneurship	3
BAM F462	Project Management	3
HSEM F415 or HSEM F416 or HSEM F417 or HSEM F418	Cybersecurity in the 21st Century: Technology and Ethics or Cybersecurity Management or Cybersecurity Resiliency or Cybercrime, Fraud and Law	3
Degree Requirement		
Elective		3
	Credits	**15**
	Total Credits	**124**

Art B.A.

Program Requirements

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Minimum Requirements for Art B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Art Program Requirements		
Complete the following:		
ART F105X	Beginning Drawing	3
ART F261X and ART F262X	History of World Art I and History of World Art II	6
ART F489	Bachelor of Arts Capstone [1]	0
Complete two of the following:		6
ART F161	Two-dimensional Digital Design	
ART F162	Color and Design	
ART F163	Three-dimensional Design	
Electives		
Complete three from the following electives (at least one must be a two-dimensional area, and one must be a three-dimensional area):		9
Two-dimensional Areas		
ART F205	Intermediate Drawing	
ART F207	Beginning Printmaking	
ART F213	Beginning Painting	
ART F271	Beginning Computer Art	
ART F283 or ART F284	Basic Darkroom Photography Basic Digital Photography	
Three-dimensional Areas		
ART F201	Beginning Ceramics	
ART F209	Beginning Metalsmithing and Jewelry	
ART F211	Beginning Sculpture	
ART F268	Alaska Native Art Studio I	
Complete three upper-division courses from one of these areas:		9
Ceramics		
Computer Art		
Drawing		
Metalsmithing		
Native Studio Art		
Painting		
Photography		
Printmaking		
Sculpture		
Complete one of the following upper-division art history courses:		3
ART F363	History of Modern Art	
ART F364	Italian Renaissance Art	
ART F365	Alaska Native Art History	
ART F425	Visual Images of the North	
ART F463	Seminar in Art History	
ART F490	Current Problems	

Upper-division art elective	3
Total Credits	**111-116**

[1] Fulfills the baccalaureate capstone requirement.

Note: Transfer students who are candidates for the B.A. degree in art must complete a minimum of 12 credits in art while in residence.

Note: In addition to the program (major) requirements above, B.A. students will need additional upper-division credit (e.g., from the social science/humanities requirements and the minor) to equal 39 upper-division credits total.

Art B.F.A.

Program Requirements

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Minimum Requirements for Art B.F.A.: 126 credits

CONCENTRATIONS: CERAMICS, COMPUTER ART, DRAWING, METALSMITHING, NATIVE STUDIO ART, PAINTING, PHOTOGRAPHY, PRINTMAKING, SCULPTURE

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.F.A. Degree Requirements		
Complete the B.F.A. degree requirements. (p. 264)		16
Art Program Requirements		
Complete the following:		
ART F105X	Beginning Drawing	3
ART F261X and ART F262X	History of World Art I and History of World Art II	6
Complete two of the following:		6
ART F161	Two-dimensional Digital Design	
ART F162	Color and Design	
ART F163	Three-dimensional Design	
Complete three of the following electives (at least one must be a two-dimensional area and one must be a three-dimensional area):		9
Two-dimensional Areas		
ART F205	Intermediate Drawing	
ART F207	Beginning Printmaking	
ART F213	Beginning Painting	
ART F231	Previsualization and Preproduction	
ART F271	Beginning Computer Art	
ART F283	Basic Darkroom Photography	
or ART F284	Basic Digital Photography	
Three-dimensional Areas		
ART F201	Beginning Ceramics	
ART F209	Beginning Metalsmithing and Jewelry	
ART F211	Beginning Sculpture	
ART F268	Alaska Native Art Studio I	
Major program approved by B.F.A. thesis committee [1]		24
Complete three of the following upper-division art history courses:		9
ART F363	History of Modern Art	
ART F364	Italian Renaissance Art	
ART F365	Alaska Native Art History	
ART F425	Visual Images of the North	
ART F463	Seminar in Art History	
ART F490	Current Problems	
Upper-division art electives		6
Additional studio electives		9
Thesis project (including exhibition, portfolio and oral presentation)		3
Complete the baccalaureate capstone requirement as determined by the program.		
Total Credits		**126-131**

[1] Major program must include at least two, and no more than three, studio areas. Minimum requirement for the first area is 15 upper-division credits. Minimum requirement for the second area is 9 upper-division credits.

Note: A minor is not required for this degree.

Note: Transfer students who are candidates for the B.F.A. in art must complete a minimum of 15 credits in art while in residence.

Note: All studio areas in the department are eligible for the fulfillment of specialization requirements: ceramics, computer art, drawing, metalsmithing, Native art, painting, photography, printmaking and sculpture.

Biological Sciences B.A.

Program Requirements

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Minimum Requirements for Biological Sciences B.A.: 120 credits

Students must earn a C- grade or better in each course.

B.A. IN BIOLOGICAL SCIENCES WITHOUT CONCENTRATION

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
CHEM F105X and CHEM F106X	General Chemistry I and General Chemistry II	
STAT F200X	Elementary Statistics	

B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260) [1]		37
Biological Sciences Program Requirements		
Complete the following:		
BIOL F115X	Fundamentals of Biology I	4
BIOL F116X	Fundamentals of Biology II	4
BIOL F260	Principles of Genetics	4
BIOL F481	Principles of Evolution	4
CHEM F321	Organic Chemistry I	4
PHYS F123X	College Physics I	3-4
or CS F103	Introduction to Computer Programming	
or CS F201	Computer Science I	
Biology Breadth Requirements		
Complete two of the following: [2]		6-12
BIOL F310	Animal Physiology	
or BIOL F111X and BIOL F112X	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
or BIOL F342	Microbiology	
or BIOL F430	Plant Physiology and Development	
BIOL F360	Cell and Molecular Biology	
BIOL F371	Principles of Ecology	
Electives		
Complete three of the following: [3]		9-12
STO F401	Communicating Science	
or choose from Lists A, B, C, D or E		
Capstone [4]		
Complete the following:		
BIOL F410	Integrative Capstone in Biological Sciences	3
Electives		
Additional student-selected electives		0-7
Total Credits		**120-128**

1. Students should consider the UAF requirement for 39 upper-division credits when choosing courses to fulfill humanities, social science and minor degree credits.
2. Because biology breadth courses for the B.A. degree serve as prerequisites for many upper-division biology electives, course choices should be made with consideration of the elective biology courses the student plans to complete.
3. BIOL F497, URSA F388 or URSA F488 courses may be substituted by petition for a maximum of two required elective courses in biology (3-4 credits of independent study or research per substituted course). The subject area of the independent study or research will determine which biological subject areas the credits satisfy.
4. Fulfills the baccalaureate capstone requirement.
5. Up to 7 credits of BIOL courses may be used for both the major and the minor (e.g., BIOL F371, BIOL F385 or others that appear in both the major and minor lists).
6. Biological Sciences majors may not count BIOL F103X toward the Environmental Change minor.

B.A. IN BIOLOGICAL SCIENCES WITH CONCENTRATION IN ENVIRONMENTAL CHANGE

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
CHEM F105X and CHEM F106X	General Chemistry I and General Chemistry II	
STAT F200X	Elementary Statistics	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
As part of the B.A. requirements, complete the following: [1]		
Minor in Environmental Change [5,6]		
Biological Sciences Program Requirements		
Complete the following:		
BIOL F115X and BIOL F116X	Fundamentals of Biology I and Fundamentals of Biology II	8
BIOL F260	Principles of Genetics	4
BIOL F371	Principles of Ecology	4
BIOL F385	Global Change Biology	3
BIOL F481	Principles of Evolution	4
CHEM F321	Organic Chemistry I	4
PHYS F123X	College Physics I	3-4
or CS F103	Introduction to Computer Programming	
or CS F201	Computer Science I	
Electives		
Complete one of the following:		3-4
STO F401	Communicating Science	
or choose from Lists A, B, C, D or E		
Complete one course from List C		3-4
Complete one course from List D		3-4
Capstone		
Complete the following:		
BIOL F410	Integrative Capstone in Biological Sciences	3
Electives		
Additional student-selected electives		0-6
Total Credits		**120-123**

1. Students should consider the UAF requirement for 39 upper-division credits when choosing courses to fulfill humanities, social science and minor degree credits.
2. Because biology breadth courses for the B.A. degree serve as prerequisites for many upper-division biology electives, course choices should be made with consideration of the elective biology courses the student plans to complete.
3. BIOL F497, URSA F388 or URSA F488 courses may be substituted by petition for a maximum of two required elective courses in biology (3-4 credits of independent study or research per substituted course). The subject area of the independent study or research will determine which biological subject areas the credits satisfy.
4. Fulfills the baccalaureate capstone requirement.

[5] Up to 7 credits of BIOL courses may be used for both the major and the minor (e.g., BIOL F371, BIOL F385 or others that appear in both the major and minor lists).

[6] Biological Sciences majors may not count BIOL F103X toward the Environmental Change minor.

BIOLOGY ELECTIVE COURSE LISTS

Courses that satisfy upper-division elective credit may require prerequisites.

List A - Cell and Molecular Biology

Code	Title	Credits
BIOL F342	Microbiology	4
BIOL F360	Cell and Molecular Biology	3
BIOL F417	Neurobiology	3
BIOL F435	Introduction to Biology of Cancer	3
BIOL F460	Principles of Virology	3
BIOL F462	Infectious Diseases	3
BIOL F463	Immunology	3
BIOL F466	Advanced Cell and Molecular Laboratory	3
CHEM F325	Organic Chemistry II	4
CHEM F449	General Biochemistry: Metabolism	3
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F470	Cellular and Molecular Neuroscience	3
CHEM F474	Neurochemistry	3

List B - Physiology

Code	Title	Credits
BIOL F310	Animal Physiology	4
BIOL F312	Medical Physiology	3
BIOL F335	Principles of Epidemiology	3
BIOL F342	Microbiology	4
BIOL F412	Exercise Physiology	3
BIOL F417	Neurobiology	3
BIOL F430	Plant Physiology and Development	3
BIOL F440	Behavioral Neuroscience Research Capstone	3
BIOL F441	Animal Behavior	4
BIOL F455	Environmental Toxicology	3
BIOL F457	Environmental Microbiology	3
BIOL F462	Infectious Diseases	3
WLF F305	Wildlife Diseases	3

List C - Ecology and Evolutionary Biology

Code	Title	Credits
BIOL F371	Principles of Ecology	4
BIOL F385	Global Change Biology	3
BIOL F415	Systematic and Comparative Biology	4
BIOL F418	Biogeography	3
BIOL F431	Population Genetics	3
BIOL F441	Animal Behavior	4
BIOL F446	Freshwater Habitat Dynamics	3
BIOL F457	Environmental Microbiology	3
BIOL F469	Landscape Ecology and Wildlife Habitat	3
BIOL F471	Population Ecology	3
BIOL F472	Community Ecology	4
BIOL F473	Limnology	4
BIOL F476	Ecosystem Ecology	4
BIOL F483	Stream Ecology	3
BIOL F486	Vertebrate Paleontology	3
BIOL F487	Conceptual Issues in Evolutionary Biology	3
BIOL F488	Arctic Vegetation Ecology: Geobotany	3
BIOL F489	Vegetation Description and Analysis	3
BIOL F491	The Human Microbiome	4
WLF F301	Design of Wildlife Studies	3
WLF F421	Ecology and Management of Large Mammals	3

List D - Organismal Biology

Code	Title	Credits
BIOL F239	Introduction to Plant Biology	4
BIOL F331	Systematic Botany	3
BIOL F406	Entomology	4
BIOL F418	Biogeography	3
BIOL F425	Mammalogy	3
BIOL F426	Ornithology	3
BIOL F427	Ichthyology	4
BIOL F486	Vertebrate Paleontology	3
BIOL F489	Vegetation Description and Analysis	3

LIST E - Biomedical Science

Code	Title	Credits
BIOL F312	Medical Physiology	3
BIOL F335	Principles of Epidemiology	3
BIOL F402	Biomedical and Research Ethics	3
BIOL F412	Exercise Physiology	3
BIOL F417	Neurobiology	3
BIOL F435	Introduction to Biology of Cancer	3
BIOL F440	Behavioral Neuroscience Research Capstone	3
BIOL F455	Environmental Toxicology	3
BIOL F460	Principles of Virology	3
BIOL F462	Infectious Diseases	3
BIOL F463	Immunology	3
BIOL F466	Advanced Cell and Molecular Laboratory	3
BIOL F491	The Human Microbiome	4
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F470	Cellular and Molecular Neuroscience	3
CHEM F474	Neurochemistry	3
WLF F305	Wildlife Diseases	3

Biological Sciences with Concentration B.S.

Program Requirements

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Minimum Requirements for Biological Sciences B.S.: 120 credits

CONCENTRATIONS: BIOMEDICAL SCIENCE (P. 290), CELL AND MOLECULAR BIOLOGY (P. 291), ECOLOGY AND EVOLUTIONARY BIOLOGY (P. 291), PHYSIOLOGY (P. 291)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
CHEM F105X and CHEM F106X	General Chemistry I and General Chemistry II	
MATH F230X	Essential Calculus with Applications	
or MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
As part of the B.S. requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Biological Sciences Program Requirements		
Complete the following:		
BIOL F260	Principles of Genetics	4
BIOL F481	Principles of Evolution	4
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	3-4
or CHEM F449	General Biochemistry: Metabolism	
PHYS F123X	College Physics I	4
or PHYS F211X	General Physics I	
PHYS F124X	College Physics II	3-4
or PHYS F212X	General Physics II	
or CS F103	Introduction to Computer Programming	
or CS F201	Computer Science I	
Complete one of the following:		4-8
BIOL F111X and BIOL F112X	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
BIOL F310	Animal Physiology	
BIOL F342	Microbiology	
BIOL F430	Plant Physiology and Development	
Concentration		
Complete one of the following: [1]		21-28
Biomedical Science		
Cell and Molecular Biology		
Ecology and Evolutionary Biology		
Physiology		
Capstone [2]		
BIOL F400	Research Capstone in Biological Sciences	0
Satisfactory completion of a capstone research project which can be done either working individually with a faculty member or within one of the following courses: [3,4]		0-4
BIOL F440	Behavioral Neuroscience Research Capstone	
BIOL F441	Animal Behavior	
BIOL F466	Advanced Cell and Molecular Laboratory	
BIOL F472	Community Ecology	
BIOL F473	Limnology	
BIOL F491	The Human Microbiome	
Electives		
Additional student-selected electives		1-23
Total Credits		**120**

1. BIOL F397, BIOL F497, URSA F388 or URSA F488 courses may be substituted by petition for a maximum of two required elective courses in biology (3-4 credits of independent study or research per substituted course). The subject area of the independent study or research will determine which biological subject areas the credits satisfy.
2. Fulfills the baccalaureate capstone requirement.
3. Students working individually with a faculty member may, for example, take BIOL F497 credits or work with a faculty member without taking course credits.
4. Capstone courses may be double counted as electives.

Concentrations

BIOMEDICAL SCIENCE

Code	Title	Credits
Biomedical Science Concentration Requirements		
General University Requirements		
As part of the general education requirements, the following are recommended:		
ECON F120X	Introduction to Economic Analysis	
or ECON F101X	Principles of Microeconomics	
or ECON F102X	Principles of Macroeconomics	
PSY F101X	Introduction to Psychology	
SOC F101X	Introduction to Sociology	
Program Requirements		
As part of the program requirements, complete the following:		
BIOL F111X and BIOL F112X	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
or BIOL F310	Animal Physiology	
CHEM F325	Organic Chemistry II	
PHYS F124X	College Physics II	
or PHYS F212X	General Physics II	

Complete the following:		
BIOL F342	Microbiology	4
BIOL F360	Cell and Molecular Biology	3
CHEM F449	General Biochemistry: Metabolism	3
Biology Breadth Electives		
Complete one additional course from lists C or D		3-4
Biomedical Electives		
Complete at least three additional courses from list E		9-12
Total Credits		**22-26**

CELL AND MOLECULAR BIOLOGY

Code	Title	Credits
Cell and Molecular Biology Concentration Requirements		
Program Requirements		
As part of the program requirements, complete the following:		
CHEM F325	Organic Chemistry II	
Complete the following:		
BIOL F360	Cell and Molecular Biology	3
CHEM F449	General Biochemistry: Metabolism	3
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
Cell and Molecular and Physiology Electives		
Complete one additional course from list A		3-4
Complete two additional courses from lists A or B		6-8
Biology Breadth Elective		
Complete one additional course from lists C or D		3-4
Total Credits		**21-25**

ECOLOGY AND EVOLUTIONARY BIOLOGY

Code	Title	Credits
Ecology and Evolutionary Biology Concentration Requirements		
Complete the following:		
BIOL F371	Principles of Ecology	4
Ecology and Evolutionary Biology Electives		
Complete two additional courses from list C		6-8
Organismal Elective		
Complete one additional course from list D		3-4
Biology Breadth Elective		
Complete one additional course from lists A, B, or E		3-4
Biology Elective		
Complete one additional course from lists A, B, C, D, or E		3-4
STAT F401 or STAT F402	Regression and Analysis of Variance Scientific Sampling	3-4
Total Credits		**22-28**

PHYSIOLOGY

Code	Title	Credits
Physiology Concentration Requirements		
Complete the following:		
BIOL F360	Cell and Molecular Biology	3
Physiology or Cell and Molecular Biology Electives		
Complete two additional courses from list B		6-8
Complete two additional courses from lists A or B		6-8
Biology Breadth Elective		
Complete one additional course from lists C or D		3-4
Biology Elective		
Complete one additional course from lists A, B, C, D, or E		3-4
Total Credits		**21-27**

Biology Elective Course Lists

Courses that satisfy upper-division elective credit may require prerequisites.

LIST A - CELL AND MOLECULAR BIOLOGY

Code	Title	Credits
BIOL F342	Microbiology	4
BIOL F360	Cell and Molecular Biology	3
BIOL F417	Neurobiology	3
BIOL F435	Introduction to Biology of Cancer	3
BIOL F460	Principles of Virology	3
BIOL F462	Infectious Diseases	3
BIOL F463	Immunology	3
BIOL F466	Advanced Cell and Molecular Laboratory	3
CHEM F325	Organic Chemistry II	4
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F470	Cellular and Molecular Neuroscience	3
CHEM F474	Neurochemistry	3
WLF F305	Wildlife Diseases	3

LIST B - PHYSIOLOGY

Code	Title	Credits
BIOL F310	Animal Physiology	4
BIOL F312	Medical Physiology	3
BIOL F335	Principles of Epidemiology	3
BIOL F342	Microbiology	4
BIOL F412	Exercise Physiology	3
BIOL F417	Neurobiology	3
BIOL F430	Plant Physiology and Development	3
BIOL F440	Behavioral Neuroscience Research Capstone	3
BIOL F441	Animal Behavior	4
BIOL F455	Environmental Toxicology	3
BIOL F457	Environmental Microbiology	3
BIOL F462	Infectious Diseases	3

LIST C - ECOLOGY AND EVOLUTIONARY BIOLOGY

Code	Title	Credits
BIOL F371	Principles of Ecology	4
BIOL F385	Global Change Biology	3
BIOL F415	Systematic and Comparative Biology	4
BIOL F418	Biogeography	3
BIOL F431	Population Genetics	3
BIOL F441	Animal Behavior	4

BIOL F446	Freshwater Habitat Dynamics	3
BIOL F457	Environmental Microbiology	3
BIOL F469	Landscape Ecology and Wildlife Habitat	3
BIOL F471	Population Ecology	3
BIOL F472	Community Ecology	4
BIOL F473	Limnology	4
BIOL F483	Stream Ecology	3
BIOL F486	Vertebrate Paleontology	3
BIOL F487	Conceptual Issues in Evolutionary Biology	3
BIOL F488	Arctic Vegetation Ecology: Geobotany	3
BIOL F489	Vegetation Description and Analysis	3
BIOL F491	The Human Microbiome	4
WLF F301	Design of Wildlife Studies	3
WLF F421	Ecology and Management of Large Mammals	3

LIST D - ORGANISMAL BIOLOGY

Code	Title	Credits
BIOL F239	Introduction to Plant Biology	4
BIOL F331	Systematic Botany	3
BIOL F406	Entomology	4
BIOL F418	Biogeography	3
BIOL F425	Mammalogy	3
BIOL F426	Ornithology	3
BIOL F427	Ichthyology	4
BIOL F486	Vertebrate Paleontology	3
BIOL F489	Vegetation Description and Analysis	3

LIST E - BIOMEDICAL SCIENCE

Code	Title	Credits
BIOL F312	Medical Physiology	3
BIOL F335	Principles of Epidemiology	3
BIOL F402	Biomedical and Research Ethics	3
BIOL F412	Exercise Physiology	3
BIOL F417	Neurobiology	3
BIOL F435	Introduction to Biology of Cancer	3
BIOL F440	Behavioral Neuroscience Research Capstone	3
BIOL F455	Environmental Toxicology	3
BIOL F460	Principles of Virology	3
BIOL F462	Infectious Diseases	3
BIOL F463	Immunology	3
BIOL F466	Advanced Cell and Molecular Laboratory	3
BIOL F491	The Human Microbiome	4
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F470	Cellular and Molecular Neuroscience	3
CHEM F474	Neurochemistry	3
WLF F305	Wildlife Diseases	3

Biological Sciences without Concentration B.S.

Program Requirements

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Minimum Requirements for Biological Sciences without Concentration B.S.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
MATH F230X	Essential Calculus with Applications	
or MATH F251X	Calculus I	
CHEM F105X and CHEM F106X	General Chemistry I and General Chemistry II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
As part of the B.S. requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
STAT F200X	Elementary Statistics	
Biological Sciences Program Requirements		
Complete the following:		
BIOL F260	Principles of Genetics	4
BIOL F360	Cell and Molecular Biology	3
BIOL F371	Principles of Ecology	4
BIOL F481	Principles of Evolution	4
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	3-4
or CHEM F449	General Biochemistry: Metabolism	
PHYS F123X	College Physics I	4
or PHYS F211X	General Physics I	
PHYS F124X	College Physics II	3-4
or PHYS F212X	General Physics II	
or CS F103	Introduction to Computer Programming	
or CS F201	Computer Science I	
Complete one of the following:		4-8
BIOL F111X and BIOL F112X	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
BIOL F310	Animal Physiology	
BIOL F342	Microbiology	
BIOL F430	Plant Physiology and Development	
Electives [1]		
Organismal elective		
Complete one additional course from the following:		3-4

List D		
Biology electives		
Complete four additional courses from the following:		12-16
Lists A, B, C, D or E		
Capstone [2]		
BIOL F400	Research Capstone in Biological Sciences	0
Satisfactory completion of a capstone research project, which can be done either working individually with a faculty member or within one of the following courses: [3,4]		
BIOL F440	Behavioral Neuroscience Research Capstone	
BIOL F441	Animal Behavior	
BIOL F466	Advanced Cell and Molecular Laboratory	
BIOL F472	Community Ecology	
BIOL F473	Limnology	
BIOL F491	The Human Microbiome	
Electives		
Additional student-selected electives		6-22
Total Credits		**120**

1 BIOL F397, BIOL F497, URSA F388 or URSA F488 courses may be substituted by petition for a maximum of two required elective courses in biology (3-4 credits of independent study or research per substituted course). The subject area of the independent study or research will determine which biological subject areas the credits satisfy.

2 Fulfills the baccalaureate capstone requirement.

3 Students working individually with a faculty member may, for example, take BIOL F497, or may work with a faculty member taking without course credits.

4 Capstone courses may be double counted as electives.

Biology Elective Course Lists

Courses that satisfy upper-division elective credit may require prerequisites.

LIST A - CELL AND MOLECULAR BIOLOGY

Code	Title	Credits
BIOL F342	Microbiology	4
BIOL F360	Cell and Molecular Biology	3
BIOL F417	Neurobiology	3
BIOL F435	Introduction to Biology of Cancer	3
BIOL F460	Principles of Virology	3
BIOL F462	Infectious Diseases	3
BIOL F463	Immunology	3
BIOL F466	Advanced Cell and Molecular Laboratory	3
CHEM F325	Organic Chemistry II	4
CHEM F449	General Biochemistry: Metabolism	3
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F470	Cellular and Molecular Neuroscience	3
CHEM F474	Neurochemistry	3

LIST B - PHYSIOLOGY

Code	Title	Credits
BIOL F310	Animal Physiology	4
BIOL F312	Medical Physiology	3
BIOL F335	Principles of Epidemiology	3
BIOL F342	Microbiology	4
BIOL F412	Exercise Physiology	3
BIOL F417	Neurobiology	3
BIOL F430	Plant Physiology and Development	3
BIOL F440	Behavioral Neuroscience Research Capstone	3
BIOL F441	Animal Behavior	4
BIOL F455	Environmental Toxicology	3
BIOL F457	Environmental Microbiology	3
BIOL F462	Infectious Diseases	3
WLF F305	Wildlife Diseases	3

LIST C - ECOLOGY AND EVOLUTIONARY BIOLOGY

Code	Title	Credits
BIOL F371	Principles of Ecology	4
BIOL F385	Global Change Biology	3
BIOL F415	Systematic and Comparative Biology	4
BIOL F418	Biogeography	3
BIOL F431	Population Genetics	3
BIOL F441	Animal Behavior	4
BIOL F446	Freshwater Habitat Dynamics	3
BIOL F457	Environmental Microbiology	3
BIOL F469	Landscape Ecology and Wildlife Habitat	3
BIOL F471	Population Ecology	3
BIOL F472	Community Ecology	4
BIOL F473	Limnology	4
BIOL F476	Ecosystem Ecology	4
BIOL F486	Vertebrate Paleontology	3
BIOL F487	Conceptual Issues in Evolutionary Biology	3
BIOL F488	Arctic Vegetation Ecology: Geobotany	3
BIOL F489	Vegetation Description and Analysis	3
BIOL F491	The Human Microbiome	4
WLF F301	Design of Wildlife Studies	3
WLF F421	Ecology and Management of Large Mammals	3

LIST D - ORGANISMAL BIOLOGY

Code	Title	Credits
BIOL F239	Introduction to Plant Biology	4
BIOL F331	Systematic Botany	3
BIOL F406	Entomology	4
BIOL F418	Biogeography	3
BIOL F425	Mammalogy	3
BIOL F426	Ornithology	3
BIOL F427	Ichthyology	4

BIOL F486	Vertebrate Paleontology	3
BIOL F489	Vegetation Description and Analysis	3

LIST E - BIOMEDICAL SCIENCE

Code	Title	Credits
BIOL F312	Medical Physiology	3
BIOL F335	Principles of Epidemiology	3
BIOL F402	Biomedical and Research Ethics	3
BIOL F412	Exercise Physiology	3
BIOL F417	Neurobiology	3
BIOL F435	Introduction to Biology of Cancer	3
BIOL F440	Behavioral Neuroscience Research Capstone	3
BIOL F455	Environmental Toxicology	3
BIOL F460	Principles of Virology	3
BIOL F462	Infectious Diseases	3
BIOL F463	Immunology	3
BIOL F466	Advanced Cell and Molecular Laboratory	3
BIOL F491	The Human Microbiome	4
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F470	Cellular and Molecular Neuroscience	3
CHEM F474	Neurochemistry	3
WLF F305	Wildlife Diseases	3

Business Administration B.B.A.

Program Requirements

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Minimum Requirements for Business Administration B.B.A.: 120 credits

CONCENTRATIONS: FINANCE (P. 295) & ECONOMICS (P. 295), GENERAL BUSINESS (P. 295), HUMAN RESOURCES (P. 295), LEADERSHIP (P. 295), MARKETING (P. 295), SPORT MANAGEMENT (P. 295)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
MATH F122X	Essential Precalculus with Applications	
B.B.A. Degree Requirements		
Complete the B.B.A. degree requirements. (p. 262)		22
As part of the B.B.A. requirements, complete the following:		
BA F323X	Business Ethics	
Business Administration Program Requirements		
Complete the following:		
AIS F310	Management of Information Systems	3
or AIS F316	Accounting Information Systems	
AIS F324	Advanced MS Excel	1
AIS F342	MS Excel for Finance	1
BA F307	Introductory Human Resources Management	3
BA F308	Professional Development: How to Prepare for a Job and Other Survival Skills	1
BA F309	Professional Development: Finding a Career	1
or BA F310	Professional Development: Being Successful in Your Career	
BA F325	Financial Management	3
BA F330	The Legal Environment of Business	4
BA F343	Principles of Marketing	3
BA F360	Operations Management	3
BA F390	Organizational Theory and Behavior	3
or BA F391	Alaska Native Corporations: A Historical and Contemporaneous Perspective	
BA F462	Corporate Strategy [1]	3
HSEM F415	Cybersecurity in the 21st Century: Technology and Ethics	3
or HSEM F416	Cybersecurity Management	
or HSEM F417	Cybersecurity Resiliency	
or HSEM F418	Cybercrime, Fraud and Law	
HSEM F445	Business Continuity and Crisis Management	3
Complete one of the following:		3
BA F460	International Business	
BA F461	International Finance	
Additional 9 credits from ACCT, BA, ECON, or a second concentration.		9
Concentration		
Complete one or more of the following concentrations:		9
Finance & Economics		
General Business		
Human Resources		
Leadership		
Marketing		
Sport Management		
Electives		
Additional student-selected electives		2-7
Total Credits		**120**

[1] As part of the B.B.A. degree requirements, BA F462 fulfills the baccalaureate capstone requirement.

Students majoring in business administration may not minor in the following: finance, general business, management and organizations, marketing, sport management or the business administration track of the leadership minor.

Note: The B.B.A. degree requires 50 percent of the accounting, business administration and economics credits to be earned at UAF. Twenty-four out of the last 30 credits earned must be taken at UAF.

Note: Students may earn a B.B.A. with more than one concentration in the above areas.

Note: Only one B.B.A. degree may be earned with a major in business administration.

Concentrations

FINANCE & ECONOMICS

Code	Title	Credits
Finance & Economics Concentration Requirements		
Complete three of the following: [2]		9
BA F423	Investment Analysis	
BA F424	Real Estate and Alternative Investments	
BA F454	Student Investment Fund	
BA F455	Portfolio Management	
BA F461	International Finance	
ECON F350	Money and Banking	
ECON F351	Public Finance	
Total Credits		**9**

[2] Classes must be different than those used to meet the B.B.A. degree and the major requirements. Courses cannot double count.

GENERAL BUSINESS

Code	Title	Credits
General Business Concentration Requirements		
Complete the following:		
Complete 9 credits as approved by the undergraduate director		9
At least 6 credits must be BA courses, the rest may be select AIS, ACCT, ECON, HSEM or SPRT classes. [3]		
At least 6 credits must be upper-division.		
Total Credits		**9**

[3] Classes must be different than those used to meet the B.B.A. degree and the major requirements. Courses cannot double count.

HUMAN RESOURCES

Code	Title	Credits
Human Resources Concentration Requirements		
Complete three of the following:		9
BA F317	Employment Law	
BA F457	Training and Management Development	
BA F489	Public Sector Labor Relations	
PSY F390	Psychology of Work	
Total Credits		**9**

LEADERSHIP

Code	Title	Credits
Leadership Concentration Requirements		
Complete three of the following:		9
BA/SPRT F280	Sport Leadership	
BA/LEAD F470	Leadership Theory and Development	
BA/LEAD F472	Leading Change	
HSEM/LEAD F456	Leaderships in Dangerous Contexts	
Total Credits		**9**

MARKETING

Code	Title	Credits
Marketing Concentration Requirements		
Complete three of the following:		9
BA F241	Advertising, Sales and Promotion	
BA F436	Consumer Behavior	
BA F443	Social Media Marketing	
BA F445	Marketing Research	
BA/SPRT F482	Sport Marketing	
BA F490	Services Marketing Strategy	
BA F491	Current Topics in Marketing	
Total Credits		**9**

SPORT MANAGEMENT

Code	Title	Credits
Sport Management Concentration Requirements		
Complete three of the following:		9
BA/LEAD/SPRT F280	Sport Leadership	
BA/SPRT F281X	Introduction to Sport Management	
BA/SPRT F481	Event Management	
BA/SPRT F482	Sport Marketing	
BA/SPRT F483	Sport and Recreation Sales	
SPRT/BA F484	Legal Aspects of Sport and Recreation Management	
SPRT/BA F485	Sport and Recreation Facilities	
Total Credits		**9**

Chemistry B.S.

Program Requirements

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American Chemistry Society-approved Minimum Requirements for Chemistry B.S.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General		
Complete the general university requirements. (p. 255)		
General Education Requirements		

Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
Chemistry Program Requirements		
Complete the following:		
CHEM F105X	General Chemistry I	4
CHEM F106X	General Chemistry II	4
CHEM F202	Basic Inorganic Chemistry	3
CHEM F212	Chemical Equilibrium and Analysis	4
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
CHEM F332	Physical Chemistry II	4
CHEM F434	Chemistry Capstone Laboratory [1]	3
CHEM F449	General Biochemistry: Metabolism	3
CHEM F481	Seminar [1]	1
CHEM F482	Seminar [1]	2
MATH F253X	Calculus III	4
Complete one of the following:		3-4
CHEM F288 and CHEM F488	Introduction to Chemical Research and Undergraduate Chemistry and Biochemistry Research (2 credits each)	
CHEM F488	Undergraduate Chemistry and Biochemistry Research (3 credits) [1]	
Complete two of the following:		6
CHEM F314	Analytical Instrumental Laboratory	
CHEM F402	Inorganic Chemistry	
CHEM F450	Information Storage and Transfer: Molecules and Pathways	
Electives		
Additional student-selected electives		10-15
Total Credits		**120**

[1] Fulfills the baccalaureate capstone requirement.

Note: Upon completing the required curriculum and fulfilling all general university requirements, students will receive a certificate from the American Chemical Society indicating approval of their degree program.

Optional Concentrations: Biochemistry, Environmental Chemistry

BIOCHEMISTRY

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
Chemistry Program Requirements		
Complete the following:		
BIOL F115X	Fundamentals of Biology I	4
BIOL F116X	Fundamentals of Biology II	4
CHEM F105X	General Chemistry I	4
CHEM F106X	General Chemistry II	4
CHEM F202	Basic Inorganic Chemistry	3
CHEM F212	Chemical Equilibrium and Analysis	4
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
CHEM F449	General Biochemistry: Metabolism	3
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F481	Seminar	1
CHEM F482	Seminar	2
CHEM F488	Undergraduate Chemistry and Biochemistry Research	3
Complete four of the following: [2]		12-14
CHEM F314	Analytical Instrumental Laboratory	
CHEM F332	Physical Chemistry II	
CHEM F402	Inorganic Chemistry	
CHEM F420	Applications of NMR Spectroscopy	
CHEM F434	Chemistry Capstone Laboratory	
MATH F253X	Calculus III	
Complete 10 credits from the following: [2]		10
BIOL F240X	Beginnings in Microbiology	
BIOL F260	Principles of Genetics	
BIOL F310	Animal Physiology	
BIOL F342	Microbiology	
BIOL F402	Biomedical and Research Ethics	
BIOL F417	Neurobiology	
BIOL F462	Infectious Diseases	
CHEM F360	Cell and Molecular Biology	
CHEM F455	Environmental Toxicology	
CHEM F470	Cellular and Molecular Neuroscience	

CHEM F474	Neurochemistry	
Total Credits		**121-127**

[2] Courses selected under these areas must meet baccalaureate degree requirements for 39 upper-division credits.

Note: This degree is intended for students interested in careers in biochemistry or pre-professional students, providing extra depth in biological sciences. The selection of optional courses will determine if the curriculum conforms to the American Chemistry Society-approved chemistry degree. Students desiring an ACS-approved chemistry degree should consult with their advisor about optional courses that will meet ACS requirements.

ENVIRONMENTAL CHEMISTRY

Minimum Requirements for Degree: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
Chemistry Program Requirements		
Complete the following:		
CHEM F105X	General Chemistry I	4
CHEM F106X	General Chemistry II	4
CHEM F202	Basic Inorganic Chemistry	3
CHEM F212	Chemical Equilibrium and Analysis	4
CHEM F314	Analytical Instrumental Laboratory	3
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
CHEM F332	Physical Chemistry II	4
CHEM F434	Chemistry Capstone Laboratory	3
CHEM F481	Seminar	1
CHEM F482	Seminar	2
CHEM F488	Undergraduate Chemistry and Biochemistry Research	3-4
or CHEM F288 and CHEM F488	Introduction to Chemical Research and Undergraduate Chemistry and Biochemistry Research	
MATH F253X	Calculus III	4
Complete two of the following:		7-8
ATM F101X	Weather and Climate of Alaska	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
GEOS F101X	The Dynamic Earth	
GEOS F262	Rocks and Minerals	
Complete two of the following:		6-7
ATM F401	Introduction to Atmospheric Sciences	
BIOL F342	Microbiology	
CHEM F406	Atmospheric Chemistry	
CHEM F455	Environmental Toxicology	
GEOS F417	Introduction to Geochemistry	
NRM F380	Soils and the Environment	
Electives		
Additional student-selected electives		1-8
Total Credits		**120**

Note: A course in statistics (e.g. STAT F200X, STAT F300, or GEOS F430) is suggested. The selection of optional courses will determine if the curriculum conforms to the American Chemistry Society-approved chemistry degree. Students desiring an ACS-approved chemistry degree should consult with their advisor about optional courses that will meet ACS requirements.

REQUIREMENTS FOR CHEMISTRY TEACHERS (GRADES 7-12)

Code	Title	Credits
Complete all the requirements of the chemistry B.A. or B.S. degree.		
All prospective science teachers must complete the following:		
PHIL F481	Philosophy of Science	3

Note: We strongly recommend that prospective secondary science teachers seek advising from the Alaska College of Education early in their undergraduate degree program so that they can be appropriately advised of the State of Alaska requirements for teacher licensure.

Child Development and Family Studies B.A.

Program Requirements

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Minimum Requirements for Child Development and Family Studies B.A.: 120 credits

CONCENTRATIONS: ADMINISTRATION WITHIN THE EARLY CHILDHOOD FIELD (P. 298), CURRICULUM AND TEACHING (P. 298), AND FAMILY SUPPORT (P. 298)

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		

Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260) [1]		22
Child Development and Family Studies Program Requirements		
Complete the following:		
ECE F101	Early Childhood Professionalism	3
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	3
ECE F107X	Child Development II: The Preschool and Primary Years	3
ECE F110	Safe, Healthy Learning Environments	3
ECE F130	Culture, Learning and the Young Child	2
ECE F140	Positive Social and Emotional Development	3
ECE F235	Screening, Assessment and Recording	3
ECE F304	Attachment and Social Development	3
ECE F305	Social Emotional Development: Reflection and Practice	3
ECE F342	Family Relationships	3
ECE F350	Play: Foundation for Development	3
ECE F445	Adolescence Through the Lifespan	3
ECE F480	Child Development and Family Studies Portfolio [2]	1
Concentration		
Complete one of the following:		24
Administration within the Early Childhood Field		
Curriculum and Teaching		
Family Support		
Electives		
Additional student-selected electives		0-3
Total Credits		**120-122**

[1] Completion of the CDEV B.A. will meet the requirements for both a major and a minor.

[2] Fulfills the baccalaureate capstone requirement.

Concentrations

ADMINISTRATION WITHIN THE EARLY CHILDHOOD FIELD

Code	Title	Credits
Administration within the Early Childhood Field Concentration Requirements		
Complete the following:		
ECE F240	Inclusion of Children with Special Needs (or department-approved course on special needs)	3
ECE F311	Theories, Methodologies and Pedagogy for Early Childhood	3
ECE F340	Financial Management of Early Childhood Programs	3
ECE F341	Personnel Management of Early Childhood Programs	3
ECE F410	Supporting Family Relationships through Mentoring	3
ECE F450	Leadership and Advocacy in the Early Childhood Field	3
ECE F471	Clinical Practice: Organizational Action Research [3]	3
SWK F360	Child Abuse and Neglect	3
Total Credits		**24**

[3] Students must earn a B grade or higher in each course.

CURRICULUM AND TEACHING

Code	Title	Credits
Curriculum and Teaching Concentration Requirements		
Complete the following:		
ECE F240	Inclusion of Children with Special Needs (or department-approved course on special needs)	3
ECE F311	Theories, Methodologies and Pedagogy for Early Childhood	3
ECE F365	Social Studies Pedagogy in Early Childhood	3
ECE F420	Developing Literacy in the Early Years	3
ECE F430	Fine Arts for the Early Years	3
ECE F440	Exploring Math and Science	3
ECE F472	Clinical Practice: Classroom Research [3]	3
ECE F473	Clinical Practice: Classroom Management [3]	3
Total Credits		**24**

[3] Students must earn a B grade or higher in each course.

FAMILY SUPPORT

Code	Title	Credits
Family Support Concentration Requirements		
Complete the following:		
ECE F242	Child and Family Ecology	3
ECE F301	Parents as Partners in Education	3
ECE F306	Building Bridges to Support Family Mental Health	3
ECE F405	Seminar in Culture and Child-rearing Practices	3
ECE F410	Supporting Family Relationships through Mentoring	3
ECE F442	Family Resource Management	3
ECE F471	Clinical Practice: Organizational Action Research [3]	3
SWK F360	Child Abuse and Neglect	3
Total Credits		**24**

[3] Students must earn a B grade or higher in each course.

Students entering the program with an A.A., A.S. or A.A.S. degree focusing on early childhood from a regionally accredited college or university:

NOTE: 20 credits will be accepted toward the program major. These credits will be applied to the following specific program requirements: ECE F101, ECE F104X, ECE F107X, ECE F110, ECE F130, ECE F140, ECE F225

MINIMUM REQUIREMENTS FOR DEGREE: 120 CREDITS

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Child Development and Family Studies Program Requirements		
Complete the following:		
ECE F304	Attachment and Social Development	3
ECE F305	Social Emotional Development: Reflection and Practice	3
ECE F342	Family Relationships	3
ECE F350	Play: Foundation for Development	3
ECE F445	Adolescence Through the Lifespan	3
ECE F480	Child Development and Family Studies Portfolio [2]	1
Concentration		
Complete one of the following:		24
Administration within the Early Childhood Field		
Curriculum and Teaching		
Family Support		
Electives		
Additional student-selected electives		3-8
Total Credits		**120**

[2] Fulfills the baccalaureate capstone requirement.

CONCENTRATIONS

Administration within the Early Childhood Field

Code	Title	Credits
Administration within the Early Childhood Field Concentration Requirements		
Complete the following:		
ECE F240	Inclusion of Children with Special Needs (or department-approved course on special needs)	3
ECE F311	Theories, Methodologies and Pedagogy for Early Childhood	3
ECE F340	Financial Management of Early Childhood Programs	3
ECE F341	Personnel Management of Early Childhood Programs	3
ECE F410	Supporting Family Relationships through Mentoring	3
ECE F450	Leadership and Advocacy in the Early Childhood Field	3
ECE F471	Clinical Practice: Organizational Action Research [3]	3
SWK F360	Child Abuse and Neglect	3
Total Credits		**24**

[3] Students must earn a B grade or higher in each course.

Curriculum and Teaching

Code	Title	Credits
Curriculum and Teaching Concentration Requirements		
Complete the following:		
ECE F240	Inclusion of Children with Special Needs (or department-approved course on special needs)	3
ECE F311	Theories, Methodologies and Pedagogy for Early Childhood	3
ECE F365	Social Studies Pedagogy in Early Childhood	3
ECE F420	Developing Literacy in the Early Years	3
ECE F430	Fine Arts for the Early Years	3
ECE F440	Exploring Math and Science	3
ECE F472	Clinical Practice: Classroom Research [3]	3
ECE F473	Clinical Practice: Classroom Management [3]	3
Total Credits		**24**

[3] Students must earn a B grade or higher in each course.

Family Support

Code	Title	Credits
Family Support Concentration Requirements		
Complete the following:		
ECE F242	Child and Family Ecology	3
ECE F301	Parents as Partners in Education	3
ECE F306	Building Bridges to Support Family Mental Health	3
ECE F405	Seminar in Culture and Child-rearing Practices	3
ECE F410	Supporting Family Relationships through Mentoring	3
ECE F442	Family Resource Management	3
ECE F471	Clinical Practice: Organizational Action Research [3]	3
SWK F360	Child Abuse and Neglect	3
Total Credits		**24**

[3] Students must earn a B grade or higher in each course.

Civil Engineering B.S.

Program Requirements

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Minimum Requirements for Civil Engineering B.S. Degree: 126 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Civil Engineering Program Requirements		
CE F112	Elementary Surveying	2-3
or MIN F202	Surveying and CAD for Engineers	
CE F302	Fundamentals of Transportation Engineering	3
CE/GE F326	Introduction to Geotechnical Engineering and Foundations	4
CE F331	Structural Analysis	3
CE F334	Properties of Materials	3
CE F341	Introduction to Environmental Engineering	4
CE F344	Water Resources Engineering	3
CE F432	Steel Design	3
CE F438	Design of Engineered Systems [1]	3
DRT F210	Intermediate CAD	3
ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F100L	Makerspace Alaska - A Laboratory Introduction to Engineering	1
ES F201	Computer Techniques	3
ES F208	Mechanics	4
ES F301	Engineering Analysis	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ESM F450	Economic Analysis and Operations	3
GE F261	General Geology for Engineers	3
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
Technical Electives [2]		
Complete 3 credits from the fields of environmental, construction or transportation engineering.		3
Complete 6 credits from the following areas of emphasis, or as approved by an advisor.		6
Arctic Emphasis		
CE F401	Arctic Engineering	
CE F424	Permafrost Engineering	
ME F441	Heat and Mass Transfer	
Construction Emphasis		
CE F451	Construction Cost Estimating and Bid Preparation	
Environmental Emphasis		
CE F442	Water and Wastewater Treatment Design	
CE F443	Air Pollution Management	
ENVE F446	Biological Unit Processes	
Geotechnical Emphasis		
CE F422	Foundation Engineering	
GE F440	Slope Stability	
GE F441	Geohazard Analysis	
Structural Emphasis		
CE F433	Reinforced Concrete Design	
CE F434	Timber Design	
Transportation Emphasis		
CE F405	Design of Highways and Streets	
CE F408	Transportation Safety Analysis	
Water Resources Emphasis		
CE/GE F420	Groundwater Engineering	
CE F445	Hydrologic Analysis and Design	
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Total Credits		**126-131**

1. Fulfills the baccalaureate capstone requirement.
2. Up to two graduate-level courses may be used towards graduation. Graduate-level courses must be approved by student's advisor, and the student must be within two semesters of graduation and have at least a 3.0 GPA to take graduate-level courses.

Note: The ability to use computers for normal class work is expected in all engineering classes above the F100 level.

Climate and Arctic Sustainability B.A.

< Back to Department (p. 106)

Minimum Requirements for Climate and Arctic Sustainability B.A.: 120 credits

CONCENTRATIONS: ARCTIC HISTORY AND POLITICS (P. 301), ENVIRONMENTAL STUDIES (P. 302) **AND** NATIVE STUDIES (P. 302)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
ATM F101X	Weather and Climate of Alaska	
or BIOL F104X	Natural History of Alaska	
or CHEM F111X	Introduction to Environmental Chemistry of the Arctic	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Arctic and Northern Studies Program Requirements		
Complete the following:		
ACNS F201	The Circumpolar North: An Introductory Overview	3
ACNS F484	Perspectives on the North [1]	3
ANS F242X	Indigenous Cultures of Alaska	3
or ANTH F242	Native Cultures of Alaska	
or ACNS F449	Northern and Environmental Literature	
or ENGL F449	Northern and Environmental Literature	
HIST F483	20th-century Circumpolar History	3
or PS F452	International Relations of the North	
or PS F469	Arctic Politics and Governance	
Category Requirements		
Students must complete an additional 3 credits from each of the following categories. Students are limited to 3 credits per department except for Arctic and Northern Studies.		9
Social Sciences - 3 credits		
Humanities - 3 credits		
Natural Sciences - 3 credits		
Concentration		
Complete one of the following:		15-19
Arctic History and Politics		
Environmental Studies		
Native Studies		
Electives		
Additional student-selected electives		3-12
Total Credits		**120**

[1] Fulfills the baccalaureate capstone requirement.

Special Notes:

- Students must take at least 39 upper-division credits in the B.A. degree.
- Students are not permitted to use one course to satisfy more than one major requirement.
- Students may petition the program director to substitute other courses towards the degree.
- Students are encouraged to minor in Alaska Native Languages, if interested.

Categories

SOCIAL SCIENCES

Code	Title	Credits
ACNS F429	Geography of the Arctic and Circumpolar North	3
ANS/PS F325	Alaska Native and Comparative Tribal Self-Government	3
ANS/PS F425	Federal Indian Law and Alaska Natives	3
HIST F461	History of Alaska	3
HIST F483	20th-century Circumpolar History	3
HSEM F461	Human Security in Alaska	3
JUST F340	Rural Justice in Alaska	3
PS F452	International Relations of the North	3
PS F469	Arctic Politics and Governance	3
RD F470	The Alaska Native Claims Settlement Act: Pre-1971 to Present	3

HUMANITIES

Code	Title	Credits
ACNS/ART F425	Visual Images of the North	3
ACNS/ENGL F449	Northern and Environmental Literature	3
ANS F329	Indigenous Alaska Native Language and Culture Revitalization	3
ANS/ENGL F349	Narrative Art of Alaska Native Peoples (in English translation)	3
ANS/ANTH/ART F365	Alaska Native Art History	3
ANS/ART F368	Alaska Native Art Studio II	3
ANS/RD F401	Cultural Knowledge of Native Elders	3
ANS/ART F468	Alaska Native Art Studio III	3
ENGL F341	Contemporary Alaska Native Literature	3
HIST F481	Polar Exploration and Its Literature	3

NATURAL SCIENCES

Code	Title	Credits
ATM F101X	Weather and Climate of Alaska	4
BIOL F104X	Natural History of Alaska	4
CHEM F111X	Introduction to Environmental Chemistry of the Arctic	4
EBOT F100	Introduction to Ethnobotany	3
EBOT F230	Ethnobotanical Chemistry	3
ENVI F101X	Introduction to Environmental Science	4
ENVI F220	Introduction to Sustainable Energy	3
FISH F110	Fish and Fisheries in a Changing World	3
FISH F261	Introduction to Fisheries Utilization	3
FISH F288	Fish and Fisheries of Alaska	3

Concentrations

ARCTIC HISTORY AND POLITICS

Code	Title	Credits
Arctic History and Politics Concentration Requirements		
Complete five of the following:		15

ACNS F429	Geography of the Arctic and Circumpolar North	
ANS F310	Alaska Native and Comparative Indigenous Land Settlements	
ANS/PS F325	Alaska Native and Comparative Tribal Self-Government	
ANS/PS F425	Federal Indian Law and Alaska Natives	
HIST F404	Modern Scandinavia	
HIST F461	History of Alaska	
HIST F463	Imperial Russia, 1700-1917	
HIST F464	Soviet and Post-Soviet Russia	
HIST F481	Polar Exploration and Its Literature	
HIST F483	20th-century Circumpolar History	
PS F450	Comparative Indigenous Rights and Policies	
PS F452	International Relations of the North	
PS F460	Government and Politics of Canada	
PS F462	Alaska Government and Politics	
PS F468	Government and Politics of Russia	
PS F469	Arctic Politics and Governance	
RD F470	The Alaska Native Claims Settlement Act: Pre-1971 to Present	
Total Credits		**15**

ENVIRONMENTAL STUDIES

Code	Title	Credits
Environmental Studies Concentration Requirements		
Complete five of the following:		15-19
ACNS/ENGL F449	Northern and Environmental Literature	
ATM F101X	Weather and Climate of Alaska	
BIOL F104X	Natural History of Alaska	
CHEM F104X	Introduction to Organic Chemistry and Biochemistry	
EBOT F100	Introduction to Ethnobotany	
EBOT F230	Ethnobotanical Chemistry	
ENVI F101X	Introduction to Environmental Science	
ENVI F220	Introduction to Sustainable Energy	
FISH F110	Fish and Fisheries in a Changing World	
FISH F261	Introduction to Fisheries Utilization	
FISH F288	Fish and Fisheries of Alaska	
HIST F411	Environmental History	
NRM F101	Natural Resources Conservation and Policy	
PS F455	Political Economy of the Global Environment	
PS F458	Comparative Environmental Politics	
RD F255	Rural Alaska Land Issues	
RD F265	Perspectives on Subsistence in Alaska	
Total Credits		**15-19**

NATIVE STUDIES

Code	Title	Credits
Native Studies Concentration Requirements		
Complete five of the following:		15
ANS F310	Alaska Native and Comparative Indigenous Land Settlements	
ANS/PS F325	Alaska Native and Comparative Tribal Self-Government	
ANS F329	Indigenous Alaska Native Language and Culture Revitalization	
ANS/ENGL F349	Narrative Art of Alaska Native Peoples (in English translation)	
ANS F350	Cross-cultural Communication: Alaska Perspectives	
ANS/ANTH/ART F365	Alaska Native Art History	
ANS/ART F368	Alaska Native Art Studio II	
ANS/RD F401	Cultural Knowledge of Native Elders	
ANS/PS F425	Federal Indian Law and Alaska Natives	
ANS/ART F468	Alaska Native Art Studio III	
BA F391	Alaska Native Corporations: A Historical and Contemporaneous Perspective	
ENGL F341	Contemporary Alaska Native Literature	
HSEM F461	Human Security in Alaska	
JUST F340	Rural Justice in Alaska	
PS F450	Comparative Indigenous Rights and Policies	
RD F470	The Alaska Native Claims Settlement Act: Pre-1971 to Present	
Total Credits		**15**

Climate and Environmental Change B.S.

Program Requirements

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Minimum Requirements for Climate and Environmental Change B.S.: 120 credits

Students must earn a C- grade or better in each course.

CONCENTRATIONS: ECOLOGICAL PROCESSES (P. 303), ENVIRONMENTAL EARTH SCIENCE (P. 303), PHYSICAL PROCESSES (P. 304), SUSTAINABILITY (P. 304)

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following: [1,2]		
ECON F235X	Introduction to Natural Resource Economics	
MATH F251X	Calculus I	
or MATH F230X	Essential Calculus with Applications	
NRM F111X	Introduction to Sustainability Science	

PS F101X	Introduction to American Government and Politics	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
As part of the B.S. requirements, complete the following: [3]		
NRM F303X	Environmental Ethics and Actions	
STAT F200X	Elementary Statistics [4]	
or STAT F300	Statistics	
Climate and Environmental Change Program Requirements		
Complete the following:		
ATM/GEOS F480	Climate Change Processes: Past, Present, Future	4
BIOL F115X	Fundamentals of Biology I [4]	4
or BIOL F103X	Biology and Society	
or BIOL F104X	Natural History of Alaska	
CHEM F105X	General Chemistry I	4
CLIM F400	Climate and Environmental Change Capstone ePortfolio [5]	1
GEOS F101X	The Dynamic Earth	4
GEOS F483	Research Design, Writing and Presentation Methods	3
or STO F401	Communicating Science	
or ENGL F314	Technical Writing	
or ENGL F414	Research Writing	
NRM F125	Our Changing Climate: Past, Present, Future	3
NRM F338	Introduction to Geographic Information Systems	3
PHYS F123X	College Physics I	4
or PHYS F211X	General Physics I	
PS F447	U.S. Environmental Politics	3
Concentration		
Complete one of the following:		35-36
Ecological Processes		
Environmental Earth Science		
Physical Processes		
Sustainability		
Electives		
Additional student-selected electives		0-2
Total Credits		**120-124**

1 Students in the Environmental Earth Science and Physical Processes concentrations must take MATH F251X to meet this requirement

2 WRTG F213X is recommended

3 Quantitatively-inclined students are encouraged to take STAT F300

4 Students in the Ecological Processes and Sustainability Concentrations must take BIOL F115X

5 Fulfills the baccalaureate capstone requirement

Concentrations

ECOLOGICAL PROCESSES

Code	Title	Credits
Ecological Processes Concentration Requirements		
As part of the general education requirements, complete the following:		
MATH F230X	Essential Calculus with Applications	
or MATH F251X	Calculus I	
As part of the B.S. requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
Complete the following:		
BIOL F371	Principles of Ecology	4
BIOL F385	Global Change Biology	3
BIOL F476	Ecosystem Ecology	4
CHEM F106X	General Chemistry II	4
GEOS F112X	The History of Earth and Life	4
STAT F401	Regression and Analysis of Variance	4
Complete two courses from the Policy, Society and Humanities course list [5]		6
Complete one course from the Physical Processes Course List [5]		3
Complete one course from the Biotic Processes or Technical & Data Skills lists [5]		3
Total Credits		**35**

6 When choosing electives, students should consider the requirement for 39 credits of upper division coursework prior to graduation.

ENVIRONMENTAL EARTH SCIENCE

Code	Title	Credits
Environmental Earth Science Concentration Requirements		
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
As part of the B.S. requirements, complete the following:		
GEOS F112X	The History of Earth and Life	
Complete the following:		
ATM F456	Climate and Climate Change	3
or OCN F481	The Ocean and Global Change	
GEOS F213	Mineralogy	4
GEOS F304	Geomorphology	3
GEOS F315	Paleobiology and Paleontology	4
or GEOS F322	Stratigraphy and Sedimentation	
GEOS F422	Geoscience Applications of Remote Sensing	3
NRM F370	Introduction to Watershed Management	3
NRM F380	Soils and the Environment	3
Complete two courses from the Policy, Society and Humanities course list [5]		6
Complete one additional course from the Physical Processes course list [5]		3

Complete one additional course from the Biotic Processes or Technical & Data Skills course lists [5]	3
Total Credits	**35**

[6] When choosing electives, students should consider the requirement for 39 credits of upper-division coursework prior to graduation.

PHYSICAL PROCESSES

Code	Title	Credits
Physical Processes Concentration Requirements		
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
As part of the B.S. requirements, complete the following:		
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Complete the following:		
ATM F401	Introduction to Atmospheric Sciences	3
ATM F456	Climate and Climate Change	3
or OCN F481	The Ocean and Global Change	
GEOS F304	Geomorphology	3
GEOS F422	Geoscience Applications of Remote Sensing	3
or NRM F435	GIS Analysis	
GEOS F477	Ice in the Climate System	3
or GEOS F481	Snow in the Environment	
MATH F252X	Calculus II	4
MATH F253X	Calculus III	4
Complete two courses from the Policy, Society, and Humanities course list [5]		6
Complete two additional courses from the Physical Processes or Technical & Data Skills course lists [5]		6
Total Credits		**35**

[6] When choosing electives, students should consider the requirement for 39 credits of upper-division coursework prior to graduation.

SUSTAINABILITY

Code	Title	Credits
Sustainability Concentration Requirements		
As part of the general education requirements, complete the following:		
MATH F230X	Essential Calculus with Applications	
or MATH F251X	Calculus I	
As part of the B.S. requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
Complete the following:		
ANS F461	Native Ways of Knowing [6]	3
or ANS F347	Voices of Native American Peoples	
ATM F101X	Weather and Climate of Alaska	4
or BIOL F104X	Natural History of Alaska	
or ECON F111X	The Economy of Rural Alaska	
BIOL F371	Principles of Ecology	4
NRM F101	Natural Resources Conservation and Policy	3
or FISH F110	Fish and Fisheries in a Changing World	
or WLF F101	Survey of Wildlife Science	
NRM F210	Principles of Sustainable Agriculture	3
NRM F277	Introduction to Conservation Biology	3
NRM F380	Soils and the Environment	3
or NRM F370	Introduction to Watershed Management	
NRM F430	Resource Management Planning	3
or NRM F407	Environmental Law	
STAT F401	Regression and Analysis of Variance	4
Complete one course from the Biotic or Physical Processes course list [5]		3
Complete one course from the Technical & Data Skills course list [5]		3
Total Credits		**36**

[6] When choosing electives, students should consider the requirement for 39 credits of upper-division coursework prior to graduation.

[7] ANS F461 fulfills the Alaska Native-themed requirement (http://catalog.uaf.edu/bachelors/alaska-native-themed/).

Course Lists

PHYSICAL PROCESSES

Code	Title	Credits
ATM F401	Introduction to Atmospheric Sciences	3
ATM F456	Climate and Climate Change	3
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
CHEM F332	Physical Chemistry II	4
GEOS F304	Geomorphology	3
GEOS F380	Geological Hazards	3
GEOS F460	The Dynamic Alaska Coastline	3
GEOS F477	Ice in the Climate System	3
OCN F419	Concepts in Physical Oceanography	3
OCN F481	The Ocean and Global Change	3
PHYS F413	Atmospheric Radiation	3
or ATM F413	Atmospheric Radiation	

BIOTIC PROCESSES

Code	Title	Credits
BIOL F371	Principles of Ecology	4
BIOL F418	Biogeography	3
BIOL F457	Environmental Microbiology	3
BIOL F476	Ecosystem Ecology	4
GEOS F315	Paleobiology and Paleontology	4
GEOS F453	Palynology and Paleopalynology	4
GEOS F485	Mass Extinctions, Neocatastrophism and the History of Life	3
MBI F482	Human Impacts to the Marine Biosphere	3

NRM F370	Introduction to Watershed Management	3
NRM F380	Soils and the Environment	3
NRM F466	Environmental Soil Chemistry	3

POLICY, SOCIETY AND CULTURE

Code	Title	Credits
ACNS F449	Northern and Environmental Literature	3
ACNS F453	Fire, Ice, and the Fate of Humanity: A History of Energy and Climate Change	3
ANS F242X	Indigenous Cultures of Alaska [6]	3
ANS F347	Voices of Native American Peoples	3
ANS F350	Cross-cultural Communication: Alaska Perspectives [6]	3
ANS F365	Alaska Native Art History [6]	3
ANS F461	Native Ways of Knowing [6]	3
HIST F483	20th-century Circumpolar History	3
HSEM F461	Human Security in Alaska [6]	3
NRM F204	Public Lands Law and Policy	3
NRM F407	Environmental Law	3
NRM F430	Resource Management Planning	3
PS F403	Public Policy	3

[6] Fulfills the Alaska Native-themed requirement (http://catalog.uaf.edu/bachelors/alaska-native-themed/).

TECHNICAL AND DATA SKILLS

Code	Title	Credits
ATM F473	Micrometeorology with Focus on Subarctic and Arctic Ecosystems	3
CS F201	Computer Science I	3
GEOS F422	Geoscience Applications of Remote Sensing	3
MATH F302	Differential Equations	3
MATH F314	Linear Algebra	3
NRM F240	Natural Resources Measurement and Inventory	3
NRM F435	GIS Analysis	4
STAT F401	Regression and Analysis of Variance	4
STAT F402	Scientific Sampling	3
STAT F461	Applied Multivariate Statistics	3

Road Maps

Climate and Environmental Change B.S. Environmental Earth Science Concentration

Course	Title	Credits
First Year		
Fall		
GEOS F101X	The Dynamic Earth (NS GER 1)	4
LS F101X	Library Information and Research (NS GER 1)	1
MATH F251X	Calculus I (Concentration Requirement, M GER)	4
PS F101X	Introduction to American Government and Politics (Concentration Requirement, M GER)	3
WRTG F111X	Writing Across Contexts (Communication GER 1)	3
	Credits	**15**
Spring		
NRM F125	Our Changing Climate: Past, Present, Future	3
COM F131X/F141X	Fundamentals of Oral Communication: Group Context (Communication GER 2)	3
NRM F111X	Introduction to Sustainability Science (S GER 2 (discipline 2))	3
CHEM F105X	General Chemistry I (NS GER 2)	4
Arts GER		3
	Credits	**16**
Second Year		
Fall		
BIOL F115X	Fundamentals of Biology I (NS degree requirement)	4
ECON F235X	Introduction to Natural Resource Economics (One more Art, H, or S GER)	3
PHYS F211X	General Physics I (Major)	4
WRTG F213X	Writing and the Sciences (Communication GER 3)	3
	Credits	**14**
Spring		
GEOS F112X	The History of Earth and Life	4
GEOS F304	Geomorphology	3
STAT F200X	Elementary Statistics	3
Open Elective		3
H GER 1		3
	Credits	**16**
Third Year		
Fall		
GEOS F213	Mineralogy (Concentration)	4
GEOS F315	Paleobiology and Paleontology (Concentration)	4
GEOS F422	Geoscience Applications of Remote Sensing (Concentration)	3
PS F447	U.S. Environmental Politics (Major)	3
NRM F380	Soils and the Environment (Concentration)	3
	Credits	**17**
Spring		
NRM F303X	Environmental Ethics and Actions (S GER 1 (discipline 1))	3
Policy List (Concentration)		3
Policy List (Concentration)		3
Open Elective		3
Open Elective		3
	Credits	**15**

Fourth Year		
Fall		
ATM F480	Climate Change Processes: Past, Present, Future (Major)	4
GEOS F483	Research Design, Writing and Presentation Methods (Major)	3
OCN F481	The Ocean and Global Change (Concentration)	3
NRM F370	Introduction to Watershed Management (Concentration)	3
NRM F338	Introduction to Geographic Information Systems (Major)	3
	Credits	**16**
Spring		
CLIM F400	Climate and Environmental Change Capstone ePortfolio (Major)	1
Open elective		3
Physical List (Concentration)		3
Bio or Tech list (Concentration)		3
Open elective		3
	Credits	**13**
	Total Credits	**122**

Communication B.A.

Program Requirements

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Minimum Requirements for Communication B.A.: 120 credits

CONCENTRATIONS: PUBLIC RELATIONS AND ORGANIZATIONAL COMMUNICATION (P. 306), SCIENCE AND ENVIRONMENTAL COMMUNICATION (P. 306), SOCIAL INTERACTION (P. 307)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Communication Program Requirements		
Complete the following:		
COM F181	Introduction to Communication Theory	3
COM F330	Intercultural Communication	3
COM F356	Gender and Communication	3
COM F401	Quantitative Research Methods in Communication [1]	3
COM F425	Communication Theory [1]	3
COM F482	Capstone Seminar in Communication [2]	3
Complete one of the following COM electives. Suggested electives are listed in each concentration. [3]		3
COM F220	Professional Interviewing	
COM Course	Any F300-F400 level [4]	
Concentration		
Complete one of the following:		9
Public Relations and Organizational Communication		
Science and Environmental Communication		
Social Interaction		
Electives		
Additional student-selected electives		13-18
Total Credits		**120**

1. Do not take these classes if considering the B.A./M.A. To maintain that option, only take them in the last year.
2. Fulfills the baccalaureate capstone requirement.
3. With advisor approval, an appropriate-level special topics or independent studies course in communication may be used to meet this requirement.
4. If COM F300X is taken to meet the degree-specific requirement for ethics, then the student must take an additional F300- or F400-level communication course to complete the major.

Concentrations

PUBLIC RELATIONS AND ORGANIZATIONAL COMMUNICATION

Code	Title	Credits
Public Relations and Organizational Communication Concentration Requirements		
Complete the following:		
COM F431	Public Relations Campaigns	3
COM F433	Public Relations Theory and Practice	3
COM F445	Organizational Communication [1]	3
Recommended Electives:		
COM F353	Conflict, Mediation and Communication	
COM F441	Persuasion	
COM F467	Communication Activism, Advocacy and Social Movements	
Total Credits		**9**

1. Do not take these classes if considering the B.A./M.A. To maintain that option, only take them in the last year.

SCIENCE AND ENVIRONMENTAL COMMUNICATION

Code	Title	Credits
Science and Environmental Communication Concentration Requirements		
Complete the following:		
COM F211	Introduction to Science Communication: Theory & Practice	3
COM F312	Science Communication & the Environment	3
COM F313	Science & Intersectionality: Race, Gender and Sexuality	3
Recommended Electives:		

COM F410	Public Engagement in Science Communication	
COM F462	Communication in Health Contexts [1]	
Total Credits		**9**

[1] Do not take these classes if considering the B.A./M.A. To maintain that option, only take them in the last year.

SOCIAL INTERACTION

Code	Title	Credits
Social Interaction Concentration Requirements		
Complete the following:		
COM F331	Advanced Group Communication	3
COM F422	Communication in Interpersonal Relationships [1]	3
COM F445	Organizational Communication [1]	3
Recommended Electives:		
COM F353	Conflict, Mediation and Communication	
COM F462	Communication in Health Contexts [1]	
Total Credits		**9**

[1] Do not take these classes if considering the B.A./M.A. To maintain that option, only take them in the last year.

Computer Engineering B.S.

Program Requirements

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Minimum Requirements for Computer Engineering B.S.: 127 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
or PHYS F213X	Elementary Modern Physics	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X and PHYS F212X	General Physics I and General Physics II	
Computer Engineering Program Requirements		
Complete the following:		
CS F201	Computer Science I	3
CS F202	Computer Science II	3
CS F301	Assembly Language Programming	3
CS F311	Data Structures and Algorithms	3
CS F321	Operating Systems	3
EE F102	Introduction to Electrical and Computer Engineering	3
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
EE F253	Circuit Theory	3
EE F333	Electronic Devices	4
EE F354	Engineering Signal Analysis	3
EE F443	Computer Engineering Analysis and Design	4
EE F444	Embedded Systems Design	4
EE F451	Digital Signal Processing	4
EE F461	Communication Systems and Networks	4
EE F481	Electrical and Computer Engineering Design I [1]	1
EE F482	Electrical and Computer Engineering Design II [1]	3
ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F100L	Makerspace Alaska - A Laboratory Introduction to Engineering	1
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MATH F307	Discrete Mathematics	3
Electives		
Complete two approved upper-division EE or CS Electives [2]		6-8
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Total Credits		**127-134**

[1] Fulfills the baccalaureate capstone requirement.

[2] Graduate-level CS and EE courses may be used as electives upon approval.

RECOMMENDED ELECTIVES

Code	Title	Credits
CS F331	Programming Languages	3
CS F411	Analysis of Algorithms	3
CS F425	Database Systems	3
CS F453	Robotics & 3D Printing	3
CS F465	Computer and Network Security	3
EE F303	Electric Power Systems and Machines	4
EE F311	Engineering Electromagnetics I	3
EE F334	Electronic Circuit Design	4
EE F464	Advanced Communications Systems	4
EE F471	Automatic Control	3

Program Learning Outcomes

Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

Within a few years of graduation, graduates of the UAF B.S. in Computer Engineering program are expected to:

1. Function independently and in diverse multidisciplinary teams as technically proficient, productive, and ethically responsible members of their profession.
2. Apply their fundamental understanding, acquire and apply new knowledge and skills, and allocate resources to solve real-world problems, including engineering for extreme environments.
3. Effectively communicate with technical and non-technical audiences, including employers, colleagues, clients, professional organizations, and the public.

Computer Science B.A.

Admission Requirements

Complete the following admission requirements:

Students are ready to declare a B.A. in computer science when they successfully:

- pass CS F103; OR
- place into MATH F122X or MATH F151X.

Program Requirements

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Minimum Requirements for Computer Science B.A.: 124 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
MATH F230X	Essential Calculus with Applications	
or MATH F251X	Calculus I	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Computer Science Program Requirements		
Complete the following:		
CS F201	Computer Science I	3
CS F202	Computer Science II	3
CS F241	Computer Hardware Concepts	4
CS F301	Assembly Language Programming	3
CS F311	Data Structures and Algorithms	3
CS F321	Operating Systems	3
CS F331	Programming Languages	3
CS F371	Computer Ethics and Technical Communication	3
CS F372	Software Construction	3
CS F441	System Architecture	3-4
or EE F443	Computer Engineering Analysis and Design	
CS F471	Senior Capstone I [1]	3
CS F472	Senior Capstone II [1]	3
STAT F200X	Elementary Statistics	3
or STAT F300	Statistics	
Electives in computer science at the F300 or F400 level, or approved electives.		12
Total Credits		**124-130**

[1] Fulfills the baccalaureate capstone requirement.

Computer Science B.S.

Program Requirements

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Minimum Requirements for Computer Science B.S.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Any approved ethics course		
Computer Science Program Requirements		
Complete one of the following:		3
MATH F302	Differential Equations	
MATH F314	Linear Algebra	
MATH F371	Probability	
MATH F405	Abstract Algebra	
MATH F408	Mathematical Statistics	
MATH F426	Numerical Analysis	
MATH F460	Mathematical Modeling	
Complete the following:		
CS F201	Computer Science I	3
CS F202	Computer Science II	3
CS F241	Computer Hardware Concepts	4

CS F301	Assembly Language Programming	3
CS F311	Data Structures and Algorithms	3
CS F321	Operating Systems	3
CS F331	Programming Languages	3
CS F371	Computer Ethics and Technical Communication	3
CS F372	Software Construction	3
CS F411	Analysis of Algorithms	3
CS F441	System Architecture	3-4
or EE F443	Computer Engineering Analysis and Design	
CS F471	Senior Capstone I [1]	3
CS F472	Senior Capstone II [1]	3
MATH F253X	Calculus III	4
MATH F307	Discrete Mathematics	3
STAT F300	Statistics	3
Electives		
Electives in computer science at the F300 or F400 level, or approved electives.		9
Additional student-selected electives		1-6
Total Credits		**120**

[1] Fulfills the baccalaureate capstone requirement.

Electrical Engineering B.S.

Program Requirements

< Back to Department (p. 134)

Minimum Requirements for Electrical Engineering B.S.: 125 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
or PHYS F213X	Elementary Modern Physics	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Electrical Engineering Program Requirements		
Complete the following:		
EE F102	Introduction to Electrical and Computer Engineering	3
EE F203	Electric Circuits	4
EE F243	Digital Systems Design	4
EE F253	Circuit Theory	3
EE F301	Analytical Methods for Electrical and Computer Engineers	3
EE F303	Electric Power Systems and Machines	4
EE F311	Engineering Electromagnetics I	3
EE F331	High-frequency Lab	1
EE F333	Electronic Devices	4
EE F354	Engineering Signal Analysis	3
EE F444	Embedded Systems Design	4
EE F451	Digital Signal Processing	4
EE F461	Communication Systems and Networks	4
EE F471	Automatic Control	3
EE F481	Electrical and Computer Engineering Design I [1]	1
EE F482	Electrical and Computer Engineering Design II [1]	3
ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F100L	Makerspace Alaska - A Laboratory Introduction to Engineering	1
ES F201	Computer Techniques	3
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
Electives		
Complete three approved upper division EE elective courses.		*9-12*
Graduate level EE and upper level and graduate CS courses may be used as electives upon approval.		
Recommended Electives:		
EE F334	Electronic Circuit Design	
EE F404	Electric Power Systems Analysis	
EE F406	Electric Power Protection and Control Systems	
EE F408	Power Electronics Design	
EE F412	Engineering Electromagnetics II	
EE F443	Computer Engineering Analysis and Design	
EE F464	Advanced Communications Systems	
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska		
Total Credits		**125-133**

Note: Students must plan their elective courses in consultation with their electrical engineering faculty advisor, and all elective courses must be approved by their electrical engineering faculty advisor.

[1] Fulfills the baccalaureate capstone requirement.

Program Learning Outcomes

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Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

Within a few years of graduation, graduates of the UAF B.S. in Electrical Engineering program are expected to:

1. Function independently and in diverse multidisciplinary teams as technically proficient, productive, and ethically responsible members of their profession.
2. Apply their fundamental understanding, acquire and apply new knowledge and skills, and allocate resources to solve real-world problems, including engineering for extreme environments.
3. Effectively communicate with technical and non-technical audiences, including employers, colleagues, clients, professional organizations, and the public.

Elementary Education (K-8) B.A.

Admission Requirements

Complete the following admission requirements:

B.A. in elementary education students should enroll in the School of Education's recommended sequence of core and major course requirements during their first two years. By following the sequence recommended in Transition One on the Criteria for Advancement through Bachelor of Arts in Elementary Education Degree (https://drive.google.com/file/d/1PS-WfnVqsm_6cjNqdRmZ8gpdNPiZTWUi/view/?usp=sharing), students will be knowledgeable about their status relative to their progress toward meeting the criteria for admission to the professional internship year. To make certain that students will be able to receive the support necessary to prepare for the internship year, all B.A. in elementary education students are required to submit Praxis I or Praxis ASE scores (passing scores are not required until applying to the internship year) to the School of Education prior to enrolling in EDSE F316, and Praxis II (test 5018) test scores must be submitted with the intern year admission packet. Prior to enrollment in professional-year courses and prior to receiving an internship placement in a classroom, all students must submit the materials listed below and meet admission requirements as described in Transition Two. **Declaring a B.A. major in elementary education does not guarantee admission to the professional internship year.**

Internships begin in August or September on the date when teachers return to school (this varies across districts). Since internship placements are arranged with principals and mentor teachers in the spring, all materials necessary for determining admission to the School of Education must be submitted by Feb. 1. Faculty in the School of Education consider multiple criteria in making valid and reliable judgments about each applicant's knowledge, skills and professional characteristics prior to approval for the yearlong internship in a classroom with elementary school-age children.

Students must submit the following information to the School of Education by Feb. 1:

1. Copies of transcripts from all institutions attended. Evidence of plan of completion of all B.A. degree in elementary education degree courses by Aug. 1 (except for those required in the professional internship year), with a minimum of a 2.75 overall GPA, a 2.0 in each major academic area, and a C or better in all required courses. Students with less than a 2.75 overall GPA may be considered for conditional admission in special circumstances.
2. Alaska passing scores from the Praxis I or Praxis Core ASE exams in reading, writing and math, and Praxis II Elementary Content Knowledge exam (test 5018). In extenuating circumstances, applicants may be allowed to begin the internship year without yet having an Alaska qualifying Praxis II score. Students cannot complete program requirement without receiving an Alaska qualifying Praxis II score. See course description for ED F468.
3. Two letters of reference that address qualifications and potential as a teacher.
4. A current and complete resume/curriculum vitae.
5. Two one-page essays on topics determined by the School of Education.
6. Completed Elementary Teacher Education Academic Analysis and Life/Work Form to provide information on breadth and depth of prior course work and/or documented life experiences relative to ten Alaska Student Content Standard areas.
7. A one- to two-page autobiographical sketch (appropriate for presenting to prospective principals and mentor teachers).
8. Extemporaneous writing sample. Contact the School of Education advising office for date, time and location information.
9. Evidence of successful experiences in teaching and learning situations.
10. Evidence of ability to work collaboratively and respectfully in cross-cultural contexts.
11. Completed Alaska Student Teacher Authorization Packet, including fingerprint cards and criminal background check. Forms are available from the School of Education.
12. Complete an interview, when requested.

Note: Students are admitted for a specific academic year and must reapply if they do not enroll in the year in which they were reviewed.

Program Requirements

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Minimum Requirements for Elementary Education (K-8) B.A.: 125-130 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
Arts		
ART/MUS/FLPA F200X	Explorations in Art	
or ANS/FLPA F161X	Introduction to Alaska Native Performance	
or ANS F202X	Aesthetic Appreciation of Alaska Native Performance	
or ANS/MUS/ACNS F223X	Alaska Native Music	

Humanities		
ENGL F270X	Introduction to Creative Writing	
Social Sciences		
HIST F100X	Modern World History	
or HIST F102X	Western Civilization Since 1500	
Mathematics		
MATH F122X	Essential Precalculus with Applications	
or MATH F151X	College Algebra for Calculus	
Natural Sciences		
BIOL F100X	Human Biology	
or BIOL F103X	Biology and Society	
or BIOL F104X	Natural History of Alaska	
CHEM F100X	Chemistry in Complex Systems	
or CHEM F103X	Introduction to General Chemistry	
or PHYS F102X	Energy and Society	
or PHYS F115X	Physical Sciences	
Additional Arts/Humanities/Social Science [1]		
Complete one of the following:		
3-5 credits of a language		
ANL F255X	Introduction to Alaska Native Languages	
ANTH F100X	Individual, Society and Culture	
HIST F132X	History of the U.S.	
SOC F101X	Introduction to Sociology	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		22
As part of the B.A. requirements, complete the following:		
Humanities		
ED/LING F100	Language, Education, Linguistics	
or LING F101X	Nature of Language	
Social Sciences		
Complete the following:		
ED/PSY F245	Child Development	
HIST F131	History of the U.S.	
PS F101X	Introduction to American Government and Politics	
Complete one of the following:		
ANS F242X	Indigenous Cultures of Alaska	
ANTH F242	Native Cultures of Alaska	
HIST F115	Alaska, Land and Its People	
HIST F461	History of Alaska	
Elementary Education (K-8) Program Requirements		
Mathematics Requirements		
Complete the following:		
MATH F211	Mathematics for Elementary School Teachers	3
MATH F212	Mathematics for Elementary School Teachers II	3
Science Requirement		
Complete one of the following:		4
ATM F101X	Weather and Climate of Alaska	
GEOS F101X	The Dynamic Earth	
GEOS F111X	Earth and Environment: Elements of Physical Geography	
GEOS F120X	Glaciers, Earthquakes and Volcanoes: Past, Present and Future	
MBI/OCN F111X	The Oceans	
Education Requirements		
Complete the following:		
ED F439	Supporting Multilingual Learners in the Elementary Classroom	3
ED F110	Becoming a Teacher in the 21st Century	1
ED F201	Introduction to Education	3
ED F206	Core Practices in Place and Arts-Based Teaching	3
ED F329	Teaching with Technology	3
ED F330	Assessment of Learning	3
ED F344	Foundations of Literacy Development	3
EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	3
EDSE F320	Adapting and Accommodating Instructions for Students with Disabilities	3
Complete one of the following:		3
ED/ANS F420	Alaska Native Education	
ED/ANS F461	Native Ways of Knowing	
Professional Internship Year with Integrated Coursework		
First Semester		
ED F411	Reading, Writing, Language Arts: Methods and Curriculum Development	3
ED F412	Integrated Social Studies and Language Arts: Methods and Curriculum Development	3
ED F414	Art, Music and Drama in Elementary Classrooms	3
ED F466	Internship and Collaborative Student Teaching [2]	3
ED F467	Classroom Management Communication and Collaboration I	2
ED F478	Mathematics Methods and Curriculum Development	3
Second Semester		
ED F417	Physical Activity and Health Education for Elementary Teachers	3
ED F468	Internship and Student Teaching [2]	4
ED F469	Classroom Management Communication and Collaboration II	2
ED F476	Assessment of Literacy Development	1
ED F479	Science Methods and Curriculum Development	3
Total Credits		**125-130**

[1] Students should consult UAF SOE advisor.

[2] Fulfills the baccalaureate capstone requirement.

English B.A.

Program Requirements

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Minimum Requirements for English B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
English Program Requirements		
Complete the following:		
ENGL F310	Literary Criticism	3
ENGL F400	Capstone Portfolio	0
Complete three of the following:		9
ENGL F301	Literature of the Ancient World	
ENGL F302	Medieval and Early Modern European Literature	
ENGL F306	Survey of American Literature: Beginnings to the Civil War	
ENGL F307	Survey of American Literature: Civil War to the Present	
ENGL F308	Survey of British Literature: Beowulf to the Romantic Period	
ENGL F309	Survey of British Literature: Romantic Period to the Present	
Complete one of the following:		3
ENGL F422	Shakespeare: History Plays and Tragedies	
ENGL F425	Shakespeare: Comedies and Nondramatic Poetry	
Complete one of the following:		3
ENGL F317	Traditional English Grammar	
ENGL F318	Modern English Grammar	
ENGL F462	Applied English Linguistics	
ENGL F472	History of the English Language	
Complete one of the following:		3
ENGL F333	Women's Literature	
ENGL F340	Contemporary Indigenous Literature in North America	
ENGL F341	Contemporary Alaska Native Literature	
ENGL F347	Voices of Native American Peoples	
ENGL F349	Narrative Art of Alaska Native Peoples (in English translation)	
ENGL F360	Multiethnic American Literature	
ENGL F380	Topics in Colonial and Postcolonial Literature	
ENGL F433	Women, Gender, and Sexuality Studies in Language, Literature, and Culture	
ENGL F449	Northern and Environmental Literature	
Complete one of the following:		3
ENGL F410	Studies in American Literature to 1900	
ENGL F415	Studies in 17th- and 18th-Century British Literature	
ENGL F420	Studies in Medieval and 16th-Century British Literature	
ENGL F440	Studies in 20th- and 21st-Century British Literature	
ENGL F450	Studies in 19th-Century British Literature	
ENGL F455	Studies in 20th- and 21st-Century American Literature	
ENGL F460	Studies in Comparative/World Literature	
Complete one of the following:		3
ENGL F427	Topics in Film Studies	
ENGL F435	Authors	
ENGL F465	Genre	
ENGL F482	Topics in Language and Literature	
ENGL F485	Teaching Composition in the Schools	
Three ENGL F300- and F400-level courses (at least one at the F400 level)		9
Electives		
Additional student-selected electives		7-12
Total Credits		**120**

Film and Performing Arts B.A.

Program Requirements

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Minimum Requirements for Film and Performing Arts B.A.: 120 credits

CONCENTRATIONS: FILM (P. 313), THEATRE (P. 313)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Film and Performing Arts Program Requirements		
Complete the following:		
FLPA F121X	Fundamentals of Acting	3
FLPA F271	Film Set Production I	3
FLPA F247	Introduction to Production Design	3
Concentration		
Complete one of the following: [2]		30
Film		

Theatre	
Electives	
Additional student-selected electives	4-9
Total Credits	**120**

1 To graduate, all students must complete 39 upper-division credits. Some of these will be covered by the upper-division required courses for the film and performing arts B.A., but not all of them. Film and performing arts students will need to take upper-division electives (in film and performing arts or other disciplines) to complete the upper-division requirement.

2 FLPA film concentration majors cannot minor in film but may minor in theatre. FLPA theatre concentration majors cannot minor in theatre but may minor in film.

Concentrations

FILM

Code	Title	Credits
Film Concentration Requirements		
Complete the following:		
FLPA/ENGL F217X	Introduction to the Study of Film	3
FLPA/ART F231	Previsualization and Preproduction	3
FLPA F258	Lights, Camera, Audio!	3
FLPA F260	Digital Video Editing: Adobe Suite	3
FLPA F289 and FLPA F389 and FLPA F489	Reel Workshop/Review I and Reel Workshop/Review II and Reel Workshop/Review III	0
FLPA F331	Directing Film/Video	3
FLPA F403	Practicum in Film Production: FRAME [1]	3
FLPA F431	Film Set Production II [1]	3
Complete three of the following:		9
FLPA F310	Acting for the Camera	
FLPA F320	Acting II: Voice and Speech	
FLPA F321	Acting III: Movement	
FLPA F334	Movies and Films: Watching and Analyzing	
FLPA F371	Digital Imaging	
FLPA/ANS F381	Indigenous World in Film	
FLPA F418	Internship in Film Production	
FLPA F423	Acting IV: Scene Study [1]	
FLPA F458	SFX Up Your Video	
FLPA F460	Cross-cultural Filmmaking	
FLPA F472	3D Animation	
FLPA F480	Documentary Filmmaking	
FLPA F481	Advanced Topics in Film or Stage Production	
FLPA/ENGL F488	Dramatic Writing	
FLPA F498	Undergraduate Research	
FLPA F499	Thesis Project [1]	
or approved FLPA elective		
Total Credits		**30**

1 Fulfills the baccalaureate capstone requirement.

Note: FLPA film concentration majors cannot minor in film but may minor in theatre. FLPA theatre concentration majors cannot minor in theatre but may minor in film.

THEATRE

Code	Title	Credits
Theatre Concentration Requirements		
Complete the following:		
FLPA F190 and FLPA F191	Audition or Portfolio Review Participation and Audition or Portfolio Review Participation	0
FLPA F215X	Dramatic Literature and History	3
FLPA F241	Basic Stagecraft	4
FLPA F290 and FLPA F291	Audition or Portfolio Review Participation II and Audition or Portfolio Review Participation II	0
FLPA F310	Acting for the Camera	3
Complete 8 credits of the following, at least 3 of which must be FLPA F402:		8
FLPA F401	Theatre Practicum: Performance	
FLPA F402	Theatre Practicum: Technical [1]	
Complete four of the following:		12
FLPA F320	Acting II: Voice and Speech	
FLPA F321	Acting III: Movement	
FLPA F332	Stage Directing I	
FLPA F347	Lighting Design	
FLPA/ANS F361	Advanced Alaska Native Performance	
FLPA F423	Acting IV: Scene Study [1]	
FLPA F481	Advanced Topics in Film or Stage Production	
FLPA/ENGL F488	Dramatic Writing	
FLPA F498	Undergraduate Research	
FLPA F499	Thesis Project [1]	
or approved FLPA elective		
Total Credits		**30**

1 Fulfills the baccalaureate capstone requirement.

Note: FLPA film concentration majors cannot minor in film but may minor in theatre. FLPA theatre concentration majors cannot minor in theatre but may minor in film.

Fisheries and Marine Sciences B.S.

Program Requirements

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Minimum Requirements for Fisheries and Marine Sciences B.S.: 122 credits

CONCENTRATIONS: FISHERIES SCIENCE (P. 314), MARINE BIOLOGY (P. 314), OCEANOGRAPHY (P. 315), NO CONCENTRATION (P. 315)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
ECON F101X	Principles of Microeconomics	
or ECON F235X	Introduction to Natural Resource Economics	
MATH F230X	Essential Calculus with Applications	
or MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
As part of the B.S. requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
STAT F200X	Elementary Statistics	
Fisheries and Marine Sciences Program Requirements		
Complete the following:		
BIOL F260	Principles of Genetics	4
BIOL F371	Principles of Ecology	3
or MBI F320	Aquatic Ecology	
FISH/MBI/OCN F102	Fact or Fishin': Case Studies in Fisheries and Marine Sciences	1
FISH F103	The Harvest of the Sea	2
FISH F110	Fish and Fisheries in a Changing World	3
FISH F490	Experiential Learning: Fisheries and Marine Sciences Internship	1
MBI F212	Introduction to Marine Science II	3
OCN F211	Introduction to Marine Science I	3
OCN F303	Data Analysis and Writing for Aquatic Sciences	3
PHYS F123X	College Physics I	4
or PHYS F115X	Physical Sciences	
or PHYS F211X	General Physics I	
STAT F401	Regression and Analysis of Variance	4
or STAT F402	Scientific Sampling	
Concentration		
Complete one of the following:		41-43
Fisheries Science		
Marine Biology		
Oceanography		
No Concentration		
Total Credits		**122-129**

Concentrations

FISHERIES SCIENCE

Code	Title	Credits
Fisheries Science Concentration Requirements		
Complete the following:		
FISH F261	Introduction to Fisheries Utilization	3
FISH F288	Fish and Fisheries of Alaska	3
FISH F315	Freshwater Fisheries Techniques	3
or FISH F414	Field Methods in Marine Ecology and Fisheries	
FISH F411	Human Dimensions of Environmental Systems	3
FISH F425	Fish Ecology	3
or FISH F426	Behavioral Ecology of Fishes	
or FISH F428	Physiological Ecology of Fishes	
or FISH F433	Pacific Salmon Life Histories	
FISH F427	Ichthyology	4
FISH F487	Fisheries Management [1]	3
or FISH F498 and FISH F499	Senior Thesis Proposal and Fisheries Senior Thesis	
Complete 4 credits of electives from chemistry, geology or physics.		4
Complete 15 credits of electives from fisheries, biology, marine biology, oceanography or natural resource management (of which at least 9 credits must be upper-division).		15
Total Credits		**41**

[1] FISH F487, or FISH F498 and FISH F499 will serve as the capstone experience for the fisheries science concentration

MARINE BIOLOGY

Code	Title	Credits
Marine Biology Concentration Requirements		
Complete the following:		
CHEM F314	Analytical Instrumental Laboratory	3
or CHEM F321	Organic Chemistry I	
or CHEM F449	General Biochemistry: Metabolism	
MBI F219	Marine Mammals of the World	2
MBI F220	Scientific Diving	2
or MBI F423	Nearshore Ecology Field Course	
or MBI F450	Marine Biology and Ecology Field Course	
or MBI F456	Kelp Forest Ecology	
or MBI F457	Field Techniques in Ocean Acidification Research	
MBI F482	Human Impacts to the Marine Biosphere [2]	3
or MBI F499	Senior Thesis	
Complete three of the following:		9-11
FISH F427	Ichthyology	
MBI F306	Aquatic Invertebrate Zoology	
MBI F317	Introduction to Marine Mammal Biology	

MBI F410	Marine Bird Ecology and Conservation	
MBI F467	Ecology and Physiology of Marine Macroalgae	
OCN F453	Zooplankton Ecology	
OCN F455	Phytoplankton and Marine Microbes	
Complete an additional 22 credits from the following: [3]		22
FISH F427	Ichthyology	
FISH F435	Data Visualization in Fisheries	
MBI F220	Scientific Diving	
MBI F306	Aquatic Invertebrate Zoology	
MBI F317	Introduction to Marine Mammal Biology	
MBI F410	Marine Bird Ecology and Conservation	
MBI F412	Early Life Histories of Marine Invertebrates	
MBI F415	Physiology of Marine Organisms	
MBI F421	Polar Marine Science	
MBI F423	Nearshore Ecology Field Course	
MBI F450	Marine Biology and Ecology Field Course	
MBI F456	Kelp Forest Ecology	
MBI F457	Field Techniques in Ocean Acidification Research	
MBI F467	Ecology and Physiology of Marine Macroalgae	
MBI F492	Seminar	
OCN F450	Biological Oceanography	
OCN F453	Zooplankton Ecology	
OCN F455	Phytoplankton and Marine Microbes	
STAT F461	Applied Multivariate Statistics	
Total Credits		**41-43**

[2] MBI F482 or MBI F499 will serve as the capstone experience for the marine biology concentration.

[3] Note that courses cannot be used to satisfy requirements in more than one marine biology concentration category

OCEANOGRAPHY

Code	Title	Credits
Oceanography Concentration Requirements		
Complete the following:		
GEOS F111X	Earth and Environment: Elements of Physical Geography	4
or GEOS F120X	Glaciers, Earthquakes and Volcanoes: Past, Present and Future	
OCN F315	Marine Geological Drama and Undersea Catastrophes	3
OCN F419	Concepts in Physical Oceanography	3
OCN F425	Subarctic Oceanography Field Course	3
OCN F450	Biological Oceanography	3
OCN F460	Chemical Oceanography	3
OCN F481	The Ocean and Global Change [4]	3
or OCN F499	Senior Thesis	
Complete 7 credits from the following:		7
OCN F453	Zooplankton Ecology	
OCN F455	Phytoplankton and Marine Microbes	
OCN F459	Computer Programming for Scientific Applications	
OCN F463	Chemical Coastal Processes	
Complete 12 credits of electives from marine biology, oceanography, fisheries, biology, geology, chemistry or physics (of which at least 9 credits must be upper-division).		12
Total Credits		**41**

[4] OCN F481 or OCN F499 will serve as the capstone experience for the oceanography concentration.

NO CONCENTRATION

Code	Title	Credits
No Concentration Requirements		
Complete the following:		
FISH F487	Fisheries Management [5]	3
or FISH F498 and FISH F499	Senior Thesis Proposal and Fisheries Senior Thesis	
or MBI F482	Human Impacts to the Marine Biosphere	
or MBI F499	Senior Thesis	
or OCN F481	The Ocean and Global Change	
or OCN F499	Senior Thesis	
Complete 38 credits of FISH, MBI and/or OCN courses (of which at least 24 credits must be upper-division)		38
Total Credits		**41**

[5] FISH F487, FISH F498 and FISH F499, MBI F482, MBI F499, OCN F481 or OCN F499 will serve as the capstone experience for the no-concentration option.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
General Education Requirements		
BIOL F115X	Fundamentals of Biology I	4
WRTG F111X	Writing Across Contexts	3
Degree Requirement		
CHEM F105X	General Chemistry I	4
FISH/MBI/OCN F102	Fact or Fishin': Case Studies in Fisheries and Marine Sciences	1

FISH F110	Fish and Fisheries in a Changing World	3
	Credits	**15**
Spring		
General Education Requirements		
BIOL F116X	Fundamentals of Biology II	4
MATH F230X or MATH F251X	Essential Calculus with Applications or Calculus I	3
Degree Requirement		
CHEM F106X	General Chemistry II	4
LS F101X	Library Information and Research	1
Program Requirements		
FISH F103	The Harvest of the Sea	2
	Credits	**14**
Second Year		
Fall		
General Education Requirements		
COM F141X	Fundamentals of Oral Communication: Public Context	3
ECON F235X or ECON F101X	Introduction to Natural Resource Economics or Principles of Microeconomics	3
Degree Requirement		
STAT F200X	Elementary Statistics	3
Program Requirements		
OCN F211	Introduction to Marine Science I	3
Concentration		
FISH/MBI/OCN concentration course 1		
	Credits	**12**
Spring		
General Education Requirements		
Humanities GER 1		
WRTG F213X	Writing and the Sciences	3
Program Requirements		
MBI F212	Introduction to Marine Science II	3
Concentration		
FISH/MBI/OCN Concentration Course 2		
FISH/MBI/OCN Concentration Course 3		
	Credits	**6**
Summer		
Program Requirements		
FISH F490	Experiential Learning: Fisheries and Marine Sciences Internship	1
	Credits	**1**
Third Year		
Fall		
General Education Requirements		
Social Sciences GER 2		
Program Requirements		
BIOL F371 or MBI F320	Principles of Ecology or Aquatic Ecology	4
OCN F303	Data Analysis and Writing for Aquatic Sciences	3
PHYS F123X or PHYS F115X or PHYS F211X	College Physics I or Physical Sciences or General Physics I	4
Concentration		
FISH/MBI/OCN Concentration Course 4		
	Credits	**11**
Spring		
Degree Requirement		
NRM F303X	Environmental Ethics and Actions	3
Program Requirements		
BIOL F260	Principles of Genetics	4
Concentration		
Upper Division FISH/MBI/OCN concentration course 1		
Upper Division FISH/MBI/OCN concentration course 2		
Upper Division FISH/MBI/OCN concentration course 3		
	Credits	**7**
Fourth Year		
Fall		
General Education Requirements		
Additional A, H, S GER		
Degree Requirement		
ANS F161X	Introduction to Alaska Native Performance	3
Program Requirements		
STAT F401 or STAT F402	Regression and Analysis of Variance or Scientific Sampling	4
Concentration		
Upper Division FISH/MBI/OCN concentration course 4		
Upper Division FISH/MBI/OCN concentration course 5		
	Credits	**7**
Spring		
Concentration		
Upper Division FISH/MBI/OCN concentration course 6		
Upper Division FISH/MBI/OCN concentration course 7		
Upper Division FISH/MBI/OCN concentration course 8		
Upper Division FISH/MBI/OCN concentration course 9		
	Credits	**0**
	Total Credits	**73**

Fisheries B.A.

Program Requirements

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Minimum Requirements for Fisheries B.A.: 120 credits

CONCENTRATIONS: FISHERIES BUSINESS AND SOCIAL SCIENCE (P. 317), RURAL AND COMMUNITY DEVELOPMENT (P. 317)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255) [1]		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Fisheries Program Requirements		
Complete the following:		
ENGL F314	Technical Writing	3
or ENGL F414	Research Writing	
FISH F102	Fact or Fishin': Case Studies in Fisheries and Marine Sciences	1
FISH F103	The Harvest of the Sea	2
FISH F110	Fish and Fisheries in a Changing World	3
FISH F261	Introduction to Fisheries Utilization	3
FISH F288	Fish and Fisheries of Alaska	3
FISH F411	Human Dimensions of Environmental Systems	3
FISH F487	Fisheries Management [2]	3
FISH F490	Experiential Learning: Fisheries and Marine Sciences Internship	1
STAT F200X	Elementary Statistics	3
Concentrations		
Complete one of the following:		21
Fisheries Business and Social Science		
Rural and Community Development		
Electives		
Additional student-selected electives		0-2
Total Credits		**120-123**

[1] To graduate, all students must complete 39 upper-division credits.
[2] Fulfills the baccalaureate capstone requirement.

Concentrations

FISHERIES BUSINESS AND SOCIAL SCIENCE

Code	Title	Credits
Fisheries Business and Social Science Concentration Requirements		
Complete the following:		
ACCT F261X	Principles of Financial Accounting	3
FISH F340	Seafood Business	3
Five upper-division classes (F300-F400 level; 15 credits) from social science fields including: Alaska Native Studies, Anthropology, Arctic and Northern Studies, Cross-Cultural Studies, Economics, Environmental Studies, Geography, History, Natural Resources Management, Sociology, Philosophy, Political Science, Psychology, Rural Development		15
Total Credits		**21**

RURAL AND COMMUNITY DEVELOPMENT

Code	Title	Credits
Rural and Community Development Concentration Requirements		
Complete the following:		
RD F300	Rural Development in a Global Perspective	3
RD F325	Rural Development Principles and Practices	3
Four upper-division (F300-F400 level; 12 credits) Rural Development electives		12
Complete one of the following:		3
RD F245	Fisheries and Marine Wildlife Development in Rural Alaska	
RD F255	Rural Alaska Land Issues	
RD F265	Perspectives on Subsistence in Alaska	
Total Credits		**21**

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
BIOL F103X	Biology and Society	4
STAT F200X	Elementary Statistics	3
FISH F102	Fact or Fishin': Case Studies in Fisheries and Marine Sciences	1
FISH F110	Fish and Fisheries in a Changing World	3
WRTG F111X	Writing Across Contexts	3
	Credits	**14**
Spring		
COM F141X	Fundamentals of Oral Communication: Public Context	3
CHEM F100X	Chemistry in Complex Systems	4
ECON F101X	Principles of Microeconomics	3
FISH F103	The Harvest of the Sea	2
LS F101X	Library Information and Research	1
Elective		3
	Credits	**16**
Second Year		
Fall		
ACCT F261X	Principles of Financial Accounting	3
ANS F111X	History of Colonization in Alaska: The Indigenous Response	3

FISH F261	Introduction to Fisheries Utilization	3
WRTG F211X	Writing and the Humanities	3
Minor Course 1 or Elective		3
	Credits	**15**
Spring		
ART F105X	Beginning Drawing	3
ECON F102X	Principles of Macroeconomics	3
ENGL/FL F200X	World Literature	3
FISH F288	Fish and Fisheries of Alaska	3
Minor Course 2 or Elective		3
	Credits	**15**
Third Year		
Fall		
ANTH F211X or PS F201X or PS F221X or SOC F201X	Fundamentals of Archaeology or Comparative Politics or International Politics or Social Problems and Solutions	3
ECON F235X	Introduction to Natural Resource Economics	3
ENGL F306	Survey of American Literature: Beginnings to the Civil War	3
ENGL F314 or ENGL F414	Technical Writing or Research Writing	3
FISH F340	Seafood Business	3
	Credits	**15**
Spring		
BA F151X	Introduction to Business	3
ECON F120X	Introduction to Economic Analysis	3
ENGL F307	Survey of American Literature: Civil War to the Present	3
NRM F303X	Environmental Ethics and Actions	3
Minor Course 3 or Elective		3
	Credits	**15**
Summer		
FISH F490	Experiential Learning: Fisheries and Marine Sciences Internship	1
	Credits	**1**
Fourth Year		
Fall		
ECON F350	Money and Banking	3
FISH F411	Human Dimensions of Environmental Systems	3
HIST F411	Environmental History	3
Upper-Div Concentration Elective		3
Minor Course 4 or Elective		3
	Credits	**15**
Spring		
FISH F487	Fisheries Management	3
HIST F364	History of the United States 1945 to Present	3
NRM F407	Environmental Law	3
Upper-Division Minor Course or Elective		3
Elective		3
	Credits	**15**
	Total Credits	**121**

Foreign Languages B.A.

Program Requirements

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Minimum Requirements for Foreign Languages B.A.: 120 credits

CONCENTRATIONS: TWO LANGUAGES (P. 318)**,** SINGLE LANGUAGE (FRENCH, GERMAN, JAPANESE, SPANISH) (P. 319)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Foreign Languages Program Requirements		
Complete the baccalaureate capstone requirement as determined by the program. [1]		
Concentration		
Complete one of the following:		30-33
Two languages		
French, German, Japanese or Spanish		
Electives		
Additional student-selected electives		10-18
Total Credits		**120**

[1] The baccalaureate capstone requirement for foreign languages may be fulfilled by FREN F431, SPAN F431, JPN F475, GER F431 or GER F432.

Note: In addition to a first and second language, students should complete a well-defined minor related to their career goals. When choosing a minor it is highly recommended that students see an advisor as early as possible.

Note: Recommended background courses: LING F101X and LING F216X.

Note: F100-level language courses (which are preparatory to, but not part of the foreign language degree) may be counted toward the fulfillment of general education requirements.

Concentrations

TWO LANGUAGES

Code	Title	Credits
Two Languages Concentration Requirements		
Complete the following:		
F200 level or above in the first language: French, German, Japanese, or Spanish. [1]		18

F200 level or above in the second language: French, German, Japanese, or Spanish.	15
Total Credits	**33**

[1] These must include two F400-level courses in the target language taken in residence at UAF.

SINGLE LANGUAGE

French, German or Spanish

Code	Title	Credits
French, German or Spanish Concentration Requirements		
Complete the following:		
Target language at the F200 level or above [1]		30
Total Credits		**30**

[1] These may include target language courses and/or courses taken in the target language on an approved study abroad program and up to 6 credits of advisor-approved electives from education or linguistics, but must include two F400-level courses in the target language taken in residence at UAF.

Japanese

Code	Title	Credits
Japanese Concentration Requirements		

See requirements under Japanese Studies major (p. 329).

Geological Engineering B.S.

Program Requirements

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Minimum Requirements for Geological Engineering B.S.: 127 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Geological Engineering Program Requirements		
Complete the following:		
ES F208	Mechanics	4
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
GE F101	Introduction to Geological Engineering	1
GE F261	General Geology for Engineers	3
GE F326	Introduction to Geotechnical Engineering and Foundations	4
GE F375	Terrain Analysis and GIS	3
GE F381	Field Methods and Applied Design I	2
GE F382	Field Methods and Applied Design II	2
GE F405	Engineering and Environmental Geophysics	3
GE F420	Groundwater Engineering	3
GE F480	Senior Design [1]	3
GEOS F213	Mineralogy	4
GEOS F214	Petrology and Petrography	4
GEOS F314	Structural Geology	4
GEOS F322	Stratigraphy and Sedimentation	4
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MIN F202	Surveying and CAD for Engineers	2-3
or CE F112	Elementary Surveying	
MIN F370	Rock Mechanics	3
MIN F390	Geostatistics and Mineral Economics	3-6
or STAT F200X and ESM F450	Elementary Statistics and Economic Analysis and Operations	
Technical Electives [2]		
Complete 6 credits from any of the following options:		6
Geotechnical/Arctic Option		
CE F401	Arctic Engineering	
CE F422	Foundation Engineering	
CE F424	Permafrost Engineering	
GE F430	Geomechanical Instrumentation	
GE F440	Slope Stability	
GE F441	Geohazard Analysis	
GE F445	Design of Earth Dams and Embankments	
GIS Option		
GE F376	GIS Applications in Geological and Environmental Engineering	
Mining Option		
GEOS F332	Ore Deposits and Structure	
MIN F482	Computer-aided Mine Design:VULCAN	
Petroleum Option		
PETE F302	Well Logging	
PETE F407	Petroleum Production Engineering	
PETE F426	Drilling Engineering	
Water Resources/Environmental Engineering Option		
CE F341	Introduction to Environmental Engineering	
CE F344	Water Resources Engineering	
CE F442	Water and Wastewater Treatment Design	

CE F445	Hydrologic Analysis and Design	
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Total Credits		**127-135**

[1] Fulfills the baccalaureate capstone requirement.

[2] Technical elective credits must contain engineering design and be selected by the student from the list of approved technical electives from the geological engineering program in conference with the advisor and approved by the department. Students are expected to complete all prerequisites required for the selected courses.

Geoscience B.S.

Program Requirements

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Minimum Requirements for Geoscience, B.S.: 123 credits

CONCENTRATIONS: GEOLOGY (P. 320), PALEONTOLOGY (P. 321), GEOSPATIAL SCIENCES (P. 321) **AND** GEOPHYSICS (P. 320)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
Geoscience Program Requirements		
Complete the following:		
GEOS F101X	The Dynamic Earth	4
GEOS F112X	The History of Earth and Life	4
GEOS F309	Tectonics	3
Concentration		
Complete one of the following:		61-71
Geology		
Geophysics		
Geospatial Sciences		
Paleontology		
Total Credits		**123-137**

Concentrations

GEOLOGY

Code	Title	Credits
Geology Concentration Requirements		
Complete the following:		
CHEM F106X	General Chemistry II	4
GEOS F213	Mineralogy	4
GEOS F214	Petrology and Petrography	4
GEOS F225	Field and Computer Methods in Geology	2
GEOS F304	Geomorphology	3
GEOS F314	Structural Geology	4
GEOS F315	Paleobiology and Paleontology	4
GEOS F322	Stratigraphy and Sedimentation	4
GEOS F430	Statistics and Data Analysis in Geology	3
GEOS F454	Field Geology [1,2]	6
PHYS F123X	College Physics I	4
PHYS F124X	College Physics II	4
STAT F200X	Elementary Statistics	3
or STAT F300	Statistics	
Complete 12 additional credits of upper-division GEOS courses or other upper-division courses approved by the undergraduate advisor including one course from the following:		12
GEOS F483	Research Design, Writing and Presentation Methods	
GEOS F488	Undergraduate Research	
Total Credits		**61**

[1] GEOS F454 is offered at UAF during the summer of odd-numbered years. Students may substitute a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in an approved field geology class.

[2] Fulfills the baccalaureate capstone requirement.

GEOPHYSICS

Code	Title	Credits
Geophysics Concentration Requirements		
Complete the following:		
GEOS F262	Rocks and Minerals	3
GEOS F375	Oral Communication Skills for Geoscientists	1
GEOS F406	Volcanology	3
GEOS F419	Solid Earth Geophysics	3
GEOS F431	Foundations of Geophysics	4
GEOS F477	Ice in the Climate System	3
GEOS F483	Research Design, Writing and Presentation Methods	3
GEOS F488	Undergraduate Research [2]	2
MATH F252X	Calculus II	4
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MATH F314	Linear Algebra	3

PHYS F211X and PHYS F212X	General Physics I and General Physics II	8
PHYS F213X	Elementary Modern Physics	4
PHYS F220	Introduction to Computational Physics	4
Complete two of the following science and engineering electives or undergraduate advisor-approved substitute:		6-8
ES F331	Mechanics of Materials	
ES F341	Fluid Mechanics	
GEOS F314	Structural Geology	
GEOS F322	Stratigraphy and Sedimentation	
GEOS F422	Geoscience Applications of Remote Sensing	
ME F441	Heat and Mass Transfer	
PHYS F301	Introduction to Mathematical Physics	
PHYS F341	Classical Physics I: Particle Mechanics	
Complete 6 additional credits of upper-division GEOS courses or other upper-division courses approved by the undergraduate advisor.		6
Total Credits		**64-66**

[2] Fulfills the baccalaureate capstone requirement.

GEOSPATIAL SCIENCES

Code	Title	Credits
Geospatial Sciences Concentration Requirements		
Complete the following:		
CHEM F106X	General Chemistry II	4
GEOS F213	Mineralogy	4
GEOS F214	Petrology and Petrography	4
GEOS F225	Field and Computer Methods in Geology	2
GEOS F304	Geomorphology	3
GEOS F309	Tectonics	3
GEOS F422	Geoscience Applications of Remote Sensing	3
GEOS F430	Statistics and Data Analysis in Geology	3
GEOS F454	Field Geology [1,2]	6
NRM F338	Introduction to Geographic Information Systems	3
PHYS F123X	College Physics I	4
PHYS F124X	College Physics II	4
STAT F200X	Elementary Statistics	3
or STAT F300	Statistics	
Electives		
Complete at least three of the following:		7-10
GEOS F458	Big Geospatial Data	
GEOS F459	Visible and Infrared Remote Sensing	
GEOS F488	Undergraduate Research	
NRM F435	GIS Analysis	
NRM F641	Natural Resource Applications of Remote Sensing	
Complete 13 additional credits of upper-division courses approved by the undergraduate advisor including two courses from the following:		13
GEOS F314	Structural Geology	
GEOS F315	Paleobiology and Paleontology	
GEOS F317	Paleontological Research and Laboratory Methods	
GEOS F322	Stratigraphy and Sedimentation	
GEOS F482	Geoscience Seminar	
GEOS F483	Research Design, Writing and Presentation Methods	
GEOS F460	The Dynamic Alaska Coastline	
MATH F314	Linear Algebra	
Total Credits		**66-69**

[1] GEOS F454 is offered at UAF during the summer of odd-numbered years. Students may substitute a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in an approved field geology class.

[2] Fulfills the baccalaureate capstone requirement.

PALEONTOLOGY

Code	Title	Credits
Paleontology Concentration Requirements		
Complete the following:		
CHEM F106X	General Chemistry II	4
GEOS F213	Mineralogy	4
GEOS F214	Petrology and Petrography	4
GEOS F225	Field and Computer Methods in Geology	2
GEOS F314	Structural Geology	4
GEOS F315	Paleobiology and Paleontology	4
GEOS F317	Paleontological Research and Laboratory Methods	2
GEOS F322	Stratigraphy and Sedimentation	4
GEOS F454	Field Geology [1,2]	6
GEOS F430	Statistics and Data Analysis in Geology	3
PHYS F123X	College Physics I	4
STAT F200X	Elementary Statistics	3
or STAT F300	Statistics	
Complete at least two from the following electives:		5-7
GEOS F453	Palynology and Paleopalynology	
GEOS F485	Mass Extinctions, Neocatastrophism and the History of Life	
GEOS F486	Vertebrate Paleontology	
GEOS F488	Undergraduate Research	
Complete the requirements for a minor in biological sciences		20
Total Credits		**69-71**

[1] GEOS F454 is offered at UAF during the summer of odd-numbered years. Students may substitute a 6-credit field geology class at another institution. The geology and geophysics undergraduate advisor will assist students in placement in an approved field geology class.

[2] Fulfills the baccalaureate capstone requirement.

History B.A.

Program Requirements

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Minimum Requirements for History B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
HIST F100X	Modern World History	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
History Program Requirements		
Complete the following:		
HIST F275	Perspectives on History	3
Complete three of the following:		9
HIST F101	Western Civilization Before 1500	
HIST F102X	Western Civilization Since 1500	
HIST F121	East Asian Civilization	
HIST F122X	East Asian Civilization	
HIST F131	History of the U.S.	
HIST F132X	History of the U.S.	
Five HIST courses at the F300 or F400 level, at least two of which must be at the F400 level		15
Of the courses for the major, at least two (at any level) must be taken in each of the following three fields: [1]		
United States history		
European history		
Other areas, such as:		
Northern history (including Alaska)		
World or non-Western (non-U.S., non-European) history		
Women's history		
Capstone		
Complete the following:		6
HIST F475	Historiography Capstone [2]	3
HIST F476	Senior Thesis Capstone [2]	3
Electives		
Additional student-selected electives		4-9
Total Credits		**120**

[1] These courses must be approved by an advisor.
[2] Fulfills the baccalaureate capstone requirement.

Note: Students who are considering graduate work in history are strongly urged to take at least two years of a foreign language.

Note: History majors are strongly urged to consult with the History Department regarding the selection of a minor.

Homeland Security and Emergency Management B.S.E.M.

Program Requirements

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Minimum Requirements for Homeland Security and Emergency Management B.S.E.M.: 120 credits

CONCENTRATIONS: CLIMATE RISK AND SECURITY (P. 323), CYBERSECURITY AND INFORMATION TECHNOLOGY MANAGEMENT (P. 323), EMERGENCY MANAGEMENT (P. 323), EMERGENCY MEDICAL AND PUBLIC HEALTH MANAGEMENT (P. 323), FIRE ADMINISTRATION (P. 323), HOMELAND SECURITY (P. 323), LAW ENFORCEMENT MANAGEMENT (P. 324)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.S.E.M. Degree Requirements		
Complete the B.S.E.M. degree requirements. (p. 270)		
Homeland Security and Emergency Management Program Requirements		
Complete the following:		
BA F307	Introductory Human Resources Management	3
BA F457	Training and Management Development	3
HSEM/ACCT F271	Fiscal Management for Emergency Management Operations	3
HSEM F301	Principles of Emergency Management and Homeland Security	3
HSEM F412	Emergency Planning and Preparedness	3
HSEM F423	Disaster Response Operations and Management	3
HSEM F434	All-hazards Risk Analysis	3
HSEM F445	Business Continuity and Crisis Management	3
HSEM F456	Leaderships in Dangerous Contexts [1]	3
21-33 credits of major requirements from UAF HSEM lower-division courses, or any regionally accredited institution with an A.A., A.S., A.A.S.-T., A.A.S. or certificate program within these subject areas: emergency/para-medical, environmental health and safety, fire science, law enforcement, network/cyber security, process technology, public safety, or wildland fire, or commensurate military credit from the above subject areas as approved by the program director.		21-33

Complete one of the following:		3
BA F390	Organizational Theory and Behavior	
BA F391	Alaska Native Corporations: A Historical and Contemporaneous Perspective	
HSEM F461	Human Security in Alaska [2]	
Complete 12 credits from the following:		12
URSA (https://catalog.uaf.edu/courses/ursa/)	Any course	
HSEM (https://catalog.uaf.edu/courses/hsem/)	Any course not counted in major requirements	
BA F330	The Legal Environment of Business	
BA F317	Employment Law	
BA F490	Services Marketing Strategy	
COM F300X	Communicating Ethics	
COM F353	Conflict, Mediation and Communication	
COM F445	Organizational Communication	
ECON F101X	Principles of Microeconomics	
ENGL F314	Technical Writing	
GEOS F380	Geological Hazards	
HSEM F452	Internship in Emergency Management	
JUST F222	Research Methods	
PS F304	International Security	
PSY F250	Introductory Statistics for Social Sciences	
STAT F200X	Elementary Statistics	
Concentration		
Complete one of the following:		6
Climate Risk and Security		
Cybersecurity and Information Technology Management		
Emergency Management		
Emergency Medical and Public Health Management		
Fire Administration		
Homeland Security		
Law Enforcement Management		
Electives		
Additional student-selected electives		0-16
Total Credits		**120-121**

[1] Fulfills the baccalaureate capstone requirement.

[2] HSEM F461 may be used to meet the Alaska Native-themed requirement (p. 275).

Note: Of the above, at least 39 credits must be taken in upper-division (F300 level or higher) courses.

Concentrations

CLIMATE RISK AND SECURITY

Code	Title	Credits
Climate Risk and Security Concentration Requirements		
Complete two of the following:		6
HSEM F461	Human Security in Alaska	
HSEM F473	Disaster Risk Reduction & Climate Change	
GEOS F380	Geological Hazards	
Total Credits		**6**

CYBERSECURITY AND INFORMATION TECHNOLOGY MANAGEMENT

Code	Title	Credits
Cybersecurity and Information Technology Management Concentration Requirements		
Complete 6 credits from the following:		6
HSEM F415	Cybersecurity in the 21st Century: Technology and Ethics	
HSEM F416	Cybersecurity Management	
HSEM F417	Cybersecurity Resiliency	
HSEM F418	Cybercrime, Fraud and Law	
Total Credits		**6**

EMERGENCY MANAGEMENT

Code	Title	Credits
Emergency Management Concentration Requirements		
Complete the following:		
HSEM F405	Introduction to Emergency Management Exercise Design	3
HSEM F407	Comparative Emergency Management	3
Total Credits		**6**

EMERGENCY MEDICAL AND PUBLIC HEALTH MANAGEMENT

Code	Title	Credits
Emergency Medical and Public Health Management Concentration Requirements		
Complete 6 credits from the following:		6
HSEM F402	Incident Command for Emergency Medical Services	
HSEM F403	Public Health in Emergencies	
HSEM F405	Introduction to Emergency Management Exercise Design	
Total Credits		**6**

FIRE ADMINISTRATION

Code	Title	Credits
Fire Administration Concentration Requirements		
Complete the following:		
HSEM F439	Supervising Emergency Services	3
HSEM F440	Advanced Principles of Fire Service Administration	3
Total Credits		**6**

HOMELAND SECURITY

Code	Title	Credits
Homeland Security Concentration Requirements		
Complete the following:		
HSEM F406	Comparative Homeland Security	3

HSEM F408	Homeland Defense and Security	3
Total Credits		**6**

LAW ENFORCEMENT MANAGEMENT

Code	Title	Credits
Law Enforcement Management Concentration Requirements		
Complete 6 credits from the following:		6
HSEM F404	Public Safety Instruction	
HSEM F418	Cybercrime, Fraud and Law	
HSEM F467	Current Topics in Public Safety	
Total Credits		**6**

Interdisciplinary Studies - General Studies Concentration (Degree Completion) B.A.A.S.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES MAJOR WITH A GENERAL STUDIES CONCENTRATION

1. Contact the Office of Undergraduate Interdisciplinary Studies for materials, procedures and to make an appointment with an interdisciplinary studies advisor. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (http://www.uaf.edu/inds/) or call 907-474-1849 or 907-474-5164.
2. If you are not currently a UAF student, are attending as a nondegree student or are enrolled in an associate or certificate program, you need to apply for admission to a bachelor's degree with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in a bachelor's degree program at UAF, you do not need to reapply for admission and can skip this step. New transfer students must have official transcripts from all previous colleges sent to UAF's Office of Admissions.
3. Submit a General Studies concentration rationale form (https://docs.google.com/forms/d/e/1FAIpQLSeQmLNQdIvDfuLcJGD8te6TlDnnGk3aG0H9fGAgt7myUr4gpw/viewform/). The interdisciplinary studies major with a general studies concentration is intended for students who have approximately 100 or more college credits but are not close to graduating or have obstacles preventing them from graduating with a particular major.
4. Your responses on the rationale form and a degree audit will be reviewed by an interdisciplinary studies advisor, the director of the Academic Advising Center, the director of Undergraduate Interdisciplinary Studies, and the UAF vice provost for admission to the major.
5. Once admitted to the interdisciplinary studies major, you will receive a degree audit, and your DegreeWorks will be updated to show your degree requirements.
6. You will continue to work with an interdisciplinary studies advisor on your path to graduation.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Program Requirements

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Minimum Requirements for Interdisciplinary Studies B.A.A.S.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A.A.S. Degree Requirements		
Complete the B.A.A.S. degree requirements. (p. 256)		10
Interdisciplinary Studies Program Requirements		
Interdisciplinary studies [1]		30
Complete an Associate of Applied Science degree from an accredited institution of higher education.		
Capstone		
GENR F400	Interdisciplinary Capstone (or an alternative capstone course or project approved by a degree completion advisor)	

[1] Students in the general studies concentration will work with a degree completion advisor to choose classes that are meaningful and relevant to their educational interests and career goals from a variety of disciplines.

Note: At least 39 upper-division credits (F300-F499) must be earned to complete a UAF bachelor's degree.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Interdisciplinary Studies - General Studies Concentration (Degree Completion) B.S.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES MAJOR WITH A GENERAL STUDIES CONCENTRATION

1. Contact the Office of Undergraduate Interdisciplinary Studies for materials, procedures and to make an appointment with an interdisciplinary studies advisor. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/) or call 907-474-1849 or 907-474-5164.
2. If you are not currently a UAF student, are attending as a nondegree student or are enrolled in an associate or certificate program, you need to apply for admission to a bachelor's degree with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in a bachelor's degree program at UAF, you

do not need to reapply for admission and can skip this step. New transfer students must have official transcripts from all previous colleges sent to UAF's Office of Admissions.

3. Submit a General Studies concentration rationale form (https://docs.google.com/forms/d/e/1FAIpQLSeQmLNQdIvDfuLcJGD8te6TlDnnGk3aG0H9fGAgt7myUr4gpw/viewform/?usp=sf_link). The interdisciplinary studies major with a general studies concentration is intended for students who have approximately 100 or more college credits but are not close to graduating or have obstacles preventing them from graduating with a particular major.
4. Your responses on the rationale form and a degree audit will be reviewed by an interdisciplinary studies advisor, the director of the Academic Advising Center, the director of Undergraduate Interdisciplinary Studies, and the UAF vice provost for admission to the major.
5. Once admitted to the interdisciplinary studies major, you will receive a degree audit, and your DegreeWorks will be updated to show your degree requirements.
6. You will continue to work with an interdisciplinary studies advisor on your path to graduation.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Program Requirements

< Back to Department (p. 153)

Minimum Requirements for Interdisciplinary Studies B.S.: 130 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
Interdisciplinary Studies Program Requirements		
Complete the following:		
Interdisciplinary studies major courses [1]		30 or more
Capstone		
Complete the following:		
GENR F400	Interdisciplinary Capstone [2]	0

1. Students in the general studies concentration will work with a degree completion advisor to choose classes that are meaningful and relevant to their educational interests and career goals from a variety of disciplines.
2. Or an alternative capstone course or project approved by a degree completion advisor.

Note: At least 39 credits upper-division (300-499) credits must be earned to complete a UAF bachelor's degree.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Interdisciplinary Studies - General Studies Concentration (Degree Completion) B.A.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES MAJOR WITH A GENERAL STUDIES CONCENTRATION

1. Contact the Office of Undergraduate Interdisciplinary Studies for materials, procedures and to make an appointment with an interdisciplinary studies advisor. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/) or call 907-474-1849 or 907-474-5164.
2. If you are not currently a UAF student, are attending as a nondegree student or are enrolled in an associate or certificate program, you need to apply for admission to a bachelor's degree with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in a bachelor's degree program at UAF, you do not need to reapply for admission and can skip this step. New transfer students must have official transcripts from all previous colleges sent to UAF's Office of Admissions.
3. Submit a General Studies concentration rationale form (https://docs.google.com/forms/d/e/1FAIpQLSeQmLNQdIvDfuLcJGD8te6TlDnnGk3aG0H9fGAgt7myUr4gpw/viewform/?usp=sf_link). The interdisciplinary studies major with a general studies concentration is intended for students who have approximately 100 or more college credits but are not close to graduating or have obstacles preventing them from graduating with a particular major.
4. Your responses on the rationale form and a degree audit will be reviewed by an interdisciplinary studies advisor, the director of the Academic Advising Center, the director of Undergraduate Interdisciplinary Studies, and the UAF vice provost for admission to the major.
5. Once admitted to the interdisciplinary studies major, you will receive a degree audit, and your DegreeWorks will be updated to show your degree requirements.
6. You will continue to work with an interdisciplinary studies advisor on your path to graduation.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Program Requirements

< Back to Department (p. 153)

Minimum Requirements for Interdisciplinary Studies B.A.: 130 credits

Students must earn a C- grade or better in each course

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Interdisciplinary Studies Program Requirements		
Interdisciplinary studies major courses [1]		30
Capstone		
GENR F400	Interdisciplinary Capstone (OR an alternative capstone course or project approved by a degree completion advisor.)	

[1] Students in the general studies concentration will work with a degree completion advisor to choose classes that are meaningful and relevant to their educational interests and career goals from a variety of disciplines.

Note: At least 39 upper-division (300-499) credits must be earned to complete a UAF bachelor's degree.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Interdisciplinary Studies - Goals Option B.A.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES CUSTOM MAJOR (GOALS OPTION)

1. Students who are interested in an interdisciplinary studies program should start by meeting with an advisor in the Office of Undergraduate Interdisciplinary Studies to discuss and develop their educational plan. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https:// www.uaf.edu/inds/). (https:// www.uaf.edu/inds/)

2. If you are not currently a UAF student, are attending as a nondegree student, or are enrolled in an associate or certificate program, then you need to apply for admission to a bachelor's degree with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in a bachelor's degree program at UAF, you do not need to reapply for admission and can skip this step.

3. Create a draft of your interdisciplinary studies major plan, including its title, courses to be included, a written description and a capstone. You can work on a draft directly on the Interdisciplinary Studies Bachelor's Degree- Goals Option Approval Form. (https://uaf.edu/inds/forms.php) Students are also encouraged to use a plan ahead worksheet or spreadsheet to lay out a path to graduation.

4. Contact at least three faculty to serve as your interdisciplinary committee. An optional fourth committee member can be added for further expertise and advice. One faculty member will serve as the chair/advisor. The faculty chair should be affiliated with an academic unit that provides the degree level you are seeking. Students are welcome to work with faculty at all stages of their major, but once you have a draft of the approval form completed, you should arrange a formal committee meeting for all members to meet and discuss your academic plan. At this meeting, the committee will review your interdisciplinary studies major and provide feedback to help you refine your title and proposed courses. They will also help you determine an appropriate graduation capstone.

5. After receiving feedback and advice from your faculty committee, you will fill out or edit your drafted Interdisciplinary Studies Bachelor's Degree- Goals Option Approval Form. The form must be submitted electronically to the Office of Undergraduate Interdisciplinary Studies, and will then be routed for electronic signatures by you, each of your committee members and the dean of your committee chair as well as the director of undergraduate interdisciplinary studies and vice provost for final approval.

6. Once your interdisciplinary studies packet is approved, you will be notified and your DegreeWorks will be updated to show your new major's courses. You will work with your committee chair as your primary academic advisor going forward.

7. Any changes to the approved curriculum are made with the approval of your faculty committee chair and submitted on a UAF Undergraduate Petition Form signed by your committee chair and the director of Undergraduate Interdisciplinary Studies. Petitions should be submitted to an interdisciplinary studies program advisor who will review the request before submitting for approval.

8. The approved title of your major will appear on your transcript and diploma when you graduate as "Your Title: Interdisciplinary Studies."

For more information visit the interdisciplinary studies website (https:// www.uaf.edu/inds/).

Program Requirements

< Back to Department (p. 153)

Minimum Requirements for Interdisciplinary Studies B.A.: 130 credits

OPTIONAL CONCENTRATION: GLOBAL PERSPECTIVES (P. 327)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Interdisciplinary Studies Program Requirements		
Interdisciplinary studies major courses [1]		30 or more
Capstone [2]		
INDS F400	Interdisciplinary Capstone	0

An additional interdisciplinary capstone element will be approved by the student's interdisciplinary committee. The capstone can be but is not limited to, an internship, a research project, a portfolio or a course.

[1] An interdisciplinary major must include coursework from more than one discipline, cannot be titled the same as an existing major and must demonstrate a cohesive body of knowledge skills. Courses in the major must be approved by an advisory committee of at least three faculty members, the dean of the faculty committee chair and the vice provost. An Interdisciplinary major from UAF consists of a minimum of 30 credits, at least 12 of which have to be earned at UAF.

[2] The capstone for Interdisciplinary Studies goals option has two elements: 1. All students take INDS F400, a zero credit class that focuses on resume development and other practical steps in post-graduation planning. 2. The second element of the capstone should be unique and specific to an individual student's needs. This should tie the major together and/or help prepare students for their post-graduation goals in a meaningful way.

Note: At least 39 upper-division (F300-F499) credits must be earned to complete any UAF bachelor's degree.

For more information visit the interdisciplinary studies website (https://www.uaf.edu/inds/).

Optional Concentration

GLOBAL PERSPECTIVES

Code	Title	Credits
Global Perspectives Concentration Requirements		
Complete the following:		
A minimum of 6 foreign language credits [3]		6
One semester of study abroad or foreign exchange outside of the U.S. [4]		12
Total Credits		**18**

[3] Two semesters of UAF foreign language coursework at any level, or Undergraduate Interdisciplinary Studies department approved foreign language study away credits or transfer credits. These credits don't need to be included in the student's Interdisciplinary Studies major and can be used to meet GER or other degree requirements. These credits can be in one or multiple languages.

[4] 1) take at least 12 credits (when converted to U.S. semester credits) while studying abroad,
2) Courses must be from an institution that is approved by the UAF Study Away advisor or registrar's office.

Interdisciplinary Studies - Goals Option B.A.A.S.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES CUSTOM MAJOR (GOALS OPTION)

1. Students who are interested in an interdisciplinary studies program should start by meeting with an advisor in the Office of Undergraduate Interdisciplinary Studies to discuss and develop their educational plan. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/).
2. If you are not currently a UAF student, are attending as a nondegree student or are enrolled in an associate or certificate program, you need to apply for admission to a bachelor's degree with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in a bachelor's degree program at UAF, you do not need to reapply for admission and can skip this step.
3. Create a draft of your interdisciplinary studies major plan, including its title, courses to be included, a written description and a capstone. You can work on a draft directly on the Interdisciplinary Studies Bachelor's Degree- Goals Option Approval Form (https://uaf.edu/inds/forms.php). Students are also encouraged to use a plan ahead worksheet or spreadsheet to lay out a path to graduation.
4. Contact at least three faculty to serve as your interdisciplinary committee. An optional fourth committee member can be added for further expertise and advice. One faculty member will serve as the chair/advisor. The faculty chair should be affiliated with an academic unit that provides the degree level you are seeking. Students are welcome to work with faculty at all stages of their major, but once you have a draft of the approval form completed, you should arrange a formal committee meeting for all members to meet and discuss your academic plan. At this meeting, the committee will review your interdisciplinary studies major and provide feedback to help you refine your title and proposed courses. They will also help you determine an appropriate graduation capstone.
5. After receiving feedback and advice from your faculty committee, you will fill out or edit your drafted Interdisciplinary Studies Bachelor's Degree- Goals Option Approval Form. The form must be submitted electronically to the Office of Undergraduate Interdisciplinary Studies, and will then be routed for electronic signatures by you, each of your committee members and the dean of your committee chair as well as the director of undergraduate interdisciplinary studies and vice provost for final approval.
6. Once your interdisciplinary studies packet is approved, you will be notified and your DegreeWorks will be updated to show your new major's courses. You will work with your committee chair as your primary academic advisor going forward.
7. Any changes to the approved curriculum are made with the approval of your faculty committee chair and submitted on a UAF Undergraduate Petition Form signed by your committee chair and the director of Undergraduate Interdisciplinary Studies.
8. The approved title of your major will appear on your transcript and diploma when you graduate as "Your Title: Interdisciplinary Studies."

For more information visit the interdisciplinary studies website (https://www.uaf.edu/inds/).

Program Requirements

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Minimum Requirements for Interdisciplinary Studies B.A.A.S.: 120 credits

OPTIONAL CONCENTRATION: GLOBAL PERSPECTIVES (P. 328)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A.A.S. Degree Requirements		
Complete the B.A.A.S. degree requirements. (p. 256)		10
Interdisciplinary Studies Program Requirements		
Interdisciplinary studies [1]		30
Complete an Associate of Applied Science degree from an accredited institution of higher education.		
Capstone [2]		
INDS F400	Interdisciplinary Capstone	
An interdisciplinary capstone will be approved by the student's interdisciplinary committee. The capstone can be but is not limited to, an internship, a research project, a portfolio or a course.		

1 An interdisciplinary major must include coursework from more than one discipline, cannot be titled the same as an existing major and must demonstrate a cohesive body of knowledge or skills. Courses in the major must be approved by an advisory committee of at least three faculty members, the dean of the faculty committee chair and the vice provost. An interdisciplinary major from UAF consists of a minimum of 30 credits, at least 12 of which have to be earned at UAF.

2 The capstone for Interdisciplinary Studies goals option has two elements: 1. All students take INDS F400, a zero credit class that focuses on resume development and other practical steps in post-graduation planning. 2. The second element of the capstone should be unique and specific to an individual student's needs. This should tie the major together and/or help prepare students for their post-graduation goals in a meaningful way.

Optional Concentration

GLOBAL PERSPECTIVES

Code	Title	Credits
Global Perspectives Concentration Requirements		
Complete the following:		
A minimum of 6 foreign language credits [3]		6
One semester of study abroad or foreign exchange outside of the U.S.		12
Total Credits		**18**

3 Two semesters of UAF foreign language coursework at any level, or Undergraduate Interdisciplinary Studies department approved foreign language study away credits or transfer credits. These credits don't need to be included in the student's Interdisciplinary Studies major and can be used to meet GER or other degree requirements. These credits can be in one or multiple languages.

Note: At least 39 upper-division credits (F300-F499) must be earned to complete a UAF bachelor's degree.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Interdisciplinary Studies - Goals Option B.S.

Admission Requirements

ADMISSION PROCESS FOR AN INTERDISCIPLINARY STUDIES CUSTOM MAJOR (GOALS OPTION):

1. Students who are interested in an interdisciplinary studies program should start by meeting with an advisor in the Office of Undergraduate Interdisciplinary Studies to discuss and develop their educational plan. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (https://www.uaf.edu/inds/).
2. If you are not currently a UAF student, are attending as a non-degree student or are enrolled in an associate or certificate program, you need to apply for admission to a bachelor's degree with the UAF Office of Admissions (https://www.uaf.edu/admissions/apply/). If you are currently active in a bachelor's degree program at UAF, you do not need to reapply for admission and can skip this step.
3. Create a draft of your interdisciplinary studies major plan, including its title, courses to be included, a written description and a capstone. You can work on a draft directly on the Interdisciplinary Studies Bachelor's Degree- Goals Option Approval Form. (https://uaf.edu/inds/forms.php) Students are also encouraged to use a plan ahead worksheet or spreadsheet to lay out a path to graduation.
4. Contact at least three faculty to serve as your interdisciplinary committee. An optional fourth committee member can be added for further expertise and advice. One faculty member will serve as the chair/advisor. The faculty chair should be affiliated with an academic unit that provides the degree level you are seeking. Students are welcome to work with faculty at all stages of their major, but once you have a draft of the approval form completed, you should arrange a formal committee meeting for all members to meet and discuss your academic plan. At this meeting, the committee will review your interdisciplinary studies major and provide feedback to help you refine your title and proposed courses. They will also help you determine an appropriate graduation capstone.
5. After receiving feedback and advice from your faculty committee, you will fill out or edit your drafted Interdisciplinary Studies Bachelor's Degree- Goals Option Approval Form. The form must be submitted electronically to the office of Undergraduate Interdisciplinary Studies, and will then be routed for electronic signatures by you, each of your committee members and the dean of your committee chair as well as the director of undergraduate interdisciplinary studies and vice provost for final approval.
6. Once your interdisciplinary studies packet is approved, you will be notified and your DegreeWorks will be updated to show your new major's courses. You will work with your committee chair as your primary academic advisor going forward.
7. Any changes to the approved curriculum are made with the approval of your faculty committee chair and submitted on a UAF Undergraduate Petition Form signed by your committee chair and the director of Undergraduate Interdisciplinary Studies.
8. The approved title of your major will appear on your transcript and diploma when you graduate as "Interdisciplinary Studies: Your Title."

For more information visit the interdisciplinary studies website (https://www.uaf.edu/inds/).

Program Requirements

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Minimum Requirements for Interdisciplinary B.S.: 130 credits

OPTIONAL CONCENTRATION: GLOBAL PERSPECTIVES (P. 329)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
Interdisciplinary Program Requirements		
Complete the following:		30
Interdisciplinary studies major courses [1]		
Capstone [2]		
INDS F400	Interdisciplinary Capstone	0
An additional interdisciplinary capstone element will be approved by the student's interdisciplinary committee. The capstone can be but is not limited to, an internship, a research project, a portfolio or a course.		

1. An interdisciplinary major must include coursework from more than one discipline, cannot be titled the same as an existing major and must demonstrate a cohesive body of knowledge skills. Courses in the major must be approved by an advisory committee of at least three faculty members, the dean of the faculty committee chair and the vice provost. An Interdisciplinary major from UAF consists of a minimum of 30 credits, at least 12 of which have to be earned at UAF.
2. The capstone for Interdisciplinary Studies goals option has two elements: 1. All students take INDS F400, a zero credit class that focuses on resume development and other practical steps in post-graduation planning. 2. The second element of the capstone should be unique and specific to an individual student's needs. This should tie the major together and/or help prepare students for their post-graduation goals in a meaningful way.

Optional Concentration

GLOBAL PERSPECTIVES

Code	Title	Credits
Global Perspectives Concentration Requirements		
Complete the following:		
A minimum of 6 foreign language credits [3]		6
One semester of study abroad or foreign exchange outside of the U.S.		12
Total Credits		**18**

3. Two semesters of UAF foreign language coursework at any level, or Undergraduate Interdisciplinary Studies department approved foreign language study away credits or transfer credits. These credits don't need to be included in the student's Interdisciplinary Studies major and can be used to meet GER or other degree requirements. These credits can be in one or multiple languages.

Note: At least 39 credits upper-division (F300-F499) credits must be earned to complete a UAF bachelor's degree.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Japanese Studies B.A.

Program Requirements

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Minimum Requirements for Japanese Studies B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Japanese Studies Program Requirements (all courses in this category are taught in Japanese)		
Complete the following:		
JPN F301	Advanced Japanese [1]	3
JPN F302	Advanced Japanese [1]	3
JPN F431	Studies in Japanese Culture [1]	3
JPN F432	Studies in Japanese Language [1]	3
JPN F475	Seminar on Contemporary Japan [2]	3
Electives		
Japanese Studies Electives		
Complete 6 credits from the following:		6
JPN F330	Classical Japanese Literature	
JPN F331	Women's Voices in Japanese Literature	
JPN F332	Japanese Cultural Traditions and Arts	
JPN F333	20th-Century Japanese Prose Fiction	
JPN F482	Selected Topics in Japanese	
Japan-Related Electives		
Complete 12 credits from the following as approved by an advisor: [3,4]		12
HIST F121	East Asian Civilization	
HIST F122X	East Asian Civilization	
HIST F331	Modern Japan	
HIST F333	Foundations of Japanese History	
HIST F414	Women and Gender in East Asian History	
JPN F210	Beginning Kanji	
JPN F310	Intermediate Kanji	
JPN F311	Advanced Kanji	
JPN F330	Classical Japanese Literature	

JPN F331	Women's Voices in Japanese Literature	
JPN F332	Japanese Cultural Traditions and Arts	
JPN F333	20th-Century Japanese Prose Fiction	
JPN F482	Selected Topics in Japanese	
PS F221X	International Politics	
PS F464	East Asian Governments and Politics	
Completion of semester exchange in Japan or written departmental approval. [1]		
Electives		
Additional student-selected electives		10-15
Total Credits		**120**

[1] After completion of language training through the 200 level, students may study in Japan as long as they complete a minimum of 15 credits of Japanese language study at the upper-division level to fulfill the Japanese studies core requirements. JPN F475 must be taken in residence at UAF.

[2] Fulfills the baccalaureate capstone requirement.

[3] Instructor-approved Japan-related courses taken during time abroad may count toward this requirement.

[4] Courses taken to satisfy Japanese studies electives requirement may not be retaken or otherwise counted to satisfy Japan-related electives requirement.

Note: Students planning a double major for a single B.A. may double count a maximum of 9 credits from the major requirements toward a second major. Students earning two degrees are not subject to double-counting restrictions.

Journalism: Science and the Environment B.A.

Program Requirements

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Minimum Requirements for Science and Environmental Journalism B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Journalism: Science and the Environment Program Requirements		
Complete the following:		
JOUR F101X	Media and Culture	3
JOUR F201	News Writing for the Media	3
JOUR F207	Audio Production	3
JOUR F211	If Einstein Were a Photographer	3
JOUR F301	Reporting Science	3
JOUR F303	Copy Editing	3
JOUR F307	Video Production	3
JOUR F400	Professional Internship	3
JOUR F429	Public Relations and Public Information in the Sciences	3
JOUR F439	Science Writing for Popular Media	3
JOUR F490	Journalism Capstone: Portfolio [1]	0
Complete one of the following: [2]		3
JOUR F205	Media and the Environment	
JOUR F391	Seminar: Issues in Science and the Environment	
JOUR F480	Documentary Filmmaking	
Complete two of the following: [2]		6-7
JOUR F205	Media and the Environment	
JOUR F391	Seminar: Issues in Science and the Environment	
JOUR F449	Northern and Environmental Literature	
JOUR F476	Advanced Digital Photography Portfolio	
JOUR F480	Documentary Filmmaking	
JOUR F497	Individual Study	
JOUR F498	Undergraduate Research	
ACNS F429	Geography of the Arctic and Circumpolar North	
ANTH F211X	Fundamentals of Archaeology	
ANTH F305	Culture, Health and Healing	
ANTH F309	Circumpolar Archaeology	
BIOL F240X	Beginnings in Microbiology	
BIOL F402	Biomedical and Research Ethics	
BIOL F470	Aquatic Food Web Ecology	
EBOT F336	Ethnomycology	
FISH F411	Human Dimensions of Environmental Systems	
FISH F412	Human-environment Research Methods	
HIST F411	Environmental History	
HIST F453	Fire, Ice, and the Fate of Humanity: A History of Energy and Climate Change	
NRM F210	Principles of Sustainable Agriculture	
NRM F303X	Environmental Ethics and Actions	
NRM F407	Environmental Law	
PS F447	U.S. Environmental Politics	
PS F454	International Law and the Environment	
PS F455	Political Economy of the Global Environment	
PS F456	Science, Technology and Politics	
PS F458	Comparative Environmental Politics	
PSY F426	Environmental Psychology and Human Well-being	
Electives		
Additional student-selected electives		3-9
Total Credits		**120**

[1] Fulfills the baccalaureate capstone requirement.

[2] Each course may satisfy only one requirement.

Program Learning Outcomes

Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Train students to excel in today's ever-changing media environment
- Develop journalists specialized in the intricacies of science and environmental reporting
- Combine students' critical thinking, creativity, and practical skills to produce multimedia content for online, broadcast, and print news formats

Justice B.A.

Program Requirements

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Minimum Requirements for Justice B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Justice Program Requirements		
Complete the following:		
JUST F110X	Introduction to Justice	3
JUST F125X	Introduction to Addictive Processes	3
JUST F222	Research Methods	3
or SWK F375	Research Methods in Social Work	
or PSY F275	Introduction to Social Science Research Methods	
JUST F251X	Criminology	3
JUST F300X	Ethics and Justice [1]	3
JUST F310	Principles of Corrections	3
JUST F340	Rural Justice in Alaska	3
JUST F358	Juvenile Delinquency	3
Complete 12 credits of JUST, PSY, SWK, HSEM, HUMS, LE, MILS, PLS, or course(s) approved by the department chair or department faculty advisor.		12
Complete one of the following capstone courses: [2]		3
JUST F475	Internship	
JUST F490	Capstone: Seminar in Critical Issues in Criminal Justice	
JUST F498	Research Project	
Complete 6 credits from the following courses:		6
JUST F315	Correctional Counseling and Rehabilitation	
JUST F335	Gender and Crime	
JUST F345	Police Problems	
JUST F352	Criminal Law	
JUST F354	Procedural Law	
JUST F453	Comparative Criminology	
JUST F454	Advanced Problems in Procedural Law	
JUST F475	Internship	
JUST F492/F492P	Seminar	
Electives		
Additional student-selected electives		0-3
Total Credits		**120-122**

[1] If taken to meet the ethics requirement in the degree specific requirements, then the student must take an additional upper-division justice elective for 3 credits to complete the major.

[2] Fulfills the baccalaureate capstone requirement.

Linguistics B.A.

Program Requirements

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Minimum Requirements for Linguistics B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete two semesters of a single foreign or Alaska Native language. [1]		
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Linguistics Program Requirements		
Complete the following:		
Four semesters (or equivalent) of a foreign, Alaska Native or American Sign language. The language chosen must be different from that used to meet GER above. [1]		12-16
ENGL F318	Modern English Grammar	3
LING F101X	Nature of Language	3
LING F318	Introduction to Phonetics and Phonology	3
LING F320	Introduction to Morphosyntax	3
LING F430	Historical Linguistics	3
or LING F410	Theory and Methods of Second Language Teaching	
or LING F431	Field Methods in Descriptive Linguistics I	
LING F441	Topics in Linguistics	3
LING F482	Seminar in Linguistics [2]	3
Complete four approved electives, three of which must be upper-division. [3]		12
Electives		

Additional student-selected electives	0-3
Total Credits	**120-126**

1 It is recommended that at least one of the languages be other than an Indo-European language.
2 Fulfills the baccalaureate capstone requirement.
3 Possible electives include: ANL F251X, ANL F315, ANL F316, ENGL F462, ENGL F472 or any LING course not used above.

Mathematics B.A.

Program Requirements

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Minimum Requirements for Mathematics B.A.: 120 credits

CONCENTRATIONS: MATHEMATICS (P. 332), STATISTICS (P. 333)

Students must earn a C- grade or better in each course.

Code	Title	Credits
Pre-major Requirement		
Students must be ready to matriculate into MATH F251X before they will be allowed to declare mathematics as their major.		
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Mathematics Program Requirements		
Complete the following:		
MATH F252X	Calculus II	4
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
MATH F314	Linear Algebra	3
Concentration		
Complete one of the following:		29-30
Mathematics		
Statistics		
Electives		
Additional student-selected electives		0-4
Total Credits		**120-121**

Note: All mathematics majors — including double majors — must have an advisor from the Department of Mathematics and Statistics.

Note: At least 12 approved mathematics credits at the F300 level or above must be taken while in residence on the Troth Yeddha' (Fairbanks) campus.

Concentrations

MATHEMATICS

Code	Title	Credits
Mathematics Concentration Requirements		
Complete the following:		
MATH F401	Introduction to Real Analysis	3
MATH F405	Abstract Algebra	3
MATH F490	Senior Seminar [1]	3
Complete at least 21 additional credits of electives. [2]		21
Total Credits		**30**

1 Fulfills the baccalaureate capstone requirement.
2 Acceptable elective courses include any MATH or STAT course at the F300 level or above and CS F201. At least 15 credits must be MATH courses. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics. The requirement that at least 15 credits be MATH courses still applies.

Suggested Elective Packages for Mathematics Concentration

Pure Mathematics Suggested Electives

Code	Title	Credits
Complete the following:		
MATH F305	Geometry	3
MATH F320	Topics in Combinatorics	3
or MATH F321	Number Theory	
MATH F404	Introduction to Topology	3
MATH F410	Introduction to Complex Analysis	3
Additional 9 elective credits		9
Total Credits		**21**

Applied Mathematics Suggested Electives

Code	Title	Credits
Complete the following:		
MATH F302	Differential Equations	3
MATH F410	Introduction to Complex Analysis	3
MATH F432	Introduction to Partial Differential Equations	3
MATH F460	Mathematical Modeling	3
Complete two of the following:		6
MATH F307	Discrete Mathematics	
MATH F426	Numerical Analysis	
STAT F300	Statistics	
Additional 3 elective credits		3
Total Credits		**21**

Mathematics Teachers (Grades 7-12) Suggested Electives [3]

Code	Title	Credits
Complete the following:		
CS F201	Computer Science I	3
MATH F305	Geometry	3
MATH F316	Introduction to the History of Mathematics	3

STAT F300	Statistics	3
or MATH F371	Probability	
or MATH F408	Mathematical Statistics	
Complete one of the following:		3
MATH F307	Discrete Mathematics	
MATH F320	Topics in Combinatorics	
MATH F321	Number Theory	
Complete two of the following:		6
MATH F302	Differential Equations	
MATH F410	Introduction to Complex Analysis	
MATH F426	Numerical Analysis	
MATH F432	Introduction to Partial Differential Equations	
MATH F460	Mathematical Modeling	
Total Credits		**21**

[3] We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in their undergraduate degree program, so that they can be appropriately advised of the State of Alaska requirements for teacher licensure. Students may choose to pursue a double major with education or complete a postbaccalaureate teacher certification program.

STATISTICS

Code	Title	Credits
Statistics Concentration Requirements		
Complete the following:		
CS F201	Computer Science I	3
or NRM F338	Introduction to Geographic Information Systems	
ENGL F314	Technical Writing	3
or ENGL F414	Research Writing	
MATH F371	Probability	3
MATH F401	Introduction to Real Analysis	3
or MATH F405	Abstract Algebra	
MATH F408	Mathematical Statistics	3
STAT F300	Statistics	3
STAT F401	Regression and Analysis of Variance	4
STAT F402	Scientific Sampling	3
STAT F454	Statistical Consulting Seminar [4]	1
Additional 3 elective STAT/MATH credits at the F300 level or above [5]		3
Total Credits		**29**

[4] Fulfills the baccalaureate capstone requirement.

[5] Acceptable elective courses include any MATH or STAT course at the F300 level or above. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

MATHEMATICS B.A. WITH MATHEMATICS CONCENTRATION

Course	Title	Credits
First Year		
Fall		
MATH F251X	Calculus I	4
GER (Art)		3
GER (Lab Science I)		4
GER (WRTG)		3
	Credits	**14**
Spring		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
	Credits	**14**
Second Year		
Fall		
MATH F253X	Calculus III	4
MATH F314	Linear Algebra	3
GER (Humanities)		3
BA (Humanities I)		3
BA (Humanities II)		3
	Credits	**16**
Spring		
Math Elective		3
Math Elective		3
GER (COM)		3
BA (Social Science I)		3
BA (Social Science II)		3
	Credits	**15**
Third Year		
Fall		
MATH F401	Introduction to Real Analysis	3
Math Elective		3
GER (Social Science II)		3
ANT Course		3
Minor Course		3
	Credits	**15**
Spring		
MATH F405	Abstract Algebra	3
Math Elective		3

GER (Art/Social Science/Humanities)		3
Ethics Course		3
Minor Course		3
	Credits	**15**
Fourth Year		
Fall		
Math Elective		3
Math Elective		3
GER (Lab Science II)		4
BA (Humanities or Social Science)		3
Minor Course		3
	Credits	**16**
Spring		
MATH F490	Senior Seminar	3
Math Elective		3
BA (Humanities or Social Science)		3
Minor Course		3
Minor Course		3
	Credits	**15**
	Total Credits	**120**

MATHEMATICS B.A. WITH MATHEMATICS CONCENTRATION - SECONDARY EDUCATION MINOR - ODD YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F251X	Calculus I	4
GER (Art)		3
GER (Lab Science I)		4
GER (WRTG)		3
	Credits	**15**
Spring		
EDSC F110	Becoming a Middle/High School Teacher	1
MATH F252X	Calculus II	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
	Credits	**14**
Second Year		
Fall		
CS F103	Introduction to Computer Programming	3
MATH F253X	Calculus III	4
MATH F314	Linear Algebra	3
PSY F245	Child Development	3
GER (Humanities)		3
	Credits	**16**
Spring		
CS F201	Computer Science I	3
EDSC F205	Introduction to Secondary Education	3
STAT F300	Statistics	3
GER (COM)		3
BA (Humanities or Social Science)		3
	Credits	**15**
Third Year		
Fall		
EDSC F458	Classroom Organization and Management	3
MATH F320	Topics in Combinatorics	3
MATH F401	Introduction to Real Analysis	3
GER (Social Science II)		3
ANT Course		3
	Credits	**15**
Spring		
MATH F305	Geometry	3
MATH F405	Abstract Algebra	3
GER (Art/Social Science/Humanities)		3
BA (Humanities or Social Science)		3
Ethics Course		3
	Credits	**15**
Fourth Year		
Fall		
EDSC F407	Developing Literacy in the Content Areas	3
MATH F302	Differential Equations	3
MATH F426	Numerical Analysis	3
GER (Lab Science II)		4
BA (Humanities or Social Science)		3
	Credits	**16**
Spring		
EDSE F422	Curriculum, Management and Strategies II: High Incidence	3
MATH F316	Introduction to the History of Mathematics	3
MATH F490	Senior Seminar	3
STAT F401	Regression and Analysis of Variance	4
BA (Humanities or Social Science)		3
	Credits	**16**
	Total Credits	**122**

MATHEMATICS B.A. WITH MATHEMATICS CONCENTRATION - SECONDARY EDUCATION MINOR - EVEN YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F251X	Calculus I	4
GER (Art)		3
GER (Lab Science I)		4
GER (WRTG)		3
	Credits	**15**

Spring		
EDSC F110	Becoming a Middle/High School Teacher	1
MATH F252X	Calculus II	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
	Credits	**14**
Second Year		
Fall		
CS F103	Introduction to Computer Programming	3
MATH F253X	Calculus III	4
MATH F314	Linear Algebra	3
PSY F245	Child Development	3
GER (Humanities)		3
	Credits	**16**
Spring		
EDSC F205	Introduction to Secondary Education	3
MATH F305	Geometry	3
STAT F300	Statistics	3
GER (COM)		3
BA (Social Science)		3
	Credits	**15**
Third Year		
Fall		
CS F201	Computer Science I	3
EDSC F458	Classroom Organization and Management	3
MATH F320	Topics in Combinatorics	3
MATH F401	Introduction to Real Analysis	3
GER (Social Science II)		3
ANT Course		3
	Credits	**18**
Spring		
MATH F305	Geometry	3
MATH F316	Introduction to the History of Mathematics	3
GER (Art/Social Science/Humanities)		3
BA (Humanities)		3
Ethics Course		3
	Credits	**15**
Fourth Year		
Fall		
EDSC F407	Developing Literacy in the Content Areas	3
MATH F426	Numerical Analysis	3
MATH F460	Mathematical Modeling	3
GER (Lab Science II)		4
BA (Humanities)		3
	Credits	**16**
Spring		
EDSE F422	Curriculum, Management and Strategies II: High Incidence	3
MATH F307	Discrete Mathematics	3
MATH F490	Senior Seminar	3
STAT F401	Regression and Analysis of Variance	4
BA (Humanities or Social Science)		3
	Credits	**16**
	Total Credits	**125**

Mathematics B.S.

Program Requirements

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Minimum Requirements for Mathematics B.S.: 120 credits

CONCENTRATIONS: MATHEMATICS (P. 336), STATISTICS (P. 336)

Students must earn a C- grade or better in each course.

Code	Title	Credits
Pre-major Requirement		
Students must be ready to matriculate into MATH F251X before they will be allowed to declare mathematics as their major.		
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
Mathematics Program Requirements		
Complete the following:		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
MATH F314	Linear Algebra	3
Concentration		
Complete one of the following:		29-30
Mathematics		
Statistics		
Electives		
Additional student-selected electives		24-29
Total Credits		**120**

Note: All mathematics majors — including double majors — must have an advisor from the Department of Mathematics and Statistics.

Note: At least 12 approved mathematics credits at the F300 level or above must be taken while in residence on the Fairbanks campus.

Concentrations

MATHEMATICS

Code	Title	Credits
Mathematics Concentration Requirements		
Complete the following:		
MATH F401	Introduction to Real Analysis	3
MATH F405	Abstract Algebra	3
MATH F490	Senior Seminar [1]	3
Complete at least 21 additional credits of electives. [2]		21
Total Credits		**30**

1 Fulfills the baccalaureate capstone requirement.

2 Acceptable elective courses include any math or statistics course at the F300 level or above and CS F201. At least 15 credits must be math courses. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics. The requirement that at least 15 credits be math courses still applies.

Suggested Elective Packages for Mathematics Concentration

Pure Mathematics Suggested Electives

Code	Title	Credits
Complete the following:		
MATH F305	Geometry	3
MATH F320	Topics in Combinatorics	3
or MATH F321	Number Theory	
MATH F404	Introduction to Topology	3
MATH F410	Introduction to Complex Analysis	3
Additional 9 elective credits [3]		9
Total Credits		**21**

3 Acceptable elective courses include any math or statistics course at the F300 level or above and CS F201. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

Applied Mathematics Suggested Electives

Code	Title	Credits
Complete the following:		
MATH F302	Differential Equations	3
MATH F410	Introduction to Complex Analysis	3
MATH F432	Introduction to Partial Differential Equations	3
MATH F460	Mathematical Modeling	3
Complete two of the following:		6
MATH F307	Discrete Mathematics	
MATH F426	Numerical Analysis	
STAT F300	Statistics	
Additional 3 elective credits		3
Total Credits		**21**

Mathematics Teachers (Grades 7-12) Suggested Electives [4]

Code	Title	Credits
Complete the following:		
CS F201	Computer Science I	3
MATH F305	Geometry	3
MATH F316	Introduction to the History of Mathematics	3
STAT F300	Statistics	3
or MATH F371	Probability	
or MATH F408	Mathematical Statistics	
Complete one of the following:		3
MATH F307	Discrete Mathematics	
MATH F320	Topics in Combinatorics	
MATH F321	Number Theory	
Complete two of the following:		6
MATH F302	Differential Equations	
MATH F410	Introduction to Complex Analysis	
MATH F426	Numerical Analysis	
MATH F432	Introduction to Partial Differential Equations	
MATH F460	Mathematical Modeling	
Total Credits		**21**

4 We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in their undergraduate degree program so that they can be appropriately advised of the State of Alaska requirements for teacher licensure. Students may choose to pursue a double major with education or complete a postbaccalaureate teacher certification program.

STATISTICS

Code	Title	Credits
Statistics Concentration Requirements		
Complete the following:		
CS F201	Computer Science I	3
or NRM F338	Introduction to Geographic Information Systems	
ENGL F314	Technical Writing	3
or ENGL F414	Research Writing	
MATH F371	Probability	3
MATH F401	Introduction to Real Analysis	3
or MATH F405	Abstract Algebra	
MATH F408	Mathematical Statistics	3
STAT F300	Statistics	3
STAT F401	Regression and Analysis of Variance	4
STAT F402	Scientific Sampling	3
STAT F454	Statistical Consulting Seminar [1]	1
Additional 3 elective credits at the F300 level or above [3]		3
Total Credits		**29**

1 Fulfills the baccalaureate capstone requirement.

[3] Acceptable elective courses include any MATH or STAT course at the F300 level or above. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

MATHEMATICS B.S. WITH MATHEMATICS CONCENTRATION

Course	Title	Credits
First Year		
Fall		
MATH F251X	Calculus I	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
Elective		3
	Credits	**16**
Spring		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
	Credits	**14**
Second Year		
Fall		
MATH F253X	Calculus III	4
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
GER (Humanities)		3
	Credits	**14**
Spring		
PHYS F212X	General Physics II	4
Math Elective		3
Math Elective		3
GER (COM)		3
Elective		3
	Credits	**16**
Third Year		
Fall		
MATH F401	Introduction to Real Analysis	3
Math Elective		3
GER (Social Science I)		3
ANT Course		3
Elective		3
	Credits	**15**
Spring		
MATH F405	Abstract Algebra	3
Math Elective		3
GER (Art/Social Science/Humanities)		3
Ethics Course		3
Elective		3
	Credits	**15**
Fourth Year		
Fall		
Math Elective		3
Math Elective		3
GER (Lab Science II)		4
Elective		3
Elective		3
	Credits	**16**
Spring		
MATH F490	Senior Seminar	3
Math Elective		3
Elective		3
Elective		3
Elective		3
	Credits	**15**
	Total Credits	**121**

MATHEMATICS B.S. WITH STATISTICS CONCENTRATION - ODD YEAR START

Course	Title	Credits
First Year		
Fall		
MATH F251X	Calculus I	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	**13**
Spring		
MATH F252X	Calculus II	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
	Credits	**13**
Second Year		
Fall		
MATH F253X	Calculus III	4
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
GER (Humanities)		3
	Credits	**14**

Spring		
CS F201 or NRM F338	Computer Science I or Introduction to Geographic Information Systems	3
PHYS F212X	General Physics II	4
STAT F300	Statistics	3
GER (COM)		3
	Credits	**13**
Third Year		
Fall		
MATH F371	Probability	3
STAT F402	Scientific Sampling	3
GER (Social Science I)		3
ANT Course		3
	Credits	**12**
Spring		
MATH F408	Mathematical Statistics	3
STAT F401	Regression and Analysis of Variance	4
GER (Art/Social Science/Humanities)		3
Ethics Course		3
	Credits	**13**
Fourth Year		
Fall		
ENGL F314 or ENGL F414	Technical Writing or Research Writing	3
MATH F401	Introduction to Real Analysis	3
GER (Lab Science II)		4
	Credits	**10**
Spring		
LS F101X	Library Information and Research	1
STAT F454	Statistical Consulting Seminar	1
Stat or Math Elective		3
	Credits	**5**
	Total Credits	**93**

MATHEMATICS B.S. WITH STATISTICS CONCENTRATION - EVEN YEAR START

Course	Title	Credits
First Year		
Fall		
MATH F251X	Calculus I	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	**13**
Spring		
MATH F252X	Calculus II	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
	Credits	**13**
Second Year		
Fall		
MATH F253X	Calculus III	4
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
GER (Humanities)		3
	Credits	**14**
Spring		
CS F201 or NRM F338	Computer Science I or Introduction to Geographic Information Systems	3
PHYS F212X	General Physics II	4
STAT F300	Statistics	3
GER (COM)		3
	Credits	**13**
Third Year		
Fall		
MATH F401	Introduction to Real Analysis	3
STAT F402	Scientific Sampling	3
GER (Social Science I)		3
ANT Course		3
	Credits	**12**
Spring		
STAT F401	Regression and Analysis of Variance	4
GER (Art/Social Science/Humanities)		3
GER (Lab Science II)		4
Ethics Course		3
	Credits	**14**
Fourth Year		
Fall		
ENGL F314 or ENGL F414	Technical Writing or Research Writing	3
MATH F371	Probability	3
Stat or Math Elective		3
	Credits	**9**
Spring		
LS F101X	Library Information and Research	1
MATH F408	Mathematical Statistics	3
STAT F454	Statistical Consulting Seminar	1
	Credits	**5**
	Total Credits	**93**

Mechanical Engineering B.S.

Program Requirements

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Minimum Requirements for Mechanical Engineering B.S.: 128 credits

CONCENTRATIONS: AEROSPACE (P. 339), MECHANICAL (P. 339), PETROLEUM (P. 339)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Mechanical Engineering Program Requirements		
Complete the following:		
ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F201	Computer Techniques	3
ES F209	Statics	3
ES F210	Dynamics	3
ES F301	Engineering Analysis	3
ES F307	Elements of Electrical Engineering	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
ME F302	Dynamics of Machinery	4
ME F308	Instrumentation and Measurement	3
ME F313	Mechanical Engineering Thermodynamics	3
ME F321	Industrial Processes	3
ME F334	Elements of Material Science/ Engineering	3
ME F403	Machine Design	3
ME F408	Mechanical Vibrations	3
ME F415	Thermal Systems Laboratory	3
ME F441	Heat and Mass Transfer	3
ME F486	Senior Design [2]	1
ME F487	Design Project [1,2]	3
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Concentration		
Complete one of the following:		9-12
Aerospace		
Mechanical		
Petroleum		
Total Credits		**128-131**

[1] Design project must be related to area of concentration.
[2] Fulfills the baccalaureate capstone requirement.

Concentrations

AEROSPACE

Code	Title	Credits
Aerospace Concentration Requirements		
Complete the following:		
ME F450	Theory of Flight	3
ME F451	Aerodynamics	3
ME F452	Introduction to Astrodynamics	3
ME F453	Propulsion Systems	3
Total Credits		**12**

MECHANICAL

Code	Title	Credits
Mechanical Concentration Requirements		
Complete the following:		
Mechanical Engineering electives at the F400 level or above		6
Advisor-approved engineering elective at the F400 level or above		3
Total Credits		**9**

PETROLEUM

Code	Title	Credits
Petroleum Concentration Requirements		
Complete the following:		
ME F409	Controls	3
ME F416	Design of Mechanical Equipment for the Petroleum Industry	3
ME F464	Corrosion Engineering	3
PETE F426	Drilling Engineering	3
Total Credits		**12**

Mining Engineering B.S.

Program Requirements

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Minimum Requirements for Mining Engineering B.S.: 124 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	

MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
LS F101X	Library Information and Research	
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Mining Engineering Program Requirements		
Complete the following:		
ES F208	Mechanics	4
ES F307	Elements of Electrical Engineering	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
GE F261	General Geology for Engineers	3
GEOS F262	Rocks and Minerals	3-4
or GEOS F213	Mineralogy	
GEOS F332	Ore Deposits and Structure	3-4
or GEOS F214	Petrology and Petrography	
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MIN F110	Elements of Mine Safety, Operations and Development	2
MIN F202	Surveying and CAD for Engineers	2
MIN F302	Underground Mine Environmental Engineering	3
MIN F303	Ore Handling and Industrial Explosives	3
MIN F313	Introduction to Mineral Preparation	3
MIN F370	Rock Mechanics	3
MIN F390	Geostatistics and Mineral Economics	3
MIN F407	Mine Reclamation and Environmental Management	2
MIN F409	Operations Research and Computer Applications in Mineral Industry	2
MIN F444	Accidents, Emergency and Safety Management in Mines	2
MIN F454	Underground Mining Methods	2
MIN F482	Computer-aided Mine Design:VULCAN	3
MIN F484	Surface Mining Methods	1
MIN F485	Mining Engineering Exit Interview	0
MIN F489	Mining Design Project I [1]	1
MIN F490	Mining Design Project II [1]	2
MIN F491	Automation and Control	2
Recommended Technical Electives		
Complete 3 credits from the following: [2]		3
CE F401	Arctic Engineering (or AE A403 Arctic Engineering)	
GE F440	Slope Stability	
MIN F401	Mine Site Field Trips	
MIN F415	Coal Preparation	
Approved technical electives		
Fundamentals of Engineering (FE) Examination		
Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Total Credits		**124-130**

1. Fulfills the baccalaureate capstone requirement.
2. Students must plan their elective courses in consultation with their mining engineering faculty advisor. Technical electives are selected from the list of approved technical electives for the mining engineering program and other program course listings. All elective courses must be approved by the student's faculty advisor.

Music B.A.

Program Requirements

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Minimum Requirements for Music B.A.: 120 credits

CONCENTRATIONS: GENERAL (P. 341), MUSIC THEORY (P. 341), MUSIC HISTORY (P. 341), MUSIC COMPOSITION (P. 341)

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Audition		
Complete an audition on the major instrument.		
Music Program Requirements		
Complete the following:		
MUS F131 and MUS F132	Basic Music Theory I and Basic Music Theory II	6
MUS F133 and MUS F134	Basic Ear Training I and Basic Ear Training II	4
MUS F161 and MUS F162 and MUS F261 and MUS F262	Private Lessons and Private Lessons and Private Lessons and Private Lessons (major area) [1]	8
MUS F190	Recital Attendance	0
MUS F221 and MUS F222	History of Western Music I and History of Western Music II	6
MUS F223X	Alaska Native Music	3
MUS F231 and MUS F232	Advanced Music Theory I and Advanced Music Theory II	4
MUS F233 and MUS F234	Advanced Ear Training I and Advanced Ear Training II	2
MUS F253	Piano Proficiency [2]	0-4
MUS F331	Form and Analysis	3
MUS F476	Senior Project [3]	3
Large ensembles [4]		4

Concentration	
Complete one of the following:	21-24
General	
Music Theory	
Music History	
Music Composition	
Total Credits	**136-148**

1 Students with voice as their major instrument are also required to complete MUS F245 or MUS F246.
2 Enrollment only following completion of piano proficiency requirements. Requirements can be met either by exam OR by the Functional Piano series (MUS F152, MUS F153, MUS F154, MUS F155).
3 Fulfills the baccalaureate capstone requirement.
4 Music majors in the B.A. program will be required to earn a minimum of 4 credits in large ensembles: MUS F117, MUS F203, MUS F205, MUS F211, MUS F317. Please work closely with your faculty advisor to determine which large ensemble course will fulfill this requirement.

Concentrations

GENERAL

Code	Title	Credits
Complete 12 credits from the following:		12
MUS F410	Women in Music History	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries	
MUS F423	Music of the 19th Century	
MUS F424	Music Since 1900	
MUS F431	Counterpoint	
MUS F432	Orchestration and Arranging	
Complete 9 credits from the following:		9
MUS F307	Chamber Music	
MUS F351	Conducting	
MUS F361	Private Lessons (major area)	
MUS F362	Private Lessons (major area)	
MUS F426	Music Literature	
MUS F433	Seminar in Musical Composition	
MUS F434	Advanced Harmonic Analysis	
Total Credits		**21**

MUSIC THEORY

Code	Title	Credits
Complete the following:		
MUS F431	Counterpoint	3
MUS F432	Orchestration and Arranging	3
MUS F433	Seminar in Musical Composition	3
MUS F434	Advanced Harmonic Analysis	3
Complete 6 credits from the following:		6
MUS F410	Women in Music History	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries	
MUS F423	Music of the 19th Century	
MUS F424	Music Since 1900	
Complete 6 credits from the following:		6
MUS F307	Chamber Music	
MUS F351	Conducting	
MUS F361	Private Lessons (major area)	
MUS F362	Private Lessons (major area)	
MUS F426	Music Literature	
MUS F435	Private Lessons in Music Composition	
Total Credits		**24**

MUSIC HISTORY

Code	Title	Credits
Complete the following:		
MUS F421	Music Before 1620	3
MUS F422	Music in the 17th and 18th Centuries	3
MUS F423	Music of the 19th Century	3
MUS F424	Music Since 1900	3
Complete 6 credits from the following:		6
MUS F410	Women in Music History	
MUS F426	Music Literature	
MUS F431	Counterpoint	
MUS F434	Advanced Harmonic Analysis	
Complete 6 credits from the following:		6
MUS F307	Chamber Music	
MUS F351	Conducting	
MUS F361	Private Lessons (major area)	
MUS F362	Private Lessons (major area)	
MUS F432	Orchestration and Arranging	
Total Credits		**24**

MUSIC COMPOSITION

Code	Title	Credits
Complete the following:		
MUS F432	Orchestration and Arranging	3
MUS F433	Seminar in Musical Composition	3
MUS F435	Private Lessons in Music Composition	2-4
Complete 6 credits from the following:		6
MUS F410	Women in Music History	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries	
MUS F423	Music of the 19th Century	
MUS F424	Music Since 1900	
MUS F426	Music Literature	
MUS F434	Advanced Harmonic Analysis	
Complete 6 credits from the following:		6
MUS F307	Chamber Music	
MUS F351	Conducting	
MUS F361	Private Lessons (major area)	
MUS F362	Private Lessons (major area)	
MUS F431	Counterpoint	
Total Credits		**20-22**

Music Education B.M.

Admission Requirements

Complete the following admission requirement:

- Audition on the major instrument
- Student must complete an interview with the Music Education lead faculty

Program Requirements

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Minimum Requirements for Music Education B.M.: 124 credits

CONCENTRATIONS: ELEMENTARY (P. 342), (P. 342) SECONDARY (P. 343), K-12 (P. 343)

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.M. Degree Requirements		
Complete the B.M. degree requirements. (p. 266)		4
Music Education Program Requirements		
Complete 6 credits from one of the following: [1]		6
MUS F117	Northern Lights String Orchestra	
MUS F203	Fairbanks Symphony Orchestra	
MUS F205	Wind Ensemble	
MUS F211	Choir of the North	
MUS F317	Arctic Chamber Orchestra	
Complete the following:		
ED/PSY F245	Child Development	3
ED F420	Alaska Native Education [2]	3
or ED F461	Native Ways of Knowing	
EDSE F482	Inclusive Classrooms for All Children	3
or EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	
MUED F110	Becoming a Music Teacher in the 21st Century	2
MUED F201	Introduction to Music Education	2
MUED F315	Music Methods and Techniques [3]	10
MUED F316	Practicum in Middle-level Music Methods	1
MUS F131 and MUS F132	Basic Music Theory I and Basic Music Theory II	6
MUS F133 and MUS F134	Basic Ear Training I and Basic Ear Training II	4
MUS F161 and MUS F162 and MUS F261 and MUS F262 and MUS F361 and MUS F362	Private Lessons and Private Lessons and Private Lessons and Private Lessons and Private Lessons and Private Lessons [4]	14
MUS F190	Recital Attendance (six semesters)	0
MUS F221 and MUS F222	History of Western Music I and History of Western Music II	6
MUS F223X	Alaska Native Music	3
MUS F231 and MUS F232	Advanced Music Theory I and Advanced Music Theory II	4
MUS F233 and MUS F234	Advanced Ear Training I and Advanced Ear Training II	2
MUS F331	Form and Analysis	3
MUS F351	Conducting	3
MUS F390	Junior Recital	0
MUS F432	Orchestration and Arranging	3
Complete one of the following: [5]		0-4
MUS F253	Piano Proficiency	
MUS F152 and MUS F153 and MUS F154 and MUS F155 and MUS F253	Functional Piano I and Functional Piano II and Functional Piano III and Functional Piano IV and Piano Proficiency	
Concentration		
Complete one of the following:		7-23
Elementary		
Secondary		
K-12		
Total Credits		**124-149**

1. Please work closely with your faculty advisor to determine which large ensemble course will fulfill this requirement.
2. ED F420 is the recommended course.
3. This course is taken five times for a total of 10 credits: voice, strings, winds, brass and percussion methods.
4. Students with voice as their major instrument are also required to complete MUS F245 or MUS F246.
5. Piano proficiency degree requirement met either by exam OR Functional Piano series (MUS F152, MUS F153, MUS F154, MUS F155).

Note: Music education majors must have completed the necessary prerequisites and be admitted to the teacher education program prior to acceptance for placement in student teaching.

Concentrations

ELEMENTARY

Code	Title	Credits
Elementary Concentration Requirements		
Complete the following:		
ED F452	Elementary Internship	3-12
MUED F309	Elementary School Music Methods	3

MUED F310	Practicum in Elementary Music Methods	1
Total Credits		**7-16**

SECONDARY

Code	Title	Credits
Secondary Concentration Requirements		
Complete the following:		
ED F453	Secondary Internship	3-12
MUED F405	Secondary School Music Methods	3
MUED F406	Practicum in Secondary Music Methods	1
Total Credits		**7-16**

K-12

Code	Title	Credits
K-12 Concentration Requirements		
Complete the following:		
ED F454	Student Teaching K-12 [1]	15
MUED F309	Elementary School Music Methods	3
MUED F310	Practicum in Elementary Music Methods	1
MUED F405	Secondary School Music Methods	3
MUED F406	Practicum in Secondary Music Methods	1
Total Credits		**23**

[1] Fulfills the baccalaureate capstone requirement.

Music Performance B.M.

Admission Requirements

Complete the following admission requirements:

- Audition on the major instrument

Program Requirements

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Minimum Requirements for Music (Performance) B.M.: 123 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, voice majors must complete:		
Either FREN F101X and FREN F102X or GER F101X and GER F102X, in consultation with your advisor [1]		
B.M. Degree Requirements		
Complete the B.M. degree requirements. (p. 266)		4
Music (Performance) Program Requirements		
Complete the following:		
MUS F131 and MUS F132	Basic Music Theory I and Basic Music Theory II	6
MUS F133 and MUS F134	Basic Ear Training I and Basic Ear Training II	4
MUS F161 and MUS F162 and MUS F261 and MUS F262 and MUS F361 and MUS F362 and MUS F461 and MUS F462	Private Lessons and Private Lessons and Private Lessons and Private Lessons and Private Lessons and Private Lessons and Private Lessons and Private Lessons [2]	24
MUS F190	Recital Attendance (eight semesters)	0
MUS F221 and MUS F222	History of Western Music I and History of Western Music II	6
MUS F223X	Alaska Native Music	3
MUS F231 and MUS F232	Advanced Music Theory I and Advanced Music Theory II	4
MUS F233 and MUS F234	Advanced Ear Training I and Advanced Ear Training II	2
MUS F331	Form and Analysis	3
MUS F351	Conducting	3
MUS F390	Junior Recital	0
MUS F490	Senior Recital [3]	0
Complete 8 credits from one of the following: [4]		8
MUS F117	Northern Lights String Orchestra	
MUS F203	Fairbanks Symphony Orchestra	
MUS F205	Wind Ensemble	
MUS F211	Choir of the North	
MUS F317	Arctic Chamber Orchestra	
Complete one of the following:		0-4
MUS F253	Piano Proficiency [5]	
MUS F152 and MUS F153 and MUS F154 and MUS F155 and MUS F253	Functional Piano I and Functional Piano II and Functional Piano III and Functional Piano IV and Piano Proficiency	
Complete 6 credits from the following advanced music theory courses:		6
MUS F431	Counterpoint	
MUS F432	Orchestration and Arranging	
MUS F433	Seminar in Musical Composition	
MUS F434	Advanced Harmonic Analysis	
MUS F435	Private Lessons in Music Composition	
Complete 6 credits from the following advanced music history courses:		6
MUS F410	Women in Music History	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries	
MUS F423	Music of the 19th Century	
MUS F424	Music Since 1900	
Complete 9 credits from the following:		9
MUS F161	Private Lessons	

MUS F162	Private Lessons	
MUS F245	Singer's Diction I: English and Italian [2]	
MUS F246	Singer's Diction II: French and German [2]	
MUS F261	Private Lessons	
MUS F262	Private Lessons	
MUS F361	Private Lessons	
MUS F362	Private Lessons	
MUS F461	Private Lessons	
MUS F462	Private Lessons	
MUS F307	Chamber Music	
MUS F313	Opera Workshop	
MUS F426	Music Literature	
MUS F493	Special Topics	
Other courses to choose from if not already taken include: MUS F410, MUS F421, MUS F422, MUS F423, MUS F424, MUS F431, MUS F432, MUS F433, MUS F434, MUS F435		
Total Credits		**123-132**

1. Selection of the language will be made in consultation with the voice advisor.
2. Students with voice as their major instrument are also required to complete MUS F245 or MUS F246.
3. Fulfills the baccalaureate capstone requirement.
4. Students should work closely with their faculty advisor to determine which large ensemble course will fulfill this requirement.
5. The Piano Proficiency degree requirement is met either by exam OR by the Functional Piano series (MUS F152, MUS F153, MUS F154, MUS F155).

Natural Resources and Environment B.S.

Minimum Requirements for Natural Resources and Environment B.S.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
As part of the general education requirements, complete one of the following:		
MATH F230X	Essential Calculus with Applications	
MATH F251X	Calculus I	
MATH F252X	Calculus II	
MATH F253X	Calculus III	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
As part of the B.S. requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
NRM F303X	Environmental Ethics and Actions	
STAT F200X	Elementary Statistics	
Natural Resources and Environment Program Requirements		
Complete the following:		
BIOL F371	Principles of Ecology	4
ECON F235X	Introduction to Natural Resource Economics	3
GEOS F483	Research Design, Writing and Presentation Methods	3
NRM F101	Natural Resources Conservation and Policy	3
NRM F210	Principles of Sustainable Agriculture	3
NRM F111X	Introduction to Sustainability Science	3
NRM F240	Natural Resources Measurement and Inventory	3
NRM F277	Introduction to Conservation Biology	3
NRM F290	Field Course of Natural Resource Management Complexity in Alaska	2
NRM F338	Introduction to Geographic Information Systems	3
NRM F370	Introduction to Watershed Management	3
NRM F380	Soils and the Environment	3
NRM F435	GIS Analysis	4
NRM F469	Survey Research in Human Dimensions of Natural Resources	3
Policy/Law Courses		
Complete one of the following:		3
NRM F204	Public Lands Law and Policy	
NRM F407	Environmental Law	
PS F447	U.S. Environmental Politics	
Capstone [1]		
NRM F430	Resource Management Planning	3
Minor, Pre-vet, Support Field		
Complete a minor, pre-vet, or 15 credits in a support field [2]		15
Electives		
Additional student-selected electives		1-6
Total Credits		**120**

1. Fulfills the baccalaureate capstone requirement.
2. Complete a minor, pre-vet, or 15 credits in a support field which is a group of courses selected for its clear pertinence to a cohesive program. Support fields may include but are not limited to natural resources and environment, chemistry, communication, education, art, fisheries and wildlife management. Courses must be approved by the student's academic advisor and department head prior to attaining senior standing. Note: students must take a total of 39 upper-division credits.

Petroleum Engineering B.S.

Program Requirements

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Minimum Requirements for Petroleum Engineering, B.S.: 131 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
LS F101X	Library Information and Research	
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Petroleum Engineering Program Requirements		
Complete the following:		
ES F201	Computer Techniques	3
ES F208	Mechanics	4
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
GE F261	General Geology for Engineers	3-4
or GEOS F101X	The Dynamic Earth	
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
MATH F426	Numerical Analysis	3
or ES F301	Engineering Analysis	
PETE F101	Fundamentals of Petroleum, Drilling and Production	2
PETE F201	Future Trends in the Oil and Gas Industry	1
PETE F301	Reservoir Rock and Fluid Properties	4
PETE F302	Well Logging	3
PETE F303	Reservoir Rock and Fluid Properties Laboratory	1
PETE/GEOS F370	Sedimentology and Structural Geology for Petroleum Engineers	4
PETE F407	Petroleum Production Engineering	3
PETE F411	Drilling Fluids Laboratory	1
PETE F421	Reservoir Characterization	3
PETE F426	Drilling Engineering	3
PETE F431	Natural Gas Engineering	2
PETE F456	Petroleum Evaluation and Economic Decisions	3
PETE F469	Enhanced Oil Recovery and Reservoir Simulation	3
PETE F476	Petroleum Reservoir Engineering	3
PETE F478	Well Test Analysis	2
PETE F481	Well Completions and Stimulation Design	3
PETE F487A	Petroleum Project Design [1,2]	1
PETE F487B	Petroleum Project Design [2]	1
STAT F300	Statistics	3
Complete one of the following approved electives:		3
CE F424	Permafrost Engineering	
ES F307	Elements of Electrical Engineering	
ESM F422	Engineering Decisions	
ME F441	Heat and Mass Transfer	
ME F458	Energy and the Environment	
Fundamentals of Engineering (FE) Examination		
Fundamentals of Engineering (FE) examination administered by the State of Alaska.		
Total Credits		**131**

[1] PETE F487A is prerequisite for PETE F487B.
[2] Fulfills the baccalaureate capstone requirement.

Philosophy B.A.

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Minimum Requirements for Philosophy B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Philosophy Program Requirements		
Complete the following:		
PHIL F102X	Introduction to Philosophy	3
PHIL F104X	Logic and Reasoning	3
PHIL F351	History of Ancient Greek Philosophy	3
PHIL F352	History of Modern Philosophy: Descartes to Kant	3
PHIL F471	Contemporary Philosophical Problems [1]	3
PHIL F481	Philosophy of Science	3
Complete 6 of the following:		18
PHIL F108	Symbolic Logic	
PHIL F202	Introduction to Eastern Philosophy	

PHIL F322X	Ethics	
PHIL F341	Theories of Knowledge	
PHIL F342	Theories of Reality	
PHIL F361	Philosophy in Literature	
PHIL F362	Feminist Philosophy	
PHIL F402	Biomedical and Research Ethics	
PHIL F421	Aesthetics	
PHIL F436	Ethical Theory	
PHIL F487	Conceptual Issues in Evolutionary Biology	
PHIL F499	B.A. Thesis in Philosophy	
Electives		
Additional student-selected electives		7-12
Total Credits		**120**

[1] Satisfy the capstone requirement by passing PHIL F471.

Physics B.S.

Program Requirements

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Minimum Requirements for Degree: 120 credits

CONCENTRATIONS: APPLIED PHYSICS (P. 346), ATMOSPHERIC PHYSICS (P. 346), COMPUTATIONAL PHYSICS (P. 347), PHYSICS (P. 347), TECHNICAL MANAGEMENT (P. 347)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Physics Program Requirements		
Complete the following:		
MATH F253X	Calculus III	4
PHYS F213X	Elementary Modern Physics	4
PHYS F220	Introduction to Computational Physics	4
PHYS F301	Introduction to Mathematical Physics	4
PHYS F341	Classical Physics I: Particle Mechanics	4
PHYS F342	Classical Physics II: Electricity and Magnetism	4
PHYS F400	Capstone Project [1]	0
Concentration		
Complete one of the following:		31-40
Applied Physics		
Atmospheric Physics		
Computational Physics		
Physics		
Technical Management		
Electives		
Additional student-selected electives		0-13
Total Credits		**120**

[1] Satisfy the capstone project requirement by passing PHYS F400, Capstone Project (0 credits).
The capstone project can be done either as individual undergraduate research with a faculty member (by taking PHYS F488 - 2 credits) or as an independent study with a faculty member within any F300- or F400-level physics course (by taking PHYS F497 - 2 credits), or as participation in the international University Physics Competition. Credits required to fulfill the capstone experience do not count toward credits required to complete the concentration.

Concentrations

APPLIED PHYSICS

Code	Title	Credits
Applied Physics Concentration Requirements		
Complete the following:		
MATH electives at the F300 level or above [1]		6
Physics credits at the F300 level or above		9
Applied physics [2]		17
Total Credits		**32**

[1] Recommended courses include MATH F314, MATH F410 and MATH F432.

[2] The credits must be in a chosen subject area and approved before the beginning of the student's final semester by the head of the Physics Department.

ATMOSPHERIC PHYSICS

Code	Title	Credits
Atmospheric Physics Concentration Requirements		
Complete the following:		
MATH electives at the F300 level or above [1]		6
Physics credits at the F300 level or above		9
ATM F401	Introduction to Atmospheric Sciences	3
ATM F413	Atmospheric Radiation	3
ATM F445	Atmospheric Dynamics	3
Other relevant upper-division courses. [2]		8
Total Credits		**32**

[1] Recommended courses include MATH F314, MATH F410 and MATH F432.

[2] The credits must be in a chosen subject area and approved before the beginning of the student's final semester by the head of the Physics Department.

COMPUTATIONAL PHYSICS

Code	Title	Credits
Computational Physics Concentration Requirements		
Complete the following:		
MATH electives at the F300 level or above [1]		6
Physics credits at the F300 level or above		9
CS F201	Computer Science I	3
CS F202	Computer Science II	3
MATH F426	Numerical Analysis	3
Other relevant upper-division courses. [2]		8
Total Credits		**32**

[1] Recommended courses include MATH F314, MATH F410 and MATH F432.

[2] The credits must be in a chosen subject area and approved before the beginning of the student's final semester by the head of the Physics Department.

PHYSICS

Code	Title	Credits
Physics Concentration Requirements		
Complete the following:		
MATH electives at the F300 level or above [1]		6
PHYS F343	Classical Physics III: Vibration and Waves	4
PHYS F351	Thermal Physics	2
PHYS F381	Physics Laboratory	3
PHYS F421	Quantum Mechanics	4
PHYS F451	Statistical Physics	2
PHYS F462	Geometrical and Physical Optics	4
Complete 6 credits from the following:		6
PHYS F471A	Advanced Topics in Physics I: Condensed Matter Physics I	
PHYS F471B	Advanced Topics in Physics I: Condensed Matter Physics II	
PHYS F471C	Advanced Topics in Physics I: Space and Auroral Physics	
PHYS F471D	Advanced Topics in Physics I: Nonlinear Dynamics	
PHYS F471E	Advanced Topics in Physics I: Biophysics	
PHYS F471F	Advanced Topics in Physics I: Nuclear and Particle Physics	
PHYS F471G	Advanced Topics in Physics I: General Relativity	
PHYS F471H	Advanced Topics in Physics I: Astrophysics	
PHYS F471I	Advanced Topics in Physics I: Topics in Modern Mathematical Physics	
PHYS F471J	Advanced Topics in Physics I: Order of Magnitude Physics	
PHYS F472A	Advanced Topics in Physics II: Planetary Atmospheres	
PHYS F472B	Advanced Topics in Physics II: Fluid Dynamics	
PHYS F472C	Advanced Topics in Physics II: Plasma Physics	
PHYS F472D	Advanced Topics in Physics II: Hamiltonian Mechanics	
PHYS F472E	Advanced Topics in Physics II: Physics of Glaciers	
PHYS F472F	Advanced Topics in Physics II: Remote Sensing	
PHYS F472G	Advanced Topics in Physics II: Solar Physics	
PHYS F472H	Advanced Topics in Physics II: Advanced Laboratory	
PHYS F472I	Advanced Topics in Physics II: Spectroscopy	
PHYS F472J	Advanced Topics in Physics II: Cosmology	
PHYS F472K	Advanced Topics in Physics II: Quantum Computation	
PHYS F472L	Advanced Topics in Physics II: Covariant Kinematics/Dynamics	
PHYS F472Z	Advanced Topics in Physics II: Current Topics in Physics	
Total Credits		**31**

[1] Recommended courses include MATH F314, MATH F410 and MATH F432.

TECHNICAL MANAGEMENT

Code	Title	Credits
Technical Management Concentration Requirements		
Complete the following:		
MATH electives at the F300 level or above [1]		3
Physics credits at the F300 level or above		12
ACCT F261X	Principles of Financial Accounting	3
ACCT F262	Principles of Managerial Accounting	3
STAT F200X	Elementary Statistics	3
College of Business and Security Management Courses [2]		
BA F325	Financial Management [3]	3
BA F330	The Legal Environment of Business [3]	4
BA F343	Principles of Marketing [3]	3
BA F360	Operations Management [3]	3
BA F390	Organizational Theory and Behavior [3]	3
Total Credits		**40**

[1] Recommended courses include MATH F314, MATH F410 and MATH F432.

[2] Students must take ACCT F261X, MATH F253X and PHYS F220 before taking these courses, or have permission of the MBA director. The College of Business and Security Management agrees that such students will be allowed to register for these courses.

[3] Students can be required to earn a B grade or higher if applying for the MBA program.

Note: Other courses suggested to fulfill minimum credit requirements: ES F201 and ES F307.

Note: Must exclude PHYS F123X and PHYS F124X from core curriculum natural science requirement.

REQUIREMENTS FOR PHYSICS TEACHERS (GRADES 7-12)

Students must earn a C- grade or better in each course.

Code	Title	Credits
Physics Program Requirements		
Complete all the requirements of the B.S. degree		
All prospective physics teachers must complete the following:		
CHEM F105X and CHEM F106X	General Chemistry I and General Chemistry II	8
PHYS F211X	General Physics I	4
PHYS F212X	General Physics II	4
PHYS F213X	Elementary Modern Physics	4
PHYS F220	Introduction to Computational Physics	4
PHYS F301	Introduction to Mathematical Physics	4
MATH electives		3
Physics-approved electives		16
All prospective science teachers must complete the following:		
PHIL F481	Philosophy of Science	3
Total Credits		**50**

Note: We strongly recommend that prospective secondary science teachers seek advising from the Alaska College of Education early in their undergraduate degree program so they can be appropriately advised of the State of Alaska requirements for teacher licensure. Students will apply for admission to the Alaska College of Education's postbaccalaureate teacher preparation program, a one-year intensive program, during their senior year.

Political Science B.A.

Program Requirements

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Minimum Requirements for Political Science B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
PS F100X	Political Economy	
PS F201X	Comparative Politics	
PS F221X	International Politics	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
As part of the B.A. requirements, complete the following:		
PS F300X	Ethics and Society	
Political Science Program Requirements		
Complete the following:		
PS F101X	Introduction to American Government and Politics	3
PS F222	Political Science Research Methods	3
Complete one of the following:		3
PS F475	Internship in Public Affairs	
PS F499	Senior Thesis	
The Alaska Universities Legislative Internship Program		
Other approved internship earning at least 3 transferable upper-division credits		
Political Science		
Complete 24 credits from the following (at least one course from four of the following sub-disciplinary groups)		24
American Government and Politics		
PS F301	American Presidency	
PS F302	Congress and Public Policy	
PS F303	Politics and the Judicial Process	
PS F401	Political Behavior	
PS F447	U.S. Environmental Politics	
Public Law		
PS F212	Introduction to Public Administration	
PS F403	Public Policy	
PS F435	Constitutional Law I: Federalism	
PS F436	Constitutional Law II: Civil Rights and Liberties	
PS F462	Alaska Government and Politics	
Comparative Politics		
PS F201X	Comparative Politics	
PS F202	Democracy and Global Society	
PS F450	Comparative Indigenous Rights and Policies	
PS F458	Comparative Environmental Politics	
PS F460	Government and Politics of Canada	
PS/HIST F467	Political Development in Latin America and the Caribbean	
PS F468	Government and Politics of Russia	
International Politics		
PS F221X	International Politics	
PS F304	International Security	
PS F322	International Law and Organization	
PS F323	International Political Economy	
PS F437	United States Foreign Policy	
PS F452	International Relations of the North	
PS F454	International Law and the Environment	
Political Theory		
PS F314	Political Ideologies	
PS F315	American Political Thought	

PS/PHIL F411	Classical Political Theory
PS/PHIL F412	Modern Political Theory
PS F414	Contemporary Political Philosophy
Electives	
Four additional Political Science courses	12
Other Courses	
PS F205	Leadership, Citizenship and Choice
PS/ANS F325	Alaska Native and Comparative Tribal Self-Government
PS F340	Gender, Sex and Politics
PS/ANS F425	Federal Indian Law and Alaska Natives
PS F455	Political Economy of the Global Environment
PS F456	Science, Technology and Politics
PS F469	Arctic Politics and Governance
PS F472	Ethics in International Affairs
PS F473	Politics and Film
Electives	
Additional student-selected electives	0-3
Total Credits	**120-122**

Pre-professional Preparation

Pre-professional advising provides information to students about the admission process to specific types of graduate programs and postbaccalaureate professional schools. Professional schools include but are not limited to, programs such as medical school, veterinary school or law school. Many types of professional schools do not require a specific major for admission to their program. However, prerequisite courses may be required before admittance, so students must research admissions requirements carefully. Students should work with their academic advisors to choose a major and minor that best prepares them to apply for postbaccalaureate professional schools.

The Academic Advising Center (https://www.uaf.edu/advising/) can be a great place to start because it provides academic advising for all pre-professional areas (https://www.uaf.edu/advising/about/pre-professional-advising.php) and can connect you to other advising resources at UAF. The Undergraduate Interdisciplinary Studies Department (https://www.uaf.edu/inds/) offers a Health Sciences for Pre-Professionals minor (p. 368) which includes prerequisite courses and advising for medical and health-related professional pathways. The Biology and Wildlife Department (https://www.bw.uaf.edu/) and the Department of Chemistry and Biochemistry (https://www.uaf.edu/chem/) provide additional academic advising and mentorship for medical, dental, pharmacy, veterinary and allied health pre-professional programs. The Justice Department (https://www.uaf.edu/justice/) and Political Science Department (https://www.uaf.edu/polisci/) both can provide academic advising for law school. UAF also offers a Law and Society minor (https://catalog.uaf.edu/bachelors/bachelors-degree-programs/law-society/), which can be a great fit for students interested in attending law school. The Honors College (https://www.uaf.edu/honors/) also offers support to students on a variety of different pre-professional educational pathways.

Psychology B.A.

Program Requirements

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Minimum Requirements for Psychology B.A.: 120 credits

CONCENTRATIONS: GENERAL (P. 350), APPLIED PROFESSIONAL (P. 350), GRADUATE SCHOOL PREPARATION (P. 350)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Psychology Program Requirements		
Complete the following:		
PSY F101X	Introduction to Psychology	3
PSY F250	Introductory Statistics for Social Sciences	3
PSY F275	Introduction to Social Science Research Methods	3
Capstone		
Complete one of the following:		3
PSY F401	Culture and Psychology	
PSY F469	Health Psychology [1]	
PSY F475	Research Design and Analysis in Psychology [1]	
PSY F499	Thesis [1]	
Concentration		
Complete one of the following:		24
General		
Applied Professional		
Graduate School Preparation		
Electives		
Additional student-selected electives		7-12
Total Credits		**120**

[1] Students may count PSY F469, PSY F475 and PSY F499 toward the concentration they are listed under and as a capstone requirement, but still need 36 psychology credits to graduate.

Note: Students may not count more than 6 credits of any combination of PSY F497 and PSY F498 toward the major.

Note: Students may apply an unlimited number of PSY F392/PSY F492 and PSY F393/PSY F493 credits toward the degree provided the topics are different for each course.

Note: Students should work closely with an advisor to ensure completion of 39 upper-division credits for graduation.

Concentrations

GENERAL

The general concentration provides a lot of flexibility for students to explore the field of psychology and design their own programs.

This option is intended for students who have a general interest in psychology, desire maximum flexibility, or transfer into the degree program with a significant number of credits from other institutions.

Code	Title	Credits
General Concentration Requirements		
Complete the following:		
PSY Elective Courses [2]		24
Total Credits		**24**

[2] Up to 6 credits (faculty-approved) from other programs may be used.

APPLIED PROFESSIONAL

The applied professional concentration provides opportunities for students to build professional skills and competencies for a variety of workplaces. The course choices reflect the department's focus on health and wellness. They are applicable to both health-oriented and business settings.

This option is intended for students who expect to enter the job market soon after graduation.

Code	Title	Credits
Applied Professional Concentration Requirements		
Complete four of the following:		12
PSY F123X	Sleepless in Alaska: Sleep, Health and You	
PSY F309	Psychology of Stress	
PSY F390	Psychology of Work	
PSY F430	Rural and Alaska Native Psychology	
PSY F445	Community Psychology	
PSY F469	Health Psychology	
PSY F475	Research Design and Analysis in Psychology	
PSY Elective Courses [2]		12
Total Credits		**24**

[2] Up to 6 credits (faculty-approved) from other programs may be used.

GRADUATE SCHOOL PREPARATION

The graduate school preparation concentration provides a focus on core content and research competencies needed for successful applications to master's and doctoral programs.

This option is intended for students who plan on going to graduate school, including graduate programs outside of psychology such as other health fields and law.

Code	Title	Credits
Graduate School Preparation Concentration Requirements		
Complete three of the following:		9
PSY F240	Psychology of Development	
PSY F304	Personality	
PSY F330	Social Psychology	
PSY F335	Brain and Behavior	
PSY F440	Theories of Learning	
Complete one of the following:		3
PSY F475	Research Design and Analysis in Psychology [3]	
PSY F480	Qualitative Social Science Research	
PSY F498	Research [3]	
PSY F499	Thesis [3]	
Complete 12 PSY Elective Credits [2]		12
Total Credits		**24**

[2] Up to 6 credits (faculty-approved) from other programs may be used.
[3] Fulfills the baccalaureate capstone requirement.

Psychology B.S.

Program Requirements

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Minimum Requirements for Psychology B.S. Degree: 120 credits

CONCENTRATIONS: GENERAL (P. 351), APPLIED PROFESSIONAL (P. 351), GRADUATE SCHOOL PREPARATION (P. 351)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
Psychology Program Requirements		
Complete the following:		
PSY F101X	Introduction to Psychology	3
PSY F250	Introductory Statistics for Social Sciences	3
PSY F275	Introduction to Social Science Research Methods	3
Capstone		
Complete one of the following:		3
PSY F401	Culture and Psychology	
PSY F469	Health Psychology [1]	
PSY F475	Research Design and Analysis in Psychology [1]	
PSY F499	Thesis [1]	

Concentration	
Complete one of the following:	24
General	
Applied Professional	
Graduate School Preparation	
Electives	
Additional student-selected electives	29-34
Total Credits	**120**

[1] Students may count PSY F469, PSY F475 and PSY F499 toward the concentration they are listed under and as a capstone requirement, but still need 36 psychology credits to graduate.

Note: Students may not count more than 6 credits of any combination of PSY F497 and PSY F498 toward the major.

Note: Students may apply an unlimited number of PSY F392/PSY F492 and PSY F393/PSY F493 credits toward the degree provided the topics are varied.

Note: Students should work closely with an advisor to ensure completion of 39 upper-division credits for graduation.

Concentrations

GENERAL

The general concentration provides a lot of flexibility for students to explore the field of psychology and design their own programs.

This option is intended for students who have a general interest in psychology, desire maximum flexibility, or transfer into the degree program with a significant number of credits from other institutions.

Code	Title	Credits
General Concentration Requirements		
Complete the following:		
PSY Elective Courses [2]		24
Total Credits		**24**

[2] Up to 6 credits (faculty-approved) from other programs may be used.

APPLIED PROFESSIONAL

The applied professional concentration provides opportunities for students to build professional skills and competencies for a variety of workplaces. The course choices reflect the department's focus on health and wellness. They are applicable to both health-oriented and business settings.

This option is intended for students who expect to enter the job market soon after graduation.

Code	Title	Credits
Applied Professional Concentration Requirements		
Complete 12 credits from the following:		12
PSY F123X	Sleepless in Alaska: Sleep, Health and You	
PSY F309	Psychology of Stress	
PSY F390	Psychology of Work	
PSY F430	Rural and Alaska Native Psychology	
PSY F445	Community Psychology	
PSY F469	Health Psychology	
PSY F475	Research Design and Analysis in Psychology	
PSY Elective Courses [2]		12
Total Credits		**24**

[2] Up to 6 credits (faculty-approved) from other programs may be used.

GRADUATE SCHOOL PREPARATION

The graduate school preparation concentration provides a focus on core content and research competencies needed for successful applications to master's and doctoral programs.

This option is intended for students who plan on going to graduate school, including graduate programs outside of psychology such as other health fields and law.

Code	Title	Credits
Graduate School Preparation Concentration Requirements		
Complete three of the following:		9
PSY F240	Psychology of Development	
PSY F304	Personality	
PSY F330	Social Psychology	
PSY F335	Brain and Behavior	
PSY F440	Theories of Learning	
Complete one of the following:		3
PSY F475	Research Design and Analysis in Psychology [3]	
PSY F480	Qualitative Social Science Research	
PSY F498	Research [3]	
PSY F499	Thesis [3]	
Complete 12 PSY Elective Credits [2]		12
Total Credits		**24**

[2] Up to 6 credits (faculty-approved) from other programs may be used.
[3] Fulfills the baccalaureate capstone requirement.

Rural Development B.A.

Program Requirements

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Minimum Requirements for Rural Development B.A.: 123 credits

CONCENTRATIONS: ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT (P. 352), HUMAN AND SOCIAL DEVELOPMENT (P. 352), INTEGRATED RESOURCE MANAGEMENT (P. 352), MULTIDISCIPLINARY (P. 352), TRIBAL AND MUNICIPAL GOVERNANCE (P. 353)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Including 39 upper-division credits		
Rural Development Program Requirements		
Complete the following:		
RD F225	Applied Communication Skills	3
RD F300	Rural Development in a Global Perspective	3
RD F325	Rural Development Principles and Practices	3
RD F340	Community Research Toolbox	3
RD F351	Strategic Planning and Decision Making	3
RD F352	Rural Business Planning and Proposal Development	3
RD F450	Managing Rural Projects and Programs	3
RD F474	Applied Community Research	3
RD F475	Rural Development Senior Project [2]	3
RD elective		3
RD, ANS, TG or ED electives		6
Concentration		
Complete one of the following:		15
Entrepreneurship and Economic Development		
Human and Social Development		
Integrated Resource Management		
Multidisciplinary		
Tribal and Municipal Governance		
Total Credits		**123-128**

[1] Students outside the Fairbanks area should verify that their chosen minor can be completed via distance delivery before declaring.

[2] Fulfills the baccalaureate capstone requirement.

[3] Courses used in the concentration area may be double-counted for the minor.

Concentrations

ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

Code	Title	Credits
Entrepreneurship and Economic Development Concentration Requirements		
Complete the following:		
RD F430	Indigenous Economic Development and Entrepreneurship	3
RD F470	The Alaska Native Claims Settlement Act: Pre-1971 to Present	3
RD F471	Corporate Social Responsibility and Accountability in Rural and Indigenous Contexts	3
Complete an additional 6 credits from rural development, Alaska Native studies, applied business, business administration, construction trades technology, economics and/or tribal governance. [4]		6
Total Credits		**15**

[4] Recommended subject areas. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

HUMAN AND SOCIAL DEVELOPMENT

Code	Title	Credits
Human and Social Development Concentration Requirements		
Complete the following:		
ANS/RD F315	Tribal People and Development	3
RD F465	Community Healing and Wellness	3
RD F468	Human Development and Social Justice	3
Complete an additional 6 credits from rural development, Alaska Native studies, ethnobotany, human services, psychology, rural development, rural human services, social work and/or tribal governance. [4]		6
Total Credits		**15**

[4] Recommended subject areas. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

INTEGRATED RESOURCE MANAGEMENT

Code	Title	Credits
Integrated Resource Management Concentration Requirements		
Complete the following:		
RD F255	Rural Alaska Land Issues	3
RD F265	Perspectives on Subsistence in Alaska	3
RD F425	Cultural Resource Issues	3
Complete an additional 6 credits from rural development, Alaska Native studies, environmental studies, ethnobotany, fisheries, high latitude range management, natural resource management, rural development and/or tribal governance. [4]		6
Total Credits		**15**

[4] Recommended subject areas. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

MULTIDISCIPLINARY

Code	Title	Credits
Multidisciplinary Concentration Requirements		
Complete the following:		
Complete 15 credits from two or more existing concentrations. Courses must include at least 9 credits from the required course lists of the existing concentrations as approved by department advisor.		15
Total Credits		**15**

TRIBAL AND MUNICIPAL GOVERNANCE

Code	Title	Credits
Tribal and Municipal Governance Concentration Requirements		
Complete the following:		
ANS F325	Alaska Native and Comparative Tribal Self-Government	3
RD F427	Tribal Contracting and Compacting	3
ANS/RD F435	Participatory Policy-making in Tribal, State and Federal Government	3
Complete an additional 6 credits from rural development, Alaska Native studies, applied business, business administration and/or tribal governance. [4]		6
Total Credits		**15**

[4] Recommended subject areas. Course substitutions relevant to the concentration area may be made with approval of the rural development faculty advisor.

Secondary Education (7-12) B.A.

Admission Requirements

Complete the following admission requirements:

Submit your undergraduate application electronically (https://uaf.edu/admissions/apply/) to the UAF Office of Admissions. A professional student teaching internship application has to be turned in to the secondary program before student teaching (last year before graduation).

Professional Student Teaching Internship:

In the last year before graduation, student teaching internships begin in August or January on the date when teachers return to school (this varies across districts). Since internship placements are arranged with principals and mentor teachers in the spring, all materials necessary for determining admission to the internship should be submitted by March 1.

Faculty in the School of Education consider multiple criteria in making valid and reliable judgments about each applicant's knowledge, skills, and professional characteristics prior to approval for the yearlong internship in a classroom with secondary children. A criminal background check is necessary to work in schools. Declaring a B.A. major in secondary education does not guarantee admission to the professional internship year.

Students must submit the following information before the student teaching internship year to the School of Education by March 1:

1. Copies of transcripts from all institutions attended. Evidence of plan of completion of all B.A. degree in secondary education degree courses and completion of the majority of the content major requirements by Aug. 1 (except for those required in the professional internship year), with a minimum of a 2.75 overall GPA.
2. Three current letters of reference that address qualifications and potential as a teacher.
3. A personal statement of 500 words addressing motivation to enter the teaching profession, self-assessed qualifications to teach, and experiences which have prepared the candidate for teaching.
4. Passing scores on an Alaska Department of Education and Early Development (http://education.alaska.gov/TeacherCertification/praxis.html)-approved basic competency exam (BCE)
5. Passing scores on the Praxis II test for each content area the applicant expects to teach. The scores must meet the score set by the State of Alaska (https://education.alaska.gov/TeacherCertification/). World language applicants may need an oral proficiency test as required by EED.

Other Information:

Secondary faculty as part of the admission process will interview applicants.

Program Requirements

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Minimum Requirements for Secondary Education (7-12) Degree: 121 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Secondary Education (7-12) Program Requirements		
Complete the following:		
EDSC F110	Becoming a Middle/High School Teacher	1
EDSC F205	Introduction to Secondary Education	3
or EDSC F415	Foundations of Modern Educational Practice	
EDSC F407	Developing Literacy in the Content Areas	3
EDSC F458	Classroom Organization and Management	3
Complete one of the following:		3
EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	
EDSE F422	Curriculum, Management and Strategies II: High Incidence	
EDSE F482	Inclusive Classrooms for All Children	
Professional Internship Year with Integrated Coursework		
Complete one of the following:		3
EDSC F432	English/Language Arts Secondary Instruction and Assessment	
EDSC F433	Mathematics Secondary Instruction and Assessment	
EDSC F434	Science Secondary Instruction and Assessment	
EDSC F435	Social Studies Secondary Instruction and Assessment	
EDSC F436	Art Secondary Instruction and Assessment	
EDSC F437	World Language Secondary Instruction and Assessment	
Complete the following:		

EDSC F442	Technology Applications in Education I	1
EDSC F443	Technology Application in Education II	2
EDSC F457	Multicultural Education and School-community Relations	3
EDSC F471	Secondary Teaching: School Internship I and Seminar [2]	3
EDSC F472	Secondary Teaching: School Internship II and Seminar [2]	6-9
Content Area		
Complete requirements for a major in content area: art, biology, Earth science, English, foreign language (French, German or Spanish), history, mathematics or political science. The B.A. degree will be awarded with a double major, one in the content area discipline and one in secondary education.		shared credits
Capstone Requirement		
Complete baccalaureate capstone requirement as determined by the program.		
Total Credits		**121**

[1] Candidates must take the section or course that corresponds with their major teaching content area.

[2] Fulfills the baccalaureate capstone requirement.

Social Work B.A.

Program Requirements

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Minimum Requirements for Social Work B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
Social Sciences		
PSY F101X	Introduction to Psychology	
SOC F101X	Introduction to Sociology	
or ANTH F100X	Individual, Society and Culture	
Natural Sciences		
Complete one of the following:		
BIOL F100X	Human Biology	
BIOL F103X	Biology and Society	
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
As part of the B.A. requirements, complete the following:		
ANS F242X	Indigenous Cultures of Alaska	
or ANTH F242	Native Cultures of Alaska	
Social Work Program Requirements [1]		
Complete the following:		
SWK F103X	Introduction to Social Work	3
SWK F220	Ethics, Values and Social Work Practice	3
SWK F305	Social Welfare History	3
SWK F306	Social Welfare: Policies and Issues	3
SWK F320	Rural Social Work	3
SWK F341	Human Behavior in the Social Environment I	3
SWK F342	Human Behavior in the Social Environment II	3
SWK F375	Research Methods in Social Work	3
SWK F460	Social Work Practice I	3
SWK F461	Practicum in Social Work I [2,3]	6
SWK F463	Social Work Practice II	3
SWK F464	Practicum in Social Work II [2,3]	6
Special Problem Areas		
Complete two of the following:		6
HUMS F205	Basic Principles of Group Counseling	
HUMS F305	Substance Abuse Counseling	
SWK F330	Seminar in International Social Work	
SWK F350	Women's Issues in Social Welfare and Social Work Practices	
SWK F360	Child Abuse and Neglect	
SWK F370	Services and Support for an Aging Society	
SWK F390	Trauma and Wellness: Historical and Contemporary Perspectives	
SWK F405	Mental Health and Wellness: A Social Work Approach	
SWK F440	Social Work Practice with Military Families	
SWK F470	Substance Abuse Theories and Treatment	
SWK F484	Seminar in Social Work Practice Areas	
Total Credits		**120-125**

[1] To advance to practicum(s), a minimum 3.0 GPA in social work program courses is required.

[2] Students must complete a total of 12 credits of practicum, and students must take SWK F461 and SWK F464 for at least 6 of these credits. SWK F466 is an option for students who have completed SWK F461 and SWK F464 for less than 12 credits.

[3] Fulfills the baccalaureate capstone requirement.

Wildlife Biology and Conservation B.S.

Program Requirements

< Back to Department (p. 111)

Minimum Requirements for Wildlife Biology and Conservation B.S.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
or MATH F230X	Essential Calculus with Applications	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		15
As part of the B.S. requirements, complete the following:		
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Wildlife Biology and Conservation Program Requirements		
Complete the following:		
BIOL F239	Introduction to Plant Biology	4
BIOL F260	Principles of Genetics	4
BIOL F310	Animal Physiology	4
BIOL F371	Principles of Ecology	4
BIOL F471	Population Ecology	3
or WLF F421	Ecology and Management of Large Mammals	
ENGL F314	Technical Writing	3
or ENGL F414	Research Writing	
PHYS F123X	College Physics I	3-4
or CHEM F321	Organic Chemistry I	
or CHEM F449	General Biochemistry: Metabolism	
or GEOS F101X	The Dynamic Earth	
or NRM F338	Introduction to Geographic Information Systems	
or NRM F380	Soils and the Environment	
STAT F401	Regression and Analysis of Variance	4
or STAT F402	Scientific Sampling	
WLF F101	Survey of Wildlife Science	2
WLF F301	Design of Wildlife Studies	3
WLF F322	Principles and Techniques of Wildlife Management	3
WLF F470	Human Dimensions of Wildlife Management [1]	3
Complete two of the following:		5-6
BIOL F190	Introduction to Alaska Flora	
BIOL F331	Systematic Botany	
BIOL F430	Plant Physiology and Development	
BIOL F488	Arctic Vegetation Ecology: Geobotany	
Complete three of the following (one must be BIOL F425 or BIOL F426)		9
BIOL F406	Entomology	
BIOL F425	Mammalogy	
BIOL F426	Ornithology	
BIOL F427	Ichthyology	
BIOL F441	Animal Behavior	
WLF/BIOL F104X	Natural History of Alaska	
WLF F305	Wildlife Diseases	
WLF F385	Global Change Biology	
WLF F421	Ecology and Management of Large Mammals	
WLF F425	Ecology and Management of Birds	
WLF F469	Landscape Ecology and Wildlife Habitat	
Complete one of the following:		2-3
ECON F235X	Introduction to Natural Resource Economics	
HIST F411	Environmental History	
NRM F204	Public Lands Law and Policy	
NRM F407	Environmental Law	
PS F447	U.S. Environmental Politics	
One elective course at the F300 level or higher in biology, wildlife biology, fisheries or natural resources management.		3-4
Electives		
Additional student-selected electives		2-11
Total Credits		**120**

[1] Passing WLF F470 fulfills the baccalaureate capstone requirement for the Wildlife Biology and Conservation Program. Prior to registering for the capstone, students must have junior or senior class standing.

Note: B.S. degree candidates are strongly urged to obtain work experience in wildlife-related positions with public resource agencies or private firms. Faculty members can help students contact potential employers.

Note: Students are not permitted to use one course to satisfy more than one major requirement.

Requirements for biology teachers (grades 7-12)

Note: We strongly recommend that prospective secondary science teachers seek advising from the Alaska College of Education early in their undergraduate degree program so they can be appropriately advised of the State of Alaska requirements for teacher licensure. Students will apply for admission to the Alaska College of Education's postbaccalaureate teacher preparation program, a one-year intensive program, during their senior year. The above requirements apply to all candidates who apply to the Alaska College of Education for licensure in biology.

Code	Title	Credits
Complete all the requirements of the wildlife biology B.S. degree.		
All prospective biology teachers must complete the following:		
BIOL F342	Microbiology	4

BIOL F481	Principles of Evolution	4
CHEM F321 and CHEM F325	Organic Chemistry I and Organic Chemistry II	8
All prospective science teachers must complete the following:		
PHIL F481	Philosophy of Science	3
Total Credits		**19**

Yup'ik Language and Culture B.A.

Program Requirements

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Minimum Requirements for Yup'ik Language and Culture B.A.: 120 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		37
Yup'ik Language and Culture Program Requirements		
Complete the following:		
ANS F401	Cultural Knowledge of Native Elders	3
or ANS F461	Native Ways of Knowing	
YUP F130	Beginning Yup'ik Grammar	3
YUP F131	Beginning Yup'ik Grammar II	3
YUP F203	Conversational Central Yup'ik III	3
YUP F204	Conversational Central Yup'ik IV	3
YUP F205	Regaining Fluency in Yup'ik	3
YUP F206	Regaining Fluency in Yup'ik II	3
YUP F208	Yup'ik Composition	3
YUP F240	Introduction to Reading and Writing Yup'ik	3
YUP F301	Advanced Central Yup'ik	3
YUP F330	Yup'ik Literature/Yupiit Quliraitnek Igaryaraq	3
YUP F375	Yup'ik Philosophy/Umyuarteqsaraq	3
YUP F488	Documenting Yup'ik Traditions/ Caliarkaq [1]	3
Electives		
Additional student-selected electives		4-9
Total Credits		**120**

[1] Fulfills the baccalaureate capstone requirement.

Minors

Minor Requirements

A minor is a component of a bachelor's degree in an area of study in addition to the student's major. A student can choose a minor that complements their major or use this as an opportunity to explore an additional area of interest. Students can declare a minor when submitting an admission application or by filling out the Declaration of Minor form through the Office of the Registrar (https://www.uaf.edu/reg/forms.php).

- A minor from UAF consists of a minimum of 15 credits, at least 3 of which have to be earned at UAF.
- Some minors may require department approval.
- Students must earn a C- or higher in each course required for the minor unless otherwise noted.
- Students must earn a cumulative GPA of at least 2.0 (C) in the minor.
- The same academic catalog year must be used for the bachelor's degree and minor.
- An Associate of Applied Science degree or certificate of at least 30 credits earned at any accredited college or university may be used to meet requirements for a minor in the Bachelor of Arts degree.
- Students must satisfactorily complete the requirements for a minor before the bachelor's degree can be awarded.

The Bachelor of Arts degree requires a minor. A minor is optional for the following degrees unless otherwise noted by the major:

- Bachelor of Applied Arts and Sciences
- Bachelor of Applied Management
- Bachelor of Business Administration
- Bachelor of Fine Arts
- Bachelor of Music
- Bachelor of Science
- Bachelor of Security and Emergency Management

Students may use the What-If feature in DegreeWorks to review minor requirements and how credits already earned apply to the requirements. Results in DegreeWorks will be more accurate once the student's minor has been declared.

Minors Available

Accounting Minor

Program Requirements

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Minimum Requirements for Accounting Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Accounting Minor Requirements		
Complete the following:		
ACCT F261X	Principles of Financial Accounting	3
ACCT F262	Principles of Managerial Accounting	3
Upper-division accounting electives		9
Total Credits		**15**

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general education requirements.

Aerospace Engineering Minor

Program Requirements

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Minimum Requirements for Aerospace Engineering Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Aerospace Engineering Minor Requirements		
Complete the following:		
ME F451	Aerodynamics	3
ME F452	Introduction to Astrodynamics	3
Complete three of the following:		9-11
AERO F654	UAS Systems Design	
AERO F656	Aerospace Systems Engineering	
AERO F658	Unmanned Aircraft Systems (UAS) Operations	
EE F444	Embedded Systems Design	
EE F471	Automatic Control	
or ME F409	Controls	
GEOS F422	Geoscience Applications of Remote Sensing	
ME F408	Mechanical Vibrations	
ME F450	Theory of Flight	
ME F453	Propulsion Systems	
Total Credits		**15-17**

Note: This minor may require substantial prerequisite courses for non-ME and non-EE majors, which should be taken into consideration.

Agrometeorology Minor

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Minimum Requirements for Agrometeorology Minor: 25 credits

Students must be enrolled in the upper-level division of sciences (natural resources and agriculture, geosciences, geography, etc.), mathematics or engineering at the University of Alaska system in order to complete the minor in agrometeorology. Students outside the UA system wishing to apply to this program are encouraged to contact the Department of Atmospheric Sciences (https://www.uaf.edu/atmos/) for options at 314 Akasofu Building, PO Box 757320, Fairbanks, AK 99775-7320. Phone: 907-474-7368, Fax: 907-474-7379

Courses scheduled for the minor in agrometeorology include 25 credits + one internship (field practice).

Students must earn a C- grade or better in each course.

Code	Title	Credits
Agrometeorology Minor Requirements		
Complete the following:		
ATM F401	Introduction to Atmospheric Sciences	3
ATM F444	Weather Analysis and Forecasting	3
ATM F473	Micrometeorology with Focus on Subarctic and Arctic Ecosystems	3
NRM F210	Principles of Sustainable Agriculture	3
NRM F338	Introduction to Geographic Information Systems	3
NRM F380	Soils and the Environment [1]	3
NRM F435	GIS Analysis	4
NRM F480	Soil Management for Quality and Conservation	3
Total Credits		**25**

[1] NRM F380 is a prerequisite for NRM F480

Alaska Native Languages Minor

Program Requirements

< Back to Department (p. 98)

Minimum Requirements for Alaska Native Languages Minor: 15 credits

Students must earn a C- or better in each course.

Code	Title	Credits
Alaska Native Languages Minor Requirements		
Complete the following:		
Any ANL, INU or YUP courses		15
Total Credits		**15**

Alaska Native Studies Minor

Program Requirements

< Back to Department (p. 100)

Minimum Requirements for Alaska Native Studies Minor: 15 credits

Students must earn a C- or better in each course.

Code	Title	Credits
Alaska Native Studies Minor Requirements		
Complete the following:		
ANS course at the F300 or F400 level		3
ANS F401	Cultural Knowledge of Native Elders	3
Alaska Native Studies electives [1]		9
Total Credits		**15**

[1] All minor electives must be approved by the head of the Department of Alaska Native Studies and Rural Development.

Ancient, Medieval and Early Modern Studies Minor

Program Requirements

< Back to Department (p. 140)

Minimum Requirements for Ancient, Medieval and Early Modern Studies Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Ancient, Medieval and Early Modern Studies Minor Requirements		
Complete the following:		
HUM F201X	Unity in the Arts	3
Complete five of the following:		15
Only two electives from the list can be from any one discipline.		
ART F261X	History of World Art I	
ART F364	Italian Renaissance Art [1]	
ENGL F301	Literature of the Ancient World [1]	
ENGL F302	Medieval and Early Modern European Literature [1]	
ENGL F308	Survey of British Literature: Beowulf to the Romantic Period	
ENGL F415	Studies in 17th- and 18th-Century British Literature [2]	
ENGL F420	Studies in Medieval and 16th-Century British Literature [2]	
ENGL F422	Shakespeare: History Plays and Tragedies	
ENGL F425	Shakespeare: Comedies and Nondramatic Poetry	
HIST F101	Western Civilization Before 1500	
HIST F401	Renaissance and Reformation Europe [1]	
HIST F402	Seventeenth- and Eighteenth-century Europe [1]	
LAT F101X	Beginning Latin I	
LAT F102X	Beginning Latin II	
MUS F221	History of Western Music I [1]	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries [1]	
PHIL F351	History of Ancient Greek Philosophy	
PHIL F352	History of Modern Philosophy: Descartes to Kant	
PHIL/PS F411	Classical Political Theory [1]	
PHIL/PS F412	Modern Political Theory	
Total Credits		**18**

[1] Course offered every two years.
[2] Course offered every three years.

Anthropology Minor

Program Requirements

< Back to Department (p. 103)

Minimum Requirements for Anthropology Minor: 18 credits

Students must earn a C- or better in each course.

Code	Title	Credits
Anthropology Minor Requirements		
Complete the following:		
ANTH F211X	Fundamentals of Archaeology	3
ANTH F215	Fundamentals of Social/Cultural Anthropology	3
ANTH F221	Fundamentals of Biological Anthropology	3
ANTH/LING F260	Fundamentals of Linguistic Anthropology: Language in Culture and Communication	3
Anthropology electives		6
Total Credits		**18**

Applied Accounting Minor

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Minimum Requirements for Applied Accounting Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Applied Accounting Minor Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F201	Principles of Accounting II	3
or ABUS F235	Fund Accounting for Nonprofits	
ABUS F210	Income Tax	3
ABUS F220	Microcomputer Accounting: QuickBooks	3
BA F151X	Introduction to Business	3
CIOS F135	Microcomputer Spreadsheets	3
or CIOS F240	Microcomputer Databases	
Total Credits		**18**

Arctic and Northern Studies Minor

Program Requirements

< Back to Department (p. 106)

Minimum Requirements for Arctic and Northern Studies Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Arctic and Northern Studies Minor Requirements		
Complete the following:		
ACNS F201	The Circumpolar North: An Introductory Overview	3
Complete any additional 12 ACNS or program-approved Arctic-related credits with approval from a program director		12
Total Credits		**15**

Arctic Skills Minor

Program Requirements

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Minimum Requirements for Arctic Skills Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Arctic Skills Minor Requirements		
Complete the following:		
AVTY F100	Private Pilot Ground School	3-4
or AVTY F111	Fundamentals of Aviation	
AVTY F231	Arctic Survival	3
or EMS F257	Arctic Survival	
EMS F170	EMT: Emergency Medical Technician I	6
Approved electives [1]		3-4
Total Credits		**15-17**

[1] Approved by program manager.

Art History Minor

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Minimum Requirements for Art History Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Art History Minor Requirements		
Complete the following:		
ART F261X	History of World Art I	3
ART F262X	History of World Art II	3
Complete three of the following:		9
ART F363	History of Modern Art	
ART F364	Italian Renaissance Art	
ART F365	Alaska Native Art History	
ART F425	Visual Images of the North	
ART F463	Seminar in Art History	
ART F464	History of Photography	
One art studio course may be substituted per department approval		
Total Credits		**15**

Art Minor

Program Requirements

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Minimum Requirements for Art Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Art Minor Requirements		
Complete the following:		
ART F105X	Beginning Drawing	3
ART F261X	History of World Art I	3
or ART F262X	History of World Art II	
Complete one of the following:		3
ART F161	Two-dimensional Digital Design	
ART F162	Color and Design	
ART F163	Three-dimensional Design	
Art Electives		9
Total Credits		**18**

Note: A minor in art is only available to non-art majors.

Asian Studies Minor

Program Requirements

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Minimum Requirements for Asian Studies Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Asian Studies Minor Requirements		
Complete 15 credits from the following: [1]		15
Anthropology		
ANTH F302	Siberia: Past, Present, Future	
Foreign Languages		
CHNS F101X	Elementary Chinese I	
CHNS F102X	Elementary Chinese II	
CHNS F201	Intermediate Chinese I	
CHNS F202	Intermediate Chinese II	
JPN F101X	Elementary Japanese I	
JPN F102X	Elementary Japanese II	
JPN F201	Intermediate Japanese I	
JPN F202	Intermediate Japanese II	
History		
HIST F121	East Asian Civilization	
HIST F122X	East Asian Civilization	
HIST F330	Modern China	
HIST F331	Modern Japan	
HIST F333	Foundations of Japanese History	
Philosophy		
PHIL F202	Introduction to Eastern Philosophy	
Political Science		
PS F304	International Security	
PS F464	East Asian Governments and Politics	
Total Credits		**15**

[1] Courses must be distributed among at least three departments and include material on at least two Asian countries. Students are strongly encouraged to include a semester or more of Asian language.

Aviation Technology Minor

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Minimum Requirements for Aviation Technology Minor: 16 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Foundation Course		
Complete the following:		
AVTY F100	Private Pilot Ground School	4
Aviation Technology Minor Requirements		
Complete the following:		
AVTY F155	Preventive Maintenance	3
AVTY F231	Arctic Survival	3
AVTY F235	Elements of Weather	3
Elective		
Complete the following:		
AVTY elective or AFPM advisor-approved elective		3
Total Credits		**16**

Biochemistry Minor

Program Requirements

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Minimum Requirements for Biochemistry Minor: 26 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Biochemistry Minor Requirements		
Complete the following:		
CHEM F105X	General Chemistry I	4
CHEM F106X	General Chemistry II	4
CHEM F202	Basic Inorganic Chemistry	3-4
or CHEM F212	Chemical Equilibrium and Analysis	
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
CHEM F449	General Biochemistry: Metabolism	3
Total Credits		**26-27**

Biological Sciences Minor

Program Requirements

< Back to Department (p. 111)

Minimum Requirements for Biological Sciences Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Biological Sciences Minor Requirements		
Complete the following:		
BIOL F115X	Fundamentals of Biology I	4
BIOL F116X	Fundamentals of Biology II	4
BIOL F260	Principles of Genetics	4
Complete one of the following: [1]		3-8
BIOL F111X and BIOL F112X	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
BIOL F310	Animal Physiology	
BIOL F342	Microbiology	
BIOL F360	Cell and Molecular Biology	
BIOL F371	Principles of Ecology	
BIOL F481	Principles of Evolution	
Complete one additional course in biology at the 200 level or above		3
Total Credits		**18-23**

[1] Courses that satisfy upper-division elective credit may require prerequisites in addition to the required biology course.

Chemistry Minor

Program Requirements

< Back to Department (p. 115)

Minimum Requirements for Chemistry Minor: 27 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Chemistry Minor Requirements		
Complete the following:		
CHEM F105X	General Chemistry I	4
CHEM F106X	General Chemistry II	4
CHEM F202	Basic Inorganic Chemistry	3-4
or CHEM F332	Physical Chemistry II	
CHEM F212	Chemical Equilibrium and Analysis	4
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
Total Credits		**27-28**

Communication Minor

Program Requirements

< Back to Department (p. 120)

Minimum Requirements for Communication Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Communication Minor Requirements		
Complete the following:		
COM F181	Introduction to Communication Theory	3
COM F330	Intercultural Communication	3
or COM F380	Women, Minorities and the Media	
Communication electives at the F300 level or above		9
Total Credits		**15**

Computer Information Technology Specialist Minor

Program Requirements

< Back to Department (p. 123)

Minimum Requirements for Computer Information Technology Specialist Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Computer Information Technology Specialist Minor Requirements		
Complete the following:		
CITS F204	Introduction to Computer Networks	3
CITS F212	Server Operating Systems	3
CITS F261	Computer and Network Security	3
Two CITS electives		6
Total Credits		**15**

Computer Science Minor

Program Requirements

< Back to Department (p. 124)

Minimum Requirements for Computer Science Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Computer Science Minor Requirements		
Complete the following:		
CS F201	Computer Science I	3
CS F202	Computer Science II	3
Complete three of the following:		9
F300- or F400-level CS course		
EE F341	Digital and Computer Analysis and Design	
MATH F426	Numerical Analysis	
MATH F460	Mathematical Modeling	
Electives approved by a computer science advisor		
Total Credits		**15**

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Creative Writing Minor

Program Requirements

< Back to Department (p. 140)

Minimum Requirements for Creative Writing Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Creative Writing Minor Requirements		
Complete the following:		

ENGL F270X	Introduction to Creative Writing	3
Complete two of the following:		6
ENGL F375	Intermediate Creative Writing: Fiction	
ENGL F376	Intermediate Creative Writing: Poetry	
ENGL F377	Intermediate Creative Writing: Nonfiction	
Complete two of the following:		6
ENGL F470	Topics in Creative Writing	
ENGL F471	Undergraduate Writers' Workshop	
ENGL F488	Dramatic Writing	
Total Credits		**15**

Cybersecurity Minor

< Back to Department (p. 149)

Minimum Requirements for Cybersecurity Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Cybersecurity Minor Requirements		
Complete the following:		
HSEM F301	Principles of Emergency Management and Homeland Security	3
HSEM F415	Cybersecurity in the 21st Century: Technology and Ethics	3
HSEM F416	Cybersecurity Management	3
HSEM F417	Cybersecurity Resiliency	3
HSEM F418	Cybercrime, Fraud and Law	3
Total Credits		**15**

Early Childhood Education Minor

Program Requirements

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Minimum Requirements for Early Childhood Education Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Early Childhood Education Minor Requirements		
Complete the following:		
ECE F101	Early Childhood Professionalism	3
ECE F104X	Child Development I: Prenatal, Infants and Toddlers	3
or ECE F107X	Child Development II: The Preschool and Primary Years	
Select 12 ECE credits [1]		12
Total Credits		**18**

[1] Including a minimum of 6 upper-division ECE credits and excluding special topics (ECE F-93) and current issue (ECE F249) courses.

Elementary Education Minor

Program Requirements

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Minimum Requirements for Elementary Education Minor: 19 credits

The elementary education minor is designed for students who intend to pursue a license in elementary education. Students who complete ED F110, ED F201, ED F330, ED F344 and EDSE F316 with grades of C or better will be allowed to substitute this sequence for ED F624, ED F625 and ED F626 in the postbaccalaureate elementary (K-8) licensure program at UAF.

Students must earn a C- or better in each course.

Code	Title	Credits
Elementary Education Minor Requirements		
Complete the following:		
ED F110	Becoming a Teacher in the 21st Century	1
ED F201	Introduction to Education	3
ED F206	Core Practices in Place and Arts-Based Teaching	3
ED F330	Assessment of Learning	3
ED F344	Foundations of Literacy Development	3
ED F420	Alaska Native Education	3
or ED F461	Native Ways of Knowing	
EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	3
Total Credits		**19**

Note: Practicum may be required in each education course.

English Minor

Program Requirements

< Back to Department (p. 140)

Minimum Requirements for English Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
English Minor Requirements		
Complete the following:		
ENGL electives at the F300 level or above		9
ENGL electives at the F400 level		9
Total Credits		**18**

Environmental Change Minor

Program Requirements

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Minimum Requirements for the Environmental Change Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Environmental Change Program Requirements		
Complete a minimum of 6 credits from each of the following lists:		15
Natural Sciences, Engineering and Technology		
Social Sciences, Humanities and Alaska Native Studies		
Additional electives can be approved by an undergraduate interdisciplinary advisor [1]		
Climate Scholars Program courses can be approved for this minor [2]		
Total Credits		**15**

NATURAL SCIENCE, ENGINEERING AND TECHNOLOGY 6-12 CREDITS

Code	Title	Credits
ATM F101X	Weather and Climate of Alaska	4
ATM F456	Climate and Climate Change	3
ATM F473	Micrometeorology with Focus on Subarctic and Arctic Ecosystems	3
BIOL F103X	Biology and Society	4
BIOL F104X	Natural History of Alaska	4
BIOL F371	Principles of Ecology	4
BIOL F385	Global Change Biology	3
CE F424	Permafrost Engineering	3
ENVI Courses		1-6
FISH F110	Fish and Fisheries in a Changing World	3
GE F441	Geohazard Analysis	3
GEOS F460	The Dynamic Alaska Coastline	3
GEOS/ATM F480	Climate Change Processes: Past, Present, Future	4
MBI F482	Human Impacts to the Marine Biosphere	3
OCN F481	The Ocean and Global Change	3
Additional electives can be approved by an undergraduate interdisciplinary advisor [1]		

SOCIAL SCIENCES, HUMANITIES AND ALASKA NATIVE STUDIES 6-9 CREDITS

Code	Title	Credits
ACNS F201	The Circumpolar North: An Introductory Overview	3
ACNS F429	Geography of the Arctic and Circumpolar North	3
ANS F101	Introduction to Alaska Native Studies	3
ANS F350	Cross-cultural Communication: Alaska Perspectives	3
ANS/ANTH/ART F365	Alaska Native Art History	3
ANS/RD F401	Cultural Knowledge of Native Elders	3
ANS/ED F461	Native Ways of Knowing	3
ART/ACNS F425	Visual Images of the North	3
ECON F434	Environmental Economics	3
ENGL/ACNS F449	Northern and Environmental Literature	3
HIST F411	Environmental History	3
HONR/ACNS/NRM/RD F125	Our Changing Climate: Past, Present, Future	3
NRM F101	Natural Resources Conservation and Policy	3
NRM F111X	Introduction to Sustainability Science	3
NRM F303X	Environmental Ethics and Actions	3
NRM F407	Environmental Law	3
PS F447	U.S. Environmental Politics	3
PS F458	Comparative Environmental Politics	3
RD F265	Perspectives on Subsistence in Alaska	3
RD F300	Rural Development in a Global Perspective	3
RD F465	Community Healing and Wellness	3
Additional electives can be approved by an undergraduate interdisciplinary advisor [1]		

NOTES

[1] Students can choose from a list of pre-approved courses that span UAF's disciplinary strengths in environmental change. Students are also encouraged to explore other relevant courses, such as special topics courses, classes bringing in cross-cultural perspectives, research experiences and study away programs. Any course that is not on the pre-approved list must be approved by the undergraduate interdisciplinary advisor for it to meet this minor's requirements.

[2] Climate Scholars Program courses can meet requirements for this minor. Advisors in the undergraduate interdisciplinary studies department can approve CSP courses and define which category they meet in the minor with a memo to Degree Services.

NOTE: Students should work with their advisors to determine if courses in the minor can be shared with other degree requirements, but generally, courses meeting general education and major requirements may be shared with the Environmental Change minor.

Environmental Politics Minor

Program Requirements

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Minimum Requirements for Environmental Politics Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Environmental Politics Minor Requirements		
Complete the following:		
PS F101X	Introduction to American Government and Politics	3
Complete 12 elective political science credits from the following:		12
PS F447	U.S. Environmental Politics	
PS F454	International Law and the Environment	
PS F455	Political Economy of the Global Environment	
PS F456	Science, Technology and Politics	
PS F458	Comparative Environmental Politics	
Total Credits		**15**

Ethnobotany Minor

Program Requirements

< Back to Department (p. 121)

Minimum Requirements for Ethnobotany Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Ethnobotany Minor Requirements		
Complete the following:		
BIOL F190	Introduction to Alaska Flora	2
EBOT F100	Introduction to Ethnobotany	3
EBOT F200	Seminar in Ethnobotany	2
EBOT F210	Ethical Wildcrafting	1
EBOT F220	Research Methods for Ethnobotanists	2
EBOT F230	Ethnobotanical Chemistry	3-4
or EBOT F250 and EBOT F251	Applied Ethnobotany Fall and Applied Ethnobotany Spring	
Complete 2-3 credits of advisor-approved elective courses at F200 level or higher, selected from related subject areas, including (but not limited to): ANL, ANS, ANTH, BIOL and RD.		2-3
Total Credits		**15-17**

Film Minor

Program Requirements

< Back to Department (p. 183)

Minimum Requirements for Film Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Film Minor Requirements		
Complete the following:		
FLPA F217X	Introduction to the Study of Film	3
FLPA F258	Lights, Camera, Audio!	3
FLPA F271	Film Set Production I	3
Department-approved FLPA electives		9
Total Credits		**18**

Finance Minor

Program Requirements

< Back to Department (p. 114)

Minimum Requirements for Finance Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Finance Minor Requirements		
Complete the following:		
ACCT F261X	Principles of Financial Accounting	3
BA F325	Financial Management	3
ECON F101X	Principles of Microeconomics	3
Complete two of the following:		6
BA F423	Investment Analysis	
BA F424	Real Estate and Alternative Investments	
BA F454	Student Investment Fund	
BA F455	Portfolio Management	
BA F461	International Finance	
Total Credits		**15**

Fire Science Minor

Program Requirements

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Minimum Requirements for Fire Science Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Fire Science Minor Requirements		
Complete the following:		
FIRE F131	Firefighter I, Series I	3
FIRE F133	Firefighter I, Series II	3
FIRE F135	Firefighter I, Series III	3
FIRE F137	Firefighter I, Series IV	3
EMS F170	EMT: Emergency Medical Technician I	6
Total Credits		**18**

Fisheries Minor

Program Requirements

< Back to Department (p. 142)

Minimum Requirements for Fisheries Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Fisheries Minor Requirements		
Complete the following:		
FISH F110	Fish and Fisheries in a Changing World	3
FISH F288	Fish and Fisheries of Alaska	3
A least 9 additional credit hours designated FISH		9
Total Credits		**15**

Foreign Languages Minor

Program Requirements

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Minimum Requirements for Foreign Languages Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Foreign Languages Minor Requirements		
Complete the following:		
Foreign language credits at the F100 level or above		3
Foreign language credits at the F200 level or above		12
Total Credits		**15**

General Business Minor - Applied Business and Accounting Program

< Back to Department (p. 104)

Minimum Requirements for General Business Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General Business Minor Requirements		
Complete the following:		
ABUS F101	Principles of Accounting I	3
ABUS F161	Personal and Business Finance	3
ABUS F175	Customer Service	3
ABUS F260	Marketing Practices	3
or ABUS F263	Public Relations	
BA F151X	Introduction to Business	3
Complete one of the following:		3
ABUS F232	Contemporary Management Issues	
ABUS F272	Small-Business Planning	
ABUS F273	Entrepreneurship and Small Business	
Total Credits		**18**

Note: Other courses specific to individual education and career goals may be substituted with program approval.

General Business Minor - Business Administration Program

Program Requirements

< Back to Department (p. 114)

Minimum Requirements for General Business Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General Business Minor Requirements		
Complete five College of Business and Security Management-approved courses.		15
At least three must be BA courses.		
At least 6 credit hours must be upper-division.		
Total Credits		**15**

General Education Minor

Program Requirements

< Back to Department (p. 137)

Minimum Requirements for General Education Minor: 16 credits

The general education minor is designed for any student interested in education issues who does not intend to pursue a license in elementary or secondary education.

Students must earn a C grade or better in each course.[1]

Code	Title	Credits
General Education Minor Requirements		
Complete the following:		
ED F110	Becoming a Teacher in the 21st Century	1
ED F201	Introduction to Education	3
ED/ANS F420	Alaska Native Education	3
or ED F461	Native Ways of Knowing	
PSY F240	Psychology of Development	3
or ED/PSY F245	Child Development	
Approved education electives [2]		6
Total Credits		**16**

1 Practicum may be required in each education course.
2 Contact the School of Education's Certification and Advising Office for a list of approved elective courses.

Geology Minor

Program Requirements

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Minimum Requirements for Geology Minor: 20 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Geology Minor Requirements		
Complete the following:		
GEOS F101X	The Dynamic Earth	4
GEOS F112X	The History of Earth and Life	4
Additional credits of GEOS courses as approved by the undergraduate geoscience advisor		12
Total Credits		**20**

Geophysics Minor

Program Requirements

< Back to Department (p. 146)

Minimum Requirements for Geophysics Minor: 21 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Geophysics Minor Requirements		
Complete the following:		
GEOS F101X	The Dynamic Earth	4
GEOS F112X	The History of Earth and Life	4
GEOS F406	Volcanology	3
GEOS F419	Solid Earth Geophysics	3
GEOS F431	Foundations of Geophysics	4
GEOS F477	Ice in the Climate System	3
Total Credits		**21**

Geospatial Sciences Minor

Program Requirements

< Back to Department (p. 146)

Minimum Requirements for Geospatial Sciences Minor: 19 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Geospatial Sciences Minor Requirements		
Complete the following:		
GEOS F101X	The Dynamic Earth	4
GEOS F112X	The History of Earth and Life	4
GEOS F225	Field and Computer Methods in Geology	2
GEOS F422	Geoscience Applications of Remote Sensing	3
GEOS F458	Big Geospatial Data	3
NRM F338	Introduction to Geographic Information Systems	3
Total Credits		**19**

Global Studies Minor

Program Requirements

< Back to Department (p. 120)

Minimum Requirements for Global Studies Minor: 16-18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Global Studies Minor Requirements		
Complete one of the following:		3
ENGL F218	Themes in Literature	
ENGL F280	Introduction to Colonial and Postcolonial Literature	
LING F216X	Languages of the World	
PS F202	Democracy and Global Society	
Complete four of the following with no more than two courses (6 credits) from the same department:		12
ANTH/RD F315	Human Biological Variation	
ANTH F428	Ecological Anthropology	
ANTH/WGS F445	Gender in Cross-cultural Perspective	
ANTH F446	Economic Anthropology	
BIOL F476	Ecosystem Ecology	
COM F330	Intercultural Communication	
COM F353	Conflict, Mediation and Communication	
ENGL F380	Topics in Colonial and Postcolonial Literature	
HIST F316	Europe Since 1945	
HIST F411	Environmental History	
NRM F338	Introduction to Geographic Information Systems	
PHIL/PS F472	Ethics in International Affairs	
PS F201X	Comparative Politics	
PS F304	International Security	
PS F322	International Law and Organization	
PS F323	International Political Economy	
PS F454	International Law and the Environment	
PS F455	Political Economy of the Global Environment	
PS F456	Science, Technology and Politics	
RD F300	Rural Development in a Global Perspective	
Civic engagement/internship project [1]		1-3
Total Credits		**16-18**

[1] Complete a variable credit civic engagement/internship project working collaboratively with one of the faculty in the student's primary course interest. The number of credits will be determined by the student's

advisor based on the number of hours worked in the nature of the academic component of the internship or project.

Note: The program in global studies also strongly encourages students to study abroad for at least one semester, and to work toward fluency in a second language.

Because of the flexibility of the program and the internship requirement, it will be important for students to work closely with an advisor familiar with the program. Please contact the program coordinator with any questions you may have about the program.

For more information and advising contact:
Kevin Sager
Program Coordinator
ksager2@alaska.edu

Health Sciences for Pre-professionals Minor

Program Requirements

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Minimum Requirements for Health Sciences for Pre-professionals Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Health Sciences for Pre-professionals Minor Requirements		
Complete one of the following advisor-approved tracks:		15-29
Tracks		
Pre-dental		
Pre-medical		
Pre-nursing		
Pre-occupational Therapy		
Pre-pharmacy		
Pre-physical Therapy		
Pre-physician Assistant		
Pre-veterinary		
Other Health Science		
Total Credits		**15-29**

The following tracks list the courses currently required or strongly recommended by post-baccalaureate professional schools in health fields. Please reference the UAF pre-health (https://uaf.edu/prehealth/) website and work closely with a designated pre-professional advisor (https://uaf.edu/prehealth/get-in-touch/advising.php) or interdisciplinary studies advisor (https://uaf.edu/inds/) for guidance and approved coursework for each minor. After meeting with a student and developing an academic plan, the advisor will submit a memo with an approved course list and total credits in the minor to the Office of the Registrar.

UAF pre-professional students should use these tracks as a reference, but prerequisite courses can vary from professional school to school even for the same professional degree type. The name of the track selected are listed in Degree Works, but they are not listed on students' transcripts; only the minor's title, *Health Sciences for Pre-Professionals* will be listed on students' transcripts.

Pre-professional courses that are meeting other UAF degree requirements don't need to be included in the minor but can be shared when allowed by the UAF Catalog. A maximum of 29 credits can be included in this minor. If more than 29 credits are needed to be included in the minor, students may work with their advisor to petition to use more than 29 credits. Another option for students who would like to include more than 29 credits in this minor, is declaring a second major. A pre-professional advisor can help you explore the best combination of major(s) and minor(s) to help you reach your goals.

TRACKS

Pre-dental

Code	Title	Credits
Dental school prerequisites:		15 or more
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F321	Organic Chemistry I	
CHEM F325	Organic Chemistry II	
PHYS F123X	College Physics I	
or PHYS F211X	General Physics I	
PHYS F124X	College Physics II	
or PHYS F212X	General Physics II	
Dental school recommendations:		
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F310	Animal Physiology	
CHEM F449	General Biochemistry: Metabolism	
MATH F251X	Calculus I	
or MATH F230X	Essential Calculus with Applications	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Advisor approved electives [1]		

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-medical

Code	Title	Credits
Medical school prerequisites:		15 or more
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F321	Organic Chemistry I	

CHEM F325	Organic Chemistry II
CHEM F449	General Biochemistry: Metabolism
PHYS F123X/ F211X	College Physics I
PHYS F124X/ F212X	College Physics II
Medical school recommendations:	
MATH F251X	Calculus I
or MATH F230X	Essential Calculus with Applications
STAT F200X	Elementary Statistics
or STAT F300	Statistics
PSY F101X	Introduction to Psychology
PSY F240	Psychology of Development
Advisor approved electives [1]	

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-nursing

Code	Title	Credits
Nursing school prerequisites:		15 or more
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F240X	Beginnings in Microbiology	
CHEM F103X	Introduction to General Chemistry	
CHEM F105X	General Chemistry I	
HLTH F203	Science of Nutrition	
or BIOL F120X	Introduction to Human Nutrition	
PSY F101X	Introduction to Psychology	
PSY F240	Psychology of Development	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Advisor approved electives [1]		

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-occupational Therapy

Code	Title	Credits
Occupational therapy school prerequisites:		15 or more
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F240X	Beginnings in Microbiology	
ECON	Economics Course	
HLTH F100	Medical Terminology	
PSY F240	Psychology of Development (SOC/ ANTH::Sociology or anthropology course)	
PSY F345	Mental Health and Psychopathology	
SOC/ANTH	Sociology or anthropology course	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Occupational therapy school recommendations:		
PHYS F123X	College Physics I	
or PHYS F211X	General Physics I	
Advisor approved electives [1]		

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-pharmacy

Code	Title	Credits
Pharmacy school prerequisites:		15 or more
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
or MATH F230X	Essential Calculus with Applications	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Pharmacy school recommendations:		
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F342	Microbiology	
PHYS F123X	College Physics I	
or PHYS F211X	General Physics I	
PHYS F124X	College Physics II	
or PHYS F212X	General Physics II	
ECON	Economics course	
Advisor approved electives [1]		

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-physical Therapy

Code	Title	Credits
Physical Therapy school prerequisites:		15 or more
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
PHYS F123X	College Physics I	
or PHYS F211X	General Physics I	
PHYS F124X	College Physics II	
or PHYS F212X	General Physics II	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	

PSY Course	Psychology/Behavioral Science course
Advisor approved electives [1]	

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-physician Assistant

Code	Title	Credits
Physician assistant school prerequisites:		15 or more
BIOL F111X	Human Anatomy and Physiology I (Physician assistant school prerequisites:)	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
BIOL F342	Microbiology	
CHEM F105X	General Chemistry I	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Physician assistant school recommendations:		
BIOL F260	Principles of Genetics	
CHEM F449	General Biochemistry: Metabolism	
PSY/ANTH/SOC	Social science elective	
Advisor approved electives [1]		

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Pre-veterinary

Code	Title	Credits
Veterinary school prerequisites:		15 or more
BIOL F115X	Fundamentals of Biology I	
BIOL F116X	Fundamentals of Biology II	
BIOL F260	Principles of Genetics	
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
CHEM F321	Organic Chemistry I	
CHEM F325	Organic Chemistry II	
CHEM F449	General Biochemistry: Metabolism	
PHYS F123X	College Physics I	
or PHYS F211X	General Physics I	
PHYS F124X	College Physics II	
or PHYS F212X	General Physics II	
MATH F251X	Calculus I	
or MATH F230X	Essential Calculus with Applications	
STAT F200X	Elementary Statistics	
or STAT F300	Statistics	
Veterinary school recommendations:		
BIOL F111X	Human Anatomy and Physiology I	
BIOL F112X	Human Anatomy and Physiology II	
BIOL F310	Animal Physiology	
BIOL F342	Microbiology	
PSY/ANTH/SOC	Social Science elective	
Advisor approved electives [1]		

[1] All minor electives must be approved by a pre-professional advisor listed on the UAF pre-health website or on the Undergraduate Interdisciplinary Studies website (https://uaf.edu/inds/).

Other Health Science

Other Health Science - If seeking another health profession other than the tracks listed, meet with a UAF pre-professional advisor to explore other health careers and the prerequisite courses that are needed for them.

History Minor

Program Requirements

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Minimum Requirements for History Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
History Minor Requirements		
Complete the following:		
HIST electives at the F300 level or above		6
HIST electives		12
Total Credits		**18**

Homeland Security and Emergency Management Minor

< Back to Department (p. 149)

Minimum Requirements for Homeland Security and Emergency Management Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Homeland Security and Emergency Management Minor Requirements		
Complete the following:		
HSEM F301	Principles of Emergency Management and Homeland Security	3
HSEM electives		12
Total Credits		**15**

Human Services Minor

< Back to Department (http://catalog.uaf.edu/minors/human-services/academic-departments/social-human-development/)

Minimum Requirements for Human Services Minor: 18 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
Human Services Minor Requirements		
Complete one of the following options:		18
Option 1:		
Complete one concentration in human services		
Complete HUMS elective credits		
Option 2:		
Complete department-approved elective credits [1]		
Total Credits		**18**

[1] Electives for Option 2 must be approved by the Department of Social and Human Development lead faculty.

Integrated Arts Minor

Program Requirements

< Back to Department (p. 183)

Minimum Requirements for Integrated Arts Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Integrated Arts Minor Requirements		
Complete the following:		
ART F105X	Beginning Drawing	3
FLPA F121X	Fundamentals of Acting	3
MUS F103X	Music Fundamentals	3
ART Elective		3
FLPA Elective		3
MUS elective		3
Total Credits		**18**

Interdisciplinary Studies Minor

Admission Requirements

Complete the following admission requirements:

1. Students who are interested in an interdisciplinary studies minor should meet with an advisor in the Office of Undergraduate Interdisciplinary Studies to develop and discuss their proposed minor. Please click on the "schedule an appointment" link on the undergraduate interdisciplinary studies website (http://www.uaf.edu/inds/).
2. After meeting with the interdisciplinary minor advisor, complete and electronically submit an interdisciplinary studies minor approval form (https://uaf.edu/inds/forms.php) to uaf-interdisciplinary@alaska.edu. On the form list the proposed minor's title, answer short essay questions about the minor's theme, and list courses included in the minor. An interdisciplinary minor cannot be titled the same as an existing minor and must demonstrate a cohesive body of knowledge skills. The approved title will appear on the student's transcript.
3. A committee appointed by the vice provost will review and approve interdisciplinary studies minors. This committee will ensure that an appropriate and cohesive body of knowledge and skills is addressed in the planned minor and that the interdisciplinary minor does not overlap with an existing minor. The committee may ask for changes to the minor before approval. Copies of the signed and approved form are sent to the student and the Office of the Registrar to be added to the student's records.

Program Requirements

< Back to Department (p. 153)

Minimum Requirements for Interdisciplinary Studies Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Interdisciplinary Studies Minor Requirements		
Complete the following:		
Courses from at least two different disciplines that focus on a shared theme.		18 or more
Total Credits		**18**

Note: At least 3 credits must be earned at UAF for all minors.

More information can be found on the interdisciplinary studies website (https://www.uaf.edu/inds/).

Japanese Studies Minor

Program Requirements

< Back to Department (p. 144)

Minimum Requirements for Japanese Studies Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Japanese Studies Minor Requirements		
Complete the following:		
Japanese course credits at the F100 level or above		3
Japanese course credits at the F200 level or above		12
Total Credits		**15**

Journalism: Science and the Environment Minor

Program Requirements

< Back to Department (p. 155)

Minimum Requirements for Journalism: Science and the Environment Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Journalism: Science and the Environment Minor Requirements		
Complete the following:		
JOUR F101X	Media and Culture	3
JOUR F201	News Writing for the Media	3
Complete three of the following:		9
JOUR F205	Media and the Environment	
JOUR F207	Audio Production	
JOUR F211	If Einstein Were a Photographer	
JOUR F301	Reporting Science	
JOUR F303	Copy Editing	
JOUR F307	Video Production	
JOUR F391	Seminar: Issues in Science and the Environment	
JOUR F400	Professional Internship	
JOUR F429	Public Relations and Public Information in the Sciences	
JOUR F439	Science Writing for Popular Media	
JOUR F476	Advanced Digital Photography Portfolio	
JOUR F480	Documentary Filmmaking	
JOUR F497	Independent Study	
JOUR F498	Undergraduate Research	
Total Credits		**15**

Justice Minor

Program Requirements

< Back to Department (p. 156)

Minimum Requirements for Justice Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Justice Minor Requirements		
Complete the following:		
JUST F110X	Introduction to Justice	3
JUST electives		12
Total Credits		**15**

Note: F400-level courses require junior standing or instructor permission.

Law and Society Minor

Program Requirements

< Back to Department (p. 171)

Minimum Requirements for Law and Society Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Law and Society Minor Requirements		
Complete the following:		
PS F303	Politics and the Judicial Process	3
PS F435	Constitutional Law I: Federalism	3
PS F436	Constitutional Law II: Civil Rights and Liberties	3
Complete 6 credits from the following:		6
ANS F425	Federal Indian Law and Alaska Natives	
BA F317	Employment Law	
BA F330	The Legal Environment of Business	
JUST F352	Criminal Law	
JUST F354	Procedural Law	
PS F322	International Law and Organization	
PS F450	Comparative Indigenous Rights and Policies	
Total Credits		**15**

Leadership Minor

Program Requirements

< Back to Department (p. 114)

Minimum Requirements for Leadership Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Leadership Minor Requirements		
Complete two of the following:		6
HSEM/LEAD F456	Leaderships in Dangerous Contexts [1]	
LEAD/BA F470	Leadership Theory and Development [1]	
LEAD/BA F472	Leading Change [1]	
Tracks		
Complete 9 credits from one of the following tracks: [2]		9
Business Administration Track		
BA/LEAD/SPRT F280	Sport Leadership	
BA F307	Introductory Human Resources Management	
BA F460	International Business	
Military Science Track		
MILS F101	Introduction to the Army	
MILS F102	Foundations of Agile and Adaptive Leadership	
MILS F201	Leadership and Decision Making	
MILS F202	Army Doctrine and Team Development	
Political Science Track		
PS F212	Introduction to Public Administration	

PS F301	American Presidency [1]	
PS/PHIL F412	Modern Political Theory [1]	
PS F437	United States Foreign Policy [1]	
Communication Track		
COM F330	Intercultural Communication	
COM F331	Advanced Group Communication	
COM F445	Organizational Communication	
COM F475	Applied Communication in Training and Development	
Outdoor Leadership Track		
NRM F161	Wilderness Leadership Education	
NRM F361	Advanced Wilderness Leadership Education [1]	
Complete 3 credits from the following skills courses for the remaining 3 credits:		
EMS F150	Wilderness Emergency Care	
RECR F140H	Beginning Rock Climbing	
RECR F140K	Advanced Rock Climbing	
RECR F140L	Introduction to Ice Climbing	
RECR F140Y	Kayaking	
RECR F170G	Introduction to Ski Mountaineering	
RECR F170N	Introduction to Winter Camping	
Alaska Native Community Leadership Track		
ANS F310	Alaska Native and Comparative Indigenous Land Settlements	
ANS F325	Alaska Native and Comparative Tribal Self-Government	
ANS/RD F401	Cultural Knowledge of Native Elders	
ANS F425	Federal Indian Law and Alaska Natives	
RD F492	Rural Development Seminar	
Total Credits		**15**

[1] These courses have prerequisites that need to be taken into consideration. Consult with the College of Business and Security Management.

[2] Complete 9 credit hours from one of the “tracks” OR with the written approval of the College of Business and Security Management, any three 3-credit hour courses from any combination of tracks.

Linguistics Minor

Program Requirements

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Minimum Requirements for Linguistics Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Linguistics Minor Requirements		
Complete the following:		
LING F101X	Nature of Language	3
LING F318	Introduction to Phonetics and Phonology	3
LING F320	Introduction to Morphosyntax	3
or ENGL F318	Modern English Grammar	
Complete two LING electives:		6
Three of these credits may be from related courses in other departments		
ANL F251X	Introduction to Athabascan Linguistics	
ANL F315	Alaska Native Languages: Inuit-Aleut	
ANL F316	Alaska Native Languages: Indian Languages	
ANTH/WGS F308	Language and Gender	
ENGL F462	Applied English Linguistics	
ENGL F472	History of the English Language	
Total Credits		**15**

Management and Organizations Minor

Program Requirements

< Back to Department (p. 114)

Minimum Requirements for Management and Organizations Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Management and Organizations Minor Requirements		
Complete five of the following:		15
BA F307	Introductory Human Resources Management	
BA F317	Employment Law	
BA F325	Financial Management	
BA F330	The Legal Environment of Business	
BA F343	Principles of Marketing	
BA F360	Operations Management	
BA F390	Organizational Theory and Behavior	
ECON F101X	Principles of Microeconomics	
Total Credits		**15**

Marine Science Minor

Program Requirements

< Back to Department (p. 142)

Minimum Requirements for Marine Science Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Marine Science Minor Requirements		
Complete the following:		
OCN F211	Introduction to Marine Science I	3
MBI F212	Introduction to Marine Science II	3
FISH/MBI/OCN advisor-approved elective course		1

Complete 3 credits from the following:		3
MBI F317	Introduction to Marine Mammal Biology	
MBI F412	Early Life Histories of Marine Invertebrates	
MBI F421	Polar Marine Science	
OCN F315	Marine Geological Drama and Undersea Catastrophes	
OCN F419	Concepts in Physical Oceanography	
OCN F450	Biological Oceanography	
OCN F460	Chemical Oceanography	
OCN F463	Chemical Coastal Processes	
OCN F481	The Ocean and Global Change	
Complete 5 credits from the following:		5
Marine Biology		
MBI F220	Scientific Diving	
MBI F317	Introduction to Marine Mammal Biology	
MBI F412	Early Life Histories of Marine Invertebrates	
MBI F421	Polar Marine Science	
MBI F423	Nearshore Ecology Field Course	
MBI F450	Marine Biology and Ecology Field Course	
MBI F456	Kelp Forest Ecology	
MBI F492	Seminar	
Oceanography		
OCN F315	Marine Geological Drama and Undersea Catastrophes	
OCN F419	Concepts in Physical Oceanography	
OCN F450	Biological Oceanography	
OCN F460	Chemical Oceanography	
OCN F463	Chemical Coastal Processes	
OCN F481	The Ocean and Global Change	
Fisheries		
FISH F288	Fish and Fisheries of Alaska	
FISH F425	Fish Ecology	
FISH/BIOL F427	Ichthyology	
Chemistry		
CHEM F202	Basic Inorganic Chemistry	
CHEM F212	Chemical Equilibrium and Analysis	
Biology and Wildlife		
BIOL F473	Limnology	
Economics		
ECON F235X	Introduction to Natural Resource Economics	
Statistics		
STAT F200X	Elementary Statistics	
Total Credits		**15**

Marketing Minor

Program Requirements

< Back to Department (p. 114)

Minimum Requirements for Marketing Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Marketing Minor Requirements		
Complete five of the following:		15
BA F241	Advertising, Sales and Promotion	
BA F343	Principles of Marketing	
BA F436	Consumer Behavior	
BA F443	Social Media Marketing	
BA F482	Sport Marketing	
BA F490	Services Marketing Strategy	
BA F491	Current Topics in Marketing	
ECON F227	Introductory Statistics for Economics and Business	
Total Credits		**15**

Mathematics Minor

Program Requirements

< Back to Department (p. 159)

Minimum Requirements for Mathematics Minor: 21 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Mathematics Minor Requirements		
Complete the following:		
MATH F251X	Calculus I	4
MATH F252X	Calculus II	4
MATH F253X	Calculus III	4
Complete at least 9 additional credits of the following:		9
MATH F265	Introduction to Mathematical Proofs	
STAT F300	Statistics	
Any F300- or F400-level MATH course		
Electives approved by a mathematics advisor		
Total Credits		**21**

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Military Science and Leadership Minor

Program Requirements

< Back to Department (p. 149)

Minimum Requirements for Military Science and Leadership Minor: 19 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Military Science and Leadership Minor Requirements		
Complete the following:		
MILS electives [1]		19
Total Credits		**19**

[1] Electives must be approved by the department.

Military Security Studies Minor

< Back to Department (p. 149)

Minimum Requirements for Military Security Studies Minor: 16 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Military Security Studies Program Requirements		
Complete the following:		
MILS electives [1]		10
Complete two of the following:		6
HSEM F301	Principles of Emergency Management and Homeland Security	
HSEM F412	Emergency Planning and Preparedness	
HSEM F423	Disaster Response Operations and Management	
HSEM F434	All-hazards Risk Analysis	
HSEM F445	Business Continuity and Crisis Management	
HSEM F456	Leaderships in Dangerous Contexts	
MILS F442	History of the American Military [2]	
Total Credits		**16**

[1] As approved by the program director of Homeland Security and Emergency Management.

[2] Or course(s) pre-approved by the program director.

Mining Engineering Minor

Program Requirements

< Back to Department (p. 163)

Minimum Requirements for Mining Engineering Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Mining Engineering Minor Requirements		
Complete the following:		
MIN F110	Elements of Mine Safety, Operations and Development	2
Complete 13 or more MIN credits from advisor-approved electives at F300 or F400 level		13
Total Credits		**15**

Music Minor

Program Requirements

< Back to Department (p. 164)

Minimum Requirements for Music Minor: 18 credits

Students must earn a C grade or better in each course.

Students must select from one of the options below:

Note: No substitutions are permitted between options. It is recommended that students contact the Music Department for program advising before registering for music classes. All performance courses are subject to course enrollment and studio space limitations. Large ensemble courses are available subject to current vacancies for particular instrumental areas. Private lessons and large ensemble courses may require that students pass a performance audition. Prerequisite requirements apply.

OPTION A (NONPERFORMANCE EMPHASIS)

Code	Title	Credits
Music Minor Requirements		
Complete the following:		
MUS F190	Recital Attendance (two semesters)	0
Complete 12 credits from the following:		12
MUS F103X	Music Fundamentals	
MUS F131	Basic Music Theory I	
MUS F132	Basic Music Theory II	
MUS F133	Basic Ear Training I	
MUS F134	Basic Ear Training II	
MUS F221	History of Western Music I	
MUS F222	History of Western Music II	
MUS F223X	Alaska Native Music	
MUS F231	Advanced Music Theory I	
MUS F232	Advanced Music Theory II	
MUS F410	Women in Music History	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries	
MUS F423	Music of the 19th Century	
MUS F424	Music Since 1900	
Complete 2 credits from the following music large ensemble courses:		2
MUS F117	Northern Lights String Orchestra	
MUS F203	Fairbanks Symphony Orchestra	
MUS F205	Wind Ensemble	
MUS F211	Choir of the North	
Complete 4 credits from the following courses in lessons or ensemble:		4
MUS F151	Class Lesson	
MUS F161	Private Lessons	
MUS F162	Private Lessons	

MUS F261	Private Lessons	
MUS F262	Private Lessons	
MUS F361	Private Lessons	
MUS F362	Private Lessons	
MUS F461	Private Lessons	
MUS F462	Private Lessons	
Total Credits		**18**

OPTION B (PERFORMANCE EMPHASIS)

Code	Title	Credits
Music Minor Requirements		
Complete the following:		
MUS F190	Recital Attendance (two semesters)	0
Complete 6 credits from the following courses:		6
MUS F103X	Music Fundamentals	
MUS F131	Basic Music Theory I	
MUS F132	Basic Music Theory II	
MUS F133	Basic Ear Training I	
MUS F134	Basic Ear Training II	
MUS F221	History of Western Music I	
MUS F222	History of Western Music II	
MUS F223X	Alaska Native Music	
MUS F231	Advanced Music Theory I	
MUS F232	Advanced Music Theory II	
MUS F410	Women in Music History	
MUS F421	Music Before 1620	
MUS F422	Music in the 17th and 18th Centuries	
MUS F423	Music of the 19th Century	
MUS F424	Music Since 1900	
Complete 4 credits from the following music ensemble courses:		4
MUS F117	Northern Lights String Orchestra	
MUS F203	Fairbanks Symphony Orchestra	
MUS F205	Wind Ensemble	
MUS F211	Choir of the North	
Complete 8 credits from the following courses in private lessons or chamber music:		8
MUS F161	Private Lessons	
MUS F162	Private Lessons	
MUS F261	Private Lessons	
MUS F262	Private Lessons	
MUS F307	Chamber Music	
MUS F361	Private Lessons	
MUS F362	Private Lessons	
MUS F461	Private Lessons	
MUS F462	Private Lessons	
Total Credits		**18**

Natural Resources and Environment Minor

< Back to Department (p. 165)

Minimum Requirements for Natural Resources and Environment Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Natural Resources and Environment Minor Requirements		
Complete the following:		
NRM F101	Natural Resources Conservation and Policy	3
NRM electives [1]		15
Total Credits		**18**

[1] At least 6 credits must be upper-division. The minor program must be approved by a DNRE advisor.

Paleontology Minor

Program Requirements

< Back to Department (p. 146)

Minimum Requirements for Paleontology Minor: 16-20 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Paleontology Minor Requirements		
Complete the following:		
GEOS F101X	The Dynamic Earth	4
GEOS F112X	The History of Earth and Life	4
Complete three of the following:		8-12
GEOS F315	Paleobiology and Paleontology	
GEOS F317	Paleontological Research and Laboratory Methods	
GEOS F322	Stratigraphy and Sedimentation	
GEOS F453	Palynology and Paleopalynology	
GEOS F485	Mass Extinctions, Neocatastrophism and the History of Life	
GEOS F486	Vertebrate Paleontology	
Total Credits		**16-20**

Paralegal Studies Minor

Program Requirements

< Back to Department (p. 167)

Minimum Requirements for Paralegal Studies Minor: 15 credits

The minor is not designed to prepare students to work as paralegals and is not an American Bar Association accredited program of study.

Students must earn a C- grade or better in each course.

Code	Title	Credits
Paralegal Studies Minor Requirements		
Complete the following:		
PLS F102	Introduction to Paralegal Studies	3
PLS electives		12
Total Credits		**15**

Philosophy Minor

Program Requirements

< Back to Department (p. 169)

Minimum Requirements for Philosophy Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Philosophy Minor Requirements		
Complete the following:		
PHIL F102X	Introduction to Philosophy	3
PHIL F351	History of Ancient Greek Philosophy	3
PHIL F352	History of Modern Philosophy: Descartes to Kant	3
PHIL elective at the F400 level		3
Complete two of the following:		6
PHIL F104X	Logic and Reasoning	
PHIL F108	Symbolic Logic	
PHIL F202	Introduction to Eastern Philosophy	
PHIL F322X	Ethics	
PHIL F341	Theories of Knowledge	
PHIL F342	Theories of Reality	
PHIL F361	Philosophy in Literature	
PHIL F362	Feminist Philosophy	
PHIL F402	Biomedical and Research Ethics	
PHIL F421	Aesthetics	
PHIL F436	Ethical Theory	
PHIL F471	Contemporary Philosophical Problems	
PHIL F481	Philosophy of Science	
PHIL F487	Conceptual Issues in Evolutionary Biology	
Total Credits		**18**

Physics Minor

Program Requirements

< Back to Department (p. 170)

Minimum Requirements for Physics Minor: 20 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Physics Minor Requirements		
Complete the following:		
PHYS F211X	General Physics I	4
PHYS F212X	General Physics II	4
PHYS F213X	Elementary Modern Physics	4
Physics electives at the F300 or F400 level		8
Total Credits		**20**

Political Science Minor

Program Requirements

< Back to Department (p. 171)

Minimum Requirements for Political Science Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Political Science Minor Requirements		
Complete the following:		
PS F101X	Introduction to American Government and Politics	3
Complete at least four political science courses at the F200, F300 or F400 level		12
Total Credits		**15**

Psychology Minor

Program Requirements

< Back to Department (p. 173)

Minimum Requirements for Psychology Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Psychology Minor Requirements		
Complete the following:		
PSY F101X	Introduction to Psychology	3
PSY electives		12
Total Credits		**15**

Recreation and Guiding Management Minor

< Back to Department (p. 104)

Minimum Requirements for Recreation and Guiding Management Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Recreation and Guiding Management Minor Requirements		
Complete the following:		
ABUS F158	Introduction to Tourism	3
ABUS F175	Customer Service	3
NRM F161	Wilderness Leadership Education	3
Complete one of the following:		3
EMS F152	Emergency Trauma Training First Responder	
EMS F195	Special Topics	
More advanced Emergency First Responder Training		
Complete 6 credits from the following electives:		6
RECR electives		
NRM F361	Advanced Wilderness Leadership Education	
ABUS/NRM/RECR-approved practicum		
Total Credits		**18**

Note: Other courses specific to individual education and career goals may be substituted with program approval.

Rural Development Minor

Program Requirements

< Back to Department (p. 100)

Minimum Requirements for Rural Development Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Rural Development Minor Requirements		
Complete the following:		
Any 3-credit RD course at the F300 level or above		3
RD electives at the F200 level or above		12
Total Credits		**15**

Secondary Education Minor

Program Requirements

< Back to Department (p. 174)

Minimum Requirements for Secondary Education Minor: 16 credits

The secondary education minor is designed for students who are interested in pursuing careers as middle school and/or high school (grades 7-12) teachers.

Students must earn a C grade or better in each course.

Code	Title	Credits
Secondary Education Minor Requirements		
Complete the following:		
EDSC F110	Becoming a Middle/High School Teacher	1
EDSC F205	Introduction to Secondary Education	3
or EDSC F415	Foundations of Modern Educational Practice	
EDSC F407	Developing Literacy in the Content Areas	3
EDSC F458	Classroom Organization and Management	3
PSY F240	Psychology of Development	3
or ED/PSY F245	Child Development	
Complete one of the following:		3
EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	
EDSC F414	Learning, Development and Special Needs Instruction	
EDSE F422	Curriculum, Management and Strategies II: High Incidence	
EDSE F482	Inclusive Classrooms for All Children	
Total Credits		**16**

Note: Practicum may be required in each education course.

Social Work Minor

Program Requirements

< Back to Department (p. 180)

Minimum Requirements for Social Work Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Social Work Minor Requirements		
Complete the following:		
SWK F103X	Introduction to Social Work	3
SWK F220	Ethics, Values and Social Work Practice	3
Complete three SWK designated courses, excluding SWK F460, SWK F461, SWK F463 and SWK F464		9
Total Credits		**15**

Special Education Minor

Program Requirements

< Back to Department (p. 181)

Minimum requirements for Minor in Special Education: 24 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Special Education Minor Requirements		
Complete the following:		
EDSE F410	Assessment of Students with Exceptionalities	3
EDSE F412	Curriculum, Management and Strategies I: Low Incidence	3
EDSE F425	Teaching Mathematics to Special Learners	3
EDSE F432	Special Education Law: Principles and Practices	3
EDSE F477	English Language Arts Assessment, Curriculum and Strategies for Special Learners	3
EDSE F478	Special Education Clinical Practice: Initial [1]	3
Complete one of the following options:		3-6
Elementary Education students complete the following:		
EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	
EDSE F320	Adapting and Accommodating Instructions for Students with Disabilities	
Secondary Education students complete the following:		
EDSE F422	Curriculum, Management and Strategies II: High Incidence	
Special Education elective		3
Total Credits		**24-27**

[1] Additional fee required. Charges are added to fee statements each semester.

Sport Management Minor

Program Requirements

< Back to Department (p. 114)

Minimum Requirements for Sport Management Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Sport Management Minor Requirements		
Complete the following:		
BA/SPRT F280	Sport Leadership	3
BA/SPRT F281X	Introduction to Sport Management	3
Complete three of the following:		9
BA/SPRT F481	Event Management	
BA/SPRT F482	Sport Marketing	
BA/SPRT F483	Sport and Recreation Sales	
PSY F337	Sport Psychology	
Total Credits		**15**

Statistics Minor

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Minimum Requirements for Statistics Minor: 16 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Statistics Minor Requirements		
Complete the following:		
MATH F371	Probability [1]	3
MATH F408	Mathematical Statistics	3
STAT F200X	Elementary Statistics	3
or STAT F300	Statistics	
STAT F401	Regression and Analysis of Variance	4
MATH, STAT or STAT-related coursework [2]		3
Total Credits		**16**

[1] MATH F371 requires MATH F251X, MATH F252X and MATH F253X as prerequisites.

[2] e.g., ANTH F424, BA F360, GEOS F430, MATH F460, etc.

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Note: Fisheries majors selecting the research option for their major only need to complete MATH F371 and MATH F408 in addition to their fisheries requirements in order to obtain a minor in statistics.

Sustainable Agriculture Minor

Program Requirements

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Minimum Requirements for Sustainable Agriculture Minor: 18 credits

The minor in sustainable agriculture is based on social, economic and environmental aspects of agriculture and food production. The curriculum supports a basic understanding of sustainability science in global and U.S. agriculture, and an appreciation for the integrated nature of the biological, physical and social sciences that make up sustainable agriculture.

Students must earn a C grade or better in each course.

Code	Title	Credits
Sustainable Agriculture Program Requirements		
Complete the following:		
ECON F235X	Introduction to Natural Resource Economics	3
NRM F101	Natural Resources Conservation and Policy	3
NRM F210	Principles of Sustainable Agriculture	3
Complete three of the following:		9
NRM F211	Introduction to Applied Plant Science	

NRM F303X	Environmental Ethics and Actions	
NRM F380	Soils and the Environment	
NRM F430	Resource Management Planning	
Total Credits		**18**

Note: Students majoring in Natural Resources and Environment are not eligible for the sustainable agriculture minor.

Teaching English to Speakers of Other Languages Minor

Program Requirements

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Minimum Requirements for Teaching English to Speakers of Other Languages Minor: 16 credits

Students must earn a C- grade or better in each course except LING F200, which is graded on a pass/fail basis.

Code	Title	Credits
Teaching English to Speakers of Other Languages Minor Requirements		
Complete the following:		
LING F100	Language, Education, Linguistics [1]	3
or LING F101X	Nature of Language	
LING F200	The Field of Teaching English to Speakers of Other Languages	1
LING F302	Introduction to Second Language Acquisition	3
LING F315	English Language for Second Language Teaching	3
LING F410	Theory and Methods of Second Language Teaching	3
LING F451	English Second Language Teaching Practicum	3
or FL F451	Foreign Language Teaching Practicum	
Total Credits		**16**

[1] For LING F100, grade of 'B' or higher is required.

Note: F400-level courses require junior standing or instructor permission.

Theatre Minor

Program Requirements

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Minimum Requirements for Theatre Minor: 18 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Theater Minor Requirements		
Complete the following:		
FLPA F121X	Fundamentals of Acting	3
FLPA F215X	Dramatic Literature and History	3
FLPA F241	Basic Stagecraft	4
Department-approved FLPA electives		8
Total Credits		**18**

Tribal Governance Minor

Program Requirements

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Minimum Requirements for Tribal Governance Minor: 15 credits

Students must earn C- grade or better in each course.

Code	Title	Credits
Tribal Governance Minor Requirements		
Complete the following:		
TG F101	Introduction to Tribal Government in Alaska	3
TG F105	Introduction to Managing Tribal Governments	3
TG F201	Tribal Government in Alaska II	3
TG F205	Managing Tribal Governments II	3
Tribal Governance course electives		3
Total Credits		**15**

Wildlife Biology and Conservation Minor

Program Requirements

< Back to Department (p. 111)

Minimum Requirements for Wildlife Biology and Conservation Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Wildlife Biology and Conservation Minor Requirements		
Complete the following:		
BIOL F471	Population Ecology	3
WLF F301	Design of Wildlife Studies	3
WLF F322	Principles and Techniques of Wildlife Management	3
Approved BIOL and WLF electives [1]		6
Total Credits		**15**

[1] Only biology or wildlife electives that are not required for the student's major. Electives must be F300- or F400-level courses and must be approved by the chair of the wildlife biology and conservation program.

Note: Prerequisites for required courses include BIOL F115X, BIOL F116X, BIOL F371, CHEM F105X, MATH F151X, and WLF F101 Depending upon a student's major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.

Women, Gender and Sexuality Studies Minor

Program Requirements

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Minimum Requirements for Women, Gender and Sexuality Studies Minor: 15 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Women, Gender and Sexuality Studies Minor Requirements		
Complete the following:		
WGS F201X	Introduction to Women, Gender and Sexuality Studies	3
Complete at least 12 additional credits [1]		12
Total Credits		**15**

[1] Additional credits from courses cross-listed with WGS and that are from two or more disciplines are subject to the approval of a women, gender and sexuality studies advisor.

Accelerated Bachelor's / Master's Degrees

How to Earn Accelerated Bachelor's / Master's Degrees

Bachelor's/master's or "accelerated master's" degree programs are designed to allow qualified students to earn both a bachelor's and master's degree through an integrated program in a cost-effective, academically rigorous and timely manner. Requirements for the available majors are found in the accelerated programs list (p. 383) section.

BENEFITS TO STUDENT

- Time to completion of the graduate degree can be reduced;
- Cost of completion of the combined undergraduate and graduate degrees can be reduced;
- Undergraduate and graduate courses may be chosen with greater flexibility;
- Graduate courses may be taken after entering the accelerated degree program;
- Work on a thesis/project or research may begin upon acceptance to the accelerated degree program; and
- Continuity with facilities, faculty and colleagues is maintained.

ADMISSION REQUIREMENTS

Minimum admissions requirements for an accelerated master's degree program include:

- Current admission into a bachelor's degree program;
- A 3.0 cumulative GPA;
- Completing 24 credits in the undergraduate major program requirements; and
- Junior standing

Individual degree programs or departments may establish different admission criteria while meeting these minimum requirements (i.e. a higher GPA, standing, etc.).

DEGREE REQUIREMENTS

An accelerated master's program requires a minimum of 138 credits as opposed to the minimum of 150 credits required for separate bachelor's (120 credits) and master's programs (30 credits). All general requirements for bachelor's degrees (e.g., general education, ethics, degree-specific requirements) are maintained, but departments may have different choices of major requirements for a bachelor's degree and an accelerated master's degree. Minors are allowed but not required for either the accelerated Bachelor of Science or the accelerated Bachelor of Arts. At least 30 credits, with a minimum of 21 credits at the 600 level, must be applied to the master's degree. Students in accelerated programs will still be expected to complete a Graduate Study Plan and the other requirements of a master's degree.

AFTER ADMISSION

Students must maintain a cumulative GPA established by the accelerated degree program, or the university minimum of 3.0, while in the accelerated degree program. Students accepted into an accelerated master's degree program must complete all degree requirements within seven years from admission to the program and comply with all other graduate school policies and requirements. Students admitted to an accelerated master's program may be eligible for graduate research assistantships.

A student has the option to transfer back from the accelerated program to the bachelor's program. In this situation, they can graduate with a bachelor's degree once they satisfy all the bachelor's degree requirements (which may be different from the requirements in the accelerated master's program). Departments proposing accelerated master's degree programs must indicate paths for students to graduate with a bachelor's degree via this route. If a student graduates by this route, they have left the accelerated program, and cannot later apply for the master's degree based upon the accelerated program degree requirements. However, they can apply coursework not used for bachelor's graduation requirements toward the completion of a conventional master's degree.

A student who graduates from the accelerated master's program will receive both their bachelor's and master's degrees in the same semester.

Accelerated Bachelor's / Master's Programs

Chemistry B.S./M.S.

Admission Requirements

B.S. applicants must complete the following admission requirements:

- Be admitted to the Chemistry baccalaureate program and have at least junior standing;
- Have a 3.0 GPA, and have completed 24 of their undergraduate major requirements;
- Submit a study goal statement;
- Submit a UAF graduate application for admission.

Program Requirements

< Back to Department (p. 115)

Minimum Requirements for Chemistry B.S./M.S. Degree: 138 credits *

* Some concentrations may require greater than 138 credits.

CONCENTRATIONS: CHEMISTRY (P. 383), BIOCHEMISTRY AND NEUROSCIENCE (P. 383), ENVIRONMENTAL CHEMISTRY (P. 384)

Students must earn a C- or better in all the below courses

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
Chemistry Program Requirements [1]		
Complete the following:		
CHEM F105X and CHEM F105L	General Chemistry I and Chemistry F105X Lab	4
CHEM F106X and CHEM F106L	General Chemistry II and Chemistry F106X Lab	4
CHEM F202	Basic Inorganic Chemistry	3
CHEM F212	Chemical Equilibrium and Analysis	4
CHEM F321	Organic Chemistry I	4
CHEM F325	Organic Chemistry II	4
CHEM F331	Physical Chemistry I	4
CHEM F332	Physical Chemistry II	4
CHEM F434	Chemistry Capstone Laboratory	3
CHEM F449	General Biochemistry: Metabolism	3
CHEM F481	Seminar	1
CHEM F482	Seminar	2
As part of the ACS certification, complete:		
MATH F253X	Calculus III	4
Concentration		
Complete one of the following:		9-24
Chemistry		
Biochemistry and Neuroscience		
Environmental Chemistry		
Total Credits		**105-124**

[1] Students must earn a C- or better.

Concentrations

CHEMISTRY

Code	Title	Credits
Chemistry Concentration Requirements		
Complete one of the following:		3-5
CHEM F488	Undergraduate Chemistry and Biochemistry Research (3-4 credits)	
CHEM F288 and CHEM F488	Introduction to Chemical Research and Undergraduate Chemistry and Biochemistry Research (2-3 credits)	
Complete two of the following:		6
CHEM F314	Analytical Instrumental Laboratory	
CHEM F402	Inorganic Chemistry	
CHEM F450	Information Storage and Transfer: Molecules and Pathways	
Total Credits		**9-11**

BIOCHEMISTRY AND NEUROSCIENCE

Code	Title	Credits
Biochemistry and Neuroscience Concentration Requirements		
Complete the following:		
BIOL F115X and BIOL F115L	Fundamentals of Biology I and BIOL F115X Laboratory	4
BIOL F116X and BIOL F116L	Fundamentals of Biology II and BIOL F116X Laboratory	4
CHEM F450	Information Storage and Transfer: Molecules and Pathways	3
CHEM F488	Undergraduate Chemistry and Biochemistry Research	3
Complete 10 credits from the following: [2]		10
BIOL F240X	Beginnings in Microbiology	
BIOL F260 and F260L	Principles of Genetics and BIOL F260 Laboratory	
BIOL F310 and F310L	Animal Physiology and BIOL F310 Laboratory	
BIOL F342 and F342L	Microbiology and BIOL F342 Laboratory	

BIOL F402	Biomedical and Research Ethics	
BIOL F417	Neurobiology	
BIOL F462	Infectious Diseases	
CHEM F360	Cell and Molecular Biology	
CHEM F455	Environmental Toxicology	
CHEM F470	Cellular and Molecular Neuroscience	
CHEM F474	Neurochemistry	
Total Credits		**24**

[2] Courses selected under these areas must meet baccalaureate degree requirements for 39 upper-division credits.

ENVIRONMENTAL CHEMISTRY

Code	Title	Credits
Environmental Chemistry Concentration Requirements		
Complete the following:		
CHEM F314	Analytical Instrumental Laboratory	3
CHEM F488	Undergraduate Chemistry and Biochemistry Research	3
Complete two of the following:		6-8
ATM F401	Introduction to Atmospheric Sciences	
BIOL F240X	Beginnings in Microbiology	
BIOL F342	Microbiology	
BIOL F457	Environmental Microbiology	
GEOS F417	Introduction to Geochemistry	
NRM F380	Soils and the Environment	
Total Credits		**12-14**

M.S. portion of the Chemistry B.S./M.S. program with Thesis or Project Requirements

CONCENTRATIONS: BIOCHEMISTRY AND NEUROSCIENCE (P. 385), ENVIRONMENTAL CHEMISTRY (P. 385)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements complete:		
Oral and Written Comprehensive Exam		
Chemistry Program Requirements		
Complete any deficiencies concurrently with this degree.		
Complete two credits of advisory committee-approved seminar courses from the two seminar course choices below. [3]		2
CHEM F691	Research Presentation Techniques	
CHEM F688	Biochemical and Molecular Biology Seminar	
Complete 7-10 credits of courses approved by the advisory committee.		7-10
Concentration		
Complete 6-9 credits from relevant advisory-committee-approved graduate-level courses or select one of the following concentrations		6-9
Biochemistry and Neuroscience		
Environmental Chemistry		
Options		
Complete one of the following: [4,5]		12
Thesis Option		
Project Option		
Total Credits		**27-33**

[3] Students in the Biochemistry and Neuroscience concentration should take the Biochemical and Molecular Biology Seminar and students in the Environmental Chemistry concentration should take Research Presentation Techniques.

[4] The minimum number of credits required is 30. The required M.S. coursework above represents 18 credits. The minimum number of thesis credits required is 6. For the thesis option, the remaining 6 credits can either be thesis credits or courses at the F400 level or higher. For the project option, the remaining 6 credits can be courses at the F400 level or higher.

[5] No more than 12 thesis credits (CHEM F699) and no more than 6 project credits (CHEM F698).

Options

THESIS OPTION

Code	Title	Credits
Complete the following:		
CHEM F699	Thesis	6
Thesis credits or committee-approved courses that are F400-level or higher. [4,6]		6
Submit a committee-approved, written research-based thesis proposal and pass an oral comprehensive examination centered on the proposal.		
Complete a committee-approved, research-based written thesis and pass an oral defense of the thesis.		
Total Credits		**12**

[4] The minimum number of credits required is 30. The required M.S. coursework above represents 18 credits. The minimum number of thesis credits required is 6. For the thesis option, the remaining 6 credits can either be thesis credits or courses at the F400 level or higher. For the project option, the remaining 6 credits can be courses at the F400 level or higher.

[6] Six (6) F400-level credits earned during the B.S. portion of the program count toward the M.S.

PROJECT OPTION

Code	Title	Credits
Complete the following:		
CHEM F698	Non-thesis Research/Project	6
Committee-approved courses that are F400-level or higher. [4,6]		6
Submit a committee-approved, literature-based written project proposal and pass an oral comprehensive examination centered on the proposal.		

Complete a committee-approved, literature-based written project and pass an oral defense of the project.	
Total Credits	**12**

[4] The minimum number of credits required is 30. The required M.S. coursework above represents 18 credits. The minimum number of thesis credits required is 6. For the thesis option, the remaining 6 credits can either be thesis credits or courses at the F400 level or higher. For the project option, the remaining 6 credits can be courses at the F400 level or higher.

[6] Six (6) 400-level credits earned during the B.S. portion of the program count toward the M.S.

Concentrations

BIOCHEMISTRY AND NEUROSCIENCE

Code	Title	Credits
Biochemistry and Neuroscience Concentration Requirements		
Complete 9 credits from the following:		9
CHEM F654	Protein Structure and Function	
CHEM F657	Molecular Foundations of Gene Expression	
CHEM F670	Cellular and Molecular Neuroscience	
CHEM F674	Membrane Biochemistry and Biophysics	
CHEM F675	Cellular Signaling	
Total Credits		**9**

ENVIRONMENTAL CHEMISTRY

Code	Title	Credits
Environmental Chemistry Concentration Requirements		
Complete 6 credits from the following:		6
CHEM F606	Atmospheric Chemistry	
CHEM F609	Aqueous and Environmental Geochemistry	
CHEM F631	Environmental Fate and Transport	
CHEM F655	Environmental Toxicology	
Total Credits		**6**

Civil Engineering B.S./M.S.

Admission Requirements

Complete the following admission requirements:

- CE major (junior preferred) or senior standing.
- A GPA 3.25 or above (based on a minimum of 24 credits in CE major requirements) is required for admission. Students must maintain a cumulative GPA of at least 3.0 to remain in the program.
- Submit three letters of reference.
- Submit GRE (general) scores.
- Submit a study goal statement.
- Submit a UAF graduate application for admission.

Program Requirements

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Minimum Requirements for Civil Engineering B.S./M.S. Degree: 144 credits

CONCENTRATIONS: ENVIRONMENTAL/WATER RESOURCES (P. 386), CIVIL INFRASTRUCTURE (P. 386)

Students must satisfy the General University Requirements for minimum grades for the respective B.S. or M.S. program (major) requirements.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
CHEM F105X	General Chemistry I	
CHEM F106X	General Chemistry II	
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Undergraduate Civil Engineering Program Requirements		
Complete the following:		
CE F112	Elementary Surveying	2-3
or MIN F202	Surveying and CAD for Engineers	
CE F302	Fundamentals of Transportation Engineering	3
CE F326	Introduction to Geotechnical Engineering and Foundations	4
CE F331	Structural Analysis	3
CE F334	Properties of Materials	3
CE F341	Introduction to Environmental Engineering	4
CE F344	Water Resources Engineering	3
CE F432	Steel Design	3
DRT F210	Intermediate CAD	3
ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F100L	Makerspace Alaska - A Laboratory Introduction to Engineering	1
ES F201	Computer Techniques	3
ES F208	Mechanics	4
ES F301	Engineering Analysis	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ESM F450	Economic Analysis and Operations	3
GE F261	General Geology for Engineers	3
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
Fundamentals of Engineering (FE) Examination		

Complete the Fundamentals of Engineering (FE) examination administered by the State of Alaska.	
Graduate Civil Engineering Program Requirements	
General University Requirements	
Complete the graduate general university requirements. (p. 416)	
Master's Degree Requirements	
Complete the master's degree requirements. (p. 418)	
Complete comprehensive exam	
Options	
Complete one of the following:	6-9
CE F699 Thesis	
CE F698 Non-thesis Research/Project	
Concentration	
Complete one of the following:	21-24
Environmental/Water Resources	
Civil Infrastructure	
Total Credits	**144-149**

Concentrations

ENVIRONMENTAL/WATER RESOURCES

Code	Title	Credits
Environmental/Water Resources Concentration Requirements		
Complete the following:		
CE F438	Design of Engineered Systems [1]	3
CE F442	Water and Wastewater Treatment Design [2]	3
or ENVE F643	Air Pollution Management	
CE F661	Advanced Water Resources Engineering	3
or CE F683	Arctic Hydrology and Hydraulic Engineering	
or CHEM F609	Aqueous and Environmental Geochemistry	
CE F662	Open Channel and River Engineering	3
or CE F663	Groundwater Hydrology	
Approved electives from the Environmental/Water Resources concentration area course list below (9 credits for thesis, 12 credits for project), or as approved by the committee [3]		9-12
Total Credits		**21-24**

1. Fulfills the baccalaureate capstone requirement.
2. Fulfills the ABET requirement (for the B.S. degree) of one upper-level course in the field of environmental engineering, construction or transportation.

CIVIL INFRASTRUCTURE

Code	Title	Credits
Civil Infrastructure Concentration Requirements		
Complete the following:		
CE F438	Design of Engineered Systems [1]	3
CE F433	Reinforced Concrete Design [2]	3
CE F635	Numerical Methods for Geomechanics and Soil-Structure Interaction	3
CE F622	Foundations and Retaining Structures	3
or CE F605	Pavement Design	
Approved electives from the Civil Infrastructure concentration area course list below (9 credits for thesis, 12 credits for project), or as approved by the committee [3]		9-12
Total Credits		**21-24**

1. Fulfills the baccalaureate capstone requirement.
2. Fulfills the ABET requirement (for the B.S. degree) of one upper-level course in the field of environmental engineering, construction, or transportation.
3. Students should select electives to ensure they complete at least 21 credits overall at the F600 level.

Recommended Elective Courses for Concentration Areas

ENVIRONMENTAL/WATER RESOURCES

Code	Title	Credits
BIOL F657	Environmental Microbiology	3
CE F442	Water and Wastewater Treatment Design	3
CE F401	Arctic Engineering	3
CE F445	Hydrologic Analysis and Design	3
CE F601	Engineering Research Communication	3
CE F624	Permafrost Engineering	3
CE F661	Advanced Water Resources Engineering	3
CE F662	Open Channel and River Engineering	3
CE F663	Groundwater Hydrology	3
CE F664	Sediment Transport	3
CE F665	Watershed Hydrology	3
CE F683	Arctic Hydrology and Hydraulic Engineering	3
CE F684	Arctic Utility Distribution	3
CHEM F609	Aqueous and Environmental Geochemistry	3
CHEM F631	Environmental Fate and Transport	3
CHEM F655	Environmental Toxicology	3
ENVE F641	Aquatic Chemistry	3
ENVE F642	Contaminant Hydrology	3
ENVE F643	Air Pollution Management	3
ENVE F644	Environmental Management and Permitting	3
ENVE F645	Unit Processes: Chemical and Physical	3
ENVE F646	Biological Unit Processes	3
ENVE F647	Biotechnology	3
ENVE F649	Hazardous and Toxic Waste Management	3
ENVE F651	Environmental Risk Assessment	3
ENVE F652	Introduction to Toxicology for Engineers and Scientists	3
ENVE F653	Environmental Measurements Laboratory	1
GEOS F616	Permafrost	3
GEOS F617	Glaciers	3
ME F658	Energy and the Environment	3

CIVIL INFRASTRUCTURE

Code	Title	Credits
CE F401	Arctic Engineering	3
CE F405	Design of Highways and Streets	3
CE F422	Foundation Engineering	3
CE F434	Timber Design	3
CE F451	Construction Cost Estimating and Bid Preparation	3
CE F605	Pavement Design	3
CE F607	GIS Applications in Civil Engineering	3
CE F622	Foundations and Retaining Structures	3
CE F624	Permafrost Engineering	3
CE F625	Soil Stabilization and Embankment Design	3
CE F626	Thermal Geotechnics	3
CE F627	Geotechnical Earthquake Engineering	3
CE F628	Unsaturated Soils Mechanics	3
CE F630	Advanced Structural Mechanics	3
CE F631	Advanced Structural Analysis	3
CE F633	Theory of Elastic Stability	3
CE F634	Structural Dynamics	3
CE F635	Numerical Methods for Geomechanics and Soil-Structure Interaction	3
CE F637	Earthquakes: Seismic Response of Structures	3
CE F640	Prestressed Concrete	3
CE F646	Structural Composites	3
CE F650	Bridge Engineering	3
CE F682	Ice Engineering	3
CE F683	Arctic Hydrology and Hydraulic Engineering	3
CE F684	Arctic Utility Distribution	3
CE F685	Topics in Frozen Ground Engineering	3
ESM F621	Operations Research	3
GE F440	Slope Stability	3
ME F601	Finite Element Analysis in Engineering	3
ME F631	Advanced Mechanics of Materials	3
ME F642	Advanced Heat Transfer	3
ME F685	Arctic Heat and Mass Transfer	3

Computer Science B.S./M.S.

Admission Requirements

Complete the following admission requirements:

1. Computer science major, junior standing, with CS F311 completed.
2. GPA 3.25 or above based on a minimum of 24 credits. Students must maintain a cumulative GPA of 3.0 to remain in the program.
3. Submit a UAF graduate application for admission.

Program Requirements

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Minimum Requirements for Computer Science B.S./M.S.: 141 credits

Students must earn a C- grade or better in each course.[1]

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F251X	Calculus I	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Any approved ethics course		
Undergraduate Computer Science Program Requirements		
Complete the following:		
CS F201	Computer Science I	3
CS F202	Computer Science II	3
CS F241	Computer Hardware Concepts	4
CS F301	Assembly Language Programming	3
CS F311	Data Structures and Algorithms	3
CS F321	Operating Systems	3
CS F331	Programming Languages	3
CS F371	Computer Ethics and Technical Communication	3
CS F372	Software Construction	3
CS F411	Analysis of Algorithms	3
CS F441	System Architecture	3-4
or EE F443	Computer Engineering Analysis and Design	
CS F471	Senior Capstone I [2]	3
CS F472	Senior Capstone II [2]	3
MATH F253X	Calculus III	4
MATH F307	Discrete Mathematics	3
STAT F300	Statistics	3
MATH elective at the F300 or F400 level		3
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Graduate Computer Science Program Requirements		
Complete the following:		
CS F600	Professional Software Development	4
CS F601	Algorithms, Architecture and Languages	4
CS F690	Graduate Seminar and Project	3
CS F691	Graduate Seminar and Project	3

Approved electives at the F400 or F600 level [3]	16
Exam	
Pass a comprehensive exam in computer science theory and practice.	
Total Credits	**135-140**

1 For the master's degree, a student must earn an A or B grade in F400-level courses. A grade of C will be accepted in F600-level courses provided a B grade point average is maintained.
2 Fulfills the baccalaureate capstone requirement.
3 9 credits maximum at the F400 level.

Note: This degree program must be completed in seven years or the student will be disqualified from the program. If a student is disqualified, a B.S. in computer science will be awarded if:

1. completed in 10 years, and
2. the student meets the B.S. degree requirements for computer science.

Linguistics B.A./Applied Linguistics M.A. Combined Degrees

Admission Requirements

Students entering the accelerated master's in applied linguistics must:

- be admitted into the B.A. in linguistics;
- have completed a minimum of 24 credits toward the B.A. in linguistics, including LING F101X, LING F318, LING F320, LING F315, LING F302; and ENGL F318;
- have a minimum 3.0 GPA overall and a 3.5 GPA in linguistics;
- obtain a letter of recommendation from a current linguistics faculty member who is willing to serve as chair of their graduate committee;
- have junior standing.

Program Requirements

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Minimum Requirements for Linguistics B.A./Applied Linguistics M.A. Degree: 138 credits

CONCENTRATIONS: GENERAL (P. 388), LANGUAGE DOCUMENTATION (P. 389), SECOND LANGUAGE ACQUISITION TEACHER EDUCATION (P. 389)

Students must satisfy the General University Requirements for minimum grades for the respective B.A. or M.A. program (major) requirements.

Students must earn a C- grade or better in each course for the B.A.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		37-40
As part of the general education requirements, complete the following:		
Two semesters of a single foreign or Alaska Native language. [1]		
B.A. Degree Requirements		
Complete the B.A. degree requirements. (p. 260)		
Linguistics Program Requirements		
Complete the following:		
Four semesters (or equivalent) of a foreign, Alaska Native or American Sign language. The language chosen must be different from that used to meet GER above. [1]		12-16
ENGL F318	Modern English Grammar	3
LING F101X	Nature of Language	3
LING F302	Introduction to Second Language Acquisition	3
LING F315	English Language for Second Language Teaching	3
LING F318	Introduction to Phonetics and Phonology	3
LING F320	Introduction to Morphosyntax	3
LING F441	Topics in Linguistics	3
LING F451	English Second Language Teaching Practicum	3
or FL F451	Foreign Language Teaching Practicum	
LING F481	Seminar in Applied Linguistic Research	1
Elective		3
Any course in LING or approved by faculty committee		
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Applied Linguistics Program Requirements		
Complete the following:		
LING F410	Theory and Methods of Second Language Teaching	3
LING F450	Language Policy and Planning	3
LING F482	Seminar in Linguistics	3
LING F600	Research Methods for Applied Linguistics	3
LING F601	Principles of Linguistic Analysis	3
LING F602	Second Language Acquisition	3
LING F610	Theory and Methods of Second Language Teaching	3
LING F611	Second Language Materials and Assessment	3
LING F698	Non-thesis Research/Project	1-9
or LING F699	Thesis	

Concentrations

GENERAL

Code	Title	Credits
General Concentration Requirements		
Complete the following:		
LING F602	Second Language Acquisition	3
LING F603	Phonetics and Phonology	3

LING F604	Morphology and Syntax	3
Total Credits		**9**

LANGUAGE DOCUMENTATION

Code	Title	Credits
Language Documentation Concentration Requirements		
Complete the following:		
LING F603	Phonetics and Phonology	3
LING F604	Morphology and Syntax	3
LING F631	Field Methods in Descriptive Linguistics I	3
Total Credits		**9**

SECOND LANGUAGE ACQUISITION TEACHER EDUCATION

Code	Title	Credits
Second Language Acquisition Teacher Education Concentration Requirements		
Complete the following:		
LING F602	Second Language Acquisition	3
LING F610	Theory and Methods of Second Language Teaching	3
LING F611	Second Language Materials and Assessment	3
or ED F683	Instruction and Assessment in Literacy	
Total Credits		**9**

Electives

ELECTIVE COURSES

This is a non-exhaustive list of possible electives.

Code	Title	Credits
ED F601	Introduction to Applied Social Science Research [3]	3
ED F670	Developing Literacy: ECE-12 [3]	3
ED F673	Literacy in the Content Area [3]	3
ED F683	Instruction and Assessment in Literacy [3]	3
LING F441	Topics in Linguistics [1]	3
LING/FL F451	English Second Language Teaching Practicum [1]	3
LING F602	Second Language Acquisition	3
LING F603	Phonetics and Phonology	3
LING F604	Morphology and Syntax	3
LING F610	Theory and Methods of Second Language Teaching	3
LING F611	Second Language Materials and Assessment	3
LING F631	Field Methods in Descriptive Linguistics I	3
LING F650	Language Policy and Planning	3

[1] It is recommended that at least one of the languages be other than an Indo-European Language.

[2] Except for the minor complex. A minor complex is not required for an accelerated Master of Arts.

[3] Per Graduate School rules, up to 6 credits of committee-approved elective credit at the 400 level may be counted toward a graduate degree.

Mathematics B.S./M.S.

Admission Requirements

Complete the following admission requirements:

- Current admission into a baccalaureate degree program
- At least a 3.0 cumulative GPA
- Completion of 24 credits in the undergraduate major program requirements
- Junior standing

Program Requirements

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Minimum Requirements for Mathematics B.S./M.S.: 138 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F252X	Calculus II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F253X	Calculus III	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
Undergraduate Mathematics Program Requirements		
Complete the following:		
MATH F265	Introduction to Mathematical Proofs	3
MATH F314	Linear Algebra	3
MATH F401	Introduction to Real Analysis	3
MATH F405	Abstract Algebra	3
MATH F410	Introduction to Complex Analysis	3
MATH F490	Senior Seminar [1]	3
Upper-division mathematics electives [2]		9
Upper-division mathematics or statistics electives [3]		6
Electives		
Additional student-selected electives		21
General University Requirements		

Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements, complete the following:		
MATH F698	Non-thesis Research/Project	6
or MATH F699	Thesis	
Complete a written comprehensive exam		
Graduate Mathematics Program Requirements		
Complete the following:		
MATH F404	Introduction to Topology	3
MATH F631	Algebra I	4
MATH F641	Real Analysis	4
MATH F645	Complex Analysis	4
MATH F651	Topology	4
Graduate Mathematics Electives [4]		6
MATH F692	Seminar	1
Total Credits		**138-142**

1 Fulfills the baccalaureate capstone requirement.

2 Acceptable electives include any 3- or 4-credit mathematics course at the F300 level or above.

3 Acceptable elective courses include any mathematics or statistics course at the F300 level or above and CS F201. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

4 Acceptable elective courses include any mathematics course at the F600 level or above. In some cases, courses with strong mathematical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

Note: All mathematics majors must have an advisor from the Department of Mathematics and Statistics.

Note: At least 12 approved mathematics credits at the F300 level or above must be taken while in residence on the Fairbanks campus.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

COMBINED MATHEMATICS B.S./M.S. - ODD YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	**14**
Spring		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
Elective		3
	Credits	**16**
Second Year		
Fall		
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
Math Elective		3
GER (Humanities)		3
Elective		3
	Credits	**16**
Spring		
PHYS F212X	General Physics II	4
Math Elective		3
Math Elective		3
GER (COM)		3
Elective		1
	Credits	**14**
Third Year		
Fall		
MATH F401	Introduction to Real Analysis	3
Math Elective (F400 level)		3
GER (Social Science I)		3
ANT Course		3
Elective		3
	Credits	**15**
Spring		
MATH F405	Abstract Algebra	3
Math Elective		3
GER (Art/Social Science/Humanities)		3
Ethics Course		3
Elective		3
	Credits	**15**
Fourth Year		
Fall		
Math Elective (F400 level)		3
Math Core (F600 level)		3
Math Elective		3

Elective		3
Elective		3
	Credits	**15**
Spring		
MATH F490	Senior Seminar	3
Math Core (F600 level)		3
Math Elective		3
GER (Lab Science I)		4
Elective		3
	Credits	**16**
Fifth Year		
Fall		
MATH F698	Non-thesis Research/Project	3
Math Core (F600 level)		3
Math Elective (F600 level)		3
	Credits	**9**
Spring		
MATH F692	Seminar	1
MATH F698	Non-thesis Research/Project	3
Math Core (F600 level)		3
Math Elective (F600 level)		3
	Credits	**10**
	Total Credits	**140**

COMBINED MATHEMATICS B.S./M.S. - EVEN YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	**14**
Spring		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
Elective		3
	Credits	**16**
Second Year		
Fall		
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
Math Elective		3
GER (Humanities)		3
Elective		3
	Credits	**16**
Spring		
PHYS F212X	General Physics II	4
Math Elective		3
Math Elective		3
GER (COM)		3
Elective		1
	Credits	**14**
Third Year		
Fall		
MATH F401	Introduction to Real Analysis	3
Math Elective (F400 level)		3
GER (Lab Science II)		4
GER (Social Science I)		3
ANT Course		3
	Credits	**16**
Spring		
MATH F405	Abstract Algebra	3
Math Elective		3
GER (Art/Social Science/Humanities)		3
Ethics Course		3
Elective		3
	Credits	**15**
Fourth Year		
Fall		
Math Elective (F400 level)		3
Math Core (F600 level)		3
Math Elective		3
Elective		3
Elective		3
	Credits	**15**
Spring		
MATH F490	Senior Seminar	3
Math Core (F600 level)		3
Math Elective		3
Elective		3
Elective		3
	Credits	**15**
Fifth Year		
Fall		
MATH F698	Non-thesis Research/Project	3
Math Core (F600 level)		3
Math Elective (F600 level)		3
	Credits	**9**
Spring		
MATH F692	Seminar	1
MATH F698	Non-thesis Research/Project	3
Math Core (F600 level)		3
Math Elective (F600 level)		3
	Credits	**10**
	Total Credits	**140**

Mathematics B.S./Statistics and Data Science M.S.

Admission Requirements

Complete the following admission requirements:

- Current admission into a baccalaureate degree program
- At least a 3.0 cumulative GPA
- Completion of 24 credits in the undergraduate major program requirements
- Junior standing

Program Requirements

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Minimum Requirements for Mathematics B.S./Statistics and Data Science M.S.: 138 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		36-40
As part of the general education requirements, complete the following:		
MATH F252X	Calculus II	
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F253X	Calculus III	
PHYS F123X and PHYS F124X	College Physics I and College Physics II	
or PHYS F211X and PHYS F212X	General Physics I and General Physics II	
Undergraduate Mathematics Program Requirements		
Complete the following:		
CS F201	Computer Science I	3
or NRM F338	Introduction to Geographic Information Systems	
ENGL F314	Technical Writing	3
or ENGL F414	Research Writing	
MATH F265	Introduction to Mathematical Proofs	3
MATH F314	Linear Algebra	3
MATH F371	Probability	3
MATH F401	Introduction to Real Analysis	3
or MATH F405	Abstract Algebra	
MATH F408	Mathematical Statistics	3
STAT F300	Statistics	3
STAT F401	Regression and Analysis of Variance	4
STAT F454	Statistical Consulting Seminar [1]	1
Upper-division mathematics or statistics electives [2]		3
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
STAT F698	Non-thesis Research/Project	6
Graduate Statistics and Data Science Program Requirements		
Complete the following:		
STAT F402	Scientific Sampling	3
STAT F651	Statistical Theory I	3
STAT F652	Statistical Theory II	3
STAT F653	Statistical Theory III: Linear Models	3
STAT F654	Statistical Consulting Seminar	1
Complete two of the following:		6
STAT F461	Applied Multivariate Statistics	
STAT F602	Experimental Design	
STAT F605	Spatial Statistics	
STAT F611	Time Series	
STAT F621	Nonparametric Statistics and Machine Learning	
STAT F631	Categorical Data Analysis	
STAT F641	Bayesian Statistics	
STAT F661	Sampling Theory	
Complete the following:		
Graduate Statistics Electives [3]		6
Total Credits		**115-119**

1. Fulfills the baccalaureate capstone requirement.
2. Acceptable elective courses include any mathematics or statistics course at the F300 level or above. In some cases, courses with strong statistical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.
3. Acceptable elective courses include any statistics course at the F600 level or above. In some cases, courses with strong statistical content from other disciplines may be used as electives. Such an elective must be approved by an advisor in the Department of Mathematics and Statistics.

Note: All mathematics majors must have an advisor from the Department of Mathematics and Statistics.

Note: At least 12 approved mathematics or statistics credits at the F300 level or above must be taken while in residence on the Fairbanks campus.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their

advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

MATHEMATICS B.S./STATISTICS AND DATA SCIENCE M.S. - ODD YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	**14**
Spring		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
Elective (CS F103)		3
	Credits	**16**
Second Year		
Fall		
CS F201	Computer Science I	3
MATH F314	Linear Algebra	3
PHYS F211X	General Physics I	4
GER (Humanities)		3
Elective		3
	Credits	**16**
Spring		
PHYS F212X	General Physics II	4
STAT F300	Statistics	3
GER (COM)		3
Elective		3
Elective		3
	Credits	**16**
Third Year		
Fall		
MATH F371	Probability	3
MATH F401	Introduction to Real Analysis	3
GER (Social Science I)		3
ANT Course		3
Elective		3
	Credits	**15**
Spring		
MATH F408	Mathematical Statistics	3
STAT F401	Regression and Analysis of Variance	4
Math or Stat Elective (F400 level)		3
GER (Art/Social Science/Humanities)		3
Ethics Course		3
	Credits	**16**
Fourth Year		
Fall		
STAT F402	Scientific Sampling	3
STAT F651	Statistical Theory I	3
GER (Lab Science II)		4
Elective		3
Elective		3
	Credits	**16**
Spring		
STAT F454	Statistical Consulting Seminar	1
STAT F652	Statistical Theory II	3
Stat Elective (F600 level)		3
Elective		3
Elective		3
	Credits	**13**
Fifth Year		
Fall		
MATH F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
Stat Elective (F600 level)		3
	Credits	**9**
Spring		
STAT F653	Statistical Theory III: Linear Models	3
STAT F654	Statistical Consulting Seminar	1
STAT F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
	Credits	**10**
	Total Credits	**141**

MATHEMATICS B.S./STATISTICS AND DATA SCIENCE M.S. - EVEN YEAR START

Course	Title	Credits
First Year		
Fall		
LS F101X	Library Information and Research	1
MATH F252X	Calculus II	4
GER (Art)		3
GER (Lab Science I)		3
GER (WRTG)		3
	Credits	**14**
Spring		
MATH F253X	Calculus III	4
MATH F265	Introduction to Mathematical Proofs	3
GER (Social Science I)		3
GER (WRTG)		3
Elective (CS F103)		3
	Credits	**16**
Second Year		
Fall		
CS F201	Computer Science I	3
MATH F314	Linear Algebra	3
MATH F371	Probability	3

PHYS F211X	General Physics I	4
GER (Humanities)		3
	Credits	**16**
Spring		
MATH F408	Mathematical Statistics	3
PHYS F212X	General Physics II	4
STAT F300	Statistics	3
GER (COM)		3
Elective		3
	Credits	**16**
Third Year		
Fall		
MATH F401	Introduction to Real Analysis	3
Math or Stat Elective (F400 level)		3
GER (Social Science I)		3
ANT Course		3
Elective		3
	Credits	**15**
Spring		
STAT F401	Regression and Analysis of Variance	4
GER (Art/Social Science/Humanities)		3
Ethics Course		3
Elective		3
Elective		3
	Credits	**16**
Fourth Year		
Fall		
STAT F402	Scientific Sampling	3
STAT F651	Statistical Theory I	3
GER (Lab Science II)		4
Elective		3
Elective		3
	Credits	**16**
Spring		
STAT F454	Statistical Consulting Seminar	1
STAT F653	Statistical Theory III: Linear Models	3
Stat Elective (F600 level)		3
Elective		3
Elective		3
	Credits	**13**
Fifth Year		
Fall		
MATH F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
Stat Elective (F600 level)		3
	Credits	**9**
Spring		
STAT F652	Statistical Theory II	3
STAT F654	Statistical Consulting Seminar	1
STAT F698	Non-thesis Research/Project	3
Stat Elective (F600 level)		3
	Credits	**10**
	Total Credits	**141**

Mechanical Engineering B.S./M.S.

Admission Requirements

Complete the following admission requirements:

1. ME major (junior preferred) or senior standing.
2. GPA 3.25 or above (based on minimum of 24 credits in ME major requirements). Students must maintain a cumulative GPA of 3.0 to remain in the program.
3. Submit a study goal statement.
4. Submit a UAF graduate application for admission.

Program Requirements

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Minimum Requirements for Mechanical Engineering B.S./M.S.: 148 credits

Students must satisfy the General University Requirements for minimum grades for the respective B.S. or M.S. program (major) requirements.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 255)		
General Education Requirements		
Complete the general education requirements. (p. 272)		35-40
B.S. Degree Requirements		
Complete the B.S. degree requirements. (p. 268)		16
As part of the B.S. requirements, complete the following:		
MATH F252X	Calculus II	
PHYS F211X	General Physics I	
PHYS F212X	General Physics II	
Mechanical Engineering Program Requirements		
Complete the following:		
ES F100X	Engineering Alaska - An Introduction to Engineering	3
ES F201	Computer Techniques	3
ES F209	Statics	3
ES F210	Dynamics	3
ES F301	Engineering Analysis	3
ES F307	Elements of Electrical Engineering	3
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
ES F346	Introduction to Thermodynamics	3
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
ME F302	Dynamics of Machinery	4
ME F308	Instrumentation and Measurement	3
ME F313	Mechanical Engineering Thermodynamics	3
ME F321	Industrial Processes	3

ME F334	Elements of Material Science/ Engineering	3
ME F403	Machine Design	3
ME F408	Mechanical Vibrations	3
ME F415	Thermal Systems Laboratory	3
ME F441	Heat and Mass Transfer	3
ME F486	Senior Design [1]	1
ME F487	Design Project [1]	3
Fundamentals of Engineering Examination		
Complete the State of Alaska Fundamentals of Engineering examination.		
Total Credits		**118-123**

[1] Fulfills the baccalaureate capstone requirement.

Note: This degree program must be completed in seven years or the student will be disqualified from the program. If a student is disqualified for exceeding the seven-year limit, a mechanical engineering B.S. degree will be awarded if:

- coursework is completed in 10 years, and
- the student meets all Mechanical Engineering B.S. requirements.

Graduate Mechanical Engineering Program Requirements

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Graduate Mechanical Engineering Program Requirements		
Complete the following:		
Program Electives		*15*
Any F600-level ME Course; up to 6 credits may be at the F400 level [2]		
General Electives		*9*
Any F600-level courses approved by the student's advisory committee; up to 6 credits may be at the F400 level [2]		
Options		
Complete one of the following:		6
ME F699	Thesis	
ME F698	Non-thesis Research/Project	
Total Credits		**30**

[2] At least 15 total program and general elective credits must be at the F600 level.

Note: This degree program must be completed in seven years or the student will be disqualified from the program. If a student is disqualified for exceeding the seven-year limit, a mechanical engineering B.S. degree will be awarded if:

- coursework is completed in 10 years, and
- the student meets all Mechanical Engineering B.S. requirements.

Postbaccalaureate Certificates and Licensures

Postbaccalaureate Certificate Requirements

1. The student must complete at least 24 approved semester credits to earn a postbaccalaureate certificate. (See Regents' Policy 10.04.030 (https://www.alaska.edu/bor/policy/10.04-Academic%20Programs.pdf))
2. Completion of a bachelor's degree from an accredited institution or from a non-US institution that is considered to be a US equivalent degree.
3. Previously earned credits at accredited institutions can be assigned to the certificate as long as at least 40% of credits applicable to the student's certificate program are earned through UAF after acceptance into the program.
4. Certificate programs may include non-coursework requirements.
5. Courses at the 500-level are for professional development and are not applicable toward any postbaccalaureate certificate, even by petition.
6. At all course levels, a student must earn a C- grade or higher in all courses required for the postbaccalaureate certificate unless otherwise specified by the program.
7. At least two-thirds of the credits required for the postbaccalaureate certificate must be taken at the upper-division (300-400) or graduate (600) level.
8. If the requirements for a postbaccalaureate certificate are not met within seven years of formal acceptance into the program, admission expires and the student must reapply for admission and meet the admission requirements in effect at the time of readmission or graduation. (See How to Earn a Bachelor's Degree (p. 252))
9. All credits counted toward the postbaccalaureate certificate, including transfer credits, must be earned within the consecutive seven-year period prior to graduation. (See How to Earn a Bachelor's Degree (p. 252))
10. Students may be awarded two or more postbaccalaureate certificates simultaneously if the 15 additional credits and other requirements have been earned for each additional postbaccalaureate certificate.

CONCURRENT CERTIFICATES

Students may pursue concurrent postbaccalaureate certificates as long as they have formally applied and been accepted to each program through the Office of Admissions.

Postbaccalaureate Certificate & Licensure Programs

Accounting P.B.C.T.

Admission Requirements

Complete the following admission requirements:

- Students need to have a completed baccalaureate degree.
- Both ACCT F261X and ACCT F262, or equivalents, must be completed prior to starting the program.

Program Requirements

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Minimum Requirements for Accounting Postbaccalaureate Certificate: 30 credits

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Accounting Program Requirements		
Complete the following:		
ACCT F330	Income Tax	3
ACCT F342	Managerial Cost Accounting	3
ACCT F361	Intermediate Accounting I	3
ACCT F362	Intermediate Accounting II	3
ACCT F452	Auditing	3
or ACCT F472	Internal and Government Auditing	
AIS F316	Accounting Information Systems	3
Complete four of the following:		12
ACCT F401	Advanced Accounting	
ACCT F404	Advanced Cost Accounting and Controllership	
ACCT F414	Governmental and Nonprofit Accounting	
ACCT F430	Advanced Taxes	
ACCT F472	Internal and Government Auditing	
BA F454	Student Investment Fund	
or BA F421	Business Analytics	
Total Credits		**30**

Art K-12 Licensure Program toward M.Ed., Secondary Education

Admission Requirements

Complete the following admission requirements:

- Applicants will follow the admission process and requirements listed in the catalog for the secondary postbaccalaureate licensure program (p. 399), with the exception that applicants must have a bachelor's degree in art from an accredited university or college. Applicants should be aware that additional content coursework may be required, depending on content of degree. Additional coursework, as determined by the appropriate departments, may mean a delay of program admission until requirements are fulfilled.

Program Requirements

< Back to Department (p. 174)

Minimum Requirements for Art K-12 Licensure Program Toward M.ED, Secondary Education: 33 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Art K-12 Licensure Program Toward M.ED, Secondary Education Program Requirements		
Complete the following:		
ED F245	Child Development	3
ED F452	Elementary Internship	3
ED F649	Elementary Art Methods	3
EDSC F415	Foundations of Modern Educational Practice	3
or EDSC F205	Introduction to Secondary Education	
EDSC F636	Art Secondary Instruction and Assessment	3
EDSC F642	Technology Applications in Education I	1
EDSC F643	Technology Application in Education II	2
EDSC F657	Multicultural Education and School-community Relations	3
EDSC F658	Classroom Organization and Management	3
EDSC F672	Secondary Teaching: School Internship II and Seminar	6-9
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
Total Credits		**33-36**

Elementary (K-8) Postbaccalaureate Certificate and Licensure

Admission Requirements

Complete the following admission requirements:

Admissions deadline is Feb 15. It is strongly recommended that applicants contact the School of Education several months prior to the deadline as it will allow sufficient time to complete prerequisites if necessary. Applications will be reviewed as submitted. Applicants may submit after the deadline with department faculty approval.

Admission includes meeting both UAF graduate admission requirements and the School of Education admission requirements.

GRADUATE SCHOOL REQUIREMENTS

Submit the following to the UAF Office of Admissions with a copy to the School of Education:

1. UAF graduate application and fee.
2. Official transcript of bachelor's degree from an accredited institution and official transcripts from all institutions attended. A GPA of at least 3.0 (B grade) in an undergraduate degree is required but students with less than a 3.0 may be considered for conditional admission in special circumstances.
3. Three letters of reference that address qualifications and potential as a teacher.
4. A vitae/resume.
5. Four- to five-page essay indicating: reasons for wanting to become a teacher, assessment of academic and personal strengths relative to teaching, future plans and reasons for selecting the elementary postbaccalaureate program.

SCHOOL OF EDUCATION REQUIREMENTS

Submit the following information directly to the School of Education, using School of Education forms:

1. Alaska passing scores from the Praxis I or Praxis Core ASE exam in reading, writing and mathematics and Praxis II Elementary Content exam (test 5018). In extenuating circumstances, applicants may be allowed to begin the internship year without yet having an Alaska qualifying Praxis II score. Students cannot complete program requirements without receiving an Alaska qualifying Praxis II score.
2. Completed academic analysis form to provide information on breadth and depth of prior course work relative to 10 Alaska Student Content Standard areas. If additional coursework is required, it must be completed prior to beginning the program.
3. A writing sample, autobiography, evidence of successful paid or volunteer teaching/learning experience, evidence of successful cross-cultural experience.
4. Evidence of technology competence through successful completion of ED F237A, ED F237B, ED F237C and ED F237D or by successfully challenging each of the four components of the two-credit course.
5. Completed Alaska Department of Education and Early Development authorization packet (fingerprint cards and criminal background check necessary to work in schools). Packet is available from the School of Education.
6. Some school districts may require interns to submit a physical examination form.

Program Requirements

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Minimum Requirements for Elementary (K-8) Postbaccalaureate Certificate and Licensure: 39 credits

Students must earn a C grade or better in each F600-level course. Students must earn a B grade or better in each F400-level course.

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Elementary (K-8) Program Requirements		
Complete the following:		
Summer Semester [1]		
ED F624	Foundations of Education in Alaska: From Segregation to Standards [2]	3
ED F625	Exceptional Learners and Child Development: Individual and Cultural Characteristics	3
ED F626	Teaching Reading, Writing and Language Arts	3
Fall Semester		
ED F411	Reading, Writing, Language Arts: Methods and Curriculum Development	3
ED F412/F602	Integrated Social Studies and Language Arts: Methods and Curriculum Development [3]	3
ED F466	Internship and Collaborative Student Teaching	3
ED F467	Classroom Management Communication and Collaboration I	2
ED F478/F678	Mathematics Methods and Curriculum Development [3]	3
ED F479/F688	Science Methods and Curriculum Development [3]	3
Spring Semester		
ED F414/F605	Art, Music and Drama in Elementary Classrooms [3]	3
ED F417/F617	Physical Activity and Health Education for Elementary Teachers [3]	3
ED F468	Internship and Student Teaching	4
ED F469	Classroom Management Communication and Collaboration II	2
ED F476	Assessment of Literacy Development	1
Total Credits		**39**

1. Or complete ED F110, ED F201, ED F330, ED F344 and EDSE F316 prior to Aug. 1 of the internship year.
2. ED F624 meets the State of Alaska requirement for an approved multicultural/cross-cultural communication course.
3. Students intending to complete the M.Ed., Elementary Education are required to take these stacked courses at the F600 level.

K-12 Art Licensure Program

Admission Requirements

Complete the following admission requirements:

Applicants will follow the admission process and requirements listed in the catalog for the secondary postbaccalaureate licensure program (p. 399), with the exception that applicants must have a bachelor's degree in art from an accredited university or college.

Program Requirements

< Back to Department (p. 174)

Minimum Requirements for K-12 Art Licensure: 33 credits

Students must earn a C grade or better in each course.

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
K-12 Art Licensure Program Requirements		
Complete the following:		
ED F245	Child Development	3
ED F449	Elementary Art Methods	3
ED F452	Elementary Internship	3
EDSC F415	Foundations of Modern Educational Practice	3
or EDSC F205	Introduction to Secondary Education	
EDSC F436	Art Secondary Instruction and Assessment	3
EDSC F442	Technology Applications in Education I	1
EDSC F443	Technology Application in Education II	2
EDSC F457	Multicultural Education and School-community Relations	3
EDSC F458	Classroom Organization and Management	3
EDSC F472	Secondary Teaching: School Internship II and Seminar	6-9
EDSE F422	Curriculum, Management and Strategies II: High Incidence	3
or EDSE F482	Inclusive Classrooms for All Children	
or EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	
Total Credits		**33-36**

Secondary Postbaccalaureate Licensure Program

Admission Requirements

Complete the following admission requirements:

Admission to the secondary postbaccalaureate licensure program includes meeting the requirements of the UAF undergraduate admission process and of the School of Education.

Submit the following information electronically (https://uaf.edu/admissions/apply/) to the UAF Office of Admissions:

1. UAF undergraduate application and application fee.
2. Official transcript of bachelor's degree from an accredited institution, minimum GPA of 2.75. Applicants who have attended more than one university should include transcripts from all universities.
3. A personal statement of 500-800 words explaining your motivation for becoming a teacher. Describe how your academic qualifications and work experiences have prepared you for a career in teaching. Elaborate on your personal strengths, including your ability to work collaboratively with others. Describe your experiences with adolescents in instructional and supervisory capacities. Explain why you believe you can help young people of all cultures be successful in school.
4. A vitae/resume.
5. Three current letters of reference that address qualifications and potential as a teacher.

Submit the following information to the School of Education:

1. Passing scores on an Alaska Department of Education and Early Development approved basic competency exam (http://education.alaska.gov/TeacherCertification/praxis.html). SAT/ACT scores may fulfill the requirement.
2. Passing scores on the Praxis II test for each content area the applicant expects to teach. The scores must meet the score set by the State of Alaska (https://education.alaska.gov/TeacherCertification/). World language applicants may need an oral proficiency test as required by EED.

Additional Information:

Secondary faculty will interview applicants as part of the admission process.

Evidence of content competency in one of the UAF-approved secondary endorsement areas is necessary. Endorsement areas for teacher certification include art, biology, chemistry, Earth science, economics, English, French, German, history, mathematics, physics, political science and Spanish.

a) Holding a degree in an approved secondary endorsement area; or

b) Documenting content competency (e.g., transcript analysis by faculty). Additional coursework may be required.

Before student teaching, teacher candidates will need to complete the Alaska Department of Education and Early Development student teaching authorization. Fingerprint cards and a criminal background check are necessary to work in schools.

APPLICATION REVIEW PROCESS

Applications for admission are due March 1 (summer or fall admission) and Oct. 15 (spring admission). Reviews for admission will be ongoing thereafter.

The secondary postbaccalaureate program is a selective teacher education program. Multiple measures are used to assess the personal characteristics, communication skills and qualifications of the candidates preparing to teach.

UPON ACCEPTANCE TO THE PROGRAM

The School of Education has a systematic procedure for monitoring the progress of education students from admission through completion of their professional education program to determine if they should continue the program, be advanced to the secondary teaching internship and eventually be recommended for a teaching license. In assessing candidate progress in knowledge, skills and disposition, faculty will review grades, observations, faculty recommendations, demonstrated academic competence and recommendations from the appropriate school professionals.

Program Requirements

< Back to Department (p. 174)

Minimum Requirements for Secondary Postbaccalaureate Licensure: 30 credits

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Secondary Postbaccalaureate Licensure Program Requirements		
Complete the following:		
EDSC F407	Developing Literacy in the Content Areas	3
EDSC F415	Foundations of Modern Educational Practice	3
or EDSC F205	Introduction to Secondary Education	
EDSC F442	Technology Applications in Education I	1
EDSC F443	Technology Application in Education II	2
EDSC F457	Multicultural Education and School-community Relations	3
EDSC F458	Classroom Organization and Management	3
EDSC F471	Secondary Teaching: School Internship I and Seminar	3
EDSC F472	Secondary Teaching: School Internship II and Seminar	6-9
Complete one of the following:		3
EDSE F316	Introduction to Special Education for Elementary Classroom Teachers	
EDSE F422	Curriculum, Management and Strategies II: High Incidence	
EDSE F482	Inclusive Classrooms for All Children	
Complete one of the following: [1]		3
EDSC F432	English/Language Arts Secondary Instruction and Assessment	
EDSC F433	Mathematics Secondary Instruction and Assessment	
EDSC F434	Science Secondary Instruction and Assessment	
EDSC F435	Social Studies Secondary Instruction and Assessment	
EDSC F436	Art Secondary Instruction and Assessment	
EDSC F437	World Language Secondary Instruction and Assessment	
Total Credits		**30-33**

[1] Candidates must take the section or course that corresponds with their major teaching content areas.

Secondary Postbaccalaureate Licensure Program toward M.Ed., Secondary Education

Admission Requirements

Complete the following admission requirements:

Application recommended due dates are March 1 (summer or fall admission) and Oct. 15 (spring admission). Applications will be reviewed on an ongoing basis thereafter.

Admission includes meeting both UAF Graduate School and School of Education admission requirements.

GRADUATE SCHOOL REQUIREMENTS

Submit the following electronically (https://uaf.edu/admissions/apply/) to the UAF Office of Admissions:

1. UAF graduate application and application fee.
2. Official transcript of bachelor's degree from an accredited institution, minimum GPA of 3.0. Applicants who have attended more than one university should include transcripts from all universities.
3. ACT or SAT or GRE scores.
4. Three current letters of reference that address qualifications and potential as a teacher.
5. A vitae/resume.
6. A personal statement of 1,200-1,500 words explaining your motivation for becoming a teacher leader. Describe how your academic qualifications and work experiences have prepared you for a career in teaching. Elaborate on your personal strengths, including your ability to work collaboratively with others. Describe your experiences with adolescents in instructional and supervisory capacities. Explain why you believe you can help young people of all cultures be successful in school.

SCHOOL OF EDUCATION REQUIREMENTS

Send the following scores directly to the School of Education:

1. Passing scores on an Alaska Department of Education and Early Development (EED) approved basic competency exam (http://education.alaska.gov/TeacherCertification/praxis.html).
2. Passing scores on the Praxis II test for each content area the applicant expects to teach. The scores must meet the score set by the State of Alaska (https://education.alaska.gov/TeacherCertification/). World language applicants may need an oral proficiency test as required by EED.
3. Secondary faculty will interview applicants as part of the admission process.

Additional Information:

Evidence of content competency in one of the secondary endorsement areas is necessary. Endorsement areas for teacher certification include art, biology, chemistry, Earth science, economics, English, French, German, history, mathematics, physics, political science, and Spanish. Content competency can be established by:

1. The applicant holds a degree in an approved secondary endorsement area or;

2. Applicants who do not hold a degree in the academic content area that they expect to teach must have documentation of content competency (transcript analysis). Additional coursework may be required.

* Before student teaching teacher candidates will need to complete the Alaska Department of Education and Early Development student teaching authorization. Fingerprint cards and criminal background check are necessary to work in schools.

Program Requirements

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Minimum Requirements for Secondary Postbaccalaureate Licensure Program Toward M.Ed., Secondary: 30-33 credits

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Secondary Postbaccalaureate Licensure Program Requirements		
Complete the following:		
EDSC F407	Developing Literacy in the Content Areas	3
EDSC F415	Foundations of Modern Educational Practice	3
EDSC F642	Technology Applications in Education I	1
EDSC F643	Technology Application in Education II	2
EDSC F657	Multicultural Education and School-community Relations	3
EDSC F658	Classroom Organization and Management	3
EDSC F671	Secondary Teaching: School Internship I and Seminar	3
EDSC F672	Secondary Teaching: School Internship II and Seminar	6-9
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
Complete one of the following: [1]		3
EDSC F632	English/Language Arts Secondary Instruction and Assessment	
EDSC F633	Mathematics Secondary Instruction and Assessment	
EDSC F634	Science Secondary Instruction and Assessment	
EDSC F635	Social Studies Secondary Instruction and Assessment	
EDSC F636	Art Secondary Instruction and Assessment	
EDSC F637	World Language Secondary Instruction and Assessment	
Total Credits		**30-33**

[1] Candidates must take the section or course that corresponds with their major teaching content areas.

Special Education K-12 Postbaccalaureate Certificate of Completion

Admission Requirements

Admission Requirements for Certified Teachers

Complete the following admission requirements:

- Admission requirements for the graduate program.
- Current teaching certificate or equivalent coursework towards an Alaska teaching certificate.

Prerequisite or corequisite: EDSE F482 or comparable transfer course from another institution

Admission Requirements for Initial Certification

1. Complete the following admission requirements:
   a. Admission requirements for the graduate program.
   b. Baccalaureate degree along with the following prerequisites:
      i. Documented recent experience (minimum 12 hours) in an educational setting with children experiencing disabilities.
      ii. UAF prerequisite or corequisite courses or comparable transfer courses. Courses may be completed prior to admission or during the program:

Code	Title	Credits
ED F245	Child Development	3
EDSE F482	Inclusive Classrooms for All Children	3
Complete one of the following:		3
ED F201	Introduction to Education	
ED F624	Foundations of Education in Alaska: From Segregation to Standards	
EDSC F205	Introduction to Secondary Education	
EDSC F415	Foundations of Modern Educational Practice	

      iii. Passing scores on the Praxis Academic Skills for Educators test (or Praxis I) or another test acceptable to the Alaska Department of Education and Early Development before or during the first semester of classes. Current test numbers and minimum scores can be found at the Basic Competency Examination Requirements page. (https://education.alaska.gov/teachercertification/praxis/)
      iv. Passing scores on the appropriate Praxis II Exam(s) required before entering EDSE F678. Current test numbers and minimum scores can be found on the Content Area Exam Information pdf. (https://education.alaska.gov/teachercertification/pdf/content_area_exams.pdf) Candidates

should consult the employing school district to determine preferred tests based on teaching assignment.

v. Passing scores on the Special Education: Core Knowledge and Applications Praxis Exam (test #5354) or another test acceptable to the Alaska Department of Education and Early Development before or during EDSE F680. Passing scores are required to complete EDSE F680 and graduate from the Special Education K-12 Postbaccalaureate Certificate of Completion.

2. The following are recommended prior to admission or during the program. They are not required for the degree, but they are required for Alaska teacher certification:
   a. An Alaska studies course approved by the Alaska Department of Education and Early Development. See the Teacher Certification site (http://education.alaska.gov/teachercertification/).
   b. A multicultural education/cross-cultural communication course approved by the Alaska Department of Education and Early Development. See the Teacher Certification site (http://education.alaska.gov/teachercertification/).
3. All prerequisite or corequisite courses must be completed with a minimum final grade of B.

Program Requirements

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Program Requirements for Certified Teachers

MINIMUM REQUIREMENTS FOR SPECIAL EDUCATION K-12 POSTBACCALAUREATE CERTIFICATION: 24 CREDITS

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Corequisite Requirements [1]		
EDSE F482	Inclusive Classrooms for All Children	
Special Education K-12 Program Requirements		
Complete the following:		
EDSE F610	Assessment of Students with Exceptionalities	3
EDSE F612	Curriculum, Management and Strategies I: Low Incidence	3
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
EDSE F625	Teaching Mathematics to Special Learners	3
EDSE F632	Special Education Law: Principles and Practices	3
EDSE F677	English Language Arts Assessment, Curriculum and Strategies for Special Learners	3
EDSE F680	Special Education Clinical Practice [2,3]	3
Electives		
Complete one of the following:		3
EDSE F605	Early Childhood Special Education	
EDSE F624	Social/Emotional Development, Assessment and Intervention	
EDSE F633	Autism and Other Developmental Disabilities: Communication and Social Interventions	
EDSE F640	Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals	
EDSE F642	Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions	
EDSE F648	Understanding FASD: Diagnosis, Intervention and Strategies	
Total Credits		**24**

1 Complete the corequisite course before or during admittance to the program; or have a comparable transfer course from another university.

2 Students pursuing a K-12 special education certificate must complete clinical practice in a public school setting.

3 Additional fee required. Charges are added to fee statements every semester.

Program Requirements for Initial Certification

MINIMUM REQUIREMENTS FOR SPECIAL EDUCATION K-12 POSTBACCALAUREATE CERTIFICATION: 27 CREDITS

Code	Title	Credits
Postbaccalaureate Certificate Requirements		
Complete the postbaccalaureate certificate requirements. (p. 396)		
Corequisite Requirements [1]		
ED F245	Child Development	
EDSE F482	Inclusive Classrooms for All Children	
Complete one of the following:		
ED F201	Introduction to Education	
ED F624	Foundations of Education in Alaska: From Segregation to Standards	
EDSC F205	Introduction to Secondary Education	
EDSC F415	Foundations of Modern Educational Practice	
Special Education K-12 Program Requirements		
Complete the following:		
EDSE F610	Assessment of Students with Exceptionalities	3
EDSE F612	Curriculum, Management and Strategies I: Low Incidence	3
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
EDSE F625	Teaching Mathematics to Special Learners	3
EDSE F632	Special Education Law: Principles and Practices	3

EDSE F677	English Language Arts Assessment, Curriculum and Strategies for Special Learners	3
EDSE F678	Special Education Clinical Practice: Initial [3]	3
EDSE F680	Special Education Clinical Practice [2,3]	3
Electives		
Complete one of the following:		3
EDSE F605	Early Childhood Special Education	
EDSE F624	Social/Emotional Development, Assessment and Intervention	
EDSE F633	Autism and Other Developmental Disabilities: Communication and Social Interventions	
EDSE F640	Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals	
EDSE F642	Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions	
EDSE F648	Understanding FASD: Diagnosis, Intervention and Strategies	
Total Credits		**27**

1 Complete the corequisite courses before or during admittance to the program; or have comparable transfer courses from another university.

2 Students pursuing a K-12 special education certificate must complete a clinical practice in a public school setting.

3 Additional fee required. Charges are added to fee statements every semester.

Note: Students who do not have a current Alaska teacher certificate must take 6 credits of clinical practice. Clinical practice courses are taken in the last two semesters of the program. To enter the clinical practice, students must apply for authorization from the State of Alaska. This includes fingerprinting and a background check. Fingerprint clearance may take up to six months to complete. Submit the clinical practice application two semesters prior to the desired placement. Failure to comply with the requirement, falsification of information, or evidence of a criminal conviction that is named in the law or the Professional Teaching Practices Commission is considered an ethics violation. This will result in denied access to field placement in Alaska school districts. Authorization is required before clinical practice can begin.

Graduate Certificates

How to Earn a Graduate Certificate

Graduate certificate programs are designed to provide education past the baccalaureate level and/or to meet clearly defined educational needs of students who have already completed a master's degree. Completion of a graduate certificate should prepare students to better accomplish their goals or meet employment criteria.

These programs provide the student with formal recognition of mastery of a clearly defined academic topic.

CONCURRENT CERTIFICATES

Students may pursue concurrent postbaccalaureate certificates as long as they have formally applied and been accepted to each program through the Office of Admissions.

General university and specific degree requirements for UAF graduate programs are described in this section of the catalog, along with requirements for each graduate program. Instructions for applying for admission can be found in the Applying for Admission: Graduate Degree Programs (p. 31) section.

Academics, Policies and Regulations

Many academic policies and regulations apply to both graduate and undergraduate students. These guidelines are relevant to the student's academic experience at UAF and are important for them to read and understand. Topics include definitions and requirements for official university communications, full- and part-time student status, academic progress, academic dismissal, grading system and policies, FERPA and the student code of conduct. See UAF academics, policies and regulations (p. 82).

General University Requirements for Graduate Certificates

1. A student must be admitted to the graduate certificate program. Students must fulfill all GURs and graduate certificate program requirements.
2. A minimum of 12 credits is required for any Graduate Certificate. Courses used to meet requirements for Graduate Certificates may be applied to other graduate programs where applicable.
3. A student may elect to graduate under the graduate certificate requirements in effect and published in the UAF catalog in any one of the previous seven years in which they are enrolled as a graduate certificate student.
   All non-academic policies and regulations listed in the current catalog apply, regardless of the catalog the student is using for their graduate certificate requirements. A student must satisfactorily complete all coursework and all other graduate certificate requirements within seven years for a graduate certificate.
   Students may earn more than one graduate certificate by completing all requirements for each additional program.
4. A cumulative GPA of at least 3.0 (B) must be earned in courses identified on the GSP.
5. In 400-level courses, a minimum grade of B is required for the course to count toward the graduate certificate program requirements. In 600-level courses, a grade of C is minimally acceptable, provided the student maintains a cumulative GPA of 3.0 (B) in all courses applicable to the graduate certificate program. At least two-thirds of the credits required for the graduate certificate must be taken at the graduate level (600-).
6. Credit by examination, audited courses, F100-, F200-, F300-, and F500-level courses, or courses taken under the credit/no credit option, may not be used to fulfill the basic course requirements of any degree program.
7. No more than one-quarter of approved program credits may be transferred from other accredited institutions, including those inside the UA system unless the graduate certificate is a joint program with another UA university. Transferred credits may not be used from previously earned undergraduate degrees. A minimum B grade (3.0) is required in all graduate courses presented for transfer. A P grade (pass) is not acceptable for transfer credit.
8. If the requirements for a graduate certificate are not met within seven years of formal acceptance into the program, admission expires and the student must reapply for admission.

Graduate Assistantships

Graduate students receive graduate assistantship stipends on a semester or academic year basis. Graduate assistantships may include tuition, stipend, graduate student health insurance, and fees. Graduate assistants can be paid for a maximum of 20 hours per week while school is in session. Students with assistantships must be registered for at least 6 credits during both the fall and spring semesters (with the exception of foreign nationals on temporary student visas who must be registered full-time). (Audited credits do not apply.) Graduate students must maintain a 3.0 minimum GPA to receive a graduate assistantship and may lose the assistantship if they do not maintain their GPA.

Any request by an assistant to work more than 20 hours per week must be approved by the student's committee chair, department head and unit dean. Complete a Graduate Student Employee Workload Exception Request (https://www.uaf.edu/gradschool/current-students/forms.php) to request approval of more than 20 hours per week. Foreign nationals on temporary student visas are not permitted to work more than 20 hours a week while classes are in session and are not eligible for an overload waiver.

Teaching assistantships include a tuition payment by the university for no more than 10 to 20 hours per week. If the workload is 10 to 14 hours per week, no more than 5-credits will be included. No tuition will be included if the workload is less than 10 hours per week.

Research assistantships include a tuition payment by grants/contracts for no more than 10-credits each semester if the workload is 15 to 20 hours per week. If the workload is 10 to 14 hours per week, no more than 5-credits will be included. No tuition will be included if the workload is less than 10 hours per week.

Tuition payments should be used for courses directly related to the student's degree program. All fees are the responsibility of the student unless the department or institute makes other arrangements with the UAF Graduate School prior to registration.

A graduate student with a GPA of less than 3.0 for one semester will need to apply for an appeal with Financial Aid to continue with the assistantship. Please see the Financial Aid forms page (https://www.uaf.edu/finaid/forms/) for more information.

Graduate Certificate Programs

Arctic and Northern Studies Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Students must have a completed baccalaureate degree.
- Students should have an undergraduate GPA of 3.0 or higher.

Program Requirements

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Minimum Requirements for Arctic and Northern Studies Graduate Certificate: 15 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Arctic and Northern Studies Program Requirements		
Complete the following:		
ACNS/HIST F600	Perspectives on the North	3
Complete one course in each of the following areas:		12
Environmental Studies		
Indigenous Studies		
International Studies		
Regional Studies		
Total Credits		**15**

Areas

Environmental Studies

Code	Title	Credits
Complete one of the following:		3
ACNS/ENGL F449	Northern and Environmental Literature	
ACNS F611	Environmental History	
ACNS/PS F658	Comparative Environmental Politics	

Indigenous Studies

Code	Title	Credits
Complete one of the following:		3
ACNS/ANTH F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS F657/ PS F650	Comparative Indigenous Rights and Policies	
CCS F608	Indigenous Knowledge Systems	

International Studies

Code	Title	Credits
Complete one of the following:		3
ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS/PS F652	International Relations of the North	
ACNS/PS F669	Arctic Politics and Governance	
ACNS/HIST F683	20th-century Circumpolar History	
HSEM F621	Circumpolar Competition-Arctic Diplomacy and Defense	

Regional Studies

Code	Title	Credits
Complete one of the following:		3
ACNS/HIST F604	Modern Scandinavia	
ACNS/PS F660	Government and Politics of Canada	
ACNS F661/ HIST F662	History of Alaska	
ACNS/PS F662	Alaska Government and Politics	
ACNS/HIST F664	Soviet and Post-Soviet Russia	
ACNS/PS F668	Government and Politics of Russia	

Aerospace Engineering Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Admission into a master's degree program within the College of Engineering and Mines or approval by the program administrator.

Program Requirements

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Minimum requirements for Aerospace Engineering Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Aerospace Engineering Graduate Certificate Program Requirements:		
Complete a minimum of two courses from the following:		6
AERO F654	UAS Systems Design	
AERO/ME F656	Aerospace Systems Engineering	
AERO/CS F658	Unmanned Aircraft Systems (UAS) Operations	
Complete up to 6 credits from the following courses:		3-6
ATM F645	Atmospheric Dynamics	
CS F665	Computer and Network Security	

GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
ME F609	Advanced Vibrations	
PHYS/ATM F647	Fundamentals of Geophysical Fluid Dynamics	
Complete up to 3 credits from the following courses:		0-3
CS F453	Robotics & 3D Printing	
ME F451	Aerodynamics	
ME F452	Introduction to Astrodynamics	
ME F453	Propulsion Systems	
Total Credits		**12-15**

Applied and Computational Mathematics Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Hold a baccalaureate degree from an accredited institution
- Complete Calculus I (MATH F251X), Calculus II (MATH F252X), Calculus III (MATH F253X), Differential Equations (MATH F302) and Computer Science I (CS F201)[1] or their equivalent;
- Complete Linear Algebra (MATH F314)[1] or its equivalent.

[1] Students must earn a C or better in each course.

Program Requirements

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Minimum Requirements for Applied and Computational Mathematics Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Applied and Computational Mathematics Program Requirements		
Complete two of the following:		6
MATH F614	Numerical Linear Algebra	
MATH F615	Numerical Analysis of Differential Equations	
MATH F660	Advanced Mathematical Modeling	
MATH F661	Optimization	
MATH F663	Graph Theory	
Select two or more from the following electives to total 12 credits for the certificate:		6-8
Any course listed above not already taken		
Any of MATH F617, MATH F632, MATH F658, MATH F665		
At most one of MATH F631, MATH F641, MATH F645, MATH F651		
At most one of MATH F401, MATH F404, MATH F405, MATH F408, MATH F410, MATH F412, MATH F426, MATH F430, MATH F432, MATH F460		
At most one 3- or 4-credit 600-level statistics course, excluding STAT F698		
Or other elective courses approved by a mathematics advisor.		
Total Credits		**12-14**

Arctic Security Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Student must have a completed baccalaureate degree.
- If the degree is in a non-security or arctic related field and has a 3.0 or higher cumulative GPA, they will be required to start with one 400-level course, which is an elective option for the degree.
- Students that have already obtained a graduate degree will not be required to complete an entrance exam or complete a 400-level course first.
- Students with a baccalaureate degree in a related field, with a cumulative GPA of 3.0 or higher will not have any additional testing or entry course requirements.
- If the student has a cumulative GPA between 3.0 and 2.75, regardless of the field of study, they will be required to complete the Watson Glaser Critical Thinking Exam.
- If a student has a cumulative GPA below 2.75, they will be required to submit results from either the GRE or GMAT.

Program Requirements

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Minimum Requirements for Arctic Security Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Arctic Security Program Requirements		
Complete the following:		
HSEM F607	Vulnerability and Protection	3
HSEM F621	Circumpolar Competition-Arctic Diplomacy and Defense	3
HSEM F622	Arctic Strategies and Operations	3
Complete one of the following:		3
HSEM F406	Comparative Homeland Security	
HSEM F408	Homeland Defense and Security	
HSEM F609	Human Security	
HSEM F692	Security and Disaster Management Seminar	
ACNS F652	International Relations of the North	
Total Credits		**12**

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
HSEM F621	Circumpolar Competition-Arctic Diplomacy and Defense	3
HSEM F622	Arctic Strategies and Operations	3
	Credits	**6**
Spring		
HSEM F607	Vulnerability and Protection	3
HSEM F406/ F408/F609/F692/ ACNS F652	Comparative Homeland Security	3
	Credits	**6**
	Total Credits	**12**

Business Continuity Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Students must have a completed baccalaureate degree.
- If the degree is in a non-security or business continuity-related field and has a 3.0 or higher cumulative GPA, students will be required to start with one 400-level course, that is an elective option for the degree.
- Students who have already obtained a graduate degree will not be required to complete an entrance exam or complete a 400-level course first.
- Students with a baccalaureate degree with a cumulative GPA of 3.0 or higher in a related field will not have any additional testing or entry course requirements.
- Students with a cumulative GPA between 3.0 and 2.75, regardless of the field of study, will be required to complete the Watson Glaser Critical Thinking Exam.
- Students with a cumulative GPA below 2.75, will be required to submit results from either the GRE or GMAT.

Program Requirements

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Minimum Requirements for Business Continuity Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Business Continuity Program Requirements		
Complete the following:		
HSEM F645	Crisis Management	3
HSEM F646	Business Continuity and Risk Assessment	3
HSEM F632	Project Management	3
Complete one of the following:		3
HSEM F445	Business Continuity and Crisis Management [1]	
HSEM F417	Cybersecurity Resiliency	
HSEM F647	Business Continuity Audit	
Total Credits		**12**

[1] If no prior experience in business continuity, HSEM F445 is a required prerequisite for this certificate.

Climate Security Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Students that have already obtained a graduate degree will not be required to complete an entrance exam or complete a 400-level course first.
- Students with a baccalaureate degree in a related field, with a cumulative GPA of 3.0 or higher will not have any additional testing or entry course requirements.
- If the student has a cumulative GPA between 3.0 and 2.75, regardless of the field of study, they will be required to complete the Watson Glaser Critical Thinking Exam.
- If a student has a cumulative GPA below 2.75, they will be required to submit results from either the GRE or GMAT.

Program Requirements

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Minimum Requirements for Climate Security Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Climate Security Program Requirements		
Complete the following:		
HSEM F609	Human Security	3

HSEM F672	Climate Catastrophes: A Case Study Approach	3
HSEM F673	Models and Scenarios for Disaster Risk Reduction	3
Complete one of the following:		3-4
ACNS/PS F647	U.S. Environmental Politics	
ACNS/PS F658	Comparative Environmental Politics	
ATM F680	Climate Change Processes: Past, Present, Future	
ATM F657	Climate Change in the Arctic: Methods and Impact Assessment	
HSEM F670	Environmental Security	
MBA F642	Economics of Environmental and Business Sustainability	
Total Credits		**12-13**

Cybersecurity Management Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Students must have a completed baccalaureate degree.
- Students must possess either prior education specific to IT, networking or cybersecurity-related work experience or a combination of both with the approval and review of the program director to enter the cybersecurity management or associated concentration within the MSDM.
- If the degree is in a non-security or non-cybersecurity-related field and the student has a 3.0 or higher cumulative GPA, students will be required to start with one 400-level course, that is an elective option for the degree.
- Students who have already obtained a graduate degree will not be required to complete an entrance exam or complete a 400-level course first.
- Students with a baccalaureate degree with a cumulative GPA of 3.0 or higher in a related field will not have any additional testing or entry course requirements.
- Students with a cumulative GPA between 3.0 and 2.75, regardless of the field of study, will be required to complete the Watson Glaser Critical Thinking Exam.
- Students with a cumulative GPA below 2.75, will be required to submit results from either the GRE or GMAT.

Program Requirements

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Minimum Requirements for Cybersecurity Management Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Cybersecurity Program Requirements		
Complete the following:		
HSEM F641	Information Assurance and Risk Assessment	3
HSEM F648	Perspectives in Addressing Cybersecurity & Critical Infrastructure	3
HSEM F649	Cyber Threats and Vulnerabilities	3
Complete one of the following:		3
HSEM F415	Cybersecurity in the 21st Century: Technology and Ethics	
HSEM F416	Cybersecurity Management	
HSEM F417	Cybersecurity Resiliency	
HSEM F418	Cybercrime, Fraud and Law	
Total Credits		**12**

Geospatial Science Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Hold a baccalaureate degree from an accredited institution
- Completion of Elementary Statistics (STAT F200X), Computer Science I (CS F201), College Algebra for Calculus (MATH F151X), Calculus II (MATH F252X), and General Physics (PHYS F211X)[1] or their equivalents;
- Completion of Introduction to GIS (NRM F338)[1] or its equivalent;

[1] Students must have earned a C or better in each course

Program Requirements

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Minimum Requirements for Geospatial Science Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Geospatial Science Program Requirements		
Complete one of the following:		3-4
NRM F435	GIS Analysis [1]	
GEOS F458	Big Geospatial Data [1]	
or GEOS F658	Big Geospatial Data	
Complete three of the following:		9
GEOS F422	Geoscience Applications of Remote Sensing [1]	
GEOS F622	Digital Image Processing in the Geosciences	
GEOS F639	InSar and Its Applications	
GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
NRM F638	GIS Programming	

NRM F641	Natural Resource Applications of Remote Sensing	
Total Credits		**12-13**

[1] Maximum 4 credits at the F400 level.

Healthcare Management and Leadership Graduate Certificate

Admission Requirements

The Healthcare Management & Leadership Graduate Certificate is designed for students who are interested in an administrative career in the healthcare sector, including managerial roles within hospital systems, public and private insurers, pharmaceutical, medical device and technology companies, consulting or other federal or local governmental organizations. Applicants are required to have professional experience in healthcare or a related field. Applications will be reviewed on a continuous basis. Complete the admission process, including the following:

- Students must have a completed baccalaureate degree.
- Students that have already obtained a graduate degree will not be required to complete an entrance exam.
- Students with a baccalaureate degree with a cumulative GPA of 3.0 or higher will not have any additional testing or entry course requirements.
- If the student has a cumulative GPA between 3.0 and 2.75, regardless of the field of study, they will be required to complete the Watson Glaser Critical Thinking Exam.
- If a student has a cumulative GPA below 2.75, they will be required to submit results from either the GRE or GMAT. A minimum score of 550 on GMAT or 299 on GRE is required.
- Additional required application documents include a Resume, Statement of Goals, Letters of Recommendation and Official transcripts.

Program Requirements

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Minimum Requirements for Healthcare Management and Leadership Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Healthcare Management and Leadership Program Requirements		
Complete the following:		
HML/MBA F636	Survey of Healthcare Administration	3
HML/MBA F637	Information Systems and Decision Making in Health Services (Information Systems and Decision Making in Health Services)	3
HML/MBA F638	Healthcare Law & Ethics (Healthcare Law and Ethics)	3
HML/MBA F639	Healthcare Finance and Economics (Healthcare Finance and Economics)	3
Total Credits		**12**

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
HML/MBA F636	Survey of Healthcare Administration	3
HML/MBA F637	Information Systems and Decision Making in Health Services	3
	Credits	**6**
Spring		
HML/MBA F638	Healthcare Law & Ethics	3
HML/MBA F639	Healthcare Finance and Economics	3
	Credits	**6**
	Total Credits	**12**

Justice Administration Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Students must have a completed baccalaureate degree.
- Students must possess either prior education specific to justice, criminal justice, public administration-related work experience or a combination of both with the approval and review of the program director to enter the justice administration graduate certificate program.
- If the degree is in a non justice or public administration-related field and the student has a 3.0 or higher cumulative GPA, students will be required to start with one 400-level course, that is an elective option for the degree.
- Students who have already obtained a graduate degree will not be required to complete an entrance exam or complete a 400-level course first.

- Students with a baccalaureate degree with a cumulative GPA of 3.0 or higher in a related field will not have any additional testing or entry course requirements.
- Students with a cumulative GPA between 3.0 and 2.75, regardless of the field of study, will be required to complete the Watson Glaser Critical Thinking Exam.
- Students with a cumulative GPA below 2.75, will be required to submit results from either the GRE or GMAT.

Program Requirements

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Minimum requirements for Justice Administration Graduate Certificate: 12 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Justice Administration Program Requirements:		
Complete the following:		
JUST F605	Administration and Management of Criminal Justice Organizations	3
JUST F620	Personnel Management in Criminal Justice	3
JUST F625	Legal Aspect of Criminal Justice Management	3
Complete 3 credits from the following or other approved JUST course:		3
JUST F610	Ethics in Criminal Justice Management	
JUST F615	Justice Program Planning/ Evaluation and Grant Writing	
JUST F640	Community/Restorative Justice	
Total Credits		**12**

Note: Students may apply 3 units (graduate-level credits) from the FBI National Academy, Command and General Staff College, Command College, Southern Police Institute (Univ. of Kentucky) or similar programs approved by the American Council on Education (e.g., graduate certificate relevant to justice from another institution).

Resilience and Adaptation Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Hold a baccalaureate degree with a minimum 3.0 GPA from an accredited institution.

Program Requirements

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Minimum Requirements for Resilience and Adaptation Studies Graduate Certificate: 12 credits

Students must earn a B or Pass grade (or better) in each course.

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Resilience and Adaptation Program Requirements		
Complete the following:		
ANTH F616	Anthropologic Background for Resilience and Adaptation	1
BIOL F616	Ecological Background for Resilience and Adaptation	1
ECON F616	Economics Background for Resilience and Adaptation	1
NRM F667	Resilience Seminar I	1
NRM F668	Interdisciplinary Research Methods-Resilience Seminar II	1
Electives		7
Total Credits		**12**

Rural Development Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Hold a baccalaureate degree from an accredited institution.

Program Requirements

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Minimum Requirements for Rural Development Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Rural Development Program Requirements		
Complete the following:		
RD F625	Community Development Strategies: Principles and Practices	3
RD F651	Management Strategies for Rural Development	3
Complete two of the following: [1,2]		6
RD F600	Indigenous Leadership Symposium	
RD F601	Political Economy of the Circumpolar North	

RD F608	Indigenous Knowledge Systems	
RD F612	Traditional Ecological Knowledge	
RD F630	Economic Development Policy and Entrepreneurship in Rural Alaska: Challenges and Opportunities	
RD F650	Community-based Research Methods	
RD F652	Indigenous Organization Management	
RD F655	Circumpolar Health Issues	
RD F667	Tribal Responses to Violence: Safety, Justice and Advocacy	
RD F670	The Alaska Native Claims Settlement Act: Pre-1971 to Present	
RD F671	Corporate Social Responsibility and Accountability in Rural and Indigenous Contexts	
RD F675	Federal Indian Law: Land, Water and Subsistence	
RD F676	Federal Indian Law in Alaska: Tribal Self-governance - Business, Public Safety Protection of Family,	
Total Credits		**12**

[1] At most one 3-credit rural development or Alaska Native studies course at the F400 level.

[2] Or other elective course approved by a rural development advisor.

School Counselor Certification Program

Admission Requirements

Complete the following admission requirements:

- Application to the school counselor certification program follows the same admission requirements and procedures as for the M.Ed. in counseling
- The application requires a master's degree in a human services area such as social work, psychology, or human services.

Additional requirements:

- Submit a national-level criminal background check prior to seeing clients during COUN F634P.
- Complete field placements appropriate to the student's declared area of interest.
- Complete a background check procedure required by the school field placement. The procedure varies depending on placement.

Program Requirements

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Minimum Requirements for School Counselor Graduate Certificate: 30 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
School Counselor Program Requirements		
Complete the following program requirements for certification in one level (elementary or secondary):		
COUN F615	Foundations of Counseling [1]	3
COUN F617P	Counseling Skills [2]	2
COUN F634P	Practicum	4
COUN F636	Internship I [3]	3
COUN F646	Introduction to School Counseling	3
COUN F647	Professional Ethics [2]	3
COUN F648	Advanced School Counseling	3
COUN F660	Multicultural Counseling	3
COUN F686	Internship II [3,4]	3
Complete the following optional class for K-12 school counseling certification (elementary and secondary)		3
COUN F687	Internship III [3]	
Total Credits		**30**

[1] Transfer credit may be accepted from another CACREP-accredited program.

[2] Transfer credit may be accepted if the student passes a role-play counseling session demonstration.

[3] Additional fee required. Charges are added to fee statements each semester.

[4] Fulfills the capstone requirement.

Science Teaching and Outreach Graduate Certificate

Program Requirements

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Minimum Requirements for Science and Teaching Outreach Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Science and Teaching Outreach Program Requirements		
Have a bachelor's degree from an accredited institution.		
Admission to a graduate science or engineering degree program at UAF (CEM, CFOS, CNSM), or prior completion of a graduate degree in the sciences or engineering.		
Complete the following:		
STO F601	Communicating Science	2
STO F602	Mentoring in the Sciences	2
STO F603	Instructional Design	1
STO F604	Science Teaching and Outreach Internship	4
STO F666	Scientific Teaching	2
Complete one of the following:		1

MATH F600	Teaching Seminar	
PHYS F605	Physics Teaching Seminar/Practicum	
STO F692P	Current Topics in Scientific Teaching	
Total Credits		**12**

Statistics Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Hold a baccalaureate degree from an accredited institution
- Complete Calculus I (MATH F251X), Calculus II (MATH F252X) and Calculus III (MATH F253X)[1]
- Complete Regression and Analysis of Variance (STAT F401) or equivalent.[1] Students without this requirement may be admitted into the program with a deficiency but will be required to complete STAT F401 as part of the requirements of the certificate.

[1] Students must earn a C or better in each course.

Program Requirements

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Minimum Requirements for Statistics Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Statistics Program Requirements		
Complete the following:		
STAT F651	Statistical Theory I [1]	3
or MATH F408	Mathematical Statistics	
Complete two of the following: [1]		6
STAT F461	Applied Multivariate Statistics	
STAT F602	Experimental Design	
STAT F605	Spatial Statistics	
STAT F611	Time Series	
STAT F621	Nonparametric Statistics and Machine Learning	
STAT F631	Categorical Data Analysis	
STAT F641	Bayesian Statistics	
STAT F651	Statistical Theory I [1]	
STAT F652	Statistical Theory II [1]	
STAT F653	Statistical Theory III: Linear Models	
STAT F661	Sampling Theory	
Complete one or more from the following electives to total 12 credits for the certificate:		3-6
FISH F604	Modern Applied Statistics for Fisheries	
FISH/WLF F625	Population Dynamics of Vertebrates	
FISH F627	Statistical Computing with R	
FISH F631	Data Analysis in Community Ecology	
MATH F614	Numerical Linear Algebra	
or MATH F641	Real Analysis	
or MATH F660	Advanced Mathematical Modeling	
or MATH F661	Optimization	
MIN/GE F635	Advanced Geostatistical Applications	
PETE F687	Experimental and Data Analytics Methods in Petroleum Engineering	
PHYS F628	Digital Time Series Analysis	
Or other elective courses approved by a statistics faculty member.		
Total Credits		**12-15**

[1] No more than two of the following courses can be used towards the certificate: MATH F408, STAT F651 or STAT F652.

Strategic Leadership Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Student must have a completed baccalaureate degree.
- Students that have already obtained a graduate degree will not be required to complete an entrance exam.
- Students with a baccalaureate degree with a cumulative GPA of 3.0 or higher will not have any additional testing or entry course requirements.
- If the student has a cumulative GPA between 3.0 and 2.75, regardless of the field of study, they will be required to complete the Watson Glaser Critical Thinking Exam.
- If a student has a cumulative GPA below 2.75, they will be required to submit results from either the GRE or GMAT.

Program Requirements

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Minimum Requirements for Strategic Leadership Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Strategic Leadership Program Requirements		
Complete the following:		
HSEM F456	Leaderships in Dangerous Contexts	3
HSEM F632	Project Management	3
HSEM F656	Strategic Leadership	3
HSEM F665	Strategic Collaboration	3
Total Credits		**12**

Systems Engineering/Program Management Graduate Certificate

Admission Requirements

Complete the following admission requirements:

- Admission into a master's degree program within the College of Engineering and Mines or approval by the program administrator.

Program Requirements

< Back to Department (p. 134)

Minimum requirements for Systems Engineering/Program Management Graduate Certificate: 12 credits

Code	Title	Credits
General University Requirements		
Complete the general university requirements. (p. 404)		
Graduate Certificate Requirements		
Complete the graduate certificate requirements. (p. 404)		
Systems Engineering/Program Management Program Requirements		
Complete the following:		
AERO F656	Aerospace Systems Engineering	3
HSEM F632	Project Management	3
Complete two of the following:		6
COM F600	Introduction to Professional Communication	
COM F622	Communication in Interpersonal Relationships	
COM F625	Communication Theory	
COM F631	Teambuilding	
Total Credits		**12**

Master's

How to Earn a Master's Degree

General university and specific degree requirements for UAF graduate programs are described in this section of the catalog, along with requirements for each graduate program. Instructions for applying for admission can be found in the Applying for Admission: Graduate Degree Programs (p. 31) section.

ACADEMICS, POLICIES AND REGULATIONS

Many academic policies and regulations apply to both graduate and undergraduate students. These guidelines are relevant to the student's academic experience at UAF and are important for them to read and understand. Topics include definitions and requirements for official university communications, full- and part-time student status, academic progress, academic dismissal, grading system and policies, FERPA and the student code of conduct. See UAF academics, policies and regulations (p. 82).

GRADUATE ADVISORY COMMITTEE

A graduate advisory committee guides students in developing and completing their degree programs. The student should form the committee and have it appointed within the first two semesters of their study. Committee members for graduate degrees are approved by the appropriate dean, usually upon recommendation of the department head, and by the director of the Graduate School. For interdisciplinary students, the graduate advisory committee chair's home department and college/school will also be the academic home of the interdisciplinary student and the student will follow the procedures of that home department.

The graduate advisory committee's major responsibilities are to formulate a graduate study plan in consultation with the student by the end of the student's second semester in the graduate program; to develop a tentative timetable for completion of all requirements for the degree program; to monitor the student's progress in course work and research; to provide advice and feedback to the student on that progress; to file a Report of Advisory Committee with the Graduate School; to approve, where appropriate, a research topic; to supervise the preparation of the research thesis or project when one is required; to uphold the standards of the college/school and the university; to inform the unit dean, in writing, if a student's performance is inadequate and provide relevant recommendations; and to formulate and conduct the comprehensive examination and other exams as required by the department. The student's advisor (major professor, advisory committee chair) acts as chair of the graduate advisory committee and takes the lead in fulfilling these responsibilities.

Committee Composition

- The advisory committee of master's degree students must consist of at least three approved UAF faculty members. Committee membership must be approved by the home department, unit dean and the director of the Graduate School.
- Retired or emeritus UAF faculty who have an association with the home department may serve on master's advisory committees, upon expressed approval by the home department.
- Faculty from other universities and other professionals who are not employed by UAF may serve as committee members on master's advisory committees upon expressed approval by the home department. They may not serve as the chair of an advisory committee but may serve as a co-chair.

GRADUATE STUDY PLAN

Graduate students must file a Graduate Study Plan (GSP) with the Graduate School before the end of their second semester in a UAF graduate degree program. The GSP outlines the curriculum of study and a timetable the student must follow in meeting graduate degree requirements. The GSP is prepared by the advisory committee in consultation with the student. It is an agreement of mutual expectations between the student and the faculty committee. The GSP not only contains the specific degree requirements but also indicates the mechanism for fulfilling these requirements (e.g., via coursework, examinations, readings, internships or other supervised experience) and a projected timetable.

ADVANCEMENT TO CANDIDACY

Advancement to candidacy formally establishes the graduate student's specific degree requirements. Students may apply for advancement to candidacy for a specific master's degree if they meet the following requirements:

1. They are in good academic standing.
2. Satisfactorily completed at least 9 semester credits of graduate study at UAF (study after admission to a specific degree program).
3. Received approval of a provisional thesis or project topic, if applicable.
4. Received approval of the finalized Graduate Study Plan, including specific coursework to be completed and any other requirements.

Students should apply as soon as possible after meeting the requirements. The application for advancement to candidacy is required at least one semester before the degree can be awarded.

The finalized Graduate Study Plan should be the basis for completing the Advancement to Candidacy form. Students must have a cumulative GPA of 3.0 in the courses identified on the Advancement to Candidacy form. For the purpose of satisfying degree requirements, students must earn a B (3.0) or better (no P grades) in each F400-level course and a C grade (2.0) or better in each 600-level course. A B- is less than a 3.0 and, if obtained in an F400 course, will not count for meeting degree requirements; likewise a C- is less than a 2.0, and if obtained in an F600-level course, will not count for meeting degree requirements.

Admission to graduate study does not imply advancement to candidacy for a degree. The graduate advisory committee has the option of refusing to recommend a student for candidacy.

EXAMINATIONS

Examinations are given in both written and oral form, depending upon the policy of the program unit, the decision of the advisory committee, and the specific examination being taken.

- **Placement Examinations**
  Some master's degree programs have formalized placement exams designed to pinpoint a student's strengths and weaknesses as an aid in developing the Graduate Study Plan. This evaluation is carried out during the student's first semester at the university, preferably in the first month, and may be written, oral, or both.
- **Qualifying Examinations**
  Some master's degree programs require the student to complete a written and/or oral qualifying examination before advancement to candidacy. This examination is an interim evaluation of academic

progress; the student may pass unconditionally or conditionally. A conditional pass indicates specific weaknesses that the student must remedy before degree requirements are completed. The Graduate Study Plan and later the Advancement to Candidacy form should include mechanisms for addressing these weaknesses.

- **Comprehensive Examination**
  The comprehensive examination is given to determine whether the student has integrated knowledge and understanding of the principles and concepts underlying major and related fields. It may be oral or written or a combination of both.
- **Defense of Project**
  Graduate students who are required to complete a project in partial fulfillment of degree requirements must pass an oral defense of project examination. The defense will consist of a presentation followed by questions on the research, analysis and written presentation. All committee members must participate in the project defense.
  The graduate project defense examinations are public events and open to the university and the wider community. The student should submit their name and project title and the date, time, and location of their defense examination to the Graduate School at least two weeks prior to their defense examination date. The Graduate School, along with the home program, department, college, or school, will advertise the examination.
  The defense examination includes a public presentation of the project moderated by the chair of the graduate advisory committee, followed by a private executive examination by the committee.
- **Defense of Thesis Examination**
  Graduate students who are required to complete a thesis in partial fulfillment of degree requirements must pass an oral defense of thesis examination. The defense will consist of a presentation followed by questions on the research, analysis and written presentation. The Graduate School will not accept a thesis for final submission until the student has successfully defended it. All committee members must participate in the defense of the thesis.
  The graduate thesis defense examinations are public events and open to the university and the wider community. The student should submit their name and thesis title, and the date, time, and location of their defense examination to the Graduate School at least two weeks prior to their defense examination date. The Graduate School, along with the home program, department, college, or school, will advertise the examination.
  The defense examination includes a public presentation of the thesis moderated by the chair of the graduate advisory committee, followed by a private executive examination by the committee.
- **Examination Committee**
  In most cases, the student's graduate advisory committee prepares and gives the examinations under guidelines formulated by the faculty of the department in which the degree is being taken. In a few programs, examinations are replaced or supplemented by departmental or school examinations and administered by an established examining committee.
- **Language/Research Tool Requirement**
  Proficiency in a second language or a research tool is not a university-wide requirement but may be required by some departments or programs. An advisory committee may specify a language or research tool in addition to the requirements of the program.
  The specific language or research tool is determined by the advisory committee, guided by the policies of the administrative unit in which the degree is offered. Generally, competency in a second language is required. However, upon approval of the department or program head, the committee may substitute computer languages, statistics, mathematics, or study in areas such as history or philosophy of science, business, administration, law, or economics. In all instances, the topics selected must support the student's degree program.

CHANGING PROGRAMS

Graduate students may change their program. To change to a program in a different department, school or college (e.g., from an M.S. in civil engineering to an M.S. in biology), the student must submit a new application for admission so faculty in the new degree program can fully review the student's credentials. To change the area of emphasis, add a degree or change the degree within the same department (e.g., from an M.A. in anthropology to a or add a Ph.D. in anthropology, or from a Ph.D. in biochemistry and molecular biology to a Ph.D. in environmental chemistry), the student may change or add programs by completing a change of major form. The form is available from the Graduate School's website. Regardless of when the form is submitted, a change of program doesn't become effective until the beginning of the upcoming fall or spring semester. For more information, contact the Graduate School at 907-474-7464.

GRADUATION

- **Responsibility**
  The student is responsible for meeting all requirements for graduation. The Advancement to Candidacy must be received by the Graduate School the semester before they intend to graduate.
  - Master's with thesis or project
    - The student must be registered for a minimum of 3 graduate-level credits within their discipline the semester that they successfully defend their dissertation and plan to graduate.
    - If the student has already successfully defended but missed the previous semester's graduation deadline, then they must be registered for a minimum of 1 graduate-level credit within their discipline the semester that they plan to graduate.
  - Master's with non-thesis/non-project
    - The student is not required to register for the semester within which they plan to graduate.

For additional information on the steps or paperwork required to graduate for all master's programs, please visit the Ready to Graduate webpage (https://www.uaf.edu/gradschool/students/ready_to_graduate/).

- **Application for Graduation**
  The student must file an application for graduation and a nonrefundable fee with the Office of the Registrar. The Graduate School encourages the student to work with their advisor/committee chair before applying for graduation to meet any departmental deadlines. Applications for graduation filed after the published deadline will be processed for graduation the following semester. The student does not need to have all requirements met before they apply for graduation. The application is an indication that they are planning to finish all degree requirements during the intended graduation semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and pay the fee again.
- **Diplomas and Commencement**
  UAF issues diplomas to graduates three times each year: in September, January and June. All students who complete degree

requirements during the academic year are invited to participate in the annual commencement ceremony at the end of the spring semester. Names of students receiving degrees appear in the commencement program and are released to the media unless the student has a confidential hold on file with the Office of the Registrar. Students who do not want their names to be released may so indicate on the application for graduation form. Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

General University Requirements for Master's Degrees

CATALOG AND TIME LIMIT

Graduate students may elect to graduate under the degree requirements in effect and published in the UAF catalog in any one of the previous seven years in which they are enrolled as a master's degree student, or in the previous 10 years if they are a doctoral student. To be considered enrolled in their master's or doctoral degree program, they must meet the registration requirements per academic year. If a student is enrolled through the nondegree student registration process, they are not considered enrolled as a degree student during that time.

All nonacademic policies and regulations listed in the current catalog apply, regardless of the catalog used for degree requirements. Students must satisfactorily complete all coursework listed on their Advancement to Candidacy form and all other degree requirements within seven years for a master's degree.

GRADES AND GRADE POINT AVERAGE

Graduate students must have a cumulative GPA of 3.0 in the courses identified on their Advancement to Candidacy form to both remain in good standing and graduate. In addition, for the purpose of satisfying degree requirements, students must earn a B (3.0) or better (no P grades) in each F400-level course and a C grade (2.0) or better in each F600-level course. A B- is less than a 3.0 and, if obtained in an F400-level course, will not count for meeting degree requirements; likewise, a C- is less than a 2.0 and, if obtained in an F600-level course, will not count for meeting degree requirements.

REGISTRATION REQUIREMENT

Graduate students must be registered for at least 6 credits per year (fall, spring, summer), at the graduate or F400 level in courses relevant to the graduate degree, while actively working toward a degree. Those who wish to temporarily suspend their studies should formally request a leave of absence.

Additionally, graduate students must be registered in both the semester that they defend their thesis dissertation and the semester in which they receive their degree as per the requirements under Graduation (p. 415).

TEMPORARY LEAVE OF ABSENCE

If a student needs to temporarily suspend studies while earning a graduate degree, they must obtain an approved leave of absence. If the student fails to register for at least 6 graduate or F400-level credits in a school year (fall, spring, or summer semester) or to obtain a leave of absence, they will be dropped from graduate study and will have to be reinstated before resuming graduate studies. Contact the Graduate School for information at 907-474-7464.

TRANSFER CREDIT

Up to one-half of all graduate degree credits approved for a graduate program may be transferred from UAA and UAS. No more than one-third of approved program credits may be transferred from other accredited institutions outside the UA system. Transferred credits may not be used from previously earned undergraduate degrees. A minimum B grade (3.0) is required in all graduate courses presented for transfer. A P grade (pass) is not acceptable for transfer credit.

Transfer credits from international institutions require that transcripts be evaluated with a comprehensive course-by-course credential report through a NACES-approved evaluation service such as World Education Services (WES) (http://www.wes.org/). Transcripts from Canadian institutions (excluding Quebec) are exempt from this requirement; they may be sent directly from the issuing institution.

CREDITS EARNED WHILE NONDEGREE SEEKING

A student who earned postbaccalaureate degree credits while studying as a nondegree student at UAF may, with the approval of the graduate advisory committee, apply those credits toward a graduate degree. However, no more than one-half of all credits used to meet the requirements of a graduate degree may be credits earned as a nondegree student.

COURSE RESTRICTIONS

Credit by examination, audited courses, F100-, F200-, F300- and F500-level courses, and courses that are taken under the credit/no credit option cannot be used to fulfill the basic course requirements of any degree program. No more than 12 credits of special topics courses (F693 or F695) or individual study (F697) may be used toward a graduate degree. The director of the Graduate School must approve requests for exceptions to the limit.

DEFICIENCIES

The graduate advisory committee may require that students remedy any deficiencies. The committee will determine early in the program both how to remedy the deficiencies and the minimum level of performance required of the student. Graded undergraduate courses taken to remedy a deficiency must receive a grade of B (3.0) or better. Deficiency courses cannot be listed on the Advancement to Candidacy form.

ENGLISH PROFICIENCY

Graduate students must be proficient in written and oral English. The graduate advisory committee will determine the requirements to address any deficiencies in communication. These requirements may not be used to fulfill departmental language/research tool requirements.

Master's Degree Requirements and Types

GENERAL MASTER'S DEGREE REQUIREMENTS

UAF offers research-oriented (thesis or project) and practice-oriented (non-thesis) master's degrees. Research-oriented programs are designed to direct graduate students toward scholarly activity that leads to the acquisition of new knowledge. Practice-oriented programs prepare graduate students for professional practice and direct them toward the application or transmission of existing knowledge. All degree requirements must be completed within a seven-year period. UAF tenured faculty, tenure-track faculty, and research faculty are not eligible to become candidates for a graduate degree within the discipline in which they teach.

The minimum requirements for a master's degree at UAF are as follows (individual departments may have additional requirements):

Steps Required for All Master's Degrees (Excludes MBA and M.S.D.M. Degrees)

- Formulate a unified degree program in cooperation with the student's graduate advisory committee. Degree programs must be composed of courses in the discipline or clearly related to and/or supportive of that discipline. All courses to be applied toward the degree must be approved by the advisory committee and follow the requirements set forth by the department that sponsors the degree.
- Master's degree students must:
  a. Meet all requirements set forth in the General University Requirements (p. 416) section.
  b. Submit an Appointment of Committee form by the end of the second semester of study.
  c. Submit a Graduate Study Plan by the end of the second semester of study.
  d. Submit a Report of Advisory Committee form by May 15 or October 15 (for students starting in the Fall or Spring semester respectively) of every year.
  e. Pass a written and/or oral comprehensive examination which may be combined with a project or thesis defense. Some programs (e.g., the M.Ed. degree program) may substitute a synthesizing paper for the comprehensive examination. This includes a demonstration of the ability to synthesize information in the field at a level appropriate for a master's degree.
  f. Submit an Advancement to Candidacy form to the Graduate School. Once submitted, this form supplants the GSP and formally establishes specific degree requirements.
  g. Pass an oral defense of the thesis or project if a thesis or project is required.
  h. Register as necessary and apply to graduate per the requirements noted in the Graduation (p. 415) section.
  i. Complete all degree requirements within the seven-year time limit.
  j. Archive thesis or project in the UAF Rasmuson Library if a thesis or project is required.

Steps Required for MBA and M.S.D.M. Degrees

- Formulate a unified degree program in cooperation with the student's graduate advisor. Degree programs must be composed of courses in the discipline or clearly related to and/or supportive of that discipline. All courses to be applied toward the degree must be approved by the advisor and follow the requirements set forth by the department that sponsors the degree.
- MBA and M.S.D.M. degree students must:
  a. Meet all requirements set forth in the General University Requirements section.
  b. Submit a Report of Advisory Committee form by May 15 or October 15 of every year (for students starting in the Fall or Spring semester respectively) every year.
  c. Submit an Advancement to Candidacy form (or equivalent as pertains to MBA and M.S.D.M. programs) to the Graduate School. Once submitted, this form formally establishes the specific degree requirements.
  d. Register as necessary and apply to graduate per the requirements noted in the Graduation section.
  e. Complete all degree requirements within the seven-year time limit.

Credit Requirements

- Successfully complete a minimum of 30 semester credits, of which 21 semester credits must be at the graduate level, including thesis and research. The remaining credits may be applied from courses at the F400-level.
- No F100-, F200-, F300-, or F500-level credits or audited courses may be applied toward master's degree requirements.
- For programs requiring a thesis, a maximum of 12 credits of thesis (699)/research (698) (with a minimum of 6 credits of thesis) may be applied toward degree requirements. For programs requiring a project, a maximum of 6 research (698) credits may be applied toward degree requirements. A student may enroll in as many thesis and/or research credits as needed to remain in good standing.

Second Master's Degree Programs

At the discretion of the student's advisory committee, admitting department, and dean, the student may transfer up to 20% of the minimum number of credits required for a UAF master's degree from a previously earned master's degree. Transferred credit may not be research, project or thesis credit. The transferred credit must be for completed graduate-level courses and not for portions of a course. For a 30-credit master's degree, for example, up to 6 graduate credits may be transferred; for a 45-credit master's degree, up to 9 graduate credits may be transferred. The following requirements apply to students who wish to pursue a second master's degree:

1. Submit a new application, including the application processing fee, updated transcripts, and three new reference letters.
2. Acceptable GRE scores submitted previously may be applied to a second master's degree.
3. Fulfill all general university requirements for the second master's degree, including taking a comprehensive exam (if required), completing a minimum of 30 semester credits (including thesis, research and transfer credits), and passing defense of thesis or project.
4. All work used to fulfill degree requirements for a second master's degree must be completed within seven years.

Exceptions to Degree Requirements

Deviations from academic requirements and regulations for graduate students must be approved by academic petition using the form available on the Graduate School website. Petitions must be approved by the student's graduate advisory committee, the department chair of the student's program, the dean of the school or college, and the director of the Graduate School.

Types of Master's Degrees

Additional information is available at uaf-grad-school@alaska.edu or 907-474-7464.

MASTER OF ARTS (M.A.) — COURSEWORK FOCUS REQUIREMENTS

1. Complete at least 30 credits of coursework. At least 24 credits must be at the F600 level.
2. Pass a written or oral comprehensive examination, which may be integrated with the capstone course.
3. Successful completion of a capstone course that includes a demonstration of the ability to synthesize information in the field at a level appropriate for a master's degree.

MASTER OF ARTS (M.A.) — WITH PROJECT REQUIREMENTS

1. Successfully complete at least 30 credits of coursework, including at least 6 credits of project work (F698) unless the degree requirements of a particular program specify that a 3-credit project is permitted. No more than 6 research (F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600 level.
2. Pass a written and/or oral comprehensive examination (may be combined with the project defense).
3. Present and defend the project.
4. Submit a completed and signed project defense form to the Graduate School.
5. Archive the project in the UAF Rasmuson Library.

MASTER OF ARTS (M.A.) — WITH THESIS REQUIREMENTS

1. Successfully complete at least 30 credits of coursework, including at least 6 credits of thesis (F699). No more than 12 thesis/research (F699/F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600 level.
2. Pass a written and/or oral comprehensive examination (may be combined with the thesis defense).
3. Present and defend the thesis.
4. Submit a completed and signed thesis defense form to the Graduate School.
5. Archive the thesis in the UAF Rasmuson Library.

MASTER OF BUSINESS ADMINISTRATION (MBA) REQUIREMENTS

1. Complete at least 30 credits of coursework. At least 24 credits must be at the F600 level (6 credits at the F400 level).
2. Successful completion of a capstone course that includes a demonstration of the ability to synthesize information in the field at a level appropriate for a master's degree.

MASTER OF EDUCATION (M.ED.) REQUIREMENTS

General descriptions are available in the departments offering an M.Ed. degree:

- Counseling (p. 126)
- Elementary Education (p. 137)
- Secondary Education (p. 174)
- Special Education (p. 181)

MASTER OF FINE ARTS (M.F.A) REQUIREMENTS

General descriptions are available in the departments offering an M.F.A. degree:

- Art (p. 107)
- English (p. 140) (creative writing)

MASTER OF MARINE POLICY (M.M.P.) REQUIREMENTS

A general description is available in marine policy (p. 447).

MASTER OF MARINE STUDIES (M.M.S.) REQUIREMENTS

A general description is available in marine studies (p. 451).

MASTER OF MUSIC (M.MU.) REQUIREMENTS

1. Minimum credits required — 36 credits
2. Successfully complete the performance of a graduate music recital.
3. Successfully complete an oral defense of an approved research project paper.

MASTER OF NATURAL RESOURCES AND ENVIRONMENT (M.N.R.E.) REQUIREMENTS

A general description is available in natural resources and environment (p. 453).

MASTER OF SCIENCE (M.S.) — COURSEWORK FOCUS REQUIREMENTS

1. Complete at least 30 credits of coursework. At least 24 credits must be at the F600 level.
2. Pass a written or oral comprehensive examination, which may be integrated with the capstone course.
3. Successful completion of a capstone course that includes a demonstration of the ability to synthesize information in the field at a level appropriate for a master's degree.

MASTER OF SCIENCE (M.S.) — WITH PROJECT REQUIREMENTS

1. Successfully complete at least 30 credits of coursework, including at least 6 credits of project work (F698) unless the degree requirements of a particular program specify that a 3-credit project is permitted. No more than 6 research (F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600 level.
2. Pass a written and/or oral comprehensive examination (may be combined with the project defense).
3. Present and defend the project.
4. Submit a completed and signed project defense form to the Graduate School.
5. Archive the project in the UAF Rasmuson Library.

MASTER OF SCIENCE (M.S.) — WITH THESIS REQUIREMENTS

1. Successfully complete at least 30 credits of coursework, including at least 6 credits of thesis (F699). No more than 12 thesis/research (F699/F698) credits may be counted toward the minimum degree credits. At least 21 credits, including those earned for thesis and research/project, must be at the F600 level.
2. Pass a written and/or oral comprehensive examination (may be combined with the thesis defense).
3. Present and defend the thesis.
4. Submit a completed and signed thesis defense form to the Graduate School.
5. Archive the thesis in the UAF Rasmuson Library.

MASTER OF SECURITY AND DISASTER MANAGEMENT (M.S.D.M.) REQUIREMENTS

1. Complete at least 30 credits of coursework. At least 24 credits must be at the F600 level (6 credits at the F400 level).
2. Successful completion of a capstone course that includes a demonstration of the ability to synthesize information in the field at a level appropriate for a master's degree.

ONE HEALTH MASTER (O.H.M.) REQUIREMENTS

1. Complete at least 30 credits of coursework. At least 24 credits must be at the F600 level or higher (6 credits at the F400 level).
2. Successful completion of a capstone course that includes a demonstration of the ability to synthesize information in the field at a level appropriate for a master's degree.

Master's Degree Programs

Anthropology M.A.

Admission Requirements

Complete the admission process including the following:

- Submit GRE scores.

Program Requirements

< Back to Department (p. 103)

Minimum Requirements for Anthropology M.A.: 30-36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Anthropology Program Requirements		
Complete the following:		
ANTH F629	Structures of Anthropological Argument	3
ANTH F652	Research Design and Professional Development Seminar	3
ANTH F698	Non-thesis Research/Project	6
or ANTH F699	Thesis	
Complete four semesters of a foreign language or proficiency in a research tool. [1]		
Complete 18 credits established by the advisory committee		18
Total Credits		**30**

[1] Students wanting a linguistic anthropology emphasis must complete the foreign language option as well as take ANTH F631 and ANTH F632 as part of their 18 credits.

Note: At least 24 credits must be regular coursework (not research or thesis) with 21 of these credits at the F600 level.

Arctic and Northern Studies M.A.

Admission Requirements

Complete the following admission requirements:

- A bachelor's degree from an accredited university.
- A minimum cumulative grade point average of 3.0 in undergraduate studies (exceptions are made for students with outstanding qualifications).
- A minimum grade point average of 3.0 in the undergraduate major (exceptions are made for students with outstanding qualifications).

Program Requirements

< Back to Department (p. 106)

Minimum Requirements for Arctic and Northern Studies M.A.: 30 credits

CONCENTRATIONS: ARCTIC POLITICS AND POLICY (P. 420), NORTHERN HISTORY (P. 421), INDIVIDUALIZED STUDY (P. 421)

Students must earn a C- grade or better in each course.

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Arctic and Northern Studies Program Requirements		
Complete the following:		
ACNS F600	Perspectives on the North	3
ACNS F601	Research Methods and Sources in the North	3
ACNS F689	Thesis Writing Workshop	3
ACNS F698	Non-thesis Research/Project	6-12
or ACNS F699	Thesis	
Complete 3 elective credits at the F400 or F600 level		3
Concentration		
Complete one of the following:		12
Arctic Politics and Policy		
Northern History		
Individualized Study		
Total Credits		**30-36**

Concentrations

ARCTIC POLITICS AND POLICY

Code	Title	Credits
Arctic Politics and Policy Concentration Requirements		
Complete one of the following:		3
ACNS/PS F652	International Relations of the North	
ACNS/PS F669	Arctic Politics and Governance	
Complete three of the following:		9
ACNS/PS F603	Public Policy	
ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS/PS F647	U.S. Environmental Politics	
ACNS/PS F652	International Relations of the North	
ACNS/PS F655	Political Economy of the Global Environment	
ACNS F657/ PS F650	Comparative Indigenous Rights and Policies	
ACNS/PS F660	Government and Politics of Canada	
ACNS/PS F662	Alaska Government and Politics	
ACNS/PS F668	Government and Politics of Russia	
ACNS/PS F669	Arctic Politics and Governance	
Total Credits		**12**

NORTHERN HISTORY

Code	Title	Credits
Northern History Concentration Requirements		
Complete the following:		
ACNS F675	Historiography Capstone	3
Complete three of the following:		9
ACNS/HIST F604	Modern Scandinavia	
ACNS F611	Environmental History	
ACNS F661/ HIST F662	History of Alaska	
ACNS/HIST F663	Imperial Russia, 1700-1917	
ACNS/HIST F664	Soviet and Post-Soviet Russia	
ACNS/HIST F681	Polar Exploration and Its Literature	
ACNS/HIST F683	20th-century Circumpolar History	
Total Credits		**12**

INDIVIDUALIZED STUDY

Code	Title	Credits
Individualized Study Concentration Requirements		
Complete 12 credits of the following:		12
Courses offered in the Arctic and Northern studies program or other approved courses, selected with the approval of your graduate advisory committee members.		
Total Credits		**12**

Art M.F.A.

Admission Requirements

Complete the following admission requirements:

- Submit a separate portfolio of work as specified in the Art Department guidelines.
- Complete a B.F.A. or B.A. in art from a university other than UAF (or from UAF with special permission from the Art Department faculty), or complete one consecutive year of classes from an accredited M.F.A. program other than UAF. In cases where an exceptional portfolio is submitted, students with another undergraduate degree will be accepted provisionally and with the condition that they make up any deficiencies as determined by their graduate committee.

Program Requirements

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Minimum Requirements for Art M.F.A.: 60 credits

CONCENTRATIONS: CERAMICS, COMPUTER ART, DRAWING, NATIVE ARTS, PAINTING, PHOTOGRAPHY, PRINTMAKING, SCULPTURE

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Art Program Requirements		
Complete the following:		
ART F661	Mentored Teaching in Art	1
ART F663	Seminar in Art History	3
ART F690	Current Problems	3
or ART F688	Professional Practices for Visual Artists	
ART F698	Non-thesis Research/Project [1]	5
or ART F699	M.F.A. Thesis Project	
Electives in art history, humanities or philosophy [2]		6
Courses may be chosen from the following:		
ART F624	Field Artists of the North	
ART F625	Visual Images of the North	
ART F663	Seminar in Art History	
ART F673	History of the Role of the Artist	
Complete at least two studio areas at the F600 level [3]		42
Courses may be chosen from the following:		
ART F601	Ceramics	
ART F603	Graduate Photography	
ART F605	Drawing	
ART F607	Printmaking	
ART F609	Metalsmithing	
ART F611	Sculpture	
ART F613	Painting	
ART F619	Life Drawing	
ART F633	Graduate Field Painting	
ART F665	Advanced Photography Seminar	
ART F668	Alaska Native Art Studio	
ART F671	Two- and Three-dimensional Computer Design	
ART F672	Advanced Computer Visualization in Art	
ART F684	Multimedia Theory and Practice	
Total Credits		**60**

1 Studio with a two-hour oral comprehensive examination.

2 Students should seek approval of art history, humanities or philosophy elective courses from their advisor and/or committee prior to registration. Additional elective options may be available and F400-level courses may be taken with additional requirements.

3 Students should take 20 credits from their primary studio area, and 9 credits from their secondary studio area. The remaining credits should be comprised of studio credits and/or additional Mentored Teaching in Art ART F661 credits. Advisor and/or committee approval should be sought to ensure the correct completion of the credit requirement.

Note: Students with a graduate teaching assistantship (TA) are required to be enrolled in ART F661 Mentored Teaching in Art each semester they have a TA award.

Atmospheric Sciences M.S.

Admissions Requirements

Complete the following admission requirements:

Admission to the Department of Atmospheric Sciences generally requires a degree in a scientific discipline, one year of calculus-based physics, math through differential equations, and one semester of chemistry. Since atmospheric science is a highly interdisciplinary field, incoming students' backgrounds vary considerably. Thus, acceptance into the program is made on a case-by-case basis.

Program Requirements

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Minimum Requirements for Atmospheric Sciences M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Atmospheric Sciences Program Requirements		
Complete four of the following basic courses in atmospheric sciences:		12
ATM F601	Introduction to Atmospheric Sciences	
ATM F613	Atmospheric Radiation	
ATM F615	Cloud Physics	
ATM F645	Atmospheric Dynamics	
ATM F646	Atmospheric Dynamics II: Climate Dynamics	
Complete one Thesis or Non-thesis option listed below		18
Total Credits		**30**

Options

THESIS OPTION

Code	Title	Credits
Complete the following:		
ATM F699	Thesis	6-12
Approved F600-Level Courses		6-12
Total Credits		**18**

NON-THESIS OPTION A

Code	Title	Credits
Complete the following:		
ATM F698	Non-thesis Research/Project	3
ATM F600-Level Course		6
Approved F600-Level Courses		9
Total Credits		**18**

NON-THESIS OPTION B

Code	Title	Credits
Complete the following:		
ATM F698	Non-thesis Research/Project	6
ATM F600-Level Course		6
Approved F600-Level Courses		6
Total Credits		**18**

Biological Sciences M.S.

Admission Requirements

Complete the following admission requirements:

- Application for admission (https://uaf.edu/admissions/apply/) and application fee
- Transcripts from all universities or colleges attended. Unofficial transcripts may be submitted with the application. Official transcripts must follow prior to matriculation
- Curriculum vitae
- Statement of Purpose that addresses the following:
  - Career aspirations
  - Research interests
  - Research experience and relevant training
  - Interest, experience, and/or plans to serve society through your career, including experiences or commitment to justice, equity, diversity, and inclusion
  - Relevance of UAF Biology and Wildlife in achieving your future goals, including the names of faculty members you have contacted regarding graduate training

Excellent statements of purpose are specific, informative, focused and concise. See the Biology and Wildlife website (https://www.uaf.edu/bw/) for more detailed instructions about the statement of purpose.

- Three letters of reference from individuals who can address your potential to succeed in graduate school. Ideally, letters of reference should come from university faculty, research staff, or professionals familiar with your academic and research achievements and also with the expectations of graduate school. References will be asked to address writing ability, critical thinking skills, quantitative skills, and potential to succeed in a graduate program. References that address notable service (e.g., Peace Corps or AmeriCorps) may also be informative.
- Optional: scores from the GRE General Test will be considered if submitted
- International students: please consult UAF's most recent application requirements (p. 33)

Note - Students are typically not admitted to the program unless a faculty advisor has agreed to serve as the mentor. Applicants should contact potential advisors before applying.

Program Requirements

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Minimum Requirements for Biological Sciences M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Biological Sciences Program Requirements		
Complete and pass the departmental written and oral master's comprehensive examination		
Complete at least one of the following:		3
BIOL/WLF F602	Research Design	
BIOL/WLF F604	Scientific Writing, Editing and Revising in the Biological Sciences	
BIOL/WLF F680	Data Analysis in Biology	
Total Credits		**3**

Business Administration MBA

Admission Requirements

Applications will be reviewed on a continuous basis. Complete the admission process including the following:

- Students with a graduate degree from an accredited institution may be admitted without taking the GMAT or GRE exam.
- UAF B.B.A. graduates with an overall GPA of 3.25 or above may be admitted without taking the GMAT or GRE exam. Those with GPA between 3.25 and 2.75 must submit results of the Watson-Glaser Critical Thinking exam for review. Those with GPA below 2.75 must submit results from the GMAT or GRE for review.
- Non-UAF applicants with a bachelor's degree in business from an AACSB-accredited institution and an overall GPA of 3.25 or above may be admitted without taking the GMAT or GRE. Those with GPA between 3.25 and 2.75 must submit results of the Watson-Glaser Critical Thinking exam for review. Those with GPA below 2.75 must submit results from the GMAT or GRE for review.
- Applicants with non-business degrees and GPA from 4.00 to 2.75 must submit results of the Watson-Glaser Critical Thinking exam for review. Those with GPA below 2.75 must submit results from the GMAT or GRE for review.

Program Requirements

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Minimum Requirements for Business Administration MBA: 30 credits

CONCENTRATIONS: BLUE (P. 424), BUSINESS ANALYTICS (P. 424), BUSINESS CONTINUITY (P. 424), (P. 424) CYBERSECURITY (P. 424), GENERAL MANAGEMENT (P. 424), HEALTHCARE (P. 424), ONE HEALTH (P. 424), STEM (P. 425)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Business Administration Program Requirements [1]		
Complete the following:		
MBA F617	Organizational Theory for Managers	3
MBA F643	Marketing Management	3
MBA F675	Quantitative Methods for Managers	3
MBA F680	Financial Markets and Strategy	3
Complete the following capstone course:		3
MBA F690	Corporate Strategy	
Concentration		
Complete one of the following:		15
Blue		
Business Analytics		
Business Continuity		
Cybersecurity		
General Management		
Healthcare		
One Health		
STEM		
Total Credits		**30**

1 Complete the following MBA core courses after any required modules are completed.

2 More than one concentration may be earned for the degree; however, courses used in one concentration may not be used to meet requirements in another concentration.

Students who earn grades of two Cs, one D, or one F in courses that are part of their MBA program will no longer be in good standing in the MBA program even if their cumulative GPA remains at or above 3.0. MBA students who are not in good standing will be subject to review and may be dismissed by the MBA committee. Students may not use more than two F600-level courses with C grades on their Advancement to Candidacy application. An A or B grade must be earned in F400-level courses.

Students with no prior coursework in business subjects may be required to complete up to seven self-study modules prior to beginning courses. Contact the CBSM MBA program for more information. These are not UAF courses and will not count toward the 30 required program credits.

Concentrations

BLUE

The Blue concentration is designed for students interested in fisheries and marine science.

Code	Title	Credits
Blue Concentration Requirements		
Complete three of the following:		9
FISH F611	Human Dimensions of Environmental Systems	
FISH F687	Fisheries Management	
OCN F681	The Ocean and Global Change	
Any other 600-level fisheries or marine science courses can be taken to satisfy concentration requirements, although these courses may require being taken in residence.		
Complete two approved CBSM or CFOS electives at the F400 or F600 level.		6
Total Credits		**15**

BUSINESS ANALYTICS

Code	Title	Credits
Business Analytics Concentration Requirements		
Complete the following:		
MBA F623	Business Analytics	3
MBA F635	Storytelling with Data	3
Complete one of the following:		3
MBA F633	Human Resources Analytics	
MBA F634	Marketing Analytics	
Complete two approved CBSM electives at the F400 or F600 level		6
Total Credits		**15**

BUSINESS CONTINUITY

Code	Title	Credits
Business Continuity Concentration Requirements		
Complete three of the following:		9
MBA F632	Project Management	
MBA F645	Crisis Management	
MBA F646	Business Continuity and Risk Assessment	
MBA F647	Business Continuity Audit	
Complete two approved CBSM electives at the F400 or F600 level		6
Total Credits		**15**

CYBERSECURITY

Code	Title	Credits
Cybersecurity Concentration Requirements		
Complete three of the following:		9
MBA F641	Information Assurance and Risk Assessment	
MBA F648	Perspectives in Addressing Cybersecurity & Critical Infrastructure	
MBA F649	Cyber Threats and Vulnerabilities	
Complete two approved CBSM electives at the F400 or F600 level		6
Total Credits		**15**

GENERAL MANAGEMENT

Code	Title	Credits
General Management Concentration Requirements		
Complete three of the following:		9
MBA F605	Contemporary Topics in Accounting	
MBA F607	Human Resources Management	
MBA F624	Controllership	
MBA F627	Business Law and Ethics	
MBA F632	Project Management	
MBA F642	Economics of Environmental and Business Sustainability	
MBA F665	Strategic Collaboration	
MBA F673	Innovation Management	
MBA F674	New Venture Development	
MBA F682	Financial Statement Analysis	
MBA F683	Advanced Topics in Marketing	
MBA F691	Advanced Topics in Business	
Complete two approved CBSM electives at the F400 or F600 level		6
Total Credits		**15**

HEALTHCARE

Code	Title	Credits
Healthcare Concentration Requirements		
Complete the following:		
MBA F636	Survey of Healthcare Administration	3
Complete two of the following:		6
MBA F637	Information Systems and Decision Making in Health Services	
MBA F638	Healthcare Law & Ethics	
MBA F639	Healthcare Finance and Economics	
Complete two approved CBSM electives at the F400 or F600 level		6
Total Credits		**15**

ONE HEALTH

Code	Title	Credits
One Health Concentration Requirements		
Complete three of the following:		9
DVM F615	One Health Concepts	
DVM F620	One Health Challenges in the Circumpolar North	
DVM F621	One Health Colloquium	
Students may take other One Health courses as approved		
Complete two approved CBSM electives at the F400 or F600 level		6
Total Credits		**15**

STEM

This concentration may require some courses to be taken in residence.

Code	Title	Credits
STEM Concentration Requirements		
Students will take three graduate-level courses in their approved STEM field. These courses must be approved by the MBA advisor.		9
Complete two approved CBSM electives at the F400 or F600 level.		6
Total Credits		**15**

Chemistry M.S.

Admission Requirements

Complete the following admission requirements:

- Submit GRE General Test scores.
- If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Program Requirements

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Minimum Requirements for Chemistry M.S.: 30 credits

OPTIONAL CONCENTRATIONS: BIOCHEMISTRY AND NEUROSCIENCE (P. 425), ENVIRONMENTAL CHEMISTRY (P. 426)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Chemistry Program Requirements		
Complete any deficiencies concurrently with this degree.		
Complete two credits of advisory committee-approved seminar courses from the two seminar course choices below. [1]		2
CHEM F688	Biochemical and Molecular Biology Seminar	
CHEM F691	Research Presentation Techniques	
Complete 7-10 credits of courses approved by the advisory committee.		7-10
Concentration		
Complete 6-9 credits from relevant advisory committee-approved graduate-level courses or select one of the following concentrations		6-9
Biochemistry and Neuroscience		
Environmental Chemistry		
Thesis or Project Requirements		
Complete the thesis or project option as described below. [2]		12
Total Credits		**30**

[1] Students in the Biochemistry and Neuroscience concentration should take the Biochemical and Molecular Biology Seminar and students in the Environmental Chemistry concentration should take Research Presentation Techniques.

[2] The minimum number of credits required is 30. The required M.S. coursework above represents 18 credits. The minimum number of thesis credits required is 6. For the thesis option the remaining 6 credits can either be thesis credits or courses at the F400 level or higher. For the project option, the remaining 6 credits can be courses at the F400 level or higher.

Thesis or Project Options

THESIS OPTION

Code	Title	Credits
Complete the following:		
CHEM F699	Thesis	6
Thesis credits or committee-approved courses that are F400 level or higher.		6
Submit a committee-approved, written research-based thesis proposal and pass an oral comprehensive examination centered on the proposal.		
Complete a committee-approved, research-based written thesis and pass an oral defense of the thesis.		
Total Credits		**12**

PROJECT OPTION

Code	Title	Credits
Complete the following:		
CHEM F698	Non-thesis Research/Project	6
Committee-approved courses that are F400 level or higher.		6
Submit a committee-approved, literature-based written project proposal and pass an oral comprehensive examination centered on the proposal.		
Complete a committee-approved, literature-based written project and pass an oral defense of the project.		
Total Credits		**12**

Optional Concentrations

BIOCHEMISTRY AND NEUROSCIENCE

Code	Title	Credits
Biochemistry and Neuroscience Concentration Requirements		
Complete 9 credits from the following list of core courses		9
CHEM F654	Protein Structure and Function	
CHEM F657	Molecular Foundations of Gene Expression	
CHEM F670	Cellular and Molecular Neuroscience	
CHEM F674	Membrane Biochemistry and Biophysics	
CHEM F675	Cellular Signaling	
Total Credits		**9**

ENVIRONMENTAL CHEMISTRY

Code	Title	Credits
Environmental Chemistry Concentration Requirements		
Complete 6 credits from the following list of core courses:		6
CHEM F606	Atmospheric Chemistry	
CHEM F609	Aqueous and Environmental Geochemistry	
CHEM F631	Environmental Fate and Transport	
CHEM F655	Environmental Toxicology	
Total Credits		**6**

Civil Engineering M.S.

Admission Requirements

Complete the following admission requirements:

- Complete a bachelor's degree in engineering or natural sciences.[1]
- Submit GRE scores.[2]

[1] If applying with a non-engineering degree, submit a graduate study plan, including required deficiency courses, to be approved by a committee.

[2] The GRE requirement is waived for any applicant graduating with a 3.0 GPA or higher from an ABET-accredited CE or GE B.S. program.

DEFICIENCY REQUIREMENTS [2]

Code	Title	Credits
Fundamentals of Engineering Exam		
MATH F251X	Calculus I	4
MATH F252X	Calculus II	4
MATH F253X	Calculus III	4
MATH F302	Differential Equations	3
Two approved science courses		8
Three F200-level or above engineering courses		
Four F400-level CE courses [3]		

[2] If taken before, these courses can be credited as deficiency courses as approved by the department chair.

[3] Two must be design classes in different fields of civil engineering.

Program Requirements

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Minimum Requirements for Civil Engineering M.S.: 30 credits

CONCENTRATIONS: ARCTIC ENGINEERING (P. 426), DESIGN AND CONSTRUCTION MANAGEMENT, (P. 427) ENVIRONMENTAL ENGINEERING (P. 427), GEOTECHNICAL ENGINEERING (P. 427), STRUCTURAL ENGINEERING (P. 427), TRANSPORTATION ENGINEERING (P. 427), WATER RESOURCES ENGINEERING (P. 427)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Civil Engineering Program Requirements		
Complete a thesis or project		3-9
Complete comprehensive exam		
Concentration		
Complete one of the following:		21-27
Arctic Engineering		
Design and Construction Management		
Environmental Engineering		
Geotechnical Engineering		
Structural Engineering		
Transportation Engineering		
Water Resources Engineering		
Total Credits		**30-36**

Concentrations

ARCTIC ENGINEERING

Code	Title	Credits
Arctic Engineering Concentration Requirements		
Complete the following:		
CE F401	Arctic Engineering	3
CE F624	Permafrost Engineering	3
CE F682	Ice Engineering	3
or GEOS F615	Sea Ice	
CE F683	Arctic Hydrology and Hydraulic Engineering	3
ME F685	Arctic Heat and Mass Transfer	3
or ME F642	Advanced Heat Transfer	
Approved electives (6 credits for thesis; 12 credits for project) [1]		6-12
Total Credits		**21-27**

[1] Recommended electives include CE F422, CE F601, CE F625, CE F628, CE F635, CE F684, CE F685, MATH F460 and MATH F615.

DESIGN AND CONSTRUCTION MANAGEMENT

Code	Title	Credits
Design and Construction Management Concentration Requirements		
Personnel, leadership, business communications, marketing electives [2]		6
Design and construction management electives [3]		6
Accounting, finance, economics electives [4]		3
Design and construction technical electives [5]		9
Project only:		0-3
Complete additional approved elective [6]		
Total Credits		**24-27**

[2] Recommended electives include CE F601, ESM F601, MBA F607 and MBA F617.
[3] Recommended electives include CE F620, ESM F608, ESM F609 and MBA F627.
[4] Recommended electives include ESM F605.
[5] Recommended electives include CE F451.
[6] Recommended electives include CE F401 and ENVE F644.

ENVIRONMENTAL ENGINEERING

Code	Title	Credits
Environmental Engineering Concentration Requirements		
Complete the following:		
CE F601	Engineering Research Communication	3
ENVE F641	Aquatic Chemistry	3
or CHEM F605	Aquatic Chemistry	
ENVE F645	Unit Processes: Chemical and Physical	3
ENVE F647	Biotechnology	3
Approved electives (9 credits for thesis; 15 credits for project) [7]		9-15
Total Credits		**21-27**

[7] Recommended electives include BIOL F657, CE F401, CE F663, CE F684, CHEM F609, CHEM F631, CHEM F655, ENVE F642, ENVE F643, ENVE F644, ENVE F646, ENVE F649, ENVE F652 and ME F658.

GEOTECHNICAL ENGINEERING

Code	Title	Credits
Geotechnical Engineering Concentration Requirements		
Complete 15 credits from the following:		15
CE F605	Pavement Design	
CE F622	Foundations and Retaining Structures	
CE F624	Permafrost Engineering	
CE F625	Soil Stabilization and Embankment Design	
CE F627	Geotechnical Earthquake Engineering	
CE F628	Unsaturated Soils Mechanics	
CE F633	Theory of Elastic Stability	
CE F635	Numerical Methods for Geomechanics and Soil-Structure Interaction	
Additional approved electives (6 credits for thesis; 12 credits for project) [8]		6-12
Total Credits		**21-27**

[8] Recommended electives include CE F401, CE F422, CE F601, CE F637, GE F440 and ME F601.

STRUCTURAL ENGINEERING

Code	Title	Credits
Structural Engineering Concentration Requirements		
Complete 15 credits from the following:		15
CE F601	Engineering Research Communication	
CE F622	Foundations and Retaining Structures	
CE F630	Advanced Structural Mechanics	
CE F633	Theory of Elastic Stability	
CE F634	Structural Dynamics	
CE F635	Numerical Methods for Geomechanics and Soil-Structure Interaction	
Additional approved electives (6 credits for thesis; 12 credits for project) [9]		6-12
Total Credits		**21-27**

[9] Recommended electives include CE F631, CE F637, CE F640, CE F646 and CE F650.

TRANSPORTATION ENGINEERING

Code	Title	Credits
Transportation Engineering Concentration Requirements		
Complete the following:		
Approved engineering electives (9 credits for thesis; 15 credits for project) [10]		9-15
Additional approved electives [11]		12
Total Credits		**21-27**

[10] Recommended engineering electives include CE F401, CE F601, CE F605, CE F624, CE F682, ESM F621, ESM F622 and ME F631.
[11] At least 3 credits must be in advanced mathematics or statistical methods. Recommended electives include MATH F408, MATH F661, STAT F402, STAT F461, STAT F602, STAT F605 and STAT F611.

WATER RESOURCES ENGINEERING

Code	Title	Credits
Water Resources Engineering Concentration Requirements		
Complete 12 credits from the following:		12
CE F661	Advanced Water Resources Engineering	
CE F662	Open Channel and River Engineering	
CE F663	Groundwater Hydrology	
CE F664	Sediment Transport	
CE F683	Arctic Hydrology and Hydraulic Engineering	
Additional approved electives (9 credits for thesis; 15 credits for project) [12]		9-15
Total Credits		**21-27**

[12] Recommended electives include CE F401, CE F445, CE F601, CE F665, GEOS F616, GEOS F617, GEOS F694, NRM F435 and NRM F670.

Computer Science M.S.

Admission Requirements

Complete the UAF admission process including the following:

1. Submit GRE general exam scores.
2. Submit a portfolio of code that you wrote, including comments, bug fixes, and commit messages, as the URL of an internet accessible version control repository.
3. For teaching assistantship consideration, foreign applicants whose native language is not English must submit a TOEFL score of at least 600.
4. The department gives preference to applicants who also submit results of the Test of Spoken English.

Program Requirements

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Minimum Requirements for Computer Science M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Computer Science Program Requirements		
Complete the following:		
CS F600	Professional Software Development	4
CS F601	Algorithms, Architecture and Languages	4
CS F690	Graduate Seminar and Project	3
CS F691	Graduate Seminar and Project	3
Approved electives		16
Total Credits		**30**

Counseling M.Ed.

Admission Requirements

Complete the following admission requirements:

1. Application deadline: February 10 for admission to the following fall semester. Admission to the spring semester will be offered only when space is available in the program. Deadline for spring admission, when offered, is September 15.
2. Application requires a bachelor's degree preferably in a human service area such as education, social work, psychology, or human services. Graduates from other undergraduate majors, who have experience in the human service field or demonstrated motivation to enter the field of counseling, may also apply.
3. Applicants must have a GPA of 3.0 or higher in their undergraduate degree.
4. Statement of academic goals addressing applicant's motivations, personal characteristics, experience, education and intentions for earning the counseling degree.
5. Professional resume including education, work, volunteer or life experience relevant to the field of counseling.
6. Three letters of references from professional, academic or character sources.
7. All applicants will be required to interview with the counseling faculty as part of the admissions process.

Additional requirements:

1. Submit a national-level criminal background check through the Federal Bureau of Investigation (http://www.fbi.gov/about-us/cjis/identity-history-summary-checks/) prior to seeing clients during COUN F634P.
2. Complete internship placements appropriate to the student's declared area of interest.
3. Complete background check procedure required by the school or clinical mental health field practicum or internship placement. The procedure varies depending on placement.
4. Pass a comprehensive exam.

Program Requirements

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Minimum Requirements for Counseling M.Ed.: 60 credits

CONCENTRATIONS: SCHOOL COUNSELING (P. 429), K-12 SCHOOL COUNSELING, (P. 429) CLINICAL MENTAL HEALTH (P. 429), CLINICAL MEDICAL HEALTH AND SCHOOL COUNSELING (P. 429), CLINICAL MENTAL HEALTH AND K-12 SCHOOL COUNSELING (P. 429)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (http://catalog.uaf.edu/graduate/mastersdegrees/#masterofeducationtext)		
Counseling Program Requirements		
Complete the following:		
COUN F601	Research in Counseling and Educational Settings	3
COUN F615	Foundations of Counseling	3
COUN F617P	Counseling Skills	2
COUN F623	Counseling Theories and Applications I	3
COUN F627	Developmental Interventions	3
COUN F628	Child and Adolescent Development	3
COUN F632	Career Development	3
COUN F630	Appraisal for Counselors	3
COUN F634P	Practicum	4
COUN F635	Field Practicum	3

COUN F636	Internship I [1]	3
COUN F647	Professional Ethics	3
COUN F651	Counseling for Addictions	3
COUN F660	Multicultural Counseling	3
COUN F666	Family and Couples Counseling	3
COUN F674	Group Counseling	3
COUN F686	Internship II [1,2]	3
Concentration		
Complete one of the following:		9-27
School Counseling (elementary or secondary)		
K-12 School Counseling (elementary and secondary)		
Clinical Mental Health		
Total Credits		**60-78**

[1] Additional fee required. Charges are added to fee statements each semester.

[2] Fulfills the capstone requirement.

Note: Courses assigned by the student's graduate committee to remove deficiencies will not be allowed as part of the graduate program.

Concentrations

SCHOOL COUNSELING

Code	Title	Credits
Complete the following:		
COUN F646	Introduction to School Counseling	3
COUN F648	Advanced School Counseling	3
COUN F649	Child Psychopathology	3
Total Credits		**9**

K-12 SCHOOL COUNSELING

Code	Title	Credits
Complete the following:		
COUN F646	Introduction to School Counseling	3
COUN F648	Advanced School Counseling	3
COUN F649	Child Psychopathology	3
COUN F687	Internship III [1]	3
Total Credits		**12**

[1] Additional fee required. Charges are added to fee statements each semester.

CLINICAL MENTAL HEALTH

Code	Title	Credits
Complete the following:		
COUN F629	Counseling Interventions for Adults	3
COUN F638	Adult Development	3
COUN F650	Multicultural Psychopathology	3
Total Credits		**9**

CLINICAL MENTAL HEALTH AND SCHOOL COUNSELING

Code	Title	Credits
Complete the following courses for both clinical mental health concentration and school counseling at one level (elementary or secondary)		
COUN F629	Counseling Interventions for Adults	3
COUN F636	Internship I [1]	3
COUN F638	Adult Development	3
COUN F646	Introduction to School Counseling	3
COUN F648	Advanced School Counseling	3
COUN F649	Child Psychopathology	3
COUN F650	Multicultural Psychopathology	3
COUN F686	Internship II [1]	3
Total Credits		**24**

[1] Additional fee required. Charges are added to fee statements each semester.

CLINICAL MENTAL HEALTH AND K-12 SCHOOL COUNSELING

Code	Title	Credits
Complete the following courses for both clinical mental health concentration and K-12 school counseling (elementary and secondary)		
COUN F629	Counseling Interventions for Adults	3
COUN F636	Internship I [1]	3
COUN F638	Adult Development	3
COUN F646	Introduction to School Counseling	3
COUN F648	Advanced School Counseling	3
COUN F649	Child Psychopathology	3
COUN F650	Multicultural Psychopathology	3
COUN F686	Internship II [1]	3
COUN F687	Internship III [1]	3
Total Credits		**27**

[1] Additional fee required. Charges are added to fee statements each semester.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Road Map Options

OPTION 1

Course	Title	Credits
First Year		
Fall		
COUN F615	Foundations of Counseling	3
COUN F628	Child and Adolescent Development	3
COUN F647	Professional Ethics	3
	Credits	**9**
Spring		
COUN F601	Research in Counseling and Educational Settings	3
COUN F617P	Counseling Skills	2
COUN F660	Multicultural Counseling	3
	Credits	**8**
Summer		
COUN F623	Counseling Theories and Applications I	3
COUN F638	Adult Development	3
	Credits	**6**
Second Year		
Fall		
COUN F627	Developmental Interventions	3
COUN F629	Counseling Interventions for Adults	3
COUN F630	Appraisal for Counselors	3
	Credits	**9**
Spring		
COUN F634P	Practicum	4
COUN F666	Family and Couples Counseling	3
COUN F674	Group Counseling	3
	Credits	**10**
Third Year		
Fall		
COUN F635	Field Practicum	3
COUN F650	Multicultural Psychopathology	3
	Credits	**6**
Spring		
COUN F632	Career Development	3
COUN F636	Internship I	3
COUN F651	Counseling for Addictions	3
	Credits	**9**
Summer		
COUN F686	Internship II	3
	Credits	**3**
	Total Credits	**60**

OPTION 2

Course	Title	Credits
First Year		
Fall		
COUN F615	Foundations of Counseling	3
COUN F628	Child and Adolescent Development	3
COUN F647	Professional Ethics	3
	Credits	**9**
Spring		
COUN F617P	Counseling Skills	2
COUN F630	Appraisal for Counselors	3
COUN F660	Multicultural Counseling	3
	Credits	**8**
Summer		
COUN F601	Research in Counseling and Educational Settings	3
COUN F623	Counseling Theories and Applications I	3
	Credits	**6**
Second Year		
Fall		
COUN F627	Developmental Interventions	3
COUN F634P	Practicum	4
COUN F646	Introduction to School Counseling	3
	Credits	**10**
Spring		
COUN F635	Field Practicum	3
COUN F648	Advanced School Counseling	3
COUN F674	Group Counseling	3
	Credits	**9**
Summer		
COUN F632	Career Development	3
COUN F666	Family and Couples Counseling	3
	Credits	**6**
Third Year		
Fall		
COUN F636	Internship I	3
COUN F649	Child Psychopathology	3
	Credits	**6**
Spring		
COUN F651	Counseling for Addictions	3
COUN F686	Internship II	3
	Credits	**6**
Fourth Year		
Fall		
COUN F687	Internship III	3
	Credits	**3**
	Total Credits	**63**

Creative Writing and Literature Combined M.F.A./M.A.

Program Requirements

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Program Requirements

1. A student who wishes to be awarded an M.F.A./M.A. combined degree in creative writing and literature must be admitted to both programs;

2. Fulfill all general university requirements and master's degree requirements and all course requirements within both programs (double counting allowed);
3. Pass comprehensive examinations in both programs;
4. Complete a thesis required for an M.F.A. degree and the thesis required for an M.A. degree.
5. Pass an oral examination of materials submitted from items 2-4 above.
6. Finish all requirements in order to be awarded the combined degree instead of the M.A. or M.F.A. separately (i.e., a student may not claim at any time more than one degree for the same work).

Creative Writing M.F.A.

Admission Requirements

Complete the following admission requirements:

- Submit creative writing sample.

Program Requirements

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Minimum Requirements for Creative Writing M.F.A. Degree: 45 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Creative Writing Program Requirements		
Complete and pass a written comprehensive examination [1]		
Students may advance to candidacy when their advisory committee deems that they have made satisfactory progress in both academic and writing areas.		
ENGL F601	Theory, Criticism and Methods [2]	3
ENGL F671	Writers' Workshop	9
ENGL F685	Teaching College Composition (or ENGL F600-level elective course) [3]	3
ENGL F699	Thesis	6
Approved electives		6
Literature seminars [4]		12
Complete two of the following:		6
ENGL F681	Forms of Poetry	
ENGL F682	Forms of Fiction	
ENGL F684	Forms of Nonfiction Prose	
ENGL F688	Writing for Film and Television	
Total Credits		**45**

[1] Based on a standardized reading list, the examination is to be taken no later than the student's fourth semester of work. The examination will be held on the Saturday ending the fourth full week of classes in the spring semester.

[2] Students are required to take ENGL F601 in their first year of study.

[3] Required if you are a teaching assistant or planning to teach.

[4] Minimum of four courses to be determined by the student's advisory committee. A literature class is one that does not have as its primary purpose the training of a student to be a creative writer or to teach composition. The following courses meet the literature-seminar requirement for the M.F.A. degree: ENGL F603, ENGL F604, ENGL F606, ENGL F607, ENGL F608, ENGL F609, ENGL F611, ENGL F612, ENGL F614, ENGL F615, ENGL F620 and versions of ENGL F692 and ENGL F693 that meet the above criteria.

Note: A student may petition the Thesis Advisory Committee and the department chair to take up to 6 credit hours of independent study to be applied toward the English M.F.A. electives requirement.

Note: The English Department requires that a student receive an A or B grade for all F600-level courses that the student wishes to apply toward the master's degree programs.

Earth System Science M.S.

Admission Requirements

Complete the following admission requirements:

University Admission criteria apply to Earth System Science, notably, that incoming students must have an undergraduate degree in a suitable field of study. Admission to Earth System Science (without concentration) is determined by an admissions committee. Admission to Earth System Science with concentration is determined by an admissions committee established within each concentration. Furthermore, the following concentrations have specific admission requirements:

- Hydrology: 1 year calculus, 1 year physics, and 1 year of either geology, chemistry, biology, or engineering
- Atmospheric and Climate Sciences: 1 year calculus, differential equations, chemistry
- Cryosphere and Solid Earth Geophysics: 1 year calculus, differential equations, and linear algebra (recommended: partial differential equations, computational physics)

Program Requirements

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Minimum Requirements for Earth System Science M.S.: 30 credits

CONCENTRATIONS: SUSTAINABILITY (P. 432), ECOSYSTEMS (P. 433), HYDROLOGY (P. 433), ATMOSPHERIC AND CLIMATE SCIENCES (P. 434), CRYOSPHERE (P. 434), SOLID EARTH GEOPHYSICS (P. 435), GEOSCIENCE (P. 435), GEOSPATIAL SCIENCE (P. 435)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete one of the following:		6-12

Complete the master's degree requirements. (p. 419) [1]		
Complete the master's degree requirements. (p. 419) [2]		
Earth System Science Program Requirements		
Complete the following:		
ESS F601	Introduction to Earth System Science	3
ESS F602	Best Practices for Research in Alaska	1
ESS F692P	Seminar	1
Concentration		
Complete one of the following:		13-19
Sustainability Concentration [2]		
Ecosystems Concentration		
Hydrology Concentration		
Atmospheric and Climate Sciences Concentration [2]		
Cryosphere Concentration		
Solid Earth Geophysics Concentration		
Geoscience Concentration		
Geospatial Science Concentration [2]		
13 credits of approved electives [3]		
Total Credits		**30**

1. Requires 12 thesis credits.
2. Master's degree with project (6 project credits) can be completed with the following concentrations: sustainability, atmospheric and climate sciences, or geospatial science.
3. Recommended courses from any of the concentrations or the methods and cross-cutting list.

METHODS AND CROSS-CUTTING COURSE LIST

Code	Title	Credits
Methods and Cross-cutting courses:		
ACNS F629	Geography of the Arctic and Circumpolar North	3
ATM F601	Introduction to Atmospheric Sciences	3
ATM F610	Analysis Methods in Meteorology and Climate	3
ATM F625	Physical Hydrometeorology	3
ATM F680	Climate Change Processes: Past, Present, Future	4
BIOL F602	Research Design	3
BIOL F604	Scientific Writing, Editing and Revising in the Biological Sciences	3
BIOL F680	Data Analysis in Biology	3
CCS F612	Traditional Ecological Knowledge	3
FISH F646	Freshwater Habitat Dynamics	3
GEOS F422	Geoscience Applications of Remote Sensing	3
GEOS F605	Geochronology	3
GEOS F606	Volcanology	3
GEOS F618	Introduction to Geochemistry	3
GEOS F622	Digital Image Processing in the Geosciences	3
GEOS F627	Inverse Problems and Parameter Estimation	3
GEOS F631	Foundations of Geophysics	4
GEOS F633	Aqueous and Environmental Geochemistry	3
GEOS F636	Programming and Automation for Geoscientists	2
GEOS F639	InSar and Its Applications	3
GEOS F653	Palynology and Paleopalynology	4
GEOS F654	Visible and Infrared Remote Sensing	3
GEOS F657	Microwave Remote Sensing	3
GEOS F658	Big Geospatial Data	3
GEOS F660	The Dynamic Alaska Coastline	3
GEOS F670	Selected Topics in Volcanology	2
GEOS F681	Snow in the Environment	3
NRM F435	GIS Analysis	4
NRM F647	Sustainability in the Changing North	3
NRM F613	Resilience Internship	2
NRM F638	GIS Programming	3
NRM F641	Natural Resource Applications of Remote Sensing	3
PHYS F628	Digital Time Series Analysis	3
PHYS F647	Fundamentals of Geophysical Fluid Dynamics	3
STAT F401	Regression and Analysis of Variance	4
STO F666	Scientific Teaching	2

Concentrations

SUSTAINABILITY

This concentration encompasses scholarly and practical aspects of sustainability and society in Earth System Science with a specific emphasis on Alaska and the Arctic. The vision is to provide graduate training in interdisciplinary research to solve real-world problems, especially in building mutually respectful research partnerships with groups, organizations, and communities outside the University.

Sustainability Concentration with Thesis

Code	Title	Credits
Sustainability Concentration with Thesis Requirements:		
Complete the following:		
CCS F612	Traditional Ecological Knowledge	3
NRM F613	Resilience Internship	2
NRM F647	Sustainability in the Changing North	3
Complete 6 credits from the following disciplinary courses:		6
ACNS F600	Perspectives on the North	
ACNS F601	Research Methods and Sources in the North	
ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS F652	International Relations of the North	
ACNS F657	Comparative Indigenous Rights and Policies	
ACNS F662	Alaska Government and Politics	
ACNS F669	Arctic Politics and Governance	
ACNS F683	20th-century Circumpolar History	
CCS F602	Cultural and Intellectual Property Rights	

CCS F608	Indigenous Knowledge Systems	
FISH F611	Human Dimensions of Environmental Systems	
FISH F613	Human-environment Research Methods	
FISH F675	Political Ecology	
NRM F630	Resource Management Planning	
NRM/CCS F656	Sustainable Livelihoods and Community Well-being	
NRM F692	Graduate Seminar	
STO F601	Communicating Science	
Thesis		
Complete 12 thesis credit hours of the following:		
CCS F699	Thesis	
or NRM F699	Thesis	
Total Credits		**14**

Sustainability Concentration with Project

Code	Title	Credits
Sustainability Concentration with Project Requirements:		
Complete the following:		
CCS F612	Traditional Ecological Knowledge	3
NRM F613	Resilience Internship	2
NRM F647	Sustainability in the Changing North	3
Complete 6 credits from the following disciplinary courses:		6
ACNS F600	Perspectives on the North	
ACNS F601	Research Methods and Sources in the North	
ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS F652	International Relations of the North	
ACNS F657	Comparative Indigenous Rights and Policies	
ACNS F669	Arctic Politics and Governance	
ACNS F683	20th-century Circumpolar History	
CCS F602	Cultural and Intellectual Property Rights	
CCS F608	Indigenous Knowledge Systems	
FISH F611	Human Dimensions of Environmental Systems	
FISH F613	Human-environment Research Methods	
FISH F675	Political Ecology	
NRM F630	Resource Management Planning	
NRM/CCS F656	Sustainable Livelihoods and Community Well-being	
NRM F692	Graduate Seminar	
STO F601	Communicating Science	
Complete 5 credits of advisory committee-approved electives		5
Project		
Complete 6 project credits of the following:		
CCS F698	Non-thesis Research/Project	
or NRM F698	Non-thesis Research/Project	
Total Credits		**19**

ECOSYSTEMS

The Ecosystems concentration in Earth System Science addresses the interactions of organisms with the transformation and flux of energy and matter. Ecosystem science is inherently interdisciplinary, including ecology, natural history, statistics, chemistry, geology, geography, and hydrology. Students will therefore benefit from shared courses and seminars with other concentrations. Students enrolling in the Ecosystems concentration will pursue research and training in observing, modeling, and predicting processes including fluxes of water, energy, carbon, and nutrients, and many will focus on high-latitude ecosystems

Code	Title	Credits
Ecosystems Concentration Requirements		
Complete 13 credits from the following courses or the Methods and Cross-cutting course List		13
BIOL F618	Biogeography	
BIOL F646	Freshwater Habitat Dynamics	
BIOL F669	Landscape Ecology and Wildlife Habitat	
BIOL F673	Ecosystem Ecology (Ecosystem Ecology (course in progress))	
BIOL F686	Vertebrate Paleontology	
BIOL F688	Arctic Vegetation Ecology: Geobotany	
BIOL F689	Vegetation Description and Analysis	
Thesis		
Complete 12 thesis credit hours of the following:		
BIOL F699	Thesis	
Total Credits		**13**

HYDROLOGY

Understanding how water cycles through the Earth's many systems fundamentally links hydrology to a broad range of scientific disciplines and societal needs. Focusing on water movement and storage in the Arctic brings particular intrigue and challenge in terms of interactions with frozen ground, glacier runoff, freeze-thaw cycles, snowmelt, and river and lake ice dynamics. Career opportunities for graduates of the Hydrology Concentration in Earth System Science include river flood forecasting, field and remote sensing hydrologist, water quality specialist, water resources management and policy, water supply treatment and distribution, stream and fish habitat restoration, and the opportunity to work as a cold-regions hydrologist with interdisciplinary science and resource management teams in Alaska and other northern regions. Graduates are prepared to hold positions in government, industry, consulting or academia.

Code	Title	Credits
Hydrology Concentration Requirements		
Complete the following:		
CE F665	Watershed Hydrology	3
Complete 10 credits from the following:		10
CE F663	Groundwater Hydrology	
CE F662	Open Channel and River Engineering	
Methods and Cross-cutting course list		
One graduate-level course approved by the student's advisory committee		
Thesis		
Complete 12 thesis credit hours of the following:		

CE F699	Thesis	
Total Credits		**13**

ATMOSPHERIC AND CLIMATE SCIENCES

The field of atmospheric and climate science covers a wide variety of disciplines involving the physical and chemical properties and processes of the atmosphere. Current research in atmospheric sciences focuses on atmospheric dynamics, chemistry and biogeochemistry, air-sea-ice interactions, climate modeling, cloud and aerosol physics, radiative processes, mesoscale modeling, numerical weather prediction, aviation weather, and the upper atmosphere (stratosphere and mesosphere). The faculty are well-positioned to be a vibrant part of cross-cutting education and research in the Earth System Science Program.

Graduate students are an essential component of a research university and an integral component of the research activities across the campus at UAF, both in the experiments in the laboratory and the field as well as in data sciences, which includes modeling and analysis of weather and climate data. Research institutes and the CNSM provide excellent environments for research in atmospheric and climate sciences as well as multidisciplinary research with researchers spanning diverse expertise.

Atmospheric and Climate Sciences Concentration with Thesis

Code	Title	Credits
Atmospheric and Climate Sciences Concentration with Thesis Requirements:		
Complete three of the following:		9
ATM F601	Introduction to Atmospheric Sciences	
ATM F613	Atmospheric Radiation	
ATM F615	Cloud Physics	
ATM F645	Atmospheric Dynamics	
ATM F646	Atmospheric Dynamics II: Climate Dynamics	
Complete one of the following:		3
ATM F644	Weather Analysis and Forecasting	
ATM F658	Air-sea Interactions	
ATM F673	Micrometeorology with Focus on Subarctic and Arctic Ecosystems	
One graduate-level course approved by the student's advisory committee		
Complete any 1-credit seminar.		1
Thesis		
Complete 12 thesis credit hours of the following:		
ATM F699	Thesis	
Total Credits		**13**

Atmospheric and Climate Sciences Concentration with Project

Code	Title	Credits
Atmospheric and Climate Sciences Concentration with Project Requirements:		
Complete the following:		
ATM F601	Introduction to Atmospheric Sciences	3
ATM F613	Atmospheric Radiation	3
ATM F645	Atmospheric Dynamics	3
ATM F646	Atmospheric Dynamics II: Climate Dynamics	3
Seminar course		1
Complete 6 credits from the following disciplinary courses:		6
ACNS F600	Perspectives on the North	
ACNS F601	Research Methods and Sources in the North	
ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS F652	International Relations of the North	
ACNS F657	Comparative Indigenous Rights and Policies	
ACNS F669	Arctic Politics and Governance	
ACNS F683	20th-century Circumpolar History	
CCS F602	Cultural and Intellectual Property Rights	
CCS F608	Indigenous Knowledge Systems	
FISH F611	Human Dimensions of Environmental Systems	
FISH F613	Human-environment Research Methods	
FISH F675	Political Ecology	
NRM F630	Resource Management Planning	
NRM/CCS F656	Sustainable Livelihoods and Community Well-being	
NRM F692	Graduate Seminar	
STO F601	Communicating Science	
Project		
Complete 6 credits of the following:		
ATM F698	Non-thesis Research/Project	
Total Credits		**19**

CRYOSPHERE

The Cryosphere Concentration is located within the geosphere cohort of ESS tracks. This concentration focuses on snow, sea-ice, glaciers, and permafrost. Research within the Cryosphere Concentration is grounded in physics, mathematics, numerical modeling and data science. Methods and applications in the Cryosphere seek to understand earth surface processes at high latitudes and how they are responding to ongoing climate change as well as associated impacts on both the built and natural environment. The courses and research associated with snow, sea-ice, glaciers, and permafrost connect with the full spectrum of topics in the Earth System Science curriculum, including geospatial sciences, geosciences, climate science, hydrology, ecology, and sustainability. The Cryosphere Concentration at UAF is strengthened by the expansive natural laboratory and faculty expertise. Ph.D. and MS coursework and graduate research will be conducted closely with the Geophysical Institute.

Code	Title	Credits
Cryosphere Concentration Requirements		
Complete the following:		
GEOS F631	Foundations of Geophysics	4
Complete 1 course from the Methods and Cross-cutting course List		3-4
Complete two of the following:		6
GEOS F615	Sea Ice	
GEOS F616	Permafrost	

GEOS F617	Glaciers	
GEOS F681	Snow in the Environment	
PHYS F614	Ice Physics	
One graduate-level course approved by the student's advisory committee		
Thesis		
Complete 12 thesis credit hours of the following:		
GEOS F699	Thesis	
Total Credits		**13-14**

SOLID EARTH GEOPHYSICS

The Solid Earth Geophysics concentration of Earth System Science includes the disciplines of seismology, geodesy, volcanology, and infrasound, and it is grounded in physics, mathematics, computing, and data science. Methods and applications in Solid Earth Geophysics seek to characterize dynamic Earth processes and associated natural hazards relevant to Alaska and surrounding regions, including earthquakes, tsunamis, volcanoes, and landslides. Continuously recording instruments used in Solid Earth Geophysics, such as seismometers and GPS, capture a wide range of environmental activities and phenomena relevant to Earth System Science, in addition to human-caused events such as nuclear explosions.

Code	Title	Credits
Solid Earth Geophysics Concentration Requirements:		
Complete the following:		
GEOS F631	Foundations of Geophysics	4
Complete 9 credits from the following:		9
GEOS F604	Seismology	
GEOS F606	Volcanology	
GEOS F626	Applied Seismology	
GEOS F669	Geodetic Methods and Modeling	
GEOS F670	Selected Topics in Volcanology	
GEOS F692	Geol/Geophys Seminar	
Methods and Cross-cutting course list		
One graduate-level course approved by the student's advisory committee		
Thesis		
Complete 12 thesis credit hours of the following:		
GEOS F699	Thesis	
Total Credits		**13**

GEOSCIENCE

The Geoscience concentration falls within the geosphere cohort of ESS tracks with a focus on tectonics, paleontology, and petrology of sedimentary, igneous, and metamorphic rocks. Methods and applications include reconstruction of past climates, ecosystems, and plate configurations, dating of geologic specimens, and locating economically valuable mineral deposits.

Code	Title	Credits
Geoscience Concentration Requirements:		
Complete 13 credits from the following courses or the Methods and Cross-cutting course list:		13
GEOS F621	Advanced Petrology	
GEOS F647	Advanced Sedimentology and Stratigraphy	
One graduate-level course approved by the student's advisory committee		
Thesis		
Complete 12 thesis credit hours of the following:		
GEOS F699	Thesis	
Total Credits		**13**

GEOSPATIAL SCIENCE

The Geospatial Science concentration of Earth System Science includes the disciplines of visible to infrared and microwave (SAR and InSAR) remote sensing, Geographic Information Systems, and their applications in the area of geosciences, natural resource management, and environmental monitoring. It is grounded in geographic science, mathematics, computer science, and data science. Methods and applications in the Geospatial Science concentration seek to characterize our changing environment, inventory and management of natural resources, and mitigate risks from geo-hazards relevant to Alaska and surrounding regions. Continuous geospatial observations of our ever-changing environment and geo-hazards from space and air are essential components of Earth System Science, as they allow for detailed studies of processes and events across scales relevant to the associated disciplines.

Geospatial Science Concentration with Thesis

Code	Title	Credits
Geospatial Science Concentration with Thesis Requirements:		
Complete 13 credits from the following:		13
GEOS F622	Digital Image Processing in the Geosciences	
GEOS F629	Geologic Hazards and Natural Disasters	
GEOS F639	InSar and Its Applications	
GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
GEOS F658	Big Geospatial Data	
NRM F435	GIS Analysis	
NRM F638	GIS Programming	
NRM F641	Natural Resource Applications of Remote Sensing	
Thesis		
Complete 12 thesis credit hours of the following:		
GEOS F699	Thesis	
or NRM F699	Thesis	
Total Credits		**13**

Geospatial Science Concentration with Project

Code	Title	Credits
Geospatial Science Concentration with Project Requirements:		
Complete 13 credits from the following disciplinary courses:		13
ACNS F600	Perspectives on the North	
ACNS F601	Research Methods and Sources in the North	
ACNS F610	Northern Indigenous Peoples and Contemporary Issues	

ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS F652	International Relations of the North	
ACNS F657	Comparative Indigenous Rights and Policies	
ACNS F669	Arctic Politics and Governance	
ACNS F683	20th-century Circumpolar History	
CCS F602	Cultural and Intellectual Property Rights	
CCS F608	Indigenous Knowledge Systems	
FISH F611	Human Dimensions of Environmental Systems	
FISH F613	Human-environment Research Methods	
FISH F675	Political Ecology	
NRM F630	Resource Management Planning	
NRM/CCS F656	Sustainable Livelihoods and Community Well-being	
NRM F692	Graduate Seminar	
STO F601	Communicating Science	
Complete 6 credits from other courses approved by the student's advisory committee.		6
Project		
Complete 6 project credits of the following:		
GEOS F698	Non-thesis Research/Project	
or NRM F698	Non-thesis Research/Project	
Total Credits		**19**

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

EARTH SYSTEM SCIENCE M.S. - SUSTAINABILITY CONCENTRATION

Course	Title	Credits
First Year		
Fall		
NRM F647	Sustainability in the Changing North	3
FISH F613	Human-environment Research Methods	3
	Credits	**6**
Spring		
CCS F612	Traditional Ecological Knowledge	3
ACNS F662	Alaska Government and Politics	3
	Credits	**6**
Second Year		
Fall		
NRM/CCS F613	Resilience Internship	2
FISH F611	Human Dimensions of Environmental Systems	3
	Credits	**5**
Spring		
ACNS F662	Alaska Government and Politics	3
	Credits	**3**
Third Year		
Fall		
CCS/NRM F656	Sustainable Livelihoods and Community Well-being	3
	Credits	**3**
Spring		
STO F601	Communicating Science	2
	Credits	**2**
	Total Credits	**25**

EARTH SYSTEM SCIENCE M.S. - SOLID EARTH GEOPHYSICS CONCENTRATION

Course	Title	Credits
First Year		
Fall		
GEOS F631	Foundations of Geophysics	4
GEOS F636	Programming and Automation for Geoscientists	2
	Credits	**6**
Spring		
GEOS F627	Inverse Problems and Parameter Estimation	3
GEOS F692	Geol/Geophys Seminar	1-6
	Credits	**4-9**
Second Year		
Fall		
GEOS F669	Geodetic Methods and Modeling	3
	Credits	**3**
Spring		
GEOS F626	Applied Seismology	4
GEOS F657	Microwave Remote Sensing	3
GEOS F692	Geol/Geophys Seminar	1-6
	Credits	**8-13**
Third Year		
Fall		
GEOS F631	Foundations of Geophysics	4
GEOS F636	Programming and Automation for Geoscientists	2
	Credits	**6**
Spring		
GEOS F627	Inverse Problems and Parameter Estimation	3
GEOS F692	Geol/Geophys Seminar	1-6
	Credits	**4-9**
	Total Credits	**31-46**

Electrical Engineering M.S.

Admission Requirements

Complete the following admission requirement:

- Submit GRE scores.

Complete one of the following admission requirements:

- Complete a bachelor's degree in electrical engineering.
- Students with bachelor's degrees in other fields should work out a program to address any background deficiencies with their graduate committee.

Program Requirements

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Minimum Requirements for Electrical Engineering M.S. Degree: 32 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Electrical Engineering Program Requirements		
Complete one of the following options:		32
Thesis		
Non-Thesis Project		
Non-Thesis Coursework		
Total Credits		**32**

THESIS

Code	Title	Credits
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Thesis Option Requirements		
Complete the following:		
EE F699	Thesis	6-12
Additional credits		20-26
Total Credits		**32**

Note: At least 26 credits must be at the F600 level.

NON-THESIS PROJECT

Code	Title	Credits
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Non-thesis Project Option Requirements		
Complete the following:		
EE F698	Non-thesis Research/Project [1]	1-6
Additional credits		26-31
Total Credits		**32**

Note: At least 26 credits must be at the F600 level.

[1] An oral project presentation and defense are required. The project will be archived in the UAF Rasmuson Library.

NON-THESIS COURSEWORK

Code	Title	Credits
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Non-thesis Coursework Option Requirements		
Complete the following:		
Additional credits		32
Total Credits		**32**

Note: At least 26 credits must be at the F600 level.

Elementary Education M.Ed.

Admission Requirements

Complete the following admission requirements:

Deadline is Feb. 15. It is recommended that students submit applications before Dec. 15 to provide time to complete prerequisites if necessary. Applications will be reviewed as submitted.

Admission includes meeting both UAF graduate admissions requirements and the School of Education admissions requirements.

GRADUATE SCHOOL REQUIREMENTS

Submit the following to the UAF Office of Admissions with a copy to the School of Education:

1. UAF graduate application and fee.
2. Official transcript of bachelor's degree from an accredited institution and official transcripts from all institutions attended. A GPA of at least 3.0 (B grade) in undergraduate degree is required but students with less than a 3.0 may be considered for conditional admission in special circumstances.
3. Three letters of reference that address qualifications and potential as a teacher.
4. A vitae/resume.
5. Four- to five-page essay indicating: reasons for wanting to become a teacher, assessment of academic and personal strengths relative to teaching, future plans and reasons for selecting the elementary postbaccalaureate program.

SCHOOL OF EDUCATION REQUIREMENTS

Submit the following information directly to the School of Education, using School of Education forms:

1. Alaska passing scores from the Praxis I or Praxis Core ASE exam in reading, writing and mathematics and score from Praxis II Elementary Content exam (test 5014 or 5018).
2. Completed academic analysis form to provide information on breadth and depth of prior course work relative to 10 Alaska Student Content Standard areas.
   If additional coursework is required, it must be completed prior to beginning the program.

3. A writing sample, autobiography, evidence of successful paid or volunteer teaching/learning experience, evidence of successful cross-cultural experience.
4. Evidence of technology competence through successful completion of ED F237A, ED F237B, ED F237C and ED F237D or by successfully challenging each of the four components of the two-credit course.
5. Completed Alaska Department of Education and Early Development authorization packet (fingerprint cards and criminal background check necessary to work in schools). Packet is available from the School of Education.

Program Requirements

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Minimum Requirements for Elementary Education M.Ed.: 45 credits

Students must earn a C grade or better in each F600-level course. Students must earn a B grade or better in each F400-level course.

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Elementary Education Program Requirements		
Complete the admission requirements for the graduate-level elementary postbaccalaureate licensure program.		
Complete the following requirements for the Elementary (K-8) Postbaccalaureate Certificate and Licensure Program:		
ED F411	Reading, Writing, Language Arts: Methods and Curriculum Development [1]	3
ED F466	Internship and Collaborative Student Teaching [1]	3
ED F467	Classroom Management Communication and Collaboration I [1]	2
ED F468	Internship and Student Teaching [1]	4
ED F469	Classroom Management Communication and Collaboration II [1]	2
ED F476	Assessment of Literacy Development [1]	1
ED F602	Integrated Social Studies and Language Arts: Methods and Curriculum Development	3
ED F605	Art, Music and Drama in Elementary Classrooms	3
ED F617	Physical Activity and Health Education for Elementary Teachers	3
ED F624	Foundations of Education in Alaska: From Segregation to Standards	3
ED F625	Exceptional Learners and Child Development: Individual and Cultural Characteristics	3
ED F626	Teaching Reading, Writing and Language Arts	3
ED F678	Mathematics Methods and Curriculum Development	3
ED F688	Science Methods and Curriculum Development	3
After completing the requirements for the Elementary (K-8) Postbaccalaureate Certificate and Licensure Program then complete the following:		
ED F601	Introduction to Applied Social Science Research	3
or ED F630	Curriculum Development	
ED F698	Non-thesis Research/Project	3
Total Credits		**45**

[1] Students must earn a grade of B or better in each F400-level course.

English M.A.

Admission Requirements

Complete the following admission requirements:

- Submit an academic writing sample.

Program Requirements

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Minimum Requirements for English M.A.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements, complete the following:		
ENGL F699	Thesis	6
Pass a written comprehensive examination based on a standardized reading list [1]		
Students may advance to candidacy when their advisory committee deems that they have made satisfactory progress toward completion of their degree.		
Pass an oral defense of the thesis.		
English Program Requirements		
Complete the following:		
ENGL F601	Theory, Criticism and Methods [2]	3
ENGL F685	Teaching College Composition (or ENGL F600-level elective course) [3]	3
Electives		
Complete two of the following:		6
ENGL F603	Studies in British Literature: Old and Middle English	
ENGL F604	Studies in British Literature: Renaissance and 17th-Century	
ENGL F606	Studies in British Literature: Restoration and 18th Century	
ENGL F607	Studies in British Literature: 19th Century	

Complete two of the following:		6
ENGL F609	Studies in American Literature to 1865	
ENGL F611	Studies in American Literature from 1865-1918	
ENGL F612	Studies in American Literature after 1918	
ENGL F620	Images of the North	
Complete one of the following:		3
ENGL F608	Studies in British Literature After 1900	
ENGL F614	Studies in Comparative Literature	
ENGL F615	Contemporary Literature	
Additional approved elective		3
Total Credits		**30**

1 The examination is to be taken in the student's second year of work. The examination will be held on the Saturday ending the fourth full week of classes in the fall semester.
2 Students are required to take ENGL F601 in their first year of study.
3 Required if you are a teaching assistant or planning to teach.

Note: Students may apply up to 3 credit hours of independent study toward the English M.A. degree requirements.

Fisheries M.S.

Admission Requirements

Complete the following admission requirements:

- Prerequisites: calculus; elementary statistics; ichthyology, biology of fish or invertebrate zoology; and computer competency.
- An application for admission (https://uaf.edu/admissions/apply/) and application fee
- Official transcripts from all universities or colleges attended
  - Grades are an important part of the review process to assess academic success, particularly performance in relevant courses.
- Resume / curriculum vitae
- It is recommended that you provide evidence of communication (oral and writing) and analytical skills. This could be shown through technical writing samples, recorded presentations, poster presentations, examples of data analyses, relevant test results, etc. Please limit the evidence provided to, **two examples** and explain how this evidence is relevant in your Statement of Purpose.
- Statement of Purpose
  - Your statement provides the application review committee within the department an opportunity to learn about your background and motivation:
    - Your professional goals, including longer-term career goals and your motivations for pursuing those goals
    - Your preparation and background, including evidence of any relevant qualifications not captured elsewhere in the application
    - Your particular reasons for applying to the Department of Fisheries at the University of Alaska Fairbanks
    - Your general research interests or special emphasis that you hope to pursue
    - Any special circumstances you wish the department to consider
- Three letters of reference from individuals who understand the challenges of completing a graduate program and are able to write about your ability to successfully complete graduate courses in fisheries and conduct the research, analyses, and writing needed to complete a thesis or dissertation. Ideally, these letters of recommendation should come from faculty, research staff, professionals, or individuals who are familiar with your academic or work experience and can speak to your work ethic and potential for success in our program.
- International students: Please reference UAF's most recent requirements (p. 33).

Program Requirements

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Minimum Requirements for Fisheries M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
FISH F699	Thesis	6-12
Fisheries Program Requirements		
Complete the following:		
STAT F401	Regression and Analysis of Variance	4
Graduate seminars		2
Complete at least 3 credits from each of the three focal areas		9-11
Biology		
Quantitative Approaches		
Management and Human Dimensions		
Electives		
Advisor approved courses		1-9
Total Credits		**30**

Note: At least 21 credits of the required 30 M.S. degree credits must be at the F600 level. All other credits must be at least at the F400 level.

Focal Areas

BIOLOGY

Code	Title	Credits
Complete at least 3 credits from the following:		
FISH F626	Behavioral Ecology of Fishes	
FISH F628	Physiological Ecology of Fishes	
FISH F633	Pacific Salmon Life Histories	
FISH F650	Fish Ecology	
FISH F651	Aquatic Conservation and Management Genetics	

FISH/MBI F676	Aquatic Food Web Ecology
MBI F615	Physiology of Marine Organisms
MBI F652	Marine Ecosystems
MBI F667	Ecology and Physiology of Marine Macroalgae

QUANTITATIVE APPROACHES

Code	Title	Credits
Complete at least 3 credits from the following:		
FISH F604	Modern Applied Statistics for Fisheries	
FISH F621	Estimation of Fish Abundance	
FISH F622	Quantitative Fish Population Dynamics	
FISH F625	Population Dynamics of Vertebrates	
FISH F645	Bioeconomic Modeling and Fisheries Management	
FISH F670	Quantitative Analysis for Marine Policy Decisions	

MANAGEMENT AND HUMAN DIMENSIONS

Code	Title	Credits
Complete at least 3 credits from the following:		
FISH F411	Human Dimensions of Environmental Systems	
or FISH F611	Human Dimensions of Environmental Systems	
FISH F487	Fisheries Management	
or FISH F687	Fisheries Management	
FISH F616	Indigenous Fisheries of Alaska	
FISH F641	Ecosystem-based Fisheries Management	
FISH F671	Foundations of Marine Policy and Ocean Governance	
FISH F672	Law and Fisheries	
FISH F673	International Maritime Law and IUU Fishing	
FISH F674	Economic Development for Fish-dependent Communities	
FISH F675	Political Ecology	
FISH F681	The North Pacific Fishery Management Council	
FISH F683	The Alaska Board of Fisheries	

Geological Engineering M.S.

Admission Requirements

Complete the following admission requirements:

- Submit GRE scores. The GRE requirement is waived for any applicant graduating with a 3.0 GPA or higher from an ABET-accredited CE or GE BS program.
- Complete one of the following admission requirements:
  - Complete a bachelor's degree in geological engineering;
  - Complete a bachelor's degree in engineering and complete the following courses:

Code	Title	Credits
GE F326	Introduction to Geotechnical Engineering and Foundations	3-4
or MIN F370	Rock Mechanics	
GE F405 and GE F420	Engineering and Environmental Geophysics and Groundwater Engineering	6
Complete one of the following:		6-8
GEOS F262 and GEOS F332	Rocks and Minerals and Ore Deposits and Structure	
GEOS F322 and GEOS F314	Stratigraphy and Sedimentation and Structural Geology	

  - Complete a bachelor's degree in geology and complete the following courses:

Code	Title	Credits
ES F208	Mechanics	4
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
GE F326	Introduction to Geotechnical Engineering and Foundations	3-4
or MIN F370	Rock Mechanics	
GE F405	Engineering and Environmental Geophysics	3
GE F420	Groundwater Engineering	3
MIN F390	Geostatistics and Mineral Economics	3

  - Complete a bachelor's degree in the natural sciences and complete the following courses:

Code	Title	Credits
ES F208	Mechanics	4
ES F331	Mechanics of Materials	3
ES F341	Fluid Mechanics	4
GE F326	Introduction to Geotechnical Engineering and Foundations	3-4
or MIN F370	Rock Mechanics	
GE F405	Engineering and Environmental Geophysics	3
GE F420	Groundwater Engineering	3
MIN F390	Geostatistics and Mineral Economics	3
Complete one of the following:		6-8
GEOS F262 and GEOS F332	Rocks and Minerals and Ore Deposits and Structure	
GEOS F322 and GEOS F314	Stratigraphy and Sedimentation and Structural Geology	

Program Requirements

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Minimum Requirements for Geological Engineering M.S. Degree (Thesis Option): 30 credits

THESIS OPTION

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
GE F699	Thesis	6
Geological Engineering with Thesis Program Requirements		
Complete four of the following:		12
GE F420	Groundwater Engineering	
GE F430	Geomechanical Instrumentation	
GE F440	Slope Stability	
GE F620	Advanced Groundwater Hydrology	
GE F622	Advanced Soil Physics	
GE F624	Stochastic Hydrology and Geohydrology	
GE F626	Thermal Geotechnics	
GE F635	Advanced Geostatistical Applications	
GE F665	Advanced Geological Materials Engineering	
GE F666	Advanced Engineering Geology	
GE F668	Tunneling Geotechniques	
MIN F621	Advanced Mineral Economics	
MIN F673	Advanced Rock Mechanics	
Geological engineering courses and technical electives		11
GE F692	Graduate Seminar	1
Total Credits		**30**

Minimum Requirements for Geological Engineering M.S. Degree (Non-thesis Option): 33 credits

NON-THESIS OPTION

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
GE F698	Non-thesis Research/Project	6
Geological Engineering Non-thesis Program Requirements		
Complete five of the following:		15
GE F420	Groundwater Engineering	
GE F430	Geomechanical Instrumentation	
GE F440	Slope Stability	
GE F620	Advanced Groundwater Hydrology	
GE F622	Advanced Soil Physics	
GE F624	Stochastic Hydrology and Geohydrology	
GE F626	Thermal Geotechnics	
GE F635	Advanced Geostatistical Applications	
GE F665	Advanced Geological Materials Engineering	
GE F666	Advanced Engineering Geology	
GE F668	Tunneling Geotechniques	
MIN F621	Advanced Mineral Economics	
MIN F673	Advanced Rock Mechanics	
Geological engineering courses and technical electives		11
GE F692	Graduate Seminar	1
Total Credits		**33**

Geophysics M.S.

Admission Requirements

Complete the following admission requirements:

- Complete a background at least to the level of a B.S. concentration in geology, geophysics or an appropriate physical science or engineering.
- Complete MATH F302
- Recommended: MATH F314, MATH F432, PHYS F220

Program Requirements

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Minimum Requirements for Geophysics M.S.: 30 credits

CONCENTRATIONS: SOLID-EARTH GEOPHYSICS (P. 442), SNOW, ICE AND PERMAFROST GEOPHYSICS (P. 442), REMOTE SENSING GEOPHYSICS (P. 442)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
GEOS F699	Thesis	6
Complete any deficiencies concurrently with this degree.		
Submit a written thesis proposal and pass an oral comprehensive examination centered on this proposal.		
Complete and submit a written thesis and pass an oral defense of thesis.		
Geophysics Program Requirements		
Complete the following:		
GEOS F631	Foundations of Geophysics	4
GEOS F682	Geoscience Seminar (fall semester)	1

Complete 6 credits from relevant graduate-level courses agreed by the advisory committee or select one from the following concentrations:	6
Solid-Earth Geophysics	
Snow, Ice and Permafrost Geophysics	
Remote Sensing	
Complete 7 credits of courses approved by the advisory committee	7
Thesis credits or credits from courses that are F400 level or higher. [1]	6
Total Credits	**30**

[1] The minimum number of credits required is 30. The required M.S. coursework above represents 18 credits. The minimum number of thesis credits required is 6. The remaining 6 credits can either be thesis credits or courses that are F400 level or higher.

Concentrations

SOLID-EARTH GEOPHYSICS

Code	Title	Credits
Solid-Earth Geophysics Concentration Requirements		
Complete 6 credits from the following:		6
GEOS F604	Seismology	
GEOS F605	Geochronology	
GEOS F626	Applied Seismology	
GEOS F669	Geodetic Methods and Modeling	
GEOS F671	Volcano Seismology	
Total Credits		**6**

SNOW, ICE AND PERMAFROST GEOPHYSICS

Code	Title	Credits
Snow, Ice and Permafrost Geophysics Concentration Requirements		
Complete 6 credits from the following:		6
GEOS F615	Sea Ice	
GEOS F616	Permafrost	
GEOS F617	Glaciers	
PHYS F614	Ice Physics	
Total Credits		**6**

REMOTE SENSING

Code	Title	Credits
Remote Sensing Concentration Requirements		
Complete 6 credits from the following:		6
ATM F613	Atmospheric Radiation	
GEOS F622	Digital Image Processing in the Geosciences	
GEOS F639	InSar and Its Applications	
GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
Total Credits		**6**

Geoscience M.S.

Admission Requirements

Complete the following admission requirements:

- Complete a background at least to the level of a B.S. concentration in geology, geophysics or earth science.

Program Requirements

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Minimum Requirements for Geoscience M.S.: 30 credits

CONCENTRATIONS: GEOGRAPHY (P. 442), GEOLOGY (P. 442)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
Complete 6-12 thesis credits		6-12
Geoscience Program Requirements		
Complete any deficiencies concurrently with this degree.		
Submit a written thesis proposal and pass a written or oral comprehensive examination.		
Complete and submit a written thesis and pass an oral defense of thesis.		
Concentration		
Complete one of the following:		12
Geography		
Geology		
Total Credits		**18-24**

Concentrations

Geography

Code	Title	Credits
Geography Concentration Requirements		
Complete the following:		
Complete 12 geography-related credits at the F600 level as approved by the graduate advisory committee.		12
Total Credits		**12**

Geology

Code	Title	Credits
Geology Concentration Requirements		
Complete the following:		
Complete 12 credits at the F600 level as approved by the graduate advisory committee.		12
Total Credits		**12**

Healthcare Management and Leadership MBA

Admission Requirements

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Admission Requirements

Complete the following admission requirements:

The Master in Healthcare Management and Leadership is designed for students who are interested in an administrative career in the healthcare sector, including managerial roles within hospital systems, public and private insurers, pharmaceutical, medical device and technology companies, consulting, or other federal or local governmental organizations. Applicants are required to have two years of professional experience in healthcare or a related field. Applications will be reviewed on a continuous basis.

Complete the admission process, including the following:

- Current Resume
- 3 Letters of Recommendation
- Statement of Goals
- Official Transcripts
- Students with a graduate degree from an accredited institution may be admitted without taking the GMAT or GRE exam.
- Applicants with an undergraduate GPA between 3.25 and 2.75 must submit results of the Watson-Glaser Critical Thinking exam for review. Minimum score of 25.
- Students with a GPA below 2.75 must submit results from the GMAT or GRE for review. Required to have 550 on GMAT or 299 on GRE.

Students without a professional or academic background in business may be required to complete up to 7 self-paced online prerequisite modules before enrolling in the MHML program.

Program Requirements

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Minimum Requirements for Healthcare Management and Leadership MBA: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Healthcare Management and Leadership Program Requirements		
Complete the following:		
HML/MBA F636	Survey of Healthcare Administration	3
HML/MBA F637	Information Systems and Decision Making in Health Services	3
HML/MBA F638	Healthcare Law & Ethics	3
HML/MBA F639	Healthcare Finance and Economics	3
HSEM F656	Strategic Leadership	3
Complete the following capstone course:		
MBA F690	Corporate Strategy	3
Degree Focus Courses		
Complete four of the following:		11-12
MBA F617	Organizational Theory for Managers	
MBA F623	Business Analytics	
MBA F627	Business Law and Ethics	
MBA F632	Project Management	
MBA F643	Marketing Management	
MBA F673	Innovation Management	
MBA F680	Financial Markets and Strategy	
HSEM F609	Human Security	
DVM F615	One Health Concepts	
Total Credits		**30**

Students who earn grades of two Cs, one D, or one F in courses that are part of their MHML program will no longer be in good standing in the MHML program even if their cumulative GPA remains at or above 3.0. MHML students who are not in good standing will be subject to review and may be dismissed by the MHML committee. Students may not use more than two F600-level courses with C grades on their Advancement to Candidacy application. An A or B grade must be earned in F400-level courses.

Students without a professional or academic background in business may be required to complete up to 7 self-paced online prerequisite modules before enrolling in the MHML program. These are not UAF courses and will not count toward the 30 required program credits.

Applicants are required to have two years of professional experience in healthcare or a related field.

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
First Year		
Fall		
MBA F636	Survey of Healthcare Administration	3
MBA F638	Healthcare Law & Ethics	3

MBA F617	Organizational Theory for Managers	3
or MBA F623	or Business Analytics	
or MBA F627	or Business Law and Ethics	
or MBA F632	or Project Management	
or MBA F643	or Marketing Management	
or MBA F673	or Innovation Management	
or MBA F680	or Financial Markets and Strategy	
or HSEM F609	or Human Security	
or DVM F615	or One Health Concepts	
	Credits	**9**
Spring		
MBA F637	Information Systems and Decision Making in Health Services	3
MBA F639	Healthcare Finance and Economics	3
MBA F617	Organizational Theory for Managers	3
or MBA F623	or Business Analytics	
or MBA F627	or Business Law and Ethics	
or MBA F632	or Project Management	
or MBA F643	or Marketing Management	
or MBA F673	or Innovation Management	
or MBA F680	or Financial Markets and Strategy	
or HSEM F609	or Human Security	
or DVM F615	or One Health Concepts	
	Credits	**9**
Second Year		
Fall		
MBA F656	Strategic Leadership	3
MBA F617	Organizational Theory for Managers	3
or MBA F623	or Business Analytics	
or MBA F627	or Business Law and Ethics	
or MBA F632	or Project Management	
or MBA F643	or Marketing Management	
or MBA F673	or Innovation Management	
or MBA F680	or Financial Markets and Strategy	
or HSEM F609	or Human Security	
or DVM F615	or One Health Concepts	
MBA F690	Corporate Strategy	3
	Credits	**9**
	Total Credits	**27**

Indigenous Studies M.A.

Admission Requirements

Complete the following admission requirements:

In general, applicants may be admitted to a graduate program if they have a bachelor's degree from an accredited institution with at least a 3.0 cumulative undergraduate GPA and a 3.0 GPA in their major. The undergraduate major should provide suitable preparation for the continuation of studies in the field of choice. Some programs require the Graduate Record Exam or Graduate Management Admission Test and other special criteria for admission.

For the purposes of admission to graduate study, all grades, including those generated from retaking a course, are included in calculating GPA.

If an applicant meets the minimum requirements for the university, the Office of Admissions sends the completed application to the academic department. Program heads and/or committees in fields of interest will determine the adequacy of the student's preparation and whether or not departmental facilities are sufficient for their aims.

Information on specific degree programs is available from academic departments or by contacting the Graduate School (https://www.uaf.edu/gradsch/) at 907-474-7464 or uaf-grad-school@alaska.edu.

Program Requirements

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Minimum Requirements for Indigenous Studies M.A.: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements, complete the following:		
CCS F698	Non-thesis Research/Project	6
Indigenous Studies Program Requirements		
Complete at least 6 credits in a field setting, including a minimum of one week camp with Elders.		
Complete at least 36 semester hours beyond the bachelor's degree level.		
Students may transfer a maximum of 9 hours from another university into their program.		
Complete at least 30 of the 36 semester hours at the F600 level.		
Satisfactorily complete a comprehensive examination.		
Core Courses		
Complete the following:		
CCS F604	Documenting Indigenous Knowledge	3
CCS F608	Indigenous Knowledge Systems	3
CCS F612	Traditional Ecological Knowledge	3
CCS/ED F690	Seminar in Cross-Cultural Studies	3
Cross-cultural Studies Specialization Courses		
Complete at least one of the following:		3
ANS/ED F461	Native Ways of Knowing	
CCS/ED F610	Education and Cultural Processes	
RD F425	Cultural Resource Issues	
Electives		
Complete a minimum of 15 credits of approved electives to provide specialization depth:		15
Examples of approved electives:		
ANS F475	Alaska Native Social Change	
CCS F602	Cultural and Intellectual Property Rights	
CCS/ED F603	Field Study Research Methods	
CCS/ED F611	Culture, Cognition and Knowledge Acquisition	
CCS/ED F613	Alaska Standards for Culturally Responsive Schools	
Total Credits		**36**

Interdisciplinary Studies M.A.

Admission Requirements

Complete the following admission requirements:

- In consultation with a UAF faculty member, prepare and submit:
  a. Statement of Academic Goals
  b. Research Prospectus
  c. Proposed Graduate Study Plan
- Other materials: resume, official transcripts, two (2) academic letters of recommendation, one (1) Letter of Endorsement from one proposed M.A. Advisory Committee member (one from UAF committee chair).

Program Requirements

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Minimum Requirements for Interdisciplinary Studies M.A.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Pass a comprehensive examination.		

Interdisciplinary Studies M.S.

Admission Requirements

Complete the following admission requirements:

- In consultation with a UAF faculty member, prepare and submit:
  a. Statement of academic goals
  b. Research prospectus
  c. Proposed graduate study plan
- Other materials: a statement of goals, a resume, official transcripts, two academic letters of recommendation (cannot be from the proposed chair), a research prospectus, a proposed graduate study plan, and one Letter of Endorsement from the proposed UAF committee chair with current CV.

Program Requirements

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Minimum Requirements for Interdisciplinary Studies M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Pass a comprehensive examination.		

Justice Administration M.A.

Admission Requirements

Complete the following admission requirements:

- Completion of a bachelor's degree from an accredited institution.
- Students with a GPA above 2.75 will be required to submit a score from the Watson-Glaser Critical Thinking Exam.
- Any students with a GPA lower than 2.75 will be required to submit scores from the GRE.

Program Requirements

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Minimum Requirements for Justice Administration M.A.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Justice Administration Program Requirements		
Complete a minimum of 18 graduate UAF credits.		
Receive a passing grade on a written comprehensive exam proctored in conjunction with the completion of JUST F690.		
Complete a non-research path that consists of 30 credits of coursework; or		
Complete a research path that consists of 30 credits of coursework where 6 credits are research project or thesis work.		
If a student elects to complete a thesis or project, receive a passing grade on an oral defense examination of a thesis or project.		
Complete the following:		
JUST F605	Administration and Management of Criminal Justice Organizations	3
JUST F610	Ethics in Criminal Justice Management	3
JUST F615	Justice Program Planning/ Evaluation and Grant Writing	3
JUST F620	Personnel Management in Criminal Justice	3
JUST F625	Legal Aspect of Criminal Justice Management	3
JUST F640	Community/Restorative Justice	3
JUST F690	Seminar in Critical Issues and Criminal Justice Policy	3
Complete 9 credits JUST electives; or from approved areas:		9
6 credits of JUST F698 (Project); or 6 credits of JUST F699 (Thesis)		
Any approved F600-level ANTH, COM, HSEM, JOUR and MBA (or other approved discipline) course; or		
F400-level JUST, ANTH, BA, COM, HSEM, JOUR or LEAD electives (up to 6 credits); or		

F400-level (up to 6 credits) or graduate-level (up to 9 credits) credits may be used as substitutes if transferred from the FBI National Academy, Command and General Staff College, Command College, Southern Police Institute or similar programs approved by the American Council on Education (e.g., graduate certificate relevant to justice from another institution)	
Total Credits	**30**

Linguistics, Applied M.A.

Program Requirements

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Minimum Requirements for Applied Linguistics M.A.: 30 credits

CONCENTRATIONS: LANGUAGE IN SOCIETY (P. 446), SECOND LANGUAGE ACQUISITION TEACHER EDUCATION (P. 446)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements, complete the following:		
LING F698	Non-thesis Research/Project	6
or LING F699	Thesis	
Applied Linguistics Program Requirements		
Complete the following:		
LING F600	Research Methods for Applied Linguistics	3
LING F602	Second Language Acquisition	3
LING F650	Language Policy and Planning	3
Electives		
Complete 9 credits of committee-approved electives		9
Concentration		
Complete one of the following:		6
Language in Society		
Second Language Acquisition Teacher Education		
Total Credits		**30**

Elective Courses

This is a non-exhaustive list of possible electives.

Code	Title	Credits
ED F601	Introduction to Applied Social Science Research [1]	3
ED F670	Developing Literacy: ECE-12 [1]	3
ED F673	Literacy in the Content Area [1]	3
ED F683	Instruction and Assessment in Literacy [1]	3
LING F441	Topics in Linguistics [2]	3
LING/FL F451	English Second Language Teaching Practicum [2]	3
LING F602	Second Language Acquisition	3
LING F603	Phonetics and Phonology	3
LING F604	Morphology and Syntax	3
LING F610	Theory and Methods of Second Language Teaching	3
LING F611	Second Language Materials and Assessment	3
LING F631	Field Methods in Descriptive Linguistics I	3
LING F650	Language Policy and Planning	3

[1] Students pursuing post-certification endorsement in second language acquisition, bilingual education and literacy must complete ED F601, ED F670, ED F673 and ED F683.

[2] Per Graduate School rules, up to 6 credits of committee-approved elective credit at the F400 level may be counted toward a graduate degree.

Concentrations

LANGUAGE IN SOCIETY

Code	Title	Credits
Language in Society Concentration Requirements		
Complete the following:		
LING F640	Linguistic Anthropology: Language, Thought and Action	3
LING F685	Discourse in Society: Analyzing Language in Social Context	3
Total Credits		**6**

SECOND LANGUAGE ACQUISITION TEACHER EDUCATION

Code	Title	Credits
Second Language Acquisition Teacher Education Concentration Requirements		
Complete the following:		
LING F610	Theory and Methods of Second Language Teaching	3
LING F611	Second Language Materials and Assessment	3
or ED F683	Instruction and Assessment in Literacy	
Total Credits		**6**

Road Map

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their

advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

Applied Linguistics, Master of Arts

LANGUAGE IN SOCIETY CONCENTRATION

Course	Title	Credits
First Year		
Fall		
LING F602	Second Language Acquisition	3
LING F640	Linguistic Anthropology: Language, Thought and Action	3
Elective Course		3
	Credits	**9**
Spring		
LING F600	Research Methods for Applied Linguistics	3
LING F685	Discourse in Society: Analyzing Language in Social Context	3
Elective Course		3
	Credits	**9**
Second Year		
Fall		
LING F650	Language Policy and Planning	3
Elective Course		3
Comprehensive Exam		
	Credits	**6**
Spring		
LING F698/F699	Non-thesis Research/Project	6
	Credits	**6**
	Total Credits	**30**

SECOND LANGUAGE ACQUISITION TEACHER EDUCATION CONCENTRATION

Course	Title	Credits
First Year		
Fall		
LING F602	Second Language Acquisition	3
Elective Course		3
Elective Course		3
	Credits	**9**
Spring		
LING F600	Research Methods for Applied Linguistics	3
LING F610	Theory and Methods of Second Language Teaching	3
Elective Course		3
	Credits	**9**
Second Year		
Fall		
LING F611	Second Language Materials and Assessment	3
LING F650	Language Policy and Planning	3
Comprehensive Exam		
	Credits	**6**
Spring		
LING F698/F699	Non-thesis Research/Project	6
	Credits	**6**
	Total Credits	**30**

Marine Biology M.S.

Admission Requirements

Complete the following admission requirement:

- Submit GRE scores.

Program Requirements

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Minimum Requirements for Marine Biology M.S.: 30 credits

Students must earn a B- grade or better in the lecture-based core courses of the degree program before being eligible to take the comprehensive exam.

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
MBI F699	Thesis	6-12
Marine Biology Program Requirements		
Complete the following:		
MBI F610	Marine Biology	3
MBI F615	Physiology of Marine Organisms	3
OCN F650	Biological Oceanography	3
Field Course with Aquatic Science Focus [1]		2
Electives		
Electives in Aquatic Sciences at F600 level [2]		5
Additional student-selected electives		2-8
Total Credits		**30**

1. Examples include MBI F457, MBI F623, MBI F650 or MBI F656.
2. Examples include but are not limited to MBI F601, MBI F602, MBI F604, MBI F605, MBI F612 or MBI F692.

Marine Policy M.M.P.

Admission Requirements

Complete the following admission requirements:

- Bachelor of Arts or a Bachelor of Science with a minimum 3.0 GPA

Admission requests will be reviewed throughout the year. There is no financial support for students in this program.

Program Requirements

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Minimum Requirements for Marine Policy M.M.P.: 30 credits [1]

CORE AREAS: LIVING MARINE RESOURCES AND THEIR MANAGEMENT (P. 448)**;** ANALYTIC METHODS (P. 449)**;** LAW AND POLICY (P. 449)**;** ECONOMICS, DEVELOPMENT AND SUSTAINABILITY (P. 449)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Marine Policy Program Requirements		
Complete the following:		
FISH F671	Foundations of Marine Policy and Ocean Governance	3
Complete one of the following internships with a federal, state, local or tribal government, a marine-dependent industry or a marine-focused NGO:		2-6
FISH F690	Marine Policy Internship	
NRM F613/ ANTH F617/ BIOL F613	Resilience Internship	
PADM S691 (https://catalog.uas.alaska.edu/search/?search=PADM+S691)	Internship	
Complete one of the following:		3
FISH F691	Marine Policy Capstone	
Comprehensive Examination	Pass an oral or written comprehensive examination that demonstrates a master's-level ability to synthesize and apply information and experience gained through coursework and the internship to the analysis of a historic, contemporary or hypothetical marine policy issue.	
Electives		
Approved electives to bring program credits to total 30 if needed [2]		0-6
Core Area Requirements		
Living Marine Resources and Their Management	Complete one course from each of the living marine resources and their management categories	5-7
Analytic Methods	Complete one course from any of the analytic methods categories	2-4
Law and Policy	Complete one course from any of the law and policy categories	2-3
Economics, Development and Sustainability	Complete one course from any of the economics, development and sustainability categories	3
Area of Emphasis	Complete two additional courses in one of the preceding categories as an area of emphasis	4-8
Total Credits		**30-37**

1 Up to 6 of these credits may be F400-level courses.
2 Electives will be selected based on student interest and relatedness to the degree and approved by the MMP program co-coordinators.

Core Areas and Categories

LIVING MARINE RESOURCES AND THEIR MANAGEMENT

Living Marine Resources

Code	Title	Credits
Complete one course in Living Marine Resources.		3-4
BIOL S405 (https://catalog.uas.alaska.edu/search/?search=BIOL+S405)	Invertebrate Zoology	
BIOL S427 (https://catalog.uas.alaska.edu/search/?search=BIOL+S427)	Introduction to Ichthyology	
BIOL S481 (https://catalog.uas.alaska.edu/search/?search=BIOL+S481)	Marine Ecology	
FISH F427	Ichthyology	
FISH F650	Fish Ecology	
FISH F633	Pacific Salmon Life Histories	
MBI F410	Marine Bird Ecology and Conservation	
MBI F610	Marine Biology	
MBI F619	Biology of Marine Mammals	
MBI F667	Ecology and Physiology of Marine Macroalgae	

Management of Living Marine Resources

Code	Title	Credits
Complete one course in Management of Living Marine Resources.		2-3
FISH F641	Ecosystem-based Fisheries Management	
FISH F645	Bioeconomic Modeling and Fisheries Management	
FISH F651	Aquatic Conservation and Management Genetics	
FISH F687	Fisheries Management	
RD F612	Traditional Ecological Knowledge	

ANALYTIC METHODS

Complete one course in Statistics, Modeling, or Qualitative Analysis.

Statistics

Code	Title	Credits
FISH/MBI F604	Modern Applied Statistics for Fisheries	
FISH/MBI/OCN F627	Statistical Computing with R	
PADM S604 (https://catalog.uas.alaska.edu/search/?search=PADM+S604)	Applied Research Methods	
STAT S400 (https://catalog.uas.alaska search/?search=STAT+S400)	Statistical Computing with R	
STAT F401	Regression and Analysis of Variance	
STAT S401 (https://catalog.uas.alaska search/?search=STAT+S401)	Regression and Analysis of Variance	
STAT F461	Applied Multivariate Statistics	
STAT F605	Spatial Statistics	
STAT F611	Time Series	
STAT F621	Nonparametric Statistics and Machine Learning	
STAT F631	Categorical Data Analysis	

Modeling

Code	Title	Credits
FISH F645	Bioeconomic Modeling and Fisheries Management	

Qualitative Analysis

Code	Title	Credits
ACNS F601	Research Methods and Sources in the North	
ANTH F412/ FISH F613	Human-environment Research Methods	
PADM S604 (https://catalog.uas.alaska.edu/search/?search=PADM+S604)	Applied Research Methods	
RD F650	Community-based Research Methods	

LAW AND POLICY

Complete one course in Regulation; Law; Distributed Governance, Self-governance and Co-management; or Policy Analysis.

Regulation

Code	Title	Credits
FISH F681	The North Pacific Fishery Management Council	
FISH F683	The Alaska Board of Fisheries	

Law

Code	Title	Credits
ACNS/PS F654	International Law and the Environment	
ANS/PS F425	Federal Indian Law and Alaska Natives	
FISH F672	Law and Fisheries	
FISH F673	International Maritime Law and IUU Fishing	
NRM F407	Environmental Law	
PADM S618 (https://catalog.uas.alaska search/?search=PADM+S618)	Law for Public Managers	
RD F675	Federal Indian Law: Land, Water and Subsistence	

Distributed Governance, Self-governance and Co-management

Code	Title	Credits
ANS/RD F435	Participatory Policy-making in Tribal, State and Federal Government	
RD F651	Management Strategies for Rural Development	

Policy Analysis

Code	Title	Credits
ACNS/PS F669	Arctic Politics and Governance	
FISH F670	Quantitative Analysis for Marine Policy Decisions	
PADM S635 (https://catalog.uas.alaska.edu/search/?search=PADM+S635)	Natural Resource Policy	

ECONOMICS, DEVELOPMENT AND SUSTAINABILITY

Complete one course in Development, Economics, Human Environments, or Business and Public Administration.

Development

Code	Title	Credits
FISH F674	Economic Development for Fish-dependent Communities	
RD F430	Indigenous Economic Development and Entrepreneurship	
RD F625	Community Development Strategies: Principles and Practices	

Economics

Code	Title	Credits
ECON F434	Environmental Economics	
ECON S435 (https://catalog.uas.alaska search/?search=ECON+S435)	Natural Resource/ Environmental Economics	
NRM/BIOL/ANTH F647	Sustainability in the Changing North	
PADM S625 (https://catalog.uas.alaska search/?search=PADM+S625)	Economics and Public Policy	
PADM S628 (https://catalog.uas.alaska.edu/search/?search=PADM+S628)	Public Financial Management	
RD F630	Economic Development Policy and Entrepreneurship in Rural Alaska: Challenges and Opportunities	

Human Environments

Code	Title	Credits
FISH F611	Human Dimensions of Environmental Systems	
FISH/ANTH F675	Political Ecology	
PS S458 (https://catalog.uas.alaska.edu/search/?search=PS+S458)	Environmental Politics	
RD/CCS F612	Traditional Ecological Knowledge	

Business and Public Administration

Code	Title	Credits
PADM S601 (https://catalog.uas.alaska.edu/search/?search=PADM+S601)	Introduction to Public Administration	
PADM S622 (https://catalog.uas.alaska search/?search=PADM+S622)	Human Resources and Organizational Development	

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

The Sample Course of Study represents a one-year path to completing the M.M.P. degree with a core focus on Economics, Development, and Sustainability.

Course	Title	Credits
First Year		
Fall		
STAT F401	Regression and Analysis of Variance [a]	4
FISH F641	Ecosystem-based Fisheries Management [b]	2
FISH F671	Foundations of Marine Policy and Ocean Governance	3
PADM S625	Economics and Public Policy [c]	3
	Credits	**12**
Spring		
FISH F633	Pacific Salmon Life Histories [d]	3
FISH F674	Economic Development for Fish-dependent Communities [c]	3
PADM S635	Natural Resource Policy [e]	3
RD F625	Community Development Strategies: Principles and Practices [c]	3
	Credits	**12**
Summer		
FISH F690	Marine Policy Internship [f]	3
ACNS F601	Research Methods and Sources in the North [h]	3
	Credits	**6**
	Total Credits	**30**

a This requirement could be met with another approved course in *Analytic Methods.*
b This requirement could be met with another approved course in *Living Marine Resources Management*.
c This requirement could be met with another approved course in *Economics, Development and Sustainability*.
d This requirement could be met with another approved course in *Living Marine Resources*.
e This requirement could be met with another approved course in *Law and Policy*.
f This requirement could be met with another approved internship.
g This requirement could be met with FISH F698.
h This requirement could be met with another approved elective.

Program Learning Outcomes

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Program learning outcomes are measurable statements that describe knowledge or skills achieved by students upon completion of the program.

Students graduating with this program will be able to demonstrate:

- Multidisciplinary Breadth: By mastering foundational concepts in the Core Areas of Living Marine Resources and their Management, Analytic Methods, Law and Policy, and, Economics, Development, and Sustainability, graduates will become effective members of policy analysis teams. Disciplinary Depth: By completing a concentration in one of the Core Areas, graduates will be able to contribute subject matter expertise to policy analysis teams. Analytic Depth: By mastering analytic tools applied to the prospective or retrospective analysis of public policies related to living marine resources, graduates will be able to contribute analytic expertise to policy analysis teams.
- Firsthand Experience: By completing an internship within federal, state, local, or tribal government, a marine-dependent industry, or a marine-focused NGO engaged in the design, analysis, or shaping of marine policy, graduates will have gained firsthand experience developing and assessing policies that affect the marine environment, its living resources, and the people who depend on them.
- Integrative Capacity: Graduates demonstrate a Master's-level capacity to interpret, synthesize, and apply their coursework and internship experience to the analysis of marine policy issues.
- Career Readiness: Students will be prepared to compete for professional positions in state and federal marine resource management agencies, tribes and tribal organizations, non-governmental organizations, and private industry.

Marine Studies M.M.S.

Admission Requirements

Complete the following admission requirement:

- Submit GRE scores.

Program Requirements

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Minimum Requirements for Marine Studies M.M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Marine Studies Program Requirements		
Complete a project or literature review.		
Complete at least 12 credits from the following: [1]		12-26
MBI F610	Marine Biology	
MBI F615	Physiology of Marine Organisms	
OCN F419	Concepts in Physical Oceanography	
OCN F620	Physical Oceanography	
OCN F630	Geological Oceanography	
OCN F650	Biological Oceanography	
OCN F660	Chemical Oceanography	
Complete 2 credits from the following seminars:		2
MBI F601	Professional Development	
MBI F602	Proposal Writing	
MBI F605	Controversies in Marine Science	
MBI F692	Seminar	
Complete 2 credits from the following: [2]		2
MBI F423/F623	Nearshore Ecology Field Course	
MBI F450/F650	Marine Biology and Ecology Field Course	
MBI F456/F656	Kelp Forest Ecology	
OCN F625	Subarctic Oceanography Field Course	
Complete 6 credits of graduate project or literature review. [3]		6
Complete 8 credits of approved electives. [4]		8
Total Credits		**30**

1. Students must earn a grade of B- or better in the core courses of the degree program before being eligible to take the comprehensive exam.
2. Students may also complete these credits with individual studies in place of the regularly scheduled classes listed.
3. The project or literature review will be determined by the major advisor.
4. Electives will be selected based on student interest, relatedness to degree and approval by their major advisor.

Mathematics M.S.

Admission Requirements

Complete the following admission requirements:

- Submit three letters of recommendation addressing the applicant's educational background, mathematical ability, and research and teaching potential.
- Submit undergraduate transcripts.
- Submit a resume and written statement of goals.

Note: For admission to the graduate school, students who are non-native speakers of English are required to submit either TOEFL or IELTS scores. While not required, submission of GRE general test scores is recommended.

Program Requirements

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Minimum Requirements for Mathematics M.S.: 30-35 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements, complete the following:		
MATH F698	Non-thesis Research/Project	6
or MATH F699	Thesis	
Complete a written comprehensive exam		
Mathematics Program Requirements		

Complete the following:		
MATH F631	Algebra I	4
MATH F641	Real Analysis	4
MATH F645	Complex Analysis	4
MATH F651	Topology	4
MATH F692	Seminar [1]	1
Total Credits		**23**

[1] One or more credit(s) of MATH F692 during the anticipated final semester of enrollment for the degree. A graduate advisory committee may choose to waive the requirement if its purpose has been met by other experiences.

Mechanical Engineering M.S.

Admission Requirements

Complete the following admission requirements:

- Submit GRE scores.
- Complete a bachelor's degree in mechanical engineering or closely related program.

Program Requirements

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Minimum Requirements for Mechanical Engineering M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Mechanical Engineering Program Requirements		
Complete one of the following options:		30
Thesis Option		
Non-thesis Option		
Total Credits		**30**

Options

THESIS OPTION

Code	Title	Credits
Complete the following:		
ME F699	Thesis	6
General Electives [1]		9
Program Electives [2]		15
Total Credits		**30**

[1] Mechanical engineering or other engineering, science or mathematics courses approved by the student's advisory committee

[2] F600-level mechanical engineering courses

NON-THESIS OPTION

Code	Title	Credits
Complete the following:		
ME F698	Non-thesis Research/Project	6
General Electives [1]		9
Program Electives [2]		15
Total Credits		**30**

[1] Mechanical engineering or other engineering, science or mathematics courses approved by the student's advisory committee.

[2] F600-level mechanical engineering courses

Mining Engineering M.S.

Program Requirements

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Minimum Requirements for Mining Engineering M.S. Thesis Option: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
MIN F699	Thesis	6
Mining Engineering Program Requirements		
Complete the following:		
MIN F688	Graduate Seminar I	1
MIN F600-level courses		12
Technical electives		11
Total Credits		**30**

Minimum Requirements for Mining Engineering M.S. Non-thesis Option: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
MIN F698	Non-thesis Research/Project	6
Mining Engineering Program Requirements		
Complete the following:		
MIN F688	Graduate Seminar I	1

MIN courses	12
Technical electives	17
Total Credits	**36**

Music Performance M.Mu.

Admission Requirements

Complete the following admission requirements:

- Performance audition, demonstrating knowledge and ability in solo literature of various historical periods and styles. Audition may be either a live performance or a performance recorded and submitted in an unedited video format (DVD or online).
- Diagnostic examinations in music theory and history. These diagnostic exams identify strengths and deficiencies in music theory, music history and music literature. Applicants will be accepted from any accredited institution; however, before admission to a degree program, all students (including UAF or UAA baccalaureate graduates) must take these preliminary examinations.

Program Requirements

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Minimum Requirements for Music Performance M.Mu.: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419) [1]		
As part of the master's degree requirements, complete the following:		
MUS F698	Non-thesis Research/Project	6
Music Performance Program Requirements		
Complete the following:		
MUS F601	Introduction to Graduate Study	2
MUS F625	Topics in Music History	3
MUS F632	Topics in Music Theory	3
Complete at least 22 credits in a primary area of specialization, including large ensembles, small ensembles and private lessons. [2]		22
Successfully complete the performance of a graduate music recital.		
Successfully complete an oral defense of an approved research project paper.		
Total Credits		**36**

1. After completing about one semester of the program, students will meet with their advisory committee to define precisely their degree coursework. Each student, with the approval of the advisory committee, will develop an appropriate final research project, write a project paper and successfully defend that paper under the supervision of the advisory committee.
2. No more than 12 credits of MUS F697 are allowed.

Note: Students with specialization in vocal performance must demonstrate proficiency in languages appropriate to their area of concentration. Proficiency will be determined by the student's graduate committee in conjunction with the Department of Foreign Languages. Graduate students studying applied music and/or presenting recitals are governed by the Music Handbook concerning recital preparation and jury examinations.

Natural Resources and Environment M.N.R.E.

Admission Requirements

Complete the following admission requirements:

A Bachelor of Science or Bachelor of Arts degree in a relevant discipline is required for acceptance into either program. Candidates should have a general familiarity with the major resource fields. The student's committee may require the student to take courses to remedy any deficiencies; these credits will not count toward the credits required for the degree.

Applicants must submit three letters of recommendation, official GRE scores, undergraduate transcripts and a statement of the applicant's goals. The latter should include information about why you are applying for the degree, why you chose UAF and the Department of Natural Resources and Environment, and how such a degree would fit into your career goals. Applications cannot be considered until all these items have been received by the Office of Admissions.

Program Requirements

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Minimum Requirements for Master of Natural Resources and Environment M.N.R.E.: 35 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Natural Resources and Environment Program Requirements		
Complete the following:		
NRM F601	Research Methods in Natural Resources Management (or an approved research methods course) [1]	2
NRM F698	Non-thesis Research/Project	6
Statistics course at the F400 level or above [2]		3
Complete any combination of the following, or other graduate seminars approved by your advisory committee, to total 3 credits		3
NRM F667	Resilience Seminar I	
NRM F668	Interdisciplinary Research Methods-Resilience Seminar II	
NRM F692	Graduate Seminar	
Additional approved courses as needed to total 35 credits [3]		21

Complete and successfully defend the project.	
Total Credits	**35**

1 Requirement may be met with a research methods course in a discipline related to natural resources management.
2 Requirement may be met with a statistics course in mathematical sciences or in a discipline related to natural resources management.
3 These courses will be approved by the student's committee and the DNRE chair. Up to 9 of these credits may be F400-level courses.

Natural Resources and Environment M.S.

Program Requirements

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Minimum Requirements for Natural Resources and Environment M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
NRM F699	Thesis	6-12
Natural Resources and Environment Program Requirements		
Complete the following:		
NRM F601	Research Methods in Natural Resources Management (or an approved research methods course) [1]	2
Complete any combination of the following, or other graduate seminars approved by your advisory committee, to total 3 credits		3
NRM F667	Resilience Seminar I	
NRM F668	Interdisciplinary Research Methods-Resilience Seminar II	
NRM F692	Graduate Seminar	
Statistics course at the F400 level or above [2]		3
Additional approved courses as needed to total 30 credits [3]		10-16
Complete and successfully defend the thesis.		
Total Credits		**30**

1 Requirement may be met with a research methods course in a discipline related to natural resources management.
2 Requirement may be met with a statistics course in mathematical sciences or in a discipline related to natural resources management.
3 These courses will be approved by the student's committee. Up to 6 of these credits may be F400-level courses.

Oceanography M.S.

Admission Requirements

Complete the following admission requirement:

- Submit GRE scores.

Note: Students are admitted to the graduate program in oceanography on the basis of their ability and the capability of the program to meet their particular interests and needs. Applications are considered throughout the year but students should apply by March 1 to have the best chance for admission and financial support for the subsequent fall semester. Assistantship stipends are awarded competitively and limited fellowship support is available. Most students are supported on research projects that relate directly to their degree research.

Program Requirements

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Minimum Requirements for Oceanography M.S.: 30 credits

CONCENTRATIONS: BIOLOGICAL (P. 454), CHEMICAL (P. 454), FISHERIES (P. 455), GEOLOGICAL (P. 454), PHYSICAL (P. 454)

Students must earn a B- grade or better in the core courses of the degree program before being eligible to take the comprehensive exam.

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Oceanography Program Requirements		
Concentration		
Complete one of the following:		30
Biological, Chemical, Geological, Physical		
Fisheries		
Total Credits		**30**

Note: Oceanography majors must demonstrate field experience aboard an oceanographic vessel.

Concentrations

BIOLOGICAL, CHEMICAL, GEOLOGICAL, PHYSICAL

Code	Title	Credits
Biological, Chemical, Geological and Physical Concentration Requirements		
Complete the following:		
OCN F620	Physical Oceanography	4
OCN F630	Geological Oceanography	3
OCN F650	Biological Oceanography	3
OCN F660	Chemical Oceanography	3
OCN F692	Seminar	1-6
OCN F699	Thesis [1]	6-12

Electives	open
Total Credits	**30**

[1] Appropriate to the area of concentration

FISHERIES

Code	Title	Credits
Fisheries Concentration Requirements		
Complete the following:		
OCN F620	Physical Oceanography	4
OCN F630	Geological Oceanography	3
OCN F643	Fisheries Oceanography	4
OCN F650	Biological Oceanography	3
OCN F660	Chemical Oceanography	3
OCN F692	Seminar	3
OCN F699	Thesis	6-12
Electives		open
Total Credits		**30**

One Health O.H.M.

Admission Requirements

Complete the following admission requirements:

One Health is an inherently interdisciplinary field, and there is no preferred background to succeed in the program. UAF welcomes applications from individuals who have backgrounds in natural or social science, health care, education, and a broad array of work and life experiences. Because the One Health Master's focused on challenges in the circumpolar North, the degree will be of particular interest to individuals throughout that area; however, the concepts, tools and techniques that will be learned and practiced within the program can be applied to One Health challenges in any location.

Applications will close on June 1 each year and newly admitted students will enter the program in the fall semester. The OHM review committee will make final decisions on admissions. The OHM review committee will consist of representatives from both the social and natural sciences.

In addition to meeting the admission requirements for the master's degree at UAF, students should also meet the following criteria when applying for admission to the One Health Master's.

1. Applicants must have earned a baccalaureate degree from a regionally accredited University in the United States or a foreign equivalent.
2. Applicants must have a cumulative undergraduate GPA of 3.25 or higher (on a 4.0 scale).
3. Applicants must submit a letter of interest explaining their understanding of One Health and how they envision incorporating the One Health Master's education in their future careers.
4. Applicants must submit names and contact information for three individuals who can address their preparedness for the One Health Master's.
5. Applicants must submit a current resume or curriculum vitae.
6. Additional requirements for the community advocate concentration: Undergraduate transcripts must include a minimum of 8 credits of natural science with labs, at least one of which must be general biology (BIOL F116X or equivalent), and one semester of basic statistics (STAT F200X or equivalent).
7. Additional requirements for the biomedical sciences concentration: Undergraduate transcripts must include a minimum of 8 credits of biological sciences with labs (BIOL F115X and BIOL F116X or equivalent), 8 credits of general chemistry with labs (CHEM F105X and CHEM F106X or equivalent), and a semester-long course in basic statistics (STAT F200X or equivalent).
8. If you have any concerns about your preparedness or qualification for admission to this degree, please contact the degree program prior to application.

Program Requirements

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Minimum Requirements for One Health O.H.M.: 30 credits

CONCENTRATIONS: BIOMEDICAL (P. 455), COMMUNITY ADVOCACY (P. 456)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
One Health Program Requirements		
Complete the following:		
ACNS F600	Perspectives on the North	3
DVM F615	One Health Concepts	2
DVM F620	One Health Challenges in the Circumpolar North	3
DVM F621	One Health Colloquium	4
DVM F714	Preventative Veterinary Medicine	4
Complete one of the following:		3
COM F441	Persuasion	
COM F680	Communication and Diversity in the Professional World	
Concentration		
Complete one of the following:		11-12
Biomedical		
Community Advocacy		
Total Credits		**30-31**

Concentrations

BIOMEDICAL

Code	Title	Credits
Biomedical Concentration Requirements		
Complete 11-12 credits from the following: [1]		11-12
BIOL F455	Environmental Toxicology	
BIOL F617	Neurobiology	
BIOL F635	Introduction to Biology of Cancer	
DVM F606	Veterinary Immunology	

DVM F637/ BIOL F632	Veterinary Bacteriology and Mycology	
DVM F639	Veterinary Virology	
DVM/BIOL F640	Veterinary Pathology/Biology of Disease I	
ECON F434	Environmental Economics	
Total Credits		**11-12**

[1] Other courses may be substituted with the approval of OHM faculty.

COMMUNITY ADVOCACY

Code	Title	Credits
Community Advocacy Concentration Requirements		
Complete 11-12 credits from the following: [1]		11-12
ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS F652	International Relations of the North	
ACNS F655	Political Economy of the Global Environment	
ACNS/HIST F683	20th-century Circumpolar History	
ECON F434	Environmental Economics	
RD F465	Community Healing and Wellness	
RD F601	Political Economy of the Circumpolar North	
Total Credits		**11-12**

[1] Other courses may be substituted with the approval of OHM faculty.

Petroleum Engineering M.S.

Admission Requirements

Complete the following admission requirements:

- Submit GRE scores.
- Complete a B.S. degree in engineering or the natural sciences.

Program Requirements

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Minimum Requirements for Petroleum Engineering M.S.: 30-36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Petroleum Engineering Program Requirements		
Complete four of the following:		12
PETE F607	Advanced Production Engineering	
PETE F608	Flow Assurance in the Petroleum Industry	
PETE F610	Advanced Reservoir Engineering	
PETE F621	Applied Reservoir Characterization	
PETE F630	Waterflooding	
PETE F656	Advanced Petroleum Economic Analysis	
PETE F661	Applied Well Testing	
PETE F662	Enhanced Oil Recovery	
PETE F663	Applied Reservoir Simulation	
PETE F665	Advanced Phase Behavior	
PETE F666	Drilling Optimization	
PETE F670	Fluid Flow Through Porous Media	
PETE F680	Horizontal Well Technology	
PETE F683	Natural Gas Processing and Engineering	
PETE F685	Non-Newtonian Fluid Mechanics	
PETE F689	Multiphase Fluid Flow in Pipes	
Options		
Complete one of the following:		18-24
Thesis Option (18 credits)		
Non-thesis Option (24 credits)		
Total Credits		**30-36**

Options

THESIS OPTION

Code	Title	Credits
Complete the following:		
PETE F699	Thesis	6
Elective courses [1]		12
Total Credits		**18**

[1] Electives are chosen with the approval of the graduate advisory committee.

NON-THESIS OPTION

Code	Title	Credits
Complete the following:		
PETE F698	Non-thesis Research/Project	6
Elective courses [1]		18
Total Credits		**24**

[1] Electives are chosen with the approval of the graduate advisory committee.

Physics M.S.

Program Requirements

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Minimum Requirements for Physics M.S.: 30-33 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		

Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Physics Program Requirements		
Complete four of the following:		12
PHYS F611	Mathematical Physics I	
PHYS F612	Mathematical Physics II	
PHYS F621	Classical Mechanics	
PHYS F622	Statistical Mechanics	
PHYS F631	Electromagnetic Theory	
PHYS F632	Electromagnetic Theory	
PHYS F651	Quantum Mechanics	
PHYS F652	Quantum Mechanics	
Options		
Complete one of the following:		18-21
Thesis Option		
Non-thesis Option		
Total Credits		**30-33**

Options

THESIS OPTION

Minimum Requirements for Physics M.S. Degree with Thesis Option: 30 credits [1]

Code	Title	Credits
Thesis Requirements		
Complete the following:		
PHYS F699	Thesis	6-12
Complete 12 credits from the following:		12
Approved PHYS F600-level courses		
Approved ATM F600-level courses		
Total Credits		**18-24**

[1] At least 24 credits must be regular coursework.

NON-THESIS OPTION

Minimum Requirements for Physics M.S. Degree with Non-thesis Option: 33 credits [2]

Code	Title	Credits
Non-thesis Requirements		
Complete the following:		
PHYS F698	Non-thesis Research/Project	3-6
Complete 18 credits from approved courses		18
Total Credits		**21-24**

[2] At least 30 credits must be regular coursework.

Physics with Computational Physics Concentration M.S.

Program Requirements

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Minimum Requirements for Physics with Computational Concentration M.S.: 30-33 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Physics with Computational Concentration Program Requirements		
Complete the following:		
PHYS F611	Mathematical Physics I	3
PHYS F612	Mathematical Physics II	3
PHYS F629	Methods of Numerical Simulation in Fluids and Plasma	3
Complete at least 3 credits from the following:		3
Approved MATH F600-level courses (excluding PHYS F611 and PHYS F612)		
Approved CS F600-level courses		
Complete 6 credits of approved PHYS F600-level courses		6
Options		
Complete one of the following:		12-18
Thesis Option		
Non-thesis Option		
Total Credits		**30-36**

Options

THESIS OPTION

Minimum Requirements for Thesis Option: 30 credits

Code	Title	Credits
Thesis Requirements		
Complete the following:		
PHYS F699	Thesis	6-12
Complete 6 credits from approved PHYS F600-level courses		6
Total Credits		**12-18**

NON-THESIS OPTION

Minimum Requirements for Non-thesis Option: 33 credits [1]

Code	Title	Credits
Non-thesis Requirements		
Complete the following:		
PHYS F698	Non-thesis Research/Project	3-6
Complete 9 credits from approved PHYS F600-level courses		9
Total Credits		**12-15**

[1] At least 30 credits must be regular coursework.

Physics with Space Physics Concentration M.S.

Program Requirements

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Minimum Requirements for Physics with Space Physics Concentration M.S. Degree: 30-33 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Physics with Space Physics Concentration Program Requirements		
Complete four of the following:		12
PHYS F626	Fundamentals of Plasma Physics	
PHYS F627	Advanced Plasma Physics	
PHYS F629	Methods of Numerical Simulation in Fluids and Plasma	
PHYS F672	Magnetospheric Physics	
PHYS F673	Space Physics	
Options		
Complete one of the following:		18-24
Thesis Option		
Non-thesis Option		
Total Credits		**30-36**

Options

THESIS OPTION

Minimum Requirements for Physics with Space Physics Concentration Degree Thesis option: 30 credits

Code	Title	Credits
Thesis Requirements		
Complete the following:		
PHYS F699	Thesis	6-12
Complete 12 credits from the approved PHYS F600-level courses		12
Total Credits		**18-24**

NON-THESIS OPTION

Minimum Requirements for Physics with Space Physics Concentration Degree with Non-thesis option: 33 credits [1]

Code	Title	Credits
Non-thesis Requirements		
Complete the following:		
PHYS F698	Non-thesis Research/Project	3-6
Complete 18 hours from approved PHYS F600-level courses		18
Total Credits		**21-24**

[1] At least 30 credits must be regular coursework.

Professional Communication M.A.

Admission Requirements

Complete the following admission requirements:

- Submit an academic writing sample.

Program Requirements

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Minimum Requirements for Professional Communication M.A. Degree: 33 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
As part of the master's degree requirements, complete the following:		
COM F699	Thesis	6
or COM F698	Non-thesis Research/Project	
Professional Communication Program Requirements		
Complete the following:		
COM F601	Quantitative Research Methods in Communication	3
COM F602	Communication Research Methodologies: Human Science	3
COM F622	Communication in Interpersonal Relationships	3
COM F625	Communication Theory	3
COM F631	Teambuilding	3
COM F645	Organizational Communication	3
COM F680	Communication and Diversity in the Professional World	3
Electives		
Complete two of the following: [1]		6
COM F633	Public Relations Theory and Practice	
COM F642	Communication in Health Contexts	
COM F675	Training and Development Communication	
COM F682	Seminar in Communication	
Total Credits		**33**

[1] Students may take F400- and F600-level courses in art, education, English, journalism, communication, marketing, business administration and Arctic and Northern studies as well as graduate-level independent studies to fulfill 6 credits of the elective requirement if approved by the student's committee. Students will also be able to apply up to 6 credits of appropriate graduate-level coursework from

other universities in the elective area if approved by the student's committee.

Note: A maximum of 6 credits of approved F400-level courses may be included in the 30-34 credit requirement.

Note: The comprehensive examination is to be taken no later than the student's fourth semester of work.

Rural Development M.A.

Admission Requirements

Complete the following admission requirements:

- Completion of a bachelor's degree from an accredited institution.

Program Requirements

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Minimum Requirements for Rural Development M.A.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Rural Development Program Requirements		
Complete the following:		
RD F600	Indigenous Leadership Symposium	3
RD F601	Political Economy of the Circumpolar North	3
RD F625	Community Development Strategies: Principles and Practices	3
RD F650	Community-based Research Methods	3
RD F651	Management Strategies for Rural Development	3
RD F691	Seminar in Rural, Community and Indigenous Development Issues	3
Path		
Complete one of the following:		12
Non-research Path		
Research Path		
Total Credits		**30**

Paths

NON-RESEARCH PATH

Code	Title	Credits
Complete the following:		
12 units RD Electives; or other courses approved by the department [1,2]		12
Receive a passing grade on a written comprehensive exam in conjunction with the completion of RD F691.		

[1] Up to 6 credits may be at the F400 level with approval from the graduate advisor.
[2] Any F600-level RD course may be used as an elective.

RESEARCH PATH

Code	Title	Credits
Complete the following:		
RD F698	Non-thesis Research/Project	6
or RD F699	Thesis	
6 units RD electives; or other courses approved by the advisory committee. [2,3]		6
Receive a passing grade on a written comprehensive exam in conjunction with the completion of RD F691		
Complete and submit a written thesis or project and pass an oral defense of the thesis or project.		

[2] Any F600-level RD course may be used as an elective.
[3] Up to 6 credits may be at the F400 level with approval from the graduate advisory committee.

Secondary Education M.Ed.

Admission Requirements

Complete the following admission requirements:

Admission to the graduate secondary postbaccalaureate licensure program and the M.Ed. in secondary education includes meeting the requirements of the UAF Graduate School and of the School of Education.

Submit the following information to the UAF Office of the Registrar:

1. UAF graduate application and application fee.
2. Official transcript of bachelor's degree from an accredited institution, minimum GPA of 3.0. Applicants who have attended more than one university should include transcripts from all universities.
3. Three current letters of reference that address qualifications and potential as a teacher.
4. A vitae/resume.
5. A personal statement of 1,200-1,500 words explaining your motivation for becoming a teacher. Describe how your academic qualifications and work experiences have prepared you for a career in teaching. Elaborate on your personal strengths, including your ability to work collaboratively with others. Describe your experiences with adolescents in instructional and supervisory capacities. Explain why you believe you can help young people of all cultures be successful in school.

Send the following scores directly to the School of Education:

1. Passing scores on an Alaska Department of Education and Early Development (EED) approved basic competency exam (http://education.alaska.gov/TeacherCertification/praxis.html).
2. Passing scores on the Praxis II test for each content area the applicant expects to teach. The scores must meet the score set by the State of Alaska (https://education.alaska.gov/TeacherCertification/). World language applicants may need an oral proficiency test as required by EED.

3. Secondary faculty will interview applicants as part of the admission process.

ADDITIONAL INFORMATION:

Evidence of content competency in one of the UAF-approved secondary endorsement areas is necessary.

Endorsement areas for teacher certification include art, biology, chemistry, Earth science, economics, English, French, German, history, mathematics, physics, political science and Spanish. A student can establish content competency by:

a) Holding a degree in an approved secondary endorsement area; or
b) Documenting content competency (e.g., transcript analysis by faculty). Additional coursework may be required.

*Before student teaching, teacher candidates will need to complete the Alaska Department of Education and Early Development student teaching authorization. Fingerprint cards and criminal background check necessary to work in schools.

Program Requirements

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Minimum Requirements for Secondary Education M.Ed.: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Complete the admission requirements for the graduate-level elementary postbaccalaureate licensure program.		
Secondary Education Program Requirements		
Complete the following:		
ED F601	Introduction to Applied Social Science Research	3
ED F687	Alaska: Resources, People and Perspectives	3
EDSC F407	Developing Literacy in the Content Areas	3
EDSC F415	Foundations of Modern Educational Practice	3
EDSC F642	Technology Applications in Education I	1
EDSC F643	Technology Application in Education II	2
EDSC F657	Multicultural Education and School-community Relations	3
EDSC F658	Classroom Organization and Management	3
EDSC F671	Secondary Teaching: School Internship I and Seminar	3
EDSC F672	Secondary Teaching: School Internship II and Seminar	6-9
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
Complete one of the following:		3
EDSC F631	Secondary Instruction and Assessment in the Content Area	
EDSC F632	English/Language Arts Secondary Instruction and Assessment	
EDSC F633	Mathematics Secondary Instruction and Assessment	
EDSC F634	Science Secondary Instruction and Assessment	
EDSC F635	Social Studies Secondary Instruction and Assessment	
EDSC F636	Art Secondary Instruction and Assessment	
EDSC F637	World Language Secondary Instruction and Assessment	
Options		
Complete one of the following:		0-9
Thesis Option		
Project Option		
Comprehensive Exam Option		
Total Credits		**36-48**

Options

THESIS OPTION

Code	Title	Credits
Complete the following:		
ED/CCS F603	Field Study Research Methods	3
or ED/CCS F604	Documenting Indigenous Knowledge	
ED F699	Thesis	6
Total Credits		**9**

PROJECT OPTION

Code	Title	Credits
Complete the following:		
ED/CCS F603	Field Study Research Methods	3
or ED/CCS F604	Documenting Indigenous Knowledge	
ED F698	Non-thesis Research/Project	3
Total Credits		**6**

COMPREHENSIVE EXAM OPTION

Code	Title	Credits
Complete the following:		
Comprehensive examination		0
Total Credits		**0**

Security and Disaster Management M.S.D.M.

Admission Requirements

Complete the following admission requirements:

- Students with a GPA above 2.75 will be required to submit a score from the Watson-Glaser Critical Thinking Exam.
- Any students with a GPA lower then 2.75 will be required to submit scores from either the GRE or the GMAT.

- Students without a background in Homeland Security and Emergency Management will be required to take HSEM F301: Principles of Emergency Management and Homeland Security. This course will not count toward the M.S.D.M. program requirements.

Program Requirements

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Minimum Requirements for Security and Disaster Management M.S.D.M.: 30 credits

CONCENTRATIONS: ARCTIC SECURITY (P. 461), BUSINESS CONTINUITY (P. 461), CLIMATE SECURITY (P. 461), CYBERSECURITY (P. 461), DISASTER MANAGEMENT (P. 461), STEM (P. 462), STRATEGIC LEADERSHIP (P. 462)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Security and Disaster Management Program Requirements [1]		
Complete the following:		
HSEM F601	Legal Aspects of Homeland Security and Emergency Management	3
HSEM F603	Disaster Management Policy	3
HSEM F607	Vulnerability and Protection	3
HSEM F609	Human Security	3
HSEM F690	Security and Disaster Management	3
Concentration		
Complete one of the following:		15
Arctic Security		
Business Continuity		
Climate Security		
Cybersecurity		
Disaster Management		
Strategic Leadership		
STEM		
Total Credits		**30**

[1] Students with two C's, one D or one F in courses that are part of the HSEM program will not be in good standing even if their cumulative GPA is at or above 3.0. HSEM students who are not in good standing will be subject to review and may be dismissed by the HSEM committee. Students may not use more than two F600-level courses with C grades on the advancement-to-candidacy application.

Concentrations

ARCTIC SECURITY

Code	Title	Credits
Arctic Security Concentration Requirements		
Complete the following:		
HSEM F621	Circumpolar Competition-Arctic Diplomacy and Defense	3
HSEM F622	Arctic Strategies and Operations	3
HSEM F692	Security and Disaster Management Seminar	3
or ACNS F652	International Relations of the North	
Complete two approved electives at the F400 or F600 level		6
Total Credits		**15**

BUSINESS CONTINUITY

Code	Title	Credits
Business Continuity Concentration Requirements		
Complete three of the following:		9
HSEM F632	Project Management	
HSEM F645	Crisis Management	
HSEM F646	Business Continuity and Risk Assessment	
HSEM F647	Business Continuity Audit	
Complete two approved electives at the F400 or F600 level		6
Total Credits		**15**

CLIMATE SECURITY

Code	Title	Credits
Climate Security Concentration Requirements		
Complete the following:		
HSEM F670	Environmental Security	3
HSEM F672	Climate Catastrophes: A Case Study Approach	3
HSEM F673	Models and Scenarios for Disaster Risk Reduction	3
Complete two approved electives at the F400 or F600 level		6
Total Credits		**15**

CYBERSECURITY

Code	Title	Credits
Cybersecurity Concentration Requirements		
Complete the following:		
HSEM F641	Information Assurance and Risk Assessment	3
HSEM F648	Perspectives in Addressing Cybersecurity & Critical Infrastructure	3
HSEM F649	Cyber Threats and Vulnerabilities	3
Complete two approved electives at the F400 or F600 level		6
Total Credits		**15**

DISASTER MANAGEMENT

Code	Title	Credits
Disaster Management Concentration Requirements		
Complete three of the following:		9
HSEM F605	Community Planning in Emergency Management	
HSEM F613	International Disaster Management	
HSEM F632	Project Management	
HSEM F665	Strategic Collaboration	

Complete two approved electives at the F400 or F600 level	6
Total Credits	**15**

STEM

This concentration may require some courses to be taken in residence.

Code	Title	Credits
STEM Concentration Requirements		
Students will take three graduate-level courses in their approved STEM field. These courses must be approved by the MSDM advisor.		9
Complete two approved CBSM electives at the F400 or F600 level.		6
Total Credits		**15**

STRATEGIC LEADERSHIP

Code	Title	Credits
Strategic Leadership Concentration Requirements		
Complete the following:		
HSEM F632	Project Management	3
HSEM F656	Strategic Leadership	3
HSEM F665	Strategic Collaboration	3
Complete two approved electives at the F400 or F600 level		6
Total Credits		**15**

Special Education M.Ed.

Admission Requirements

The School of Education offers Master of Education degrees in counseling, special education and education. Students in the education major may earn a degree in these areas of specialization: people, place and pedagogy, second language acquisition, bilingual education, and literacy, and online innovation and design. Students completing postbaccalaureate certification in elementary or secondary education may earn an M.Ed. in the respective area. For elementary education, secondary education, special education and counseling majors, refer to specific admission and program requirements listed in the respective sections.

ADMISSION REQUIREMENTS

Applications will be reviewed on March 1 and Oct. 1 for admission in the following semester. Faculty may vote to admit, not admit or admit with stipulations. Stipulations are specified when additional development in particular areas is needed before beginning a graduate degree program.

Minimum requirements for admission to the M.Ed. program are:

1. Bachelor's degree and a 3.0 GPA.
2. One year of satisfactory teaching or administrative experience. Alternative experience may be accepted.

Complete the following application procedures for the UAF Graduate School:

1. Submit a graduate application to the UAF Office of Admissions.
2. Submit scores on the general GRE if undergraduate GPA is below 3.0.
3. Submit a four- to five-page essay that describes your career goals and educational philosophy, and how those goals and philosophy are relevant to the School of Education's mission and education graduate degree program.
4. Submit official transcripts.
5. Submit three letters of reference.
6. Submit a resume.

For Certified Teachers

Complete the following admission requirements:

- Current Alaska teaching certificate or equivalent coursework towards an Alaska teaching certificate.

Prerequisite or corequisite: EDSE F482 or comparable transfer course from another institution.

For Initial Certification

Complete the following admission requirements:

1. Baccalaureate degree along with the following prerequisites:
   a. Documented recent experience (minimum of 12 hours) in an educational setting with children experiencing disabilities.
   b. UAF prerequisite or corequisite courses or comparable transfer courses. Courses may be completed prior to admission or during the program:

Code	Title	Credits
ED F245	Child Development	3
Select one from the following:		3
ED F201	Introduction to Education	
ED F624	Foundations of Education in Alaska: From Segregation to Standards	
EDSC F205	Introduction to Secondary Education	
EDSC F415	Foundations of Modern Educational Practice	
EDSE F482	Inclusive Classrooms for All Children	

   c. Passing scores on the Praxis Academic Skills for Educators text (or Praxis I) or another test acceptable to the Alaska Department of Education and Early Development before or during the first semester of classes. Current test numbers and minimum scores can be found at the basic competency examination requirement site (https://education.alaska.gov/teachercertification/praxis/).
   d. Passing scores on the appropriate Praxis II Exam(s) required before entering EDSE F678. Current test numbers and minimum scores can be found at the Alaska Department of Education and Early Development content area examinations site (https://education.alaska.gov/teachercertification/contentareaexams/). Candidates should consult the employing school district to determine preferred tests based on teaching assignment.
   e. Passing scores on the Special Education: Core Knowledge and Applications Praxis Exam (test #5354) or another test acceptable to the Alaska Department of Education and Early Development before or during EDSE F680. Passing scores are required to complete EDSE F680 and graduate from the Special Education K-12 Postbaccalaureate Certificate of Completion.

Recommended prior to admission or during the program, not required for the degree but for Alaska teacher certification:

1. An Alaska studies course approved by the Alaska Department of Education and Early Development (http://education.alaska.gov/teachercertification/).
2. A multicultural education/cross-cultural communication course approved by the Alaska Department of Education and Early Development (http://education.alaska.gov/teachercertification/).

All prerequisite courses must be completed with a minimum final grade of B.

Program Requirements

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Certified Teachers

MINIMUM REQUIREMENTS FOR SPECIAL EDUCATION M.ED.: 36 CREDITS

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Corequisite Requirements [1]		
EDSE F482	Inclusive Classrooms for All Children	
Certified Teachers Special Education Program Requirements		
Complete the following:		
ED F601	Introduction to Applied Social Science Research	3
EDSE F610	Assessment of Students with Exceptionalities	3
EDSE F612	Curriculum, Management and Strategies I: Low Incidence	3
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
EDSE F625	Teaching Mathematics to Special Learners	3
EDSE F632	Special Education Law: Principles and Practices	3
EDSE F677	English Language Arts Assessment, Curriculum and Strategies for Special Learners	3
EDSE F680	Special Education Clinical Practice [2,3]	3
Complete four of the following elective courses as approved by the candidate's graduate committee:		12
ED F603	Field Study Research Methods	
or ED/CCS F604	Documenting Indigenous Knowledge	
EDSE F605	Early Childhood Special Education	
EDSE F624	Social/Emotional Development, Assessment and Intervention	
EDSE F633	Autism and Other Developmental Disabilities: Communication and Social Interventions	
EDSE F640	Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals	
EDSE F642	Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions	
EDSE F648	Understanding FASD: Diagnosis, Intervention and Strategies	
Complete comprehensive examination [4]		
Total Credits		**36**

1. Complete the corequisite course before or during admittance to the program or have a comparable transfer course from another university.
2. Additional fee required. Charges are added to fee statements every semester.
3. Students pursuing a K-12 special education certificate must complete clinical practice in a public school setting.
4. Must be enrolled in 3 graduate credits the semester the comprehensive exam is completed.

Initial Certification

MINIMUM REQUIREMENTS FOR SPECIAL EDUCATION M.ED.: 39 CREDITS

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Corequisite Requirements [1]		
ED F245	Child Development	
EDSE F482	Inclusive Classrooms for All Children	
Complete one of the following:		
ED F201	Introduction to Education	
ED F624	Foundations of Education in Alaska: From Segregation to Standards	
EDSC F205	Introduction to Secondary Education	
EDSC F415	Foundations of Modern Educational Practice	
Initial Certification Special Education Program Requirements		
Complete the following:		
ED F601	Introduction to Applied Social Science Research	3
EDSE F610	Assessment of Students with Exceptionalities	3
EDSE F612	Curriculum, Management and Strategies I: Low Incidence	3
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
EDSE F625	Teaching Mathematics to Special Learners	3
EDSE F632	Special Education Law: Principles and Practices	3
EDSE F677	English Language Arts Assessment, Curriculum and Strategies for Special Learners	3
EDSE F678	Special Education Clinical Practice: Initial [2]	3

EDSE F680	Special Education Clinical Practice [2,3]	3
Complete four of the following elective courses as approved by the candidate's graduate committee:		12
ED F603	Field Study Research Methods	
or ED/CCS F604	Documenting Indigenous Knowledge	
EDSE F605	Early Childhood Special Education	
EDSE F624	Social/Emotional Development, Assessment and Intervention	
EDSE F633	Autism and Other Developmental Disabilities: Communication and Social Interventions	
EDSE F640	Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals	
EDSE F642	Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions	
EDSE F648	Understanding FASD: Diagnosis, Intervention and Strategies	
Complete comprehensive examination [4]		
Total Credits		**39**

1 Complete the corequisite courses before or during admittance to the program or have comparable transfer courses from another university.

2 Additional fee required. Charges are added to fee statements every semester.

3 Students pursuing a K-12 special education certificate must complete clinical practice in a public school setting.

4 Must be enrolled in 3 graduate credits the semester the comprehensive exam is completed.

M.Ed. Degree Without Certification

MINIMUM REQUIREMENTS FOR SPECIAL EDUCATION, M.ED.: 36 CREDITS

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 418)		
Corequisite Requirements [1]		
EDSE F482	Inclusive Classrooms for All Children	
Special Education Without Certification Program Requirements		
Complete the following:		
ED F601	Introduction to Applied Social Science Research	3
EDSE F610	Assessment of Students with Exceptionalities	3
EDSE F612	Curriculum, Management and Strategies I: Low Incidence	3
EDSE F622	Curriculum, Management and Strategies II: High Incidence	3
EDSE F625	Teaching Mathematics to Special Learners	3
EDSE F632	Special Education Law: Principles and Practices	3
EDSE F677	English Language Arts Assessment, Curriculum and Strategies for Special Learners	3
Complete five of the following elective courses as approved by the candidate's graduate committee:		15
ED F603	Field Study Research Methods	
or ED/CCS F604	Documenting Indigenous Knowledge	
EDSE F605	Early Childhood Special Education	
EDSE F624	Social/Emotional Development, Assessment and Intervention	
EDSE F633	Autism and Other Developmental Disabilities: Communication and Social Interventions	
EDSE F640	Culturally Responsive Collaboration: Working with Parents, Colleagues and Paraprofessionals	
EDSE F642	Autism Spectrum Disorders and Other Developmental Disabilities: Sensory and Behavioral Interventions	
EDSE F648	Understanding FASD: Diagnosis, Intervention and Strategies	
Complete comprehensive examination [4]		
Total Credits		**36**

1 Complete the corequisite course before or during admittance to the program or have a comparable transfer course from another university.

4 Must be enrolled in 3 graduate credits the semester the comprehensive exam is completed.

Statistics and Data Science M.S.

Admission Requirements

Complete the following admission requirements:

- Submit three letters of recommendation concerning the applicant's educational background and quantitative training.
- Submit complete transcripts for all college-level work.
- Submit a resume.
- Submit a written statement of goals.
- The applicant must have completed a bachelor's degree from an accredited institution with a GPA of at least 3.0.
- Must have completed the following courses or their equivalent with a B grade or better: full calculus sequence (Calculus I (MATH F251X), Calculus II (MATH F252X), Calculus III (MATH F253X)); note that students substituting Essential Calculus with Applications (MATH F230X) for Calculus I must take MATH F252X and MATH F253X before acceptance; a course in linear algebra (MATH F314); at least one introductory statistics or probability course (STAT F200X, STAT F300 or MATH F371, MATH F408); and Regression and Analysis of Variance (STAT F401). Students lacking MATH F314 or STAT F401 may be accepted on probation.

Program Requirements

< Back to Department (p. 159)

Minimum Requirements for Statistics and Data Science M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master's Degree Requirements		
Complete the master's degree requirements. (p. 419)		
Statistics and Data Science Program Requirements		
Complete the following:		
STAT F651	Statistical Theory I	3
STAT F652	Statistical Theory II	3
STAT F653	Statistical Theory III: Linear Models	3
STAT F654	Statistical Consulting Seminar	1
STAT F698	Non-thesis Research/Project	3
Complete two of the following:		6
STAT F461	Applied Multivariate Statistics	
STAT F602	Experimental Design	
STAT F605	Spatial Statistics	
STAT F611	Time Series	
STAT F621	Nonparametric Statistics and Machine Learning	
STAT F631	Categorical Data Analysis	
STAT F641	Bayesian Statistics	
STAT F661	Sampling Theory	
STAT F671	Statistical Computing	
Complete at least 6 credits of approved courses from an application area or courses with substantial statistical and/or mathematical content. [1]		6
Total Credits		**25**

[1] Students working in subject areas involving significant non-English literature will be expected to read the appropriate foreign language.

Note: Each student must take and pass a two-part comprehensive exam. The first part, written by the statistics faculty, is a written exam (not a take-home exam) covering the material in the core statistics courses. The second part is an oral exam covering follow-up questions from the written exam as well as any material from courses the student has taken along with their project.

Wildlife Biology and Conservation M.S.

Admission Requirements

Complete the following admission requirements:

- Application for admission (https://uaf.edu/admissions/apply/) and application fee
- Transcripts from all universities or colleges attended. Unofficial transcripts may be submitted with the application. Official transcripts must follow prior to matriculation
- Curriculum vitae
- Statement of Purpose that addresses the following:
  - Career aspirations
  - Research interests
  - Research experience and relevant training
  - Interest, experience, and/or plans to serve society through your career, including experiences or commitment to justice, equity, diversity, and inclusion
  - Relevance of UAF Biology and Wildlife in achieving your future goals, including the names of faculty members you have contacted regarding graduate training

  Excellent statements of purpose are specific, informative, focused and concise. See the Biology and Wildlife website (https://www.uaf.edu/bw/) for more detailed instructions about the statement of purpose.
- Three letters of reference from individuals who can address your potential to succeed in graduate school. Ideally, letters of reference should come from university faculty, research staff, or professionals familiar with your academic and research achievements and also with the expectations of graduate school. References will be asked to address writing ability, critical thinking skills, quantitative skills, and potential to succeed in a graduate program. References that address notable service (e.g., Peace Corps or AmeriCorps) may also be informative.
- Optional: scores from the GRE General Test will be considered if submitted
- International students: please consult UAF's most recent application requirements (p. 33)

Note - Students are typically not admitted to the program unless a faculty advisor has agreed to serve as the mentor. Applicants should contact potential advisors before applying.

Program Requirements

< Back to Department (p. 111)

Minimum Requirements for Wildlife Biology and Conservation M.S.: 30 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 416)		
Master of Science with Thesis Degree Requirements		
Complete the master's degree requirements. (p. 419)		
As part of the master's degree requirements, complete the following:		
BIOL F699	Thesis	6-12

Wildlife Biology and Conservation Program Requirements		
Complete two courses in BIOL or WLF at the graduate level including one of the following:		6-7
BIOL/WLF F602	Research Design	
BIOL/WLF F604	Scientific Writing, Editing and Revising in the Biological Sciences	
BIOL/WLF F680	Data Analysis in Biology	
Complete and pass the departmental written and oral master's comprehensive examination.		

Ph.D.s

How to Earn a Ph.D.

GRADUATE ADVISORY COMMITTEE

A graduate advisory committee guides students in developing and completing their degree programs. The student should form the committee and have it appointed within the first two semesters of their study. Committee members for graduate degrees are approved by the appropriate dean, usually upon recommendation of the department head, and by the director of the Graduate School. For interdisciplinary students, the graduate advisory committee chair's home department and college/school will also be the academic home of the interdisciplinary student and the student will follow the procedures of that home department.

The graduate advisory committee's major responsibilities are to formulate a graduate study plan in consultation with the student by the end of the student's second semester in the graduate program; to develop a tentative timetable for completion of all requirements for the degree program; to monitor the student's progress in course work and research; to provide advice and feedback to the student on that progress; to file a Report of Graduate Student Advisory Committee with the Graduate School; to approve, where appropriate, a research topic; to supervise the preparation of the research thesis or project when one is required; to uphold the standards of the college/school and the university; to inform the unit dean, in writing, if a student's performance is inadequate and provide relevant recommendations; and to formulate and conduct the comprehensive examination and other exams as required by the department. The student's advisor (major professor, advisory committee chair) acts as chair of the graduate advisory committee and takes the lead in fulfilling these responsibilities.

Committee Composition

- The advisory committee of doctoral degree students must consist of at least four approved UAF faculty members. At least four of the committee members must each have an earned Ph.D. or equivalent. For interdisciplinary students, one advisory committee member must be from a Ph.D.-granting department or be approved as the graduate school representative by the graduate school director, based on prior experience advising Ph.D. students. Committee membership must be approved by the home department, unit dean, and the director of the Graduate School.
- Retired or emeritus UAF faculty who have an association with the home department may serve on doctoral advisory committees upon expressed approval by the home department.
- Faculty y serve as committee members on doctoral advisory committees (all must have a Ph.D. or equivalent) upon expressed approval by the home department. They may not serve as the chair of an advisory committee but may serve as co-chairs.

GRADUATE STUDY PLAN

Graduate students must file a Graduate Study Plan with the Graduate School before the end of their second semester in a UAF graduate degree program. The GSP outlines the curriculum of study and a timetable the student must follow in meeting graduate degree requirements. The GSP is prepared by the advisory committee in consultation with the student. It is an agreement of mutual expectations between the student and the faculty committee. The GSP not only contains the specific degree requirements but also indicates the mechanism for fulfilling these requirements (e.g., via coursework, examinations, readings, internships, or other supervised experience) and a projected timetable.

ADVANCEMENT TO CANDIDACY

Advancement to candidacy formally establishes a student's specific degree requirements and should be done as soon as possible after qualifying. The student is required to submit an application for advancement to candidacy one semester before the student plans to graduate.

The Graduate Study Plan should be the basis for completing the Advancement to Candidacy form. Students must have a cumulative GPA of 3.0 in the courses identified on the Advancement to Candidacy form. For the purpose of satisfying degree requirements, students must earn a B (3.0) or better (no P grades) in each F400-level course and a C grade (2.0) or better in each 600-level course. The grade of B- is less than a 3.0 and, if obtained in an F400 course, will not count for meeting degree requirements; likewise a C- is less than a 2.0, and if obtained in an F600-level course, will not count for meeting degree requirements.

Admission to graduate study does not imply advancement to candidacy for a degree. The graduate advisory committee has the option of refusing to recommend a student for candidacy.

Graduate students may apply for advancement to candidacy for the Ph.D. degree if they meet the following requirements:

1. They are in good academic standing.
2. Completed the full-time equivalent of two academic years of graduate study.
3. Completed at least 9 UAF credits.
4. Received approval of the Graduate Study Plan.
5. Obtained approval of the advisory committee for the title and synopsis of the thesis.
6. Passed a written comprehensive examination.

EXAMINATIONS

Examinations are given in both written and oral form, depending upon the policy of the program unit, the decision of the advisory committee, and the specific examination being taken.

- **Placement Examinations**
  Some programs have formalized placement exams designed to pinpoint a student's strengths and weaknesses as an aid in developing the Graduate Study Plan. This evaluation is carried out during the student's first semester at the university, preferably in the first month, and may be written, oral, or both.
- **Comprehensive Examination**
  The comprehensive examination is given to determine whether the student has integrated knowledge and understanding of the principles and concepts underlying major and related fields. It may be oral or written or a combination of both. Ph.D. degree students normally take a written comprehensive examination within two academic years of entering the program, but no later than two academic years before the expected completion of the degree (whichever is earliest). The Ph.D. student's advisory committee may choose to give an oral examination to supplement the written comprehensive examination. Each Ph.D. student must pass the comprehensive examination prior to advancement to candidacy.
- **Defense of Dissertation Examination**

Doctoral students are required to complete a dissertation in partial fulfillment of their degree requirement and must pass an oral defense of dissertation examination. The defense will consist of a presentation followed by questions on the research, analysis, and written presentation. The Graduate School will not accept a dissertation for final submission until the student has successfully defended it. The Ph.D. dissertation defense is to be conducted on any UAF campus. All committee members must participate in the defense of the dissertation.

The dissertation defense examinations are public events and open to the university and the wider community. The student should submit their name and dissertation title and the date, time, and location of their defense examination to the Graduate School at least two weeks prior to their defense examination date. The Graduate School, along with the home program, department, college, or school, will advertise the examination.

The defense examination includes a public presentation of the dissertation moderated by the chair of the graduate advisory committee, followed by a private executive examination by the committee.

- **Examination Committee**
  In most cases, the student's graduate advisory committee prepares and gives the examinations under guidelines formulated by the faculty of the department in which the degree is being taken. In a few programs, examinations are replaced or supplemented by departmental or school examinations and administered by an examining committee that is established by the program.
- **Outside Examiner**
  An outside examiner representing and appointed by the director of the Graduate School is required at all Ph.D. oral examinations. The examiner must be from a different department than the student and the chair of the advisory committee. The outside examiner is present to determine that a stringent, unbiased examination is fairly administered and evaluated.
- **Language/Research Tool Requirement**
  Proficiency in a second language or a research tool is not a university-wide requirement but may be required by some programs. An advisory committee may specify a language or research tool in addition to the requirements of the program.

  The specific language or research tool is determined by the advisory committee, and guided by the policies of the administrative unit in which the degree is offered. Generally, competency in a second language is required. However, upon approval of the department or program head, the committee may substitute computer languages, statistics, mathematics, or study in areas such as history or philosophy of science, business, administration, law, or economics. In all instances, the topics selected must support the student's degree program.

General University Requirements for Ph.D.

- **Catalog and Time Limit**
  Graduate students may elect to graduate under the degree requirements in effect and published in the UAF catalog in any one of the previous 10 years as doctoral students. To be considered enrolled in their doctoral degree program they must meet the registration requirements per academic year. If enrollment occurs through the non-degree student registration process, the student is not considered enrolled as a degree student during that time.

  All nonacademic policies and regulations listed in the current catalog apply, regardless of the catalog used for degree requirements. Students must satisfactorily complete all coursework listed on the individual's Advancement to Candidacy form and all other degree requirements within 10 years as a doctoral student.
- **Grades and Grade Point Average**
  Graduate students must have a cumulative GPA of 3.0 in the courses identified on their Advancement to Candidacy form to both remain in good standing and graduate. In addition, for the purpose of satisfying degree requirements, students must earn a B (3.0) or better (no P grades) in each F400-level course and a C grade (2.0) or better in each F600-level course. A B- is less than a 3.0 and, if obtained in an F400-level course, will not count for meeting degree requirements; likewise, a C- is less than a 2.0 and, if obtained in an F600-level course, will not count for meeting degree requirements.
- **Registration Requirement**
  Graduate students must be registered for at least 6 credits per year (fall, spring, summer), at the graduate or F400-level in courses relevant to the graduate degree, while actively working toward a degree. Those who wish to temporarily suspend their studies should formally request a leave of absence.

  Additionally, graduate students must be registered in both the semester of dissertation defense and the semester in which the degree is received as per the requirements under Graduation (p. 469).
- **Temporary Leave of Absence**
  If a student needs to temporarily suspend studies while earning a graduate degree, they must obtain an approved leave of absence. If a student fails to register for at least 6 graduate or F400-level credits in a school year (fall, spring or summer semester) or to obtain a leave of absence, will be dropped from graduate study and will have to be reinstated before resuming graduate studies. Contact the Graduate School for information at 907-474-7464.
- **Transfer Credit**
  Up to one-half of all graduate degree credits approved for a graduate program may be transferred from UAA and UAS. No more than one-third of approved program credits may be transferred from other accredited institutions outside the UA system. Transferred credits may not be used from previously earned undergraduate degrees. A minimum B grade (3.0) is required in all graduate courses presented for transfer. A P grade (pass) is not acceptable for transfer credit. Transfer credits from international institutions require that transcripts be evaluated with a comprehensive course-by-course credential report through a NACES-approved evaluation service such as World Education Services (WES) (http://www.wes.org/). Transcripts from Canadian institutions (excluding Quebec) are exempt from this requirement; they may be sent directly from the issuing institution.
- **Credits Earned While Nondegree Seeking**
  A student who earned post-baccalaureate degree credits while studying as a nondegree student at UAF may, with approval of the graduate advisory committee, apply those credits toward a graduate degree. However, no more than one-half of all credits used to meet the requirements of a graduate degree may be credits earned as a nondegree student.
- **Course Restrictions**
  Credit by examination, audited courses, F100-, F200-, F300-, and F500-level courses, or courses that are taken under the credit/no credit option cannot be used to fulfill the basic course requirements of any degree program. No more than 12 credits of special topics courses (F693 or F695) or individual study (F697) may be used toward a graduate degree. The director of the Graduate School must approve requests for exceptions to the limit.
- **Deficiencies**

The graduate advisory committee may require that students remedy any deficiencies. The committee will determine early in the program both how to remedy the deficiencies and the minimum level of performance required of the student. Graded undergraduate courses taken to remedy a deficiency must receive a grade of B (3.0) or better. Deficiency courses cannot be listed on the Advancement to Candidacy form.

- **English Proficiency**
  Graduate students must be proficient in written and oral English. The graduate advisory committee will determine the requirements to address any deficiencies in communication. These requirements may not be used to fulfill departmental language/research tool requirements.
- **Cooperative Programs**
  Some students may develop cooperative programs using specific courses from other universities before being admitted to graduate study at UAF. As part of the application process, the cooperative program must be included in an approved Graduate Study Plan. The student must complete a minimum of 12-semester credits in residence at UAF, in addition to thesis and research.
  The following guidelines are for collaborative Ph.D. graduate studies across all UA academic units. Some individual degree programs have additional requirements which are included in specific program descriptions in the graduate degree program (p. 471) section. The guidelines described here apply only to programs that have not established different requirements.
  a. At least four faculty members shall serve on the graduate advisory committee for each Ph.D. student. At least two committee members shall be UAF faculty. One of the UAF committee members must be on a tenure-track appointment in a Ph.D.-granting department. The committee shall be chaired or co-chaired by a UAF faculty member.
  b. The graduate advisory committee and its chair and/or co-chairs must be approved by the program director and the dean of the Graduate School.
  c. UAF rules and regulations on graduate studies shall apply to all UAF graduate students, including those concurrently enrolled at UAA and UAS.
  d. The graduate advisory committee must meet at least once a year to update the Graduate Study Plan and to review the student's progress toward the degree. The annual progress report must be signed by all committee members and submitted to the dean of the UAF Graduate School.
  e. A comprehensive exam committee composed of the student's advisory committee will administer the Ph.D. comprehensive exam for each student.
  f. The Ph.D. thesis defense is to be conducted on the UAF campus.

CHANGING PROGRAMS

A graduate student may change their program. To change to a program in a different department, school or college (e.g., from an M.S. in civil engineering to an M.S. in biology), the student must submit a new application for admission so faculty in the new degree program can fully review the student's credentials. To change the area of emphasis, add a degree or the degree within the same department (e.g., from an M.A. in anthropology to a or add a Ph.D. in anthropology, or from a Ph.D. in biochemistry and molecular biology to a Ph.D. in environmental chemistry) the student may change or add programs by completing a change of major form. The form is available from the Graduate School's website. Regardless of when the form is submitted, a change of program doesn't become effective until the beginning of the upcoming fall or spring semester. For more information, contact the Graduate School at 907-474-7464.

GRADUATION

- **Responsibility**
  The student is responsible for meeting all requirements for graduation. The Advancement to Candidacy must be received by the Graduate School the semester before the student intends to graduate.
  - All Ph.D. programs
    - The student must be registered for a minimum of 3 graduate-level credits within their discipline the semester of successfully defending their dissertation and plan to graduate.
    - If the student has already successfully defended but missed the previous semester's graduation deadline, then they must be registered for a minimum of 1 graduate-level credit within their discipline the semester that they plan to graduate.

Additional information on the steps or paperwork required to graduate for all Ph.D. programs is available on the Graduate School's website (https://www.uaf.edu/gradsch/current/ready-to-graduate/).

- **Application for Graduation**
  The student must file an application for graduation and a non-refundable fee with the Office of the Registrar. The Graduate School encourages the student to work with their advisor/committee chair before applying for graduation to meet any departmental deadlines. Applications for graduation filed after the published deadline will be processed for graduation the following semester. The student needs not to have all requirements met before they apply for graduation. The application is an indication that they are planning to finish all degree requirements during the intended graduation semester. Students who apply for graduation and who do not complete degree requirements by the end of the semester must reapply for graduation and pay the fee again.
- **Diplomas and Commencement**
  UAF issues diplomas to graduates three times each year: in September, January and June. All students who complete degree requirements during the academic year are invited to participate in the annual commencement ceremony at the end of the spring semester. Names of students receiving degrees appear in the commencement program and are released to the media unless the student has a confidential hold on file with the Office of the Registrar. Students who do not want their names to be released may so indicate on the application for graduation form. Graduates are responsible for ordering caps and gowns through the UAF bookstore in early spring.

Ph.D. Requirements

The Doctor of Philosophy degree is granted in recognition of scholarly attainment and proven ability. UAF's tenured faculty, tenure track faculty, and research faculty are not eligible to become candidates for a graduate degree within the discipline in which they teach at UAF.

STEPS REQUIRED FOR ALL DOCTORAL DEGREES

- The Ph.D. degree requires at least three full years of study beyond the baccalaureate degree. (See transfer credit (p. 42).)

- In addition to the satisfactory completion of a plan of study developed in accordance with the requirements listed above, the Ph.D. candidate must:
  a. Meet all requirements set forth in the General University Requirements (p. 468) section.
  b. Submit an Appointment of Committee form by the end of the second semester of study.
  c. Submit a Graduate Study Plan by the end of the second semester.
  d. Submit a Report of Advisory Committee form by May 15 or October 15 (for students starting in the Fall or Spring semester respectively) of every year.
  e. Pass a written comprehensive exam.
  f. Submit an Advancement to Candidacy form to the Graduate School. Once submitted, this form supplants the GSP and formally establishes specific degree requirements.
  g. Satisfactorily complete a dissertation that is a substantial contribution to the body of knowledge in the area studied.
  h. Pass an oral defense of the dissertation (an outside examiner is required). The oral defense of the dissertation must be conducted on any UAF campus.
  i. Apply for graduation and be registered for a minimum of 3 graduate credits within the student's discipline and maintain enrollment in the semester that the student successfully defends their thesis and must be registered for a minimum of 1 graduate credit within the student's discipline and maintain enrollment during the semester of graduation.
  j. Complete all degree requirements within the 10-year time limit.
  k. Archive dissertation in the UAF Rasmuson Library.

CREDIT REQUIREMENTS

1. A minimum of 18 thesis (F699) UAF credits must be earned.
2. No F100-, F200-, F300-, or F500-level credits or audited courses may be applied toward the Ph.D. degree requirements.

EXCEPTIONS TO DEGREE REQUIREMENTS

Deviations from academic requirements and regulations for graduate students must be approved by academic petition using the form available on the Graduate School website. Petitions must be approved by the student's graduate advisory committee, the department chair of the student's program, the dean of the school or college, and the director of the Graduate School.

Ph.D. Programs

Anthropology Ph.D.

Admission Requirements

Complete the following admission requirements:

- Submit GRE scores.

Program Requirements

< Back to Department (p. 103)

Minimum Requirements for Anthropology Ph.D.: 18 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
ANTH F699	Thesis (18 credits)	
Anthropology Program Requirements		
Complete coursework in anthropology and related disciplines as determined by the advisory committee.		
Complete one foreign language and a research tool, or two foreign languages.		
Total Credits		**18**

Atmospheric Sciences Ph.D.

Admission Requirements

Admission to the Department of Atmospheric Sciences generally requires a degree in a scientific discipline, one year of calculus-based physics, math through differential equations, and one semester of chemistry. Since atmospheric science is a highly interdisciplinary field, incoming students' backgrounds vary considerably. Thus, acceptance into the program is made on a case-by-case basis.

Program Requirements

< Back to Department (p. 108)

Minimum Requirements for Atmospheric Sciences Ph.D.: 45 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
ATM F699	Thesis (18 credits)	
Atmospheric Sciences Program Requirements		
Complete the following:		
ATM F601	Introduction to Atmospheric Sciences	3
ATM F613	Atmospheric Radiation	3
ATM F615	Cloud Physics	3
ATM F645	Atmospheric Dynamics	3
ATM F646	Atmospheric Dynamics II: Climate Dynamics	3
Complete 12 additional approved credits, 6 of which should be ATM courses		12
Total Credits		**45**

Biochemistry and Neuroscience with Biochemistry Concentration Ph.D.

Admission Requirements

Complete the following admission requirements:

- Submit GRE General Test scores
- If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Program Requirements

< Back to Department (p. 115)

Minimum Requirements for Biochemistry and Neuroscience Ph.D. (including core courses): 38 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
CHEM F699	Thesis (18 credits)	
Biochemistry and Neuroscience Program Requirements		
Complete three of the following:		9
CHEM F654	Protein Structure and Function	
CHEM F657	Molecular Foundations of Gene Expression	
CHEM F670	Cellular and Molecular Neuroscience	
CHEM F674	Membrane Biochemistry and Biophysics	
CHEM F675	Cellular Signaling	
Complete 9 credits of electives excluding thesis or project (CHEM F699 and CHEM F698).		9
Complete Ph.D. dissertation		
Complete seminar series CHEM F688 at least twice.		2
CHEM F688	Biochemical and Molecular Biology Seminar	
Total Credits		**38**

See Chemistry B.S. (p. 295) and M.S. (p. 425) programs.

See Environmental Chemistry Ph.D. (p. 477) program.

Biochemistry and Neuroscience with Neuroscience Concentration Ph.D.

Admission Requirements

Complete the following admission requirements:

- Submit GRE General Test scores
- If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Program Requirements

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Minimum Requirements for Biochemistry and Neuroscience Ph.D. (including core courses): 38 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
CHEM F699	Thesis (18 credits)	
Biochemistry and Neuroscience Program Requirements		
Complete the following:		
CHEM F670	Cellular and Molecular Neuroscience	3
CHEM F676	Neurochemistry	3
Complete one of the following:		3
CHEM F654	Protein Structure and Function	
CHEM F657	Molecular Foundations of Gene Expression	
CHEM F674	Membrane Biochemistry and Biophysics	
CHEM F675	Cellular Signaling	
Complete nine credits of electives at the F400 or F600 level, as approved by the graduate committee, excluding thesis or project (CHEM F699 and CHEM F698), with at most two courses at the F400 level		9
Complete Ph.D. dissertation in a field of neuroscience		
Complete the seminar series, CHEM F688, at least twice.		2
CHEM F688	Biochemical and Molecular Biology Seminar	
Total Credits		**38**

See Chemistry B.S. (p. 295) and M.S. (p. 425) programs.

See Environmental Chemistry Ph.D. (p. 477) program.

Biological Sciences Ph.D.

Admission Requirements

Complete the following admission requirements:

- Application for admission (https://uaf.edu/admissions/apply/) and application fee
- Transcripts from all universities or colleges attended. Unofficial transcripts may be submitted with the application. Official transcripts must follow prior to matriculation
- Curriculum vitae
- Statement of Purpose that addresses the following:
  - Career aspirations
  - Research interests
  - Research experience and relevant training
  - Interest, experience, and/or plans to serve society through your career, including experiences or commitment to justice, equity, diversity, and inclusion
  - Relevance of UAF Biology and Wildlife in achieving your future goals, including the names of faculty members you have contacted regarding graduate training

Excellent statements of purpose are specific, informative, focused and concise. See the Biology and Wildlife website (https://www.uaf.edu/bw/) for more detailed instructions about the statement of purpose.

- Three letters of reference from individuals who can address your potential to succeed in graduate school. Ideally, letters of reference should come from university faculty, research staff, or professionals familiar with your academic and research achievements and also with the expectations of graduate school. References will be asked to address writing ability, critical thinking skills, quantitative skills, and potential to succeed in a graduate program. References that address notable service (e.g., Peace Corps or AmeriCorps) may also be informative.
- Optional: scores from the GRE General Test will be considered if submitted
- International students: please consult UAF's most recent application requirements (p. 33)

Note - Students are typically not admitted to the program unless a faculty advisor has agreed to serve as the mentor. Applicants should contact potential advisors before applying.

Program Requirements

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Minimum Requirements for Biological Sciences Ph.D.: 18 thesis credits

OPTIONAL CONCENTRATION: WILDLIFE BIOLOGY AND CONSERVATION

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
BIOL F699	Thesis (18 credits) [1]	
Biological Sciences Program Requirements		
Complete and pass a written and oral comprehensive examination administered by the graduate advisory committee		
Complete and successfully defend the Ph.D. dissertation		
If entering the program without first completing a master's degree in biology or a related discipline, complete coursework at least equivalent to that required for the Biological Sciences M.S. degree		
Total Credits		**18**

[1] Note that in practice, most Ph.D. students also take coursework credits and more thesis credits than the minimum required. Any specific course requirements will be determined by the individual student's graduate advisory committee.

Earth System Science Ph.D.

Admission Requirements

Complete the following admission requirements:

University Admission criteria apply to Earth System Science, notably, that incoming students must have an undergraduate degree in a suitable field of study. Admission to Earth System Science (without concentration) is determined by an admissions committee. Admission to Earth System Science with concentration is determined by an admissions committee established within each concentration. Furthermore, the following concentrations have specific admission requirements:

- Hydrology: 1 year calculus, 1 year physics, and 1 year of either geology, chemistry, biology, or engineering
- Atmospheric and Climate Sciences: 1 year calculus, differential equations, chemistry
- Cryosphere and Solid Earth Geophysics: 1 year calculus, differential equations, and linear algebra (recommended: partial differential equations, computational physics)

Program Requirements

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Minimum Requirements for Earth System Science Ph.D.: 26 credits

CONCENTRATIONS: SUSTAINABILITY (P. 474), ECOSYSTEMS (P. 474), HYDROLOGY (P. 474), ATMOSPHERIC AND CLIMATE SCIENCES (P. 475), CRYOSPHERE (P. 475), SOLID EARTH GEOPHYSICS (P. 475), GEOSCIENCE (P. 476), GEOSPATIAL SCIENCE (P. 476)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469) [1]		18
Earth System Science Program Requirements		
Complete the following:		
ESS F601	Introduction to Earth System Science	3
ESS F602	Best Practices for Research in Alaska	1
ESS F692P	Seminar	1
Concentration		
Complete one of the following:		3-18
Sustainability		
Ecosystems		
Hydrology		
Atmospheric and Climate Sciences		
Cryosphere		
Solid Earth Geophysics		
Geoscience		
Geospatial Science		
13 credits of approved electives [2]		
Total Credits		**26-41**

[1] Requires 18 thesis credits.

[2] Recommended courses from any of the concentrations or the methods and cross-cutting list.

METHODS AND CROSS-CUTTING COURSE LIST

Code	Title	Credits
Methods and Cross-cutting Courses:		
ACNS F629	Geography of the Arctic and Circumpolar North	3
ATM F601	Introduction to Atmospheric Sciences	3
ATM F610	Analysis Methods in Meteorology and Climate	3
ATM F625	Physical Hydrometeorology	3
ATM F680	Climate Change Processes: Past, Present, Future	4
BIOL F602	Research Design	3
BIOL F604	Scientific Writing, Editing and Revising in the Biological Sciences	3
BIOL F680	Data Analysis in Biology	3
CCS F612	Traditional Ecological Knowledge	3

FISH F646	Freshwater Habitat Dynamics	3
GEOS F422	Geoscience Applications of Remote Sensing	3
GEOS F605	Geochronology	3
GEOS F606	Volcanology	3
GEOS F618	Introduction to Geochemistry	3
GEOS F622	Digital Image Processing in the Geosciences	3
GEOS F627	Inverse Problems and Parameter Estimation	3
GEOS F631	Foundations of Geophysics	4
GEOS F633	Aqueous and Environmental Geochemistry	3
GEOS F636	Programming and Automation for Geoscientists	2
GEOS F639	InSar and Its Applications	3
GEOS F653	Palynology and Paleopalynology	4
GEOS F654	Visible and Infrared Remote Sensing	3
GEOS F657	Microwave Remote Sensing	3
GEOS F658	Big Geospatial Data	3
GEOS F660	The Dynamic Alaska Coastline	3
GEOS F670	Selected Topics in Volcanology	2
GEOS F681	Snow in the Environment	3
NRM F435	GIS Analysis	4
NRM F647	Sustainability in the Changing North	3
NRM F613	Resilience Internship	2
NRM F638	GIS Programming	3
NRM F641	Natural Resource Applications of Remote Sensing	3
PHYS F628	Digital Time Series Analysis	3
PHYS F647	Fundamentals of Geophysical Fluid Dynamics	3
STAT F401	Regression and Analysis of Variance	4
STO F666	Scientific Teaching	2

Concentrations

SUSTAINABILITY

This concentration encompasses scholarly and practical aspects of sustainability and society in Earth System Science with a specific emphasis on Alaska and the Arctic. The vision is to provide graduate training in interdisciplinary research to solve real-world problems, especially in building mutually respectful research partnerships with groups, organizations and communities outside the University.

Code	Title	Credits
Sustainability Concentration Requirements		
Complete the following:		
CCS F612	Traditional Ecological Knowledge	3
NRM F613	Resilience Internship	2
NRM F647	Sustainability in the Changing North	3
Complete one of the following:		3
ACNS F600	Perspectives on the North	
ACNS F601	Research Methods and Sources in the North	
ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS F629	Geography of the Arctic and Circumpolar North	
ACNS F652	International Relations of the North	
ACNS F657	Comparative Indigenous Rights and Policies	
ACNS F662	Alaska Government and Politics	
ACNS F669	Arctic Politics and Governance	
ACNS F683	20th-century Circumpolar History	
CCS F602	Cultural and Intellectual Property Rights	
CCS F608	Indigenous Knowledge Systems	
CCS/NRM F656	Sustainable Livelihoods and Community Well-being	
FISH F611	Human Dimensions of Environmental Systems	
FISH F613	Human-environment Research Methods	
FISH F675	Political Ecology	
NRM F630	Resource Management Planning	
NRM F692	Graduate Seminar	
STO F601	Communicating Science	
Total Credits		**11**

ECOSYSTEMS

The Ecosystems concentration in Earth System Science addresses the interactions of organisms with the transformation and flux of energy and matter. Inherently, ecosystem science is interdisciplinary, including ecology, natural history, statistics, chemistry, geology, geography, and hydrology. Students will therefore benefit from shared courses and seminars with other concentrations. Students enrolling in the Ecosystems concentration will pursue research and training in observing, modeling, and predicting processes including fluxes of water, energy, carbon, and nutrients, and many will focus on high-latitude ecosystems.

Code	Title	Credits
Ecosystems Concentration Requirements		
Complete one of the following:		3
BIOL F618	Biogeography	
BIOL F646	Freshwater Habitat Dynamics	
BIOL F669	Landscape Ecology and Wildlife Habitat	
BIOL F673	Ecosystem Ecology	
BIOL F686	Vertebrate Paleontology	
BIOL F688	Arctic Vegetation Ecology: Geobotany	
BIOL F689	Vegetation Description and Analysis	
Total Credits		**3**

HYDROLOGY

Understanding how water cycles through the Earth's many systems fundamentally link hydrology to a broad range of scientific disciplines and societal needs. Focusing on water movement and storage in the Arctic brings particular intrigue and challenge regarding interactions with frozen ground, glacier runoff, freeze-thaw cycles, snowmelt, and river and lake ice dynamics. Career opportunities for graduates of the Hydrology Concentration in Earth System Science include river flood forecasting, field and remote sensing hydrologist, water quality specialist, water resources management and policy, water supply treatment and

distribution, stream and fish habitat restoration, and the opportunity to work as a cold-regions hydrologist with interdisciplinary science and resource management teams in Alaska and other northern regions. Graduates are prepared to hold positions in government, industry, consulting or academia.

Code	Title	Credits
Hydrology Concentration Requirements		
Complete the following:		
CE F665	Watershed Hydrology	3
Complete 10 credits from the following:		10
CE F662	Open Channel and River Engineering	
CE F663	Groundwater Hydrology	
Methods and Cross-cutting course list		
One graduate-level course approved by the student's advisory committee		
Total Credits		**13**

ATMOSPHERIC AND CLIMATE SCIENCES

The field of atmospheric and climate science covers a wide variety of disciplines involving the physical and chemical properties and processes of the atmosphere. Current research in atmospheric sciences focuses on atmospheric dynamics, chemistry and biogeochemistry, air-sea-ice interactions, climate modeling, cloud and aerosol physics, radiative processes, mesoscale modeling, numerical weather prediction, aviation weather, and the upper atmosphere (stratosphere and mesosphere). The faculty are well-positioned to be a vibrant part of methods and cross-cutting education and research in the Earth System Science Program.

Graduate students are an essential component of a research university and an integral component of the research activities across the campus at UAF, both in the experiments in the laboratory and the field as well as in data sciences, which includes modeling and analysis or weather and climate data. Research institutes and the CNSM provide excellent environments for research in atmospheric and climate sciences as well as multidisciplinary research with researchers spanning diverse expertise.

Code	Title	Credits
Atmospheric and Climate Sciences Concentration Requirements		
Complete the following:		
ATM F613	Atmospheric Radiation	3
ATM F615	Cloud Physics	3
ATM F645	Atmospheric Dynamics	3
ATM F646	Atmospheric Dynamics II: Climate Dynamics	3
Complete two of the following:		6
ATM F644	Weather Analysis and Forecasting	
ATM F658	Air-sea Interactions	
ATM F673	Micrometeorology with Focus on Subarctic and Arctic Ecosystems	
One graduate-level course (maximum 3 credits) approved by the student's advisory committee		
Total Credits		**18**

CRYOSPHERE

The Cryopshereic Concentration is located within the geosphere cohort of ESS tracks. This concentration focuses on snow, sea ice, glaciers, and permafrost. Research within the Cryosphere Concentration is grounded in physics, mathematics, numerical modeling and data science. Methods and applications in Cryosphere seek to understand earth surface processes at high latitudes and how they are responding to ongoing climate change as well as associated impacts on both the built and natural environment. The courses and research associated with snow, sea ice, glaciers, and permafrost connect with the full spectrum of topics in the Earth System Science curriculum, including geospatial sciences, geosciences, climate science, hydrology, ecology, and sustainability. The Cryosphere Concentration at UAF is strengthened by the expansive natural laboratory and faculty expertise. Ph.D. and MS coursework and graduate research will be conducted closely with the Geophysical Institute.

Code	Title	Credits
Cryosphere Concentration Requirements		
Complete the following:		
GEOS F631	Foundations of Geophysics	4
One course from the methods and cross-cutting list		3
Complete two of the following:		6
GEOS F615	Sea Ice	
GEOS F616	Permafrost	
GEOS F617	Glaciers	
GEOS F681	Snow in the Environment	
PHYS F614	Ice Physics	
One graduate-level course (maximum 4 credits) approved by the student's advisory committee		
Total Credits		**13**

SOLID EARTH GEOPHYSICS

The Solid Earth Geophysics concentration of Earth System Science includes the disciplines of seismology, geodesy, volcanology, and infrasound, and it is grounded in physics, mathematics, computing, and data science. Methods and applications in Solid Earth Geophysics seek to characterize dynamic Earth processes and associated natural hazards relevant to Alaska and surrounding regions, including earthquakes, tsunamis, volcanoes, and landslides. Continuously recording instruments used in Solid Earth Geophysics, such as seismometers and GPS, capture a wide range of environmental activities and phenomena relevant to Earth System Science, in addition to human-caused events such as nuclear explosions.

Code	Title	Credits
Solid Earth Geophysics Concentration Requirements		
Complete the following:		
GEOS F631	Foundations of Geophysics	4
Complete 9 credits from the following:		9
GEOS F604	Seismology	
GEOS F606	Volcanology	
GEOS F626	Applied Seismology	
GEOS F669	Geodetic Methods and Modeling	
GEOS F670	Selected Topics in Volcanology	
GEOS F692	Geol/Geophys Seminar	
Methods and Cross-cutting course list		

One graduate-level course approved by the student's advisory committee	
Total Credits	**13**

GEOSCIENCE

The Geoscience concentration falls within the geosphere cohort of ESS tracks with a focus on tectonics, paleontology, and petrology of sedimentary, igneous, and metamorphic rocks. Methods and applications include reconstruction of past climates, ecosystems, and plate configurations, dating of geologic specimens, and locating economically valuable mineral deposits.

Code	Title	Credits
Geoscience Concentration Requirements		
Complete 5 credits from the following:		5
GEOS F621	Advanced Petrology	
GEOS F647	Advanced Sedimentology and Stratigraphy	
Methods and Cross-cutting course list		
One graduate-level course approved by the student's advisory committee		
Total Credits		**5**

GEOSPATIAL SCIENCE

The Geospatial Science concentration of Earth System Science includes the disciplines of visible to infrared and microwave (SAR and InSAR) remote sensing, Geographic Information Systems, and their applications in the area of geosciences, natural resource management, and environmental monitoring. It is grounded in geographic science, mathematics, computer science, and data science. Methods and applications in the Geospatial Science concentration seek to characterize our changing environment, inventory and management of natural resources, and mitigate risks from geo-hazards relevant to Alaska and surrounding regions. Continuous geospatial observations of our ever-changing environment and geo-hazards from space and air are essential components of Earth System Science, as they allow for detailed studies of processes and events across scales relevant to the associated disciplines.

Code	Title	Credits
Geospatial Science Concentration Requirements		
Complete three of the following:		9
GEOS F622	Digital Image Processing in the Geosciences	
GEOS F629	Geologic Hazards and Natural Disasters	
GEOS F639	InSar and Its Applications	
GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
GEOS F658	Big Geospatial Data	
NRM F435	GIS Analysis	
NRM F638	GIS Programming	
NRM F641	Natural Resource Applications of Remote Sensing	
Total Credits		**9**

Road Maps

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Road Maps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Some courses and milestones must be completed in the semester listed to ensure timely graduation. Transfer credit may change the road map.

This road map should be used in conjunction with regular academic advising appointments. All students are encouraged to meet with their advisor or mentor each semester. Requirements, course availability and sequencing are subject to change.

EARTH SYSTEM SCIENCE PH.D. - SUSTAINABILITY CONCENTRATION

Course	Title	Credits
First Year		
Fall		
Program Requirements		
ESS F601	Introduction to Earth System Science	3
ESS F602	Best Practices for Research in Alaska	1
Concentration		
NRM F647	Sustainability in the Changing North	3
FISH F613	Human-environment Research Methods	3
	Credits	**10**
Spring		
Concentration		
CCS F612	Traditional Ecological Knowledge	3
ACNS F662	Alaska Government and Politics	3
	Credits	**6**
Second Year		
Fall		
Program Requirements		
ESS F692P	Seminar	1
Concentration		
NRM/CCS F613	Resilience Internship	2
FISH F611	Human Dimensions of Environmental Systems	3
	Credits	**6**
Spring		
Concentration		
ACNS F662	Alaska Government and Politics	3
	Credits	**3**
Third Year		
Fall		
Concentration		
CCS/NRM F656	Sustainable Livelihoods and Community Well-being	3
	Credits	**3**
Spring		
Concentration		

STO F601	Communicating Science	2
	Credits	**2**
	Total Credits	**30**

EARTH SYSTEM SCIENCE PH.D. - SOLID EARTH GEOPHYSICS CONCENTRATION

Course	Title	Credits
First Year		
Fall		
Program Requirements		
ESS F601	Introduction to Earth System Science	3
ESS F602	Best Practices for Research in Alaska	1
Concentration		
GEOS F631	Foundations of Geophysics	4
GEOS F636	Programming and Automation for Geoscientists	2
	Credits	**10**
Spring		
Concentration		
GEOS F627	Inverse Problems and Parameter Estimation	3
GEOS F692	Geol/Geophys Seminar	1-6
	Credits	**4-9**
Second Year		
Fall		
Program Requirements		
ESS F692P	Seminar	1
Concentration		
GEOS F669	Geodetic Methods and Modeling	3
	Credits	**4**
Spring		
Concentration		
GEOS F626	Applied Seismology	4
GEOS F657	Microwave Remote Sensing	3
GEOS F692	Geol/Geophys Seminar	1-6
	Credits	**8-13**
Third Year		
Fall		
Concentration		
GEOS F631	Foundations of Geophysics	4
GEOS F636	Programming and Automation for Geoscientists	2
	Credits	**6**
Spring		
Concentration		
GEOS F627	Inverse Problems and Parameter Estimation	3
GEOS F692	Geol/Geophys Seminar	1-6
	Credits	**4-9**
	Total Credits	**36-51**

Additional courses to consider
include GEOS F657, GEOS F606, GEOS F670, and PHYS F628.

Engineering Ph.D.

Admission Requirements

Complete the following admission requirements:

- Complete either a B.S. or M.S. degree in engineering.
- Complete a master's degree in engineering or a closely related field.
- Submit GRE scores.

Program Requirements

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Minimum Requirements for Engineering Doctorate Degree: 36 credits

CONCENTRATIONS: ARCTIC, CIVIL, COMPUTER, ELECTRICAL, ENGINEERING MANAGEMENT, ENVIRONMENTAL, GEOLOGICAL, MECHANICAL, MINING, PETROLEUM

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469) [1]		18
Engineering Program Requirements		
Complete at least 18 credits of coursework beyond the M.S. degree.		18
Complete at least three full-time semesters of residency, which may include a summer semester. [2]		
Complete and pass a written and oral comprehensive examination.		
Complete and submit a written thesis proposal for approval.		
Complete a research program as arranged with the graduate advisory committee.		
Complete a thesis that is a substantial contribution to the body of knowledge in engineering and pass an oral defense of the thesis.		
Total Credits		**36**

1 Requires 18 thesis credits.
2 Residency is defined as living in the Fairbanks area and working with the student's graduate advisor and graduate committee while taking courses at UAF.

Environmental Chemistry Ph.D.

Admission Requirements

Complete the following admission requirements

- Submit GRE General Test scores
- If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

Program Requirements

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Minimum Requirements for Environmental Chemistry Ph.D.: 32 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
CHEM F699	Thesis (18 credits)	
Environmental Chemistry Program Requirements		
Complete three of the following:		9
CHEM F606	Atmospheric Chemistry	
CHEM F609	Aqueous and Environmental Geochemistry	
CHEM F631	Environmental Fate and Transport	
CHEM F655	Environmental Toxicology	
Seminar Courses		
Complete the following:		
CHEM F691	Research Presentation Techniques [1]	2
Complete approved electives [2]		3
Total Credits		**32**

[1] CHEM F691 is a single-credit course that must be completed twice to fulfill the program requirements.

[2] Approved electives are specified by the student's committee. The following tracks are defined as a guide. Within these tracks students will be expected to complete as part of the core and electives:

i. Atmospheric Chemistry: CHEM F601, CHEM F606, CHEM F609 and CHEM F631

ii. Aqueous/Environmental Geochemistry: CHEM F606 or CHEM F631; CHEM F609 and GEOS F618

iii. Environmental Toxicology and Contaminant Fate: CHEM F606 or CHEM F609, CHEM F631 and CHEM F655

A customized focus area may be developed based on an appropriate sequence of core and elective courses, subject to approval by the student's advisory committee.

See Biochemistry and Neuroscience (p. 115).

See Chemistry (p. 115).

Fisheries Ph.D.

Admission Requirements

Complete the following admission requirements:

1. Complete a master's degree in a fisheries-related field or meet the requirements as outlined below to be accepted directly into a Ph.D. program without a master's degree.

ADMISSION TO PH.D. PROGRAM DIRECTLY FROM BACHELOR'S PROGRAM

Entering graduate students whose highest earned degree is the baccalaureate are normally admitted as Master of Science students. However, exceptionally able and accomplished students in this category are eligible for direct admission to the Ph.D. program. Criteria for direct admission to the Ph.D. program from the baccalaureate are:

1. Endorsement by proposed chair of graduate advisory committee AND 2 or 3 below.
2. At least one first-authored manuscript published or accepted for publication in a peer-reviewed scientific journal or receipt of an NSF, NIH, or similar prestigious pre-doctoral fellowship. OR
3. Demonstrated research proficiency (e.g. undergraduate thesis, Research Experiences for Undergraduates or other intensive research experience) documented in the application AND either
   a. attained a GPA of at least 3.5 at the undergraduate level, or
   b. scored at the 80% level in two of three categories in the GRE.

Students who elect this route must fulfill course requirements as outlined for both the M.S. and Ph.D. degrees. Applicants who do not meet these criteria may enter the graduate program as M.S. candidates, and in exceptional cases may petition for conversion to the Ph.D. program after advancement to candidacy (for the M.S.). Such petitions must be approved both by the student's current (M.S.) and proposed (Ph.D.) advisory committee and the department director or designee.

Program Requirements

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Minimum Requirements for Fisheries Ph.D.: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
FISH F699	Thesis (18 credits)	
Fisheries Program Requirements		
Complete at least 18 credits of coursework		18
Complete a thesis.		
Total Credits		**36**

Note: At least 9 of the required 18 non-thesis Ph.D. degree credits must be at the F600 level, other courses must be at least at the F400 level.

Geophysics Ph.D.

Admission Requirements

Complete the following admission requirements:

- Complete a master's degree in geology, geophysics or an appropriate field of physical science or engineering.

ADMISSION TO PH.D. GEOPHYSICS PROGRAM DIRECTLY FROM A BACHELOR'S PROGRAM

Entering graduate students whose highest earned degree is the baccalaureate are normally admitted as Master of Science candidates. However, exceptionally able and accomplished students in this category are eligible for direct admission to the Ph.D. program. For direct admission from the baccalaureate to the Ph.D. program, a student must receive approval from the graduate admission committee and also meet one of three criteria:

1. At least one first-authored manuscript published, accepted or submitted for publication in a peer-reviewed scientific journal.
2. Receipt of an NSF, NIH or similar prestigious pre-doctoral fellowship.
3. Demonstrated research proficiency AND either
   - attained a GPA of at least 3.5 in mathematics and science courses at the undergraduate level, or
   - scored at or above the 80th percentile in two of three categories in the GRE.

   The requirement of demonstrated research proficiency can be waived for exceptionally promising students. In this case, the student is required to complete a research or review paper focusing on a thesis-related topic approved by the graduate advising committee. The paper should be roughly 4,000-5,000 words and must be submitted and approved by the advising committee within the first three semesters to maintain Ph.D. status. Failure will result in changing the student's status to M.S. candidate.

After admission, M.S. candidates may, in exceptional cases, petition for conversion to the Ph.D. program if they satisfy one of the above criteria. Such petitions must be approved both by the student's current (M.S.) and proposed (Ph.D.) advisory committee and the department director or designee.

Program Requirements

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Minimum Requirements for Geophysics Ph.D.: 18 thesis credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Master's Degree Requirements		
GEOS F631	Foundations of Geophysics	4
GEOS F682	Geoscience Seminar (fall semester)	1
Complete 6 credits from relevant graduate-level courses agreed by the advisory committee, or select one of the following concentrations:		6
Solid-Earth Geophysics		
Complete 6 credits from the following:		
GEOS F604	Seismology	
GEOS F605	Geochronology	
GEOS F626	Applied Seismology	
GEOS F669	Geodetic Methods and Modeling	
GEOS F671	Volcano Seismology	
Snow, Ice and Permafrost Geophysics		
Complete 6 credits from the following:		
PHYS F614	Ice Physics	
GEOS F615	Sea Ice	
GEOS F616	Permafrost	
GEOS F617	Glaciers	
Remote Sensing		
Complete 6 credits from the following:		
ATM F613	Atmospheric Radiation	
GEOS F622	Digital Image Processing in the Geosciences	
GEOS F639	InSar and Its Applications	
GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
Advanced Skills Categories		
Complete 3 credits each in two of the following four categories:		6
Digital Signal Analysis and Remote Sensing		
GEOS F622	Digital Image Processing in the Geosciences	
GEOS F654	Visible and Infrared Remote Sensing	
GEOS F657	Microwave Remote Sensing	
Statistics and Parameter Estimation		
GEOS F627	Inverse Problems and Parameter Estimation	
STAT F401	Regression and Analysis of Variance	
STAT F461	Applied Multivariate Statistics	
ATM F610	Analysis Methods in Meteorology and Climate	
Mathematical Methods		
MATH F432	Introduction to Partial Differential Equations	
MATH F614	Numerical Linear Algebra	
MATH F615	Numerical Analysis of Differential Equations	
MATH F661	Optimization	
ME F601	Finite Element Analysis in Engineering	
Skills course		
One graduate-level advanced skills course approved by the student's advisory committee		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		
Complete and pass a written and oral comprehensive examination.		
Complete and submit a written thesis proposal for approval.		
Complete a research program as arranged with the graduate advisory committee.		
Complete 18 credits of thesis, write a thesis and pass an oral defense of thesis.		18
Total Credits		**35**

Geoscience Ph.D.

Program Requirements

< Back to Department (p. 146)

Minimum Requirements for Geoscience Ph.D.: 18 thesis credits

CONCENTRATIONS: GEOGRAPHY, GEOLOGY

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
GEOS F699	Thesis (18 credits)	
Geoscience Program Requirements		
Complete the coursework requirements for the appropriate M.S. concentration.		
Complete and pass a written and oral comprehensive examination.		
Complete and submit a written thesis proposal for approval.		
Complete a research program as arranged with the graduate advisory committee.		
Complete 18 credits of thesis, write a thesis and pass an oral defense of thesis.		
Total Credits		**18**

Note: In addition to courses listed under the geoscience program, students should check the course listings under the College of Engineering and Mines and the marine science program.

Note: In addition to the facilities available directly through the instructional program, UAF has active research laboratories in the fields of seismology, volcanology, paleomagnetism, isotope geochronology, glaciology and ice physics in the Geophysical Institute (see Geophysical Institute (p. 18) under Research). These laboratories can frequently provide topics for M.S. and Ph.D. theses. Other laboratories are also available in other divisions on campus, as listed under Research Institutes and Centers (p. 16).

Indigenous Studies Ph.D.

Program Requirements

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Minimum Requirements for Indigenous Studies Ph.D.: 48 credits

CONCENTRATIONS: INDIGENOUS SUSTAINABILITY (P. 481), INDIGENOUS STUDIES & RESEARCH (P. 481), INDIGENOUS LEADERSHIP (P. 481), INDIGENOUS LANGUAGES (P. 482), INDIGENOUS KNOWLEDGE SYSTEMS (P. 482), INDIGENOUS EDUCATION & PEDAGOGY (P. 482)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
ANL/CCS/ED/RD F699	Thesis (18 credits)	
Indigenous Studies Program Requirements		
Complete the following:		
ANL/CCS/ED/RD F608	Indigenous Knowledge Systems	3
ANL/CCS/ED/RD F690	Seminar in Cross-Cultural Studies	3
Core Courses		
Complete two of the following:		6
ANL F601	Seminar in Language Revitalization	
ANTH F631	Linguistic Anthropology: Language, Thought and Action	
ANTH F646	Economic Anthropology	
ANTH/BIOL/ ECON/NRM F647	Sustainability in the Changing North	
ANTH/BIOL/ ECON/NRM F649	Integrated Assessment and Adaptive Management	
ANTH/ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
CCS F602	Cultural and Intellectual Property Rights	
CCS/ED F610	Education and Cultural Processes	
CCS/ED F611	Culture, Cognition and Knowledge Acquisition	
CCS F612	Traditional Ecological Knowledge	
ED/LING F621	Cultural Aspects of Language Acquisition	
ED F616	Education and Socioeconomic Change	
ED F620	Language, Literacy and Learning	
ED F660	Educational Administration in Cultural Perspective	
RD F600	Indigenous Leadership Symposium	
RD F601	Political Economy of the Circumpolar North	
RD F651	Management Strategies for Rural Development	
RD F652	Indigenous Organization Management	

Research Courses		
Complete two of the following:		6
ANTH F424	Analytical Techniques	
ANTH F637	Methods in Ethnohistorical Research	
CCS F604	Documenting Indigenous Knowledge	
CCS/ED F603	Field Study Research Methods	
RD F650	Community-based Research Methods	
Concentration		
Complete one or more of the following:		12
Indigenous Sustainability		
Indigenous Studies & Research		
Indigenous Leadership		
Indigenous Languages		
Indigenous Knowledge Systems		
Indigenous Education & Pedagogy		
Total Credits		**48**

The joint Ph.D. program in Indigenous Studies draws and builds upon long-standing academic and research capabilities at UAF to offer an integrated course of advanced graduate study consisting of a common core curriculum that all students complete, coupled with six areas of concentration:

Concentrations

INDIGENOUS SUSTAINABILITY

Code	Title	Credits
Indigenous Sustainability Concentration Requirements		
Complete four of the following: [1]		12
ACNS/PS F603	Public Policy	
ANTH/BIOL/ ECON/NRM F647	Sustainability in the Changing North	
ANTH/BIOL/ ECON/NRM F649	Integrated Assessment and Adaptive Management	
CCS/ED F619	Cultural Atlases as a Pedagogical Strategy	
CCS/NRM F656	Sustainable Livelihoods and Community Well-being	
ED F681	Place-based Education	
MBA F642	Economics of Environmental and Business Sustainability	
PS/ACNS F669	Arctic Politics and Governance	
RD F430	Indigenous Economic Development and Entrepreneurship	
RD F671	Corporate Social Responsibility and Accountability in Rural and Indigenous Contexts	
Total Credits		**12**

[1] Subject to student and committee modification.

INDIGENOUS STUDIES & RESEARCH

Code	Title	Credits
Indigenous Studies & Research Concentration Requirements		
Complete four of the following: [1]		12
ANTH/ACNS F610	Northern Indigenous Peoples and Contemporary Issues	
ANTH F630	Anthropological Field Methods	
ANTH F637	Methods in Ethnohistorical Research	
ANTH F646	Economic Anthropology	
CCS F602	Cultural and Intellectual Property Rights	
CCS/ED F603	Field Study Research Methods	
CCS/ED F604	Documenting Indigenous Knowledge	
CCS/ED F616	Education and Socioeconomic Change	
RD F601	Political Economy of the Circumpolar North	
RD F650	Community-based Research Methods	
RD F651	Management Strategies for Rural Development	
Total Credits		**12**

[1] Subject to student and committee modification.

INDIGENOUS LEADERSHIP

Code	Title	Credits
Indigenous Leadership Concentration Requirements		
Complete four of the following: [1]		12
ACNS/HIST F600	Perspectives on the North	
ACNS/ANTH F610	Northern Indigenous Peoples and Contemporary Issues	
ACNS/PS F647	U.S. Environmental Politics	
ACNS/PS F652	International Relations of the North	
ACNS/PS F654	International Law and the Environment	
ACNS F657/ PS F650	Comparative Indigenous Rights and Policies	
ACNS/PS F662	Alaska Government and Politics	
ACNS/PS F669	Arctic Politics and Governance	
ANS F475	Alaska Native Social Change	
ANTH F603	Political Anthropology	
ANTH F607	Kinship and Social Organization	
ANTH F652/ PS F650	Research Design and Professional Development Seminar	
ANTH F653	Current Perspectives in Cultural Resource Management	
BA F470	Leadership Theory and Development	
ED F660	Educational Administration in Cultural Perspective	
MBA/HSEM F656	Strategic Leadership	
RD F600	Indigenous Leadership Symposium	
RD F625	Community Development Strategies: Principles and Practices	
RD F651	Management Strategies for Rural Development	
RD F652	Indigenous Organization Management	
RD F671	Corporate Social Responsibility and Accountability in Rural and Indigenous Contexts	
Total Credits		**12**

[1] Subject to student and committee modification.

INDIGENOUS LANGUAGES

Code	Title	Credits
Indigenous Languages Concentration Requirements		
Complete four of the following: [1]		12
ANL F402	Alaska Native Language Apprenticeship II	
ANL F452	Principles of Linguistic Analysis for Alaska Native Languages	
ANL F601	Seminar in Language Revitalization	
ANL/LING F651	Topics in Athabascan Linguistics	
ED F620	Language, Literacy and Learning	
ED/LING F621	Cultural Aspects of Language Acquisition	
LING F601	Principles of Linguistic Analysis	
LING F602	Second Language Acquisition	
LING F610	Theory and Methods of Second Language Teaching	
LING F611	Second Language Materials and Assessment	
LING F612	Assessment for the Second Language Classroom	
LING F627	Introduction to Linguistic Description and Documentation	
LING F631/ ANTH F632	Field Methods in Descriptive Linguistics I	
LING F650/ ANTH F654	Language Policy and Planning	
YUP F488	Documenting Yup'ik Traditions/ Caliarkaq	
YUP F415	Additional Topics in Advanced Yup'ik	
Total Credits		**12**

[1] Subject to student and committee modification.

INDIGENOUS KNOWLEDGE SYSTEMS

Code	Title	Credits
Indigenous Knowledge Systems Concentration Requirements		
Complete four of the following: [1]		12
ACNS/ANTH F470	Oral Sources: Issues in Documentation	
ANS/RD F401	Cultural Knowledge of Native Elders	
ANS/ED F461	Native Ways of Knowing	
ANS/RD F465	Community Healing and Wellness	
ANTH F607	Kinship and Social Organization	
ANTH F610	Northern Indigenous Peoples and Contemporary Issues	
ANTH/ACNS F670	Oral Sources: Issues in Documentation	
CCS/PSY F606	Indigenous Ways of Healing	
CCS/ED F611	Culture, Cognition and Knowledge Acquisition	
CCS F612	Traditional Ecological Knowledge	
CCS/PSY F621	Indigenous Ways of Knowing	
CCS F602	Cultural and Intellectual Property Rights	
FISH F611	Human Dimensions of Environmental Systems	
RD F462	Rural Health and Human Service Systems	
RD F625	Community Development Strategies: Principles and Practices	
Total Credits		**12**

[1] Subject to student and committee modification.

INDIGENOUS EDUCATION & PEDAGOGY

Code	Title	Credits
Indigenous Education & Pedagogy Concentration Requirements		
Complete four of the following: [1]		12
ANS/ED F461	Native Ways of Knowing	
CCS/ED F619	Cultural Atlases as a Pedagogical Strategy	
CCS/ED F682	Rethinking Multicultural Education	
ED F606	Alaska Native Education	
ED/CCS F610	Education and Cultural Processes	
ED/CCS F611	Culture, Cognition and Knowledge Acquisition	
ED F612	Foundations of Education	
ED/CCS F613	Alaska Standards for Culturally Responsive Schools	
ED F624	Foundations of Education in Alaska: From Segregation to Standards	
ED F630	Curriculum Development	
ED F631	Culture, Community and the Curriculum	
ED F681	Place-based Education	
ENGL F686	Teaching Writing in a Cross-cultural Context	
Total Credits		**12**

[1] Subject to student and committee modification.

Interdisciplinary Studies Ph.D.

Admission Requirements

Complete the following admission requirements:

- Complete a master's degree.
- In consultation with a UAF faculty member, prepare and submit:
  - Statement of academic goals
  - Research prospectus
  - Proposed graduate study plan
- Other materials: resume, official transcripts, two academic letters of recommendation, two letters of endorsement from two proposed Ph.D. advisory committee members (one letter of endorsement from the proposed UAF committee chair).

Program Requirements

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Minimum Requirements for Interdisciplinary Studies Ph.D.: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
Thesis credits (F699)		
Interdisciplinary Studies Program Requirements		
Pass both a written and oral comprehensive exam [1]		
Coursework [2]		9
Additional coursework or thesis credits		9
Total Credits		**36**

1 The oral comprehensive exam may be an oral defense of the written research proposal.

2 Complete coursework in thematic areas as determined by the advisory committee.

Marine Biology Ph.D.

Admission Requirements

Complete the following admission requirements:

- Submit GRE scores.

Program Requirements

< Back to Department (p. 142)

Minimum Requirements for Marine Biology Ph.D.: 18 thesis credits

Students must earn a B- grade or better in the M.S. lecture-based core courses of the degree program before being eligible to complete the qualifying exam required for this program.

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
MBI F699	Thesis (18 credits)	
Marine Biology Program Requirements		
Complete coursework at least equivalent to that required for the M.S. degree.		
Total Credits		**18**

Mathematics Ph.D.

Admission Requirements

Complete the following admission requirements:

- Submit three letters of recommendation addressing the applicant's educational background, mathematical ability, and research and teaching potential.
- Submit undergraduate and, if applicable, graduate transcripts.
- Submit a resume and written statement of goals.
- Either submit transcripts indicating the completion of a master's degree in mathematics or a related area or complete all the requirements for the M.S. degree in mathematics, including a project or thesis which initiates study of the Ph.D. research area.

Note: For admission to the graduate school, students who are nonnative speakers of English are required to submit either TOEFL or IELTS scores. The GRE mathematics subject test score is not required, but we strongly recommend submitting the score as part of the application.

Program Requirements

< Back to Department (p. 159)

Minimum Requirements for Mathematics Ph.D.: 36 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
MATH F699	Thesis (18 credits)	
Mathematics Program Requirements		
MATH F692	Seminar [1]	1-6
Pass the Ph.D. qualifying exam.		
Total Credits		**19-24**

1 One or more credit(s) of MATH F692 during the anticipated final semester of enrollment for the degree. A graduate advisory committee may choose to waive the requirement if its purpose has been met by other experiences.

Natural Resources and Sustainability Ph.D.

Program Requirements

< Back to Department (p. 165)

Minimum Requirements for Natural Resources and Sustainability Ph.D.: 24 credits (18 thesis credits)

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
NRM F699	Thesis (18 credits)	
Natural Resources and Sustainability Program Requirements		
Complete coursework in thematic area(s) as determined by the advisory committee.		
Complete any combination of the following to total 3 credits		3
NRM F667	Resilience Seminar I	
NRM F668	Interdisciplinary Research Methods-Resilience Seminar II	
NRM F692	Graduate Seminar	
Complete the following:		
NRM F647	Sustainability in the Changing North	3
Outreach activity of one annual public presentation		
Written and oral comprehensive exams [1]		
Dissertation defense seminar		
Dissertation defense examination		
Doctoral dissertation		
Total Credits		**24**

[1] Advancement to candidacy occurs when the student demonstrates mastery in understanding sustainability and in-depth knowledge of the student's dissertation research topic area. Requirements for advancement to candidacy are determined by the academic committee of the student and shall be consistent with the candidacy requirements for Ph.D. studies at UAF. The basis of the evaluation will be written and oral comprehensive exams.

Oceanography Ph.D.

Admission Requirements

Complete the following admission requirements:

- Submit GRE scores.

Note: Students are admitted to the graduate program in oceanography on the basis of their ability and the capability of the program to meet their particular interests and needs. Applications are considered throughout the year but students should apply by March 1 to have the best chance for admission and financial support for the subsequent fall semester. Assistantship stipends are awarded competitively and limited fellowship support is available. Most students are supported on research projects that relate directly to their degree research.

Program Requirements

< Back to Department (p. 142)

Minimum Requirements for Oceanography Ph.D.: 18 credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469)		18
As part of the Ph.D. requirements, complete the following:		
OCN F699	Thesis (18 credits)	
Oceanography Program Requirements		
Complete coursework equivalent to M.S. degree. [1]		
Total Credits		**18**

[1] There are no fixed course requirements, nor is an M.S. degree required to earn the Ph.D. degree. However, a candidate for the Ph.D. degree in oceanography (biological, chemical, fisheries, geological and physical oceanography) will be expected to have completed coursework at least equivalent to that required for the corresponding M.S. degree.

Note: Oceanography majors must demonstrate field experience aboard an oceanographic vessel.

Physics Ph.D.

Program Requirements

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Minimum Requirements for Physics Ph.D.: 18 thesis credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469) [1]		18
As part of the Ph.D. requirements, complete the following:		
PHYS F699	Thesis (18 credits)	
Physics Program Requirements		
Complete and pass a written and oral comprehensive examination.		
Total Credits		**18**

[1] Complete in accordance with the Physics Department's policies and procedures manual for graduate students.

Space Physics Ph.D.

Program Requirements

< Back to Department (p. 170)

Minimum Requirements for Space Physics Ph.D.: 18 thesis credits

Code	Title	Credits
General University Requirements		
Complete the graduate general university requirements. (p. 468)		
Ph.D. Degree Requirements		
Complete the Ph.D. degree requirements. (p. 469) [1]		18
As part of the Ph.D. requirements, complete the following:		
PHYS F699	Thesis (18 credits)	
Space Physics Program Requirements		
Complete and pass a written and oral comprehensive examination.		
Total Credits		**18**

[1] Complete in accordance with the Physics Department's policies and procedures manual for graduate students.

UAF ADMINISTRATION, FACULTY AND EMERITI

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University Advancement	Samara Taber, Executive Director

Governance

Governance	
ASUAF	Ashlyn Espinosa, President (2022-2023)
Faculty Senate	Ataur Chowdhury, President (2022-2023)
Staff Council	Ronnie Houchin, President (2022-2023)

Faculty

The abbreviation that follows the person's title indicates the University of Alaska Fairbanks unit in which the employee works.

The abbreviations are:

ACEP Alaska Center for Energy and Power

AFES Agricultural and Forestry Experiment Station

AKCFWRU Alaska Cooperative Fish and Wildlife Research Unit

ANLC Alaska Native Language Center

BBC Bristol Bay Campus

CANHR Center for Alaska Native Health Research

CBSM College of Business and Security Management

CC Chukchi Campus

CEM College of Engineering and Mines

CFOS College of Fisheries and Ocean Sciences

CHANC Chancellor's Office

CLA College of Liberal Arts

CNSM College of Natural Science and Mathematics

CTC Community and Technical College

CRCD College of Rural and Community Development

CRS Center for Research Services

DANSRD Department of Alaska Native Studies and Rural Development

EDE eCampus

GI Geophysical Institute

GRAD Graduate School

IAB Institute of Arctic Biology

IAC Interior Alaska Campus

IANRE Institute of Agriculture, Natural Resources and Extension

IARC International Arctic Research Center

INE Institute of Northern Engineering

KUC Kuskokwim Campus

LIB Elmer E. Rasmuson Library

MUSEUM University of Alaska Museum of the North

NWC Northwest Campus

PROV Provost's Office

SA Student Affairs

SOE School of Education

VCAS Vice Chancellor for Administrative Services

VCR Vice Chancellor for Research

WERC Water and Environmental Research Center

A

Abramowicz, Kenneth F. Associate Professor of Accounting, CBSM. University of Tulsa '82 BA; '83 MS; University of Missouri–Columbia '91 PhD.

Aggarwal, Srijan Professor of Civil and Environmental Engineering, CEM. Indian Institute of Technology Delhi '07 BS; University of Minnesota - Twin Cities '09 MS; '11 PhD.

Aguilar–Islas, Ana Maria Associate Professor of Oceanography, CFOS. University of California, Santa Cruz '07 PhD.

Ahn, Il Sang Associate Professor of Civil and Environmental Engineering, CEM. Seoul National University '91 BS; '93 MS; State University of New York at Buffalo '05 PhD.

Al-Badri, Maher Assistant Professor of Electrical and Computer Engineering, CEM. University of Baghdad '84 BS; University of Malaya '09 MEng; Concordia University '15 PhD.

Albertson, Leif E. Professor of Extension, IANRE. Home Health Food Preservation, Anchorage Service Center, CES. University of California, Berkeley '01 BA; Harvard University '06 MS.

Aldrich, Betty J. Term Assistant Professor of Allied Health, CTC. University of Alaska Fairbanks '83 BBA; University of Washington School of Medicine '96 MD.

Alexander, Kevin Wayne Associate Professor of Aviation Maintenance Technology, CTC. Director of Aviation Programs, CTC. University of Alaska Fairbanks '96 Certificate; '05 AAS.

Alexander, Samuel L Term Assistant Professor of Gwich'in Language, CRCD. United States Military Academy '02 BS; Dartmouth College '14 MBA.

Alexeev, Vladimir Research Professor of Atmospheric Sciences and Meteorology, IARC. Moscow Institute for Physics and Technology, Russia '84 MS; '88 PhD.

Alicia, Lamar Assistant Professor, SOE Counseling. .

Allman, Elizabeth S. Professor of Mathematics, CNSM. Yale University '87 BS; University of California, Los Angeles '92 MA; '95 PhD.

Alu, Kelechukwu I. Associate Professor of Developmental Mathematics, CRCD. Federal University of Technology Owerri, Nigeria '98 BTech; East Tennessee State University '11 MS.

Ammu, Tav Assistant Professor of Fishing and Fisheries Science and Management, ASG. .

Angaiak, Michael Andrew Term Assistant Professor of Elementary Education, SOE. University of Alaska Anchorage '2010 MEd.

Anger, Andreas Paul Wilhelm Professor of Applied Business and Accounting, CTC. University of Nebraska Lincoln '90 MBA; University of Bayreuth, Germany '91 Diplom–Kaufmann.

Anthony, Katey Marion Walter Professor of Engineering, CEM. University of Alaska Fairbanks '06 PhD.

Aoki, Miho Associate Professor of Computer Art, CLA. Aichi University, Japan '91 Bed; Ohio State University '98 MFA.

Arp, Christopher Douglas Research Associate Professor of Hydrology and Water Resources, INE. Utah State University '06 PhD.

Arya, Sampurna Assistant Professor of Mining and Mineral Engineering, CEM. Indian School of Mines '06 BS; University of Kentucky '13 MS; '18 PhD.

Aschwanden, Andreas Research Professor of Snow, Ice + Permafrost, GI. ETH Zurich '04 MSc; '08 PhD.

Atkinson, Judith Ann Professor of Developmental Math, CTC. Department Chair, Developmental Mathematics, CTC. Eastern Kentucky University '88 BS; University of Alaska Fairbanks '93 MS; '02 PhD.

Avdonin, Sergei Anatolievich Professor of Mathematics, CNSM. St. Petersburg State University, Russia '72 BS; '77 PhD.

Awoleke, Obadare O. Associate Professor of Petroleum Engineering, CEM. University of Ibadan, Nigeria '01 BS; Texas A+M University '09 MS; '13 PhD.

B

Babcock, Gerald Term Assistant Professor of Justice, CLA. Troy University '17 MS.

Badiei, Alireza Assistant Professor of Department of Veterinary, CNSM. University of Otago, Christchurch New Zealand 'PhD .

Baek, Jungho Professor of Economics, CBSM. Hanyang University '91 BA; Korea University '93 MA; Michigan State University '04 MA; '04 PhD.

Baker, Carrie Crosby Professor of Theatre, CLA. Associate Dean, CLA. Middlebury College '96 BA; University of California, Irvine '02 MFA.

Balazs, Matthew S. Postdoctoral Fellow of Tectonics and Sedimentation, GI. .

Ballinger, Thomas J. Research Assistant Professor of Atmospheric Chemistry and Climatology, ARC. Kent State University '2015 PhD.

Baltensperger, Andrew Phillip Bradley Postdoctoral Fellow, IARC. .

Barnes, Brian M. Professor of Zoophysiology, CNSM. Director, IAB. University of California, Riverside '77 BS; University of Washington '83 PhD.

Barnes, David L. Professor of Civil Engineering, CEM. New Mexico State University '85 BS; '87 MS; Colorado State University '97 PhD.

Barry, Ronald P. Professor of Statistics, CNSM. University of Alaska Anchorage '84 AA; University of Alaska Fairbanks '85 BS; '87 MS; University of California, Irvine '91 PhD.

Barry, Patrick Dylan Postdoctoral Fellow, CFOS. .

Barry, Timothy J. Visiting Assistant Professor of Mathematics, CNSM. .

Barst, Benjamin D. Research Assistant Professor of Physical Sciences, CEM. .

Beiniek, Peter A. Research Assistant Professor of Atmospheric Sciences and Meteorolgy, IARC. University of Alaska Fairbanks '2012 PhD.

Belz, Nathan P. Associate Professor of Civil Engineering, CEM. University of Maine '06 BS; '08 MS; University of Vermont '13 PhD.

Bennett, Alec P. Term Instructor of Homeland Security and Emergency Management, CBSM. University of Alaska Southeast '05 BS; University of Alaska Fairbanks '18 MSDM.

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CATALOG ADDENDUM

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