

# Accounting

School of Management  
Department of Accounting and Information Systems  
(907) 474-7121  
[www.uaf.edu/som/aisd.html](http://www.uaf.edu/som/aisd.html)

## B.B.A. Degree

Minimum Requirements for Degree: 123 credits

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 UAF accounting program is accredited by the Association to Advance College Schools of Business. The AACSB accredits 120 programs nationwide, and the UAF accounting program is the only program in Alaska with AACSB accreditation.

The accounting program prepares students for certification as Certified Public Accountants (CPA), Certified Management Accountants (CMA), Certified Financial Managers (CFM), Certified Internal Auditors (CIA) and Certified Fraud Examiners (CFE). The UAF accounting program places nearly 100 percent of its graduates.

### Admission Standards to UAF School of Management's Upper-Division Courses, effective Fall 2005

- Complete at least 30-40 credits with a cumulative GPA of 2.25 or higher.
- Complete the following courses with a grade of "C" or better:
 

ACCT 261—Accounting Concepts and Uses I .....	3
ACCT 262—Accounting Concepts and Uses II .....	3
STAT 200—Elementary Probability and Statistics.....	3
AIS 101—Effective Personal Computer Use .....	3
COMM 131X—Fundamentals of Oral Communication:	
Group Context (3)	
or COMM 141X Fundamentals of Oral Communication:	
Public Context (3) .....	3
ECON 200—Principles of Economics .....	4
ENGL 111X—Introduction to Academic Writing.....	3
ENGL 211X—Academic Writing about Literature (3)	
or ENGL 213X—Academic Writing about Social and Natural	
Sciences (3).....	3
MATH 262X—Calculus for Business and Economics .....	4
- Complete at least 9 credits that satisfy UAF's Baccalaureate Core in Perspectives on the Human Condition and Natural Sciences.

### Conditional Admission to Upper Division courses

A student wishing to take upper division courses may do so for one semester only, while completing lower level deficiencies, with approval of the director of undergraduate studies.

## Major—B.B.A. Degree

- Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: any approved ethics course\* and MATH 262X\*.)
- Complete the B.B.A. degree requirements (page 113. As part of the common body of knowledge, complete AIS 316.)
- Complete ENGL 314W/O/2\*.
- Complete the following program (major) requirements:\*
 

ACCT 330—Income Tax.....	3
ACCT 342—Managerial Cost Accounting .....	3
ACCT 361—Intermediate Accounting.....	3
ACCT 362—Intermediate Accounting .....	3
ACCT 414—Governmental and Nonprofit Accounting .....	3
ACCT 452W—Auditing.....	3
- Complete 2 of the following:\*
 

ACCT 401—Advanced Accounting .....	3
ACCT 404—Advanced Cost Accounting and Controllershship.....	3
ACCT 430—Advanced Taxes.....	3
ACCT 472—Advanced Auditing.....	3
AIS 473—Applied System Design .....	3
- Complete free electives. .... 9-13
- Minimum credits required ..... 123

\* Student must earn a C grade or better in each course.

Note: The B.B.A. degree requires 50 percent of the accounting, business administration and economics credits to be earned in residence at UAF

Note: Students within 18 credit hours of fulfilling the requirement for the baccalaureate degree are eligible to take the CPA examination in Alaska. Any student who does not complete a baccalaureate degree by December 31, 2000 will be required to meet the state's 150-hour requirement to receive a CPA certificate.

## Minor

- Complete the following:\*
 

ACCT 261—Accounting Concepts and Uses I .....	3
ACCT 262—Accounting Concepts and Uses II .....	3
Upper division accounting electives.....	9
  - Minimum credits required ..... 15
- \* Student must earn a C grade or better in each course.
- Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Alaska Native Languages

College of Liberal Arts  
Department of Alaska Native Languages  
(907) 474-7874  
[www.uaf.edu/anlc/classes.html](http://www.uaf.edu/anlc/classes.html)

## Minor only

The Alaska Native language program offers courses in Eskimo-Aleut and Indian languages spoken in the state. Major and minor curricula are offered in Central Yup'ik Eskimo, the largest Alaska Native language in terms of number of speakers; and Inupiaq Eskimo, the second largest. Regular courses are also available in Gwich'in Athabascan. Individual or small-group instruction is available in other Athabascan languages as well as in Siberian Yupik, Alutiiq, Aleut and Tlingit. UAF is the only university in the United States to provide such programs. Students interested in individual or small group interaction should contact the Alaska Native Language Center directly.

Professional opportunities for those skilled in Alaska Native languages exist in teaching, research, and cultural, educational and political development. The A.A. degree and the 30-credit certificate in Native language education for either Inupiaq or Athabascan are available by distance delivery. Both provide training in language and culture for people interested in becoming Native language instructors, and both may serve as a step toward further education.

The Alaska Native language teaching program benefits from the research staff and library of the Alaska Native Language Center. Students have access to researchers who are world leaders in the documentation of Eskimo and northern Athabascan languages. The library houses more than 15,000 items, virtually everything written about Alaska Native languages, including copies of documentation dating to the 1700s.

## Minor

1. Complete the following:  
Any ANL or ESK courses ..... 15
2. Minimum credits required ..... 15

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Alaska Native Studies

College of Liberal Arts  
Department of Alaska Native Studies  
(907) 474-7181  
[www.uaf.edu/ans/](http://www.uaf.edu/ans/)

## B.A. Degree

Minimum Requirements for Degree: B.A.: 130 credits

Alaska Native Studies seeks to provide students with an awareness of the scope, richness and variety of Alaska Native cultures. It offers a series of critical perspectives on the contemporary Native experience in pluralistic North American society. The interdisciplinary academic program is built upon a combination of courses offered by the Alaska Native Studies program and other specialized disciplines.

The Alaska Native studies B.A. prepares students to appreciate historical and contemporary cultural dynamics. The department also welcomes students pursuing a second major or a minor. It encourages students who expect to be involved professionally in Alaska Native communities or other multicultural settings to pursue this degree.

## Major

### Concentrations: General, Language

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
  - a. Complete the following:
    - ANL 315—Alaska Native Languages: Eskimo-Aleut\*\* (3)  
or ANL 316—Alaska Native Languages:  
Indian Languages\*\* (3) ..... 3
    - ANS/PS 325—Native Self-Government ..... 3
    - ANS 347—Voices of Native American Peoples ..... 3
    - ANS 401—Cultural Knowledge of Native Elders..... 3
    - ANS/ANTH 242—Native Cultures of Alaska ..... 3
    - HIST 110—History of Alaska Natives (3)  
or ANS 101—Introduction to Alaska Native Studies (3)..... 3
  - b. Complete 1 of the following concentrations\*:

#### General

1. Complete the following:
  - ANS/ENGL 340—Contemporary Native American Literature (3)  
or ANS/ENGL 349—Narrative Art of Alaska Native Peoples  
(in English Translation) (3) ..... 3
  - ANS/PS 425—Federal Indian Law and Alaska Natives (3)  
or ANS/PS 450—Comparative Aboriginal Rights and  
Policies (3) ..... 3
2. Complete 9 credits from the following (you may include courses not selected from courses above in general part 1):
  - ANS 160—Alaska Native Dance..... 1
  - ANS/THR 161—Introduction to Alaska Native Performance ..... 3
  - ANS 202X—Aesthetic Appreciation of Alaska Native  
Performance\*\*\* ..... 3
  - ANS 250—Current Alaska Native Leadership Perspectives..... 3
  - ANS 251—Practicum in Native Cultural Expression..... 3
  - ANS 300W—Alaska Native Writers Workshop ..... 3
  - ANS 310—The Alaska Native Lands Settlement..... 3
  - ANS/RD 315—Tribal People and Development ..... 3
  - ANS 320W—Language and Culture: Application of Alaska..... 3

ANS 335—Native North Americans.....	3
ANS 348W—Native North American Women .....	3
ANS 350W,O—Cross Cultural Communication: Alaskan Perspectives.....	3
ANS 351—Practicum in Native Cultural Expression.....	3
ANS 360—Advanced Native Dance .....	1
ANS 361—Advanced Alaska Native Performance.....	3
ANS/ART 365—Native Art of Alaska .....	3
ANS 375—Native American Religion and Philosophy .....	3
ANS/ED 420—Alaska Native Education .....	3
ANS 475—Alaska Native Social Change .....	3
PS 263—Alaska Native Politics.....	3
RD 255—Rural Alaska Land Issues.....	3
SOC 408—Race and Ethnic Relations.....	3

3. Minimum credits required .....130

#### Language

1. Complete the following:
  - ANL 251—Introduction to Athabascan Linguistics (3)  
or LING 101—Nature of Language (3) ..... 3
  - ANL 287—Teaching Methods for Alaska Native Languages..... 3
  - ANL 288—Curriculum and Materials Development for Alaska  
Native Languages..... 3
  - ANS/ANTH 320W—Language and Culture:  
Applications to Alaska ..... 3
  - LING 450—Language Policy and Planning ..... 3
2. Complete the following Language concentration requirement:  
Three years of 1 Alaska Native language or equivalent\*\* ..... 22

3. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

\*\* These courses may be used to fulfill the bachelor of arts requirements for a minor complex, or foreign/Alaska Native language option (page 109).

\*\*\* ANS 202X may not be counted toward an Alaska Native studies major if used to fulfill core requirements.

Note: ANL 255 may be substituted for ANL 315.

Note: ANL 256 may be substituted for ANL 316.

#### Minor\*

1. Complete the following:
  - ANS 300- or 400-level course..... 3
  - ANS 401—Cultural Knowledge of Native Elders..... 3
  - Alaska Native Studies electives..... 9
2. Minimum credits required .....15

\* All minor programs must be approved by the department head of Alaska Native studies.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Anthropology

College of Liberal Arts  
Department of Anthropology  
(907) 474-7288  
[www.uaf.edu/anthro/](http://www.uaf.edu/anthro/)

## B.A., B.S. Degrees

Minimum Requirements for Degrees: B.A.: 120 credits;  
B.S.: 130 credits

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 maintain active research programs elsewhere, such as Africa and North America.

### Major—B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements complete ANTH 100X\*.)
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
- a. Choose 3 of the following courses:  
ANTH 211—Fundamentals of Archaeology ..... 3  
ANTH 215—Fundamentals of Social/Cultural Anthropology ..... 3  
ANTH 221—Introduction to Biological Anthropology ..... 3  
LING 101—Nature of Language ..... 3
- b. Complete the following:  
ANTH 384—History of Anthropology ..... 3  
ANTH 411O—Senior Seminar ..... 3
- c. Complete 6 anthropology electives, with degree classification designator 's' or 'h,' at least 4 (12 credits) of which are at the 400-level ..... 18  
Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

Note: LING 101 satisfies part of the B.A. humanities requirements.

### Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements complete ANTH 100X\*.)
2. Complete the B.S. degree requirements (page 112).
3. Complete the following program major requirements:\*
- a. Complete the following:  
ANTH 211—Fundamentals of Archaeology ..... 3  
ANTH 221—Introduction to Biological Anthropology ..... 3  
ANTH 215—Fundamentals of Social/Cultural Anthropology (3)  
or ANTH 320W—Language and Culture: Applications to Alaska (3)  
or LING 101—Nature of Language (3) ..... 3  
ANTH 411O—Senior Seminar ..... 3
- b. Complete the following:  
ANTH 214—World Prehistory ..... 3  
ANTH 405—Archaeological Methods and Theory ..... 3  
ANTH 423—Paleoanthropology ..... 3  
ANTH 424—Analytical Techniques ..... 3
- c. Complete 1 of the following:  
ANTH 309—Circumpolar Archaeology ..... 3  
ANTH 315—Human Biology ..... 3
- d. Complete 1 of the following:  
ANTH 415—Zooarchaeology and Taphonomy ..... 3  
ANTH 422—Human Osteology ..... 3
- e. Complete at least 2 of the following electives:\*\*  
ANTH 426—Bioarchaeology ..... 3  
ANTH 428—Ecological Anthropology ..... 3  
ANTH 492—Seminar: Physical Anthropology ..... 3  
ANTH 492—Seminar: Archaeology ..... 3
4. Minimum credits required ..... 130  
\* Student must earn a C grade or better in each course.  
\*\*Courses not selected under "c" or "d" areas may be used to meet this area.

### Minor

1. Complete the following:  
ANTH 211—Fundamentals of Archaeology ..... 3  
ANTH 215—Fundamentals of Social/Cultural Anthropology ..... 3  
ANTH 221—Introduction to Biological Anthropology ..... 3  
ANTH 320W—Language and Culture: Applications to Alaska ..... 3  
Anthropology electives ..... 6
2. Minimum credits required ..... 18

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Arctic Skills

College of Rural Alaska  
Industrial and Service Technology Division  
(907) 455-2889

## Minor only

The minor in arctic skills is designed for anyone who lives and works in a northern climate and wishes to learn to cope with the outdoor arctic environment.

Students who complete this minor also earn a state of Alaska EMT I certificate and may prepare to take the FAA written exam for partial fulfillment of the private pilot certificate.

## Minor

- Complete the following:  
AVTY 100—Private Pilot Ground School (4)  
or AVTY 111—Fundamentals of Aviation (3) .....3-4  
AVTY 231—Arctic Survival (3)  
or EMS 257 A, B—Arctic Survival (2) .....2-3  
EMS 170—EMT: Emergency Medical Technician I.....6  
Approved electives\* .....3-4
- Minimum credits required .....15  
\* Approved by program manager.

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X .....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X .....(3) \_\_\_\_\_  
COMM 131X **OR** 141X .....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X .....(3) \_\_\_\_\_  
ECON/PS 100X .....(3) \_\_\_\_\_  
HIST 100X .....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X .....(3) \_\_\_\_\_  
ENGL/FL 200X .....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X .....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_



# Art

College of Liberal Arts  
Department of Art  
(907) 474-7530  
www.art.uaf.edu/

## B.A., B.F.A. Degrees

Minimum Requirements for Degrees: B.A.: 130 credits; B.F.A.: 130 credits

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 the 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.

### Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
  - a. Complete the following:
 

ART 105—Beginning Drawing.....	3
ART 205—Intermediate Drawing.....	3
ART 211—Beginning Sculpture .....	3
ART 213—Beginning Painting (Acrylic or Oil) .....	3
ART 261 and 262—History of World Art.....	6
  - b. Complete 2 of the following:
 

ART 161—Two-Dimensional Design.....	3
ART 162—Color and Design.....	3
ART 163—Three-Dimensional Design.....	3
  - c. Complete 1 of the following electives:
 

ART 201—Beginning Ceramics.....	3
ART 207—Beginning Printmaking.....	3
ART 209—Beginning Metalsmithing and Jewelry.....	3
ART 268—Beginning Native Art Studio.....	3
ART 371O—Digital Photography and Pixel Painting .....	3
  - d. Complete 3 upper division courses from one of these major concentrations:
 

Ceramics.....	9
Computer Art .....	9
Drawing.....	9
Metalsmithing.....	9
Native Studio Art.....	9
Painting .....	9
Printmaking.....	9
Sculpture .....	9
  - e. Upper division art history.....
4. Minimum art credits required for major.....

5. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

Note: Transfer students who are candidates for the B.A. degree or a B.F.A. in art must complete a minimum of 18 credits in art while in residence.

### Major—B.F.A. Degree

**Concentrations: Ceramics, Computer Art, Drawing, Metalsmithing, Native Studio Art, Painting, Printmaking, Sculpture**

1. Complete the general university requirements (page 106).
2. Complete the B.F.A. degree requirements (page 113).
3. Complete the following program (major) requirements:\*
  - a. Complete the following:
 

ART 105—Beginning Drawing.....	3
ART 205—Intermediate Drawing.....	3
ART 211—Beginning Sculpture .....	3
ART 213—Beginning Painting (Acrylic or Oil) .....	3
ART 261 and 262—History of World Art.....	6
  - b. Complete 2 of the following:
 

ART 161—Two-Dimensional Design.....	3
ART 162—Color and Design.....	3
ART 163—Three-Dimensional Design.....	3
  - c. Complete 1 of the following:
 

ART 201—Beginning Ceramics.....	3
ART 207—Beginning Printmaking.....	3
ART 209—Beginning Metalsmithing and Jewelry.....	3
ART 268—Beginning Native Art Studio.....	3
ART 371O—Digital Photography and Pixel Painting .....	3
  - d. Complete the following:
 

Upper division art history** .....	9
Major program approved by B.F.A. thesis committee*** .....	30
Upper division art electives.....	6
Thesis project .....	3
4. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

\*\* Any upper-division art history class (ART 360, 363W, 364W, 365, 366, 367), ANTH/ART 402, 463, 490, 493, HUM 332 or HUM 469W may apply toward this requirement.

\*\*\* Major program must include at least 2, and no more than 3, 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 non-art minor is not required for this degree.

Note: Transfer students who are candidates for the B.A. degree or a B.F.A. in Art must complete a minimum of 18 credits in art while in residence.

Note: All studio areas in the department are eligible for fulfillment of specialization requirements: ceramics, computer art, metalsmithing, Native art, painting, drawing, printmaking and sculpture.

## Minor

1. Complete the following: \*  
ART 105—Beginning Drawing..... 3  
ART 262—History of World Art..... 3  
ART 365—Native Art of Alaska..... 3
2. Complete 1 of the following: \*  
ART 161—Two-Dimensional Design..... 3  
ART 162—Color and Design..... 3  
ART 163—Three-Dimensional Design..... 3
3. Complete 1 of the following: \*  
ART 201—Beginning Ceramics..... 3  
ART 211—Beginning Sculpture ..... 3  
ART 268—Beginning Native Art Studio..... 3
4. Complete 1 of the following: \*  
ART 207—Beginning Printmaking..... 3  
ART 209—Beginning Metalsmithing and Jewelry..... 3  
ART 213—Beginning Painting (Acrylic or Oil) ..... 3  
ART 371O—Digital Photography and Pixel Painting ..... 3
5. Minimum credits required ..... 18

\* Student must earn a C grade or better in each course.

Note: A minor in art for the B.A. or B.S. degree is available only to non-art majors.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Arts and Sciences

School of Education  
Academic Advising Center  
(907) 474-7341  
[www.uaf.edu/educ/](http://www.uaf.edu/educ/)

## B.A.S. Degree

Minimum Requirements for Degree: 120 credits

The arts and sciences degree program instructs students in the subject areas encompassed in Alaska teacher content and performance standards: English/language arts, mathematics, science, geography, government and citizenship, history, skills for a healthy life, arts, world languages and technology.

The B.A.S. program is a broad-based major, concentrating on key principles and content knowledge in mathematics and science, the social sciences, humanities and fine arts.

Students in the B.A.S. degree program are advised by the School of Education. B.A.S. majors may choose any approved minor. Students who are interested in being teachers are encouraged to choose the education minor.

## Major—B.A.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete the following: ART/MUS/THR 200X\*, HIST 100X\*, ANTH/SOC 100X\*, ENG/FL 200X\*, MATH 107X\* or MATH 161X\*, COMM 131X\* or COMM 141X\*, and two different science discipline breadth-emphasis laboratory courses selected from biology\*, chemistry\*, physics\* and geoscience\*. Two years of a non-English language highly recommended.)
2. Complete the following B.A.S. degree major requirements in addition to the core:\*
  - a. Complete the following mathematics requirements:
    - MATH 205—Mathematics for Elementary School Teachers I..... 3
    - MATH 206—Mathematics for Elementary School Teachers II..... 3
  - b. Complete 2 additional breadth-emphasis laboratory courses in the 2 science disciplines not completed for the baccalaureate core.
  - c. Complete the following social sciences requirements:
    - GEOG 101—World Regional Geography..... 3
    - HIST 131—History of the U.S. (3)
      - or HIST 132—History of the U.S. (3)..... 3
    - HIST 461W—History of Alaska ..... 3
    - PS 101—Introduction to American Government and Politics..... 3
  - d. Complete the following literature, grammar and writing requirements:
    - ENGL 271—Introduction to Creative Writing—Fiction (3)
      - or ENGL 272—Introduction to Creative Writing—Poetry (3)
      - or ENGL 313W—Writing Non-Fiction Prose (3)
      - or ENGL 314W/O/2—Technical Writing (3)
      - or JRN 311W—Magazine Article Writing (3)..... 3
    - ENGL 306—Survey of American Literature: Beginnings to the Civil War (3)
      - or ENGL 307—Survey of American Literature: Civil War to the Present (3)
      - or ENGL 308—Survey of British Literature: Beowulf to the Romantic Period (3)
      - or another literature-focus course (3) ..... 3
    - ENGL 317—Traditional English Grammar..... 3

- e. Complete the following psychology and language development requirements:
  - LING 101—Nature of Language (3)
    - or LING 303W/O—Language Acquisition (3) ..... 3
  - PSY 240—Lifespan Developmental Psychology(3)
    - or PSY 245—Child Development (3) ..... 3
- f. Complete creative expression course or courses from applied courses in music, theatre, photography or art. .... 3
- g. Complete the following understanding diversity and culture requirements:
  - ANTH 242—Native Cultures of Alaska ..... 3
  - Course selected from a list developed by the review committee..... 3
- h. Complete the following interdisciplinary senior seminar requirements:
  - LAS 410W/O/2—Scientific Research ..... 3
  - LAS 420W/O/2—Social Science Inquiry and Research (3)
    - or LAS 430W/O/2—Language Arts and the Humanities: Creative Activities and Research (3) ..... 3
3. Complete minor complex\*\* ..... 15
4. Complete electives ..... 7
5. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

\*\* Departmental requirements for minors may exceed this 15 credit minimum. See other program descriptions for specific minor requirements.

Note: For the B.A.S. degree program, at least 39 credits must be taken in upper division (300- and 400-level) courses. Courses taken to fulfill the B.A.S. degree can also be counted for content minors or second majors.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Asian Studies

Interdisciplinary Program  
(907) 474-6507

## Minor only

A minor in Asian studies provides interdisciplinary instruction in the varieties of Asian languages and cultures. It enables students to consolidate various course offerings into a meaningful and cohesive program relevant to several major fields of specialization.

## Minor

1. Complete 15 credits in approved Asian studies courses: \*
    - GEOG 311W—Geography of Asia..... 3
    - HIST 121—East Asian Civilization ..... 3
    - HIST 122—East Asian Civilization ..... 3
    - HIST 330—Modern China ..... 3
    - HIST 331—Modern Japan ..... 3
    - JPN 101—Elementary Japanese I..... 5
    - JPN 102—Elementary Japanese II..... 5
    - JPN 201—Intermediate Japanese I..... 4
    - JPN 202—Intermediate Japanese II..... 4
    - PHIL 202—Introduction to Eastern Philosophy..... 3
  2. Minimum credits required ..... 15
- \* Courses must be distributed among at least 3 departments and include material on at least 2 Asian countries.

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Biological Sciences

College of Science, Engineering and Mathematics  
Department of Biology and Wildlife  
(907) 474-7671  
mercury.bio.uaf.edu/

## B.A., B.S. Degrees

Minimum Requirements for Degrees: B.A.: 130 credits;  
B.S.: 130 credits

The biological sciences program provides a broad education and sound foundation in the basic principles of biology. Students who major in biological sciences may pursue either a B.A. or B.S. degree. The B.A. requires fewer credits in the major field than the B.S., but it gives greater emphasis in the social sciences and humanities and allows a greater breadth of subject matter.

The B.S. degree includes a foundation in the basic sciences and stronger requirements within the biological sciences than the B.A. Candidates who expect to teach in public secondary schools must be sure that they meet education requirements.

### Major—B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: CHEM 105X\* and 106X\*.)
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:
 

BIOL 105X—Fundamentals of Biology I.....	4
BIOL 106X—Fundamentals of Biology II .....	4
BIOL 271—Principles of Ecology.....	4
BIOL 303—Principles of Metabolism and Biochemistry (4) or CHEM 321—Organic Chemistry (3) and CHEM 322—Organic Chemistry (3) .....	4-6
BIOL 310—Animal Physiology (4) or BIOL 111X and 112X—Human Anatomy and Physiology I & II (8) or BIOL 334W—Structure and Function of Vascular Plants (4) or BIOL 342—Microbiology (4) .....	4-8
BIOL 362—Principles of Genetics .....	4
BIOL 481—Principles of Evolution .....	4
BIOL elective .....	3
STAT 200—Elementary Probability and Statistics.....	3
4. Minimum credits required.....130

### Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X\* or MATH 272X\*; and CHEM 105X\* and 106X\*.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete STAT 200\* or STAT 300\*. Biology foundation courses may be used toward partial fulfillment of the natural science requirement.)

3. Complete the following program (major) requirements:
  - a. Complete the following:
 

BIOL 105X—Fundamentals of Biology I.....	4
BIOL 106X—Fundamentals of Biology II .....	4
BIOL 310—Animal Physiology (4) or BIOL 111X and 112X—Human Anatomy and Physiology I & II (8) or BIOL 334W—Structure and Function in Vascular Plants (4) or BIOL 342—Microbiology (4) .....	4-8
BIOL 271—Principles of Ecology.....	4
BIOL 303—Principles of Metabolism and Biochemistry (4) or CHEM 321—Organic Chemistry (3) and CHEM 322—Organic Chemistry (3) .....	4-6
BIOL 362—Principles of Genetics .....	4
BIOL 481—Principles of Evolution .....	4
  - b. Complete biology electives\*\*.....24
  - c. In addition to all other requirements, complete 2 electives (6 or more credits) from the following:
 

Chemistry (200-level or above)  
Geosciences  
Marine Science  
Mathematics (200-level or above)  
Physics  
Space Physics and Atmospheric Sciences  
Statistics
4. Minimum credits required.....130

\* Student must earn a C grade or better in each course.

\*\* A maximum of 6 credits of independent study (-97) may be applied to this requirement. Students may petition to substitute chemistry courses (up to 10 for the biology electives required for the B.S. degree).

Note: Foreign Language is encouraged by the department in meeting requirements of the core curriculum.

Note: Biology foundation courses may be used toward partial fulfillment of the natural science requirement for the B.S. degree with a major in biological sciences.

Note: Candidates for the bachelor of science degree in general science wishing to major in biological sciences must satisfy both the requirements of their major curriculum and those listed above for a B.A. degree with a major in biological sciences.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## Requirements for Biology Teachers (grades 7 – 12)\*

1. Complete all the requirements of the Biological Sciences B.A. or B.S. degree.
2. Complete the following:  
BIOL 310—Animal Physiology (4) or BIOL 111X and  
BIOL 112X—Human Anatomy and Physiology (8) .....4-8  
BIOL 239—Introduction to Plant Biology (4)  
or BIOL 334—Structure and Function in Vascular Plants (4)... 4  
BIOL 342—Microbiology ..... 4  
Complete one of the following:  
BIOL 305—Invertebrate Zoology (5)  
BIOL 406—Entomology (4)  
BIOL 425—Mammalogy(3)  
BIOL 426W,O/2—Ornithology(3)  
BIOL 427W,O—Ichthyology (4) .....3-5
3. Complete one of the following:  
PHIL 380—Conceptual Foundations of Science (3)  
or PHIL 382 Science & Technological Limits (3)  
or PHIL 481—Philosophy of Science (3) ..... 3

*\*We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later, for licensure in biology.*

## Minor

1. Complete the following:  
BIOL 105X—Fundamentals of Biology I..... 4  
BIOL 106X—Fundamentals of Biology II ..... 4
2. Complete 3 of the following:  
BIOL 310—Animal Physiology (4)  
or BIOL 111X and 112X—Human Anatomy and  
Physiology I and II (8) .....4-8  
BIOL 271—Principles of Ecology..... 4  
BIOL 303—Principles of Metabolism and Biochemistry..... 4  
BIOL 334W—Structure and Function in Vascular Plants..... 4  
BIOL 342—Microbiology ..... 4  
BIOL 362—Principles of Genetics ..... 4  
BIOL 481—Principles of Evolution ..... 4
3. Minimum credits required .....20

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Business Administration

School of Management  
Department of Business Administration  
(907) 474-7253  
www.uaf.edu/som/bad.html

## B.B.A. Degree

Minimum Requirements for Degrees: 124 credits

The business administration department offers professional education to students interested in management, finance, human resource management, international business, marketing and travel industry management.

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 programs are accredited by the International Association for Management Education.

## Admission Standards to UAF School of Management's Upper-Division Courses, effective Fall 2005

- Complete at least 30-40 credits with a cumulative GPA of 2.25 or higher.
- Complete the following courses with a grade of "C" or better:
 

ACCT 261—Accounting Concepts and Uses I .....	3
ACCT 262—Accounting Concepts and Uses II .....	3
STAT 200—Elementary Probability and Statistics .....	3
AIS 101—Effective Personal Computer Use .....	3
COMM 131X—Fundamentals of Oral Communication:	
Group Context (3) .....	
or COMM 141X Fundamentals of Oral Communication:	
Public Context (3) .....	3
ECON 200—Principles of Economics .....	4
ENGL 111X—Introduction to Academic Writing .....	3
ENGL 211X—Academic Writing about Literature (3) .....	
or ENGL 213X—Academic Writing about Social and Natural	
Sciences (3) .....	3
MATH 262X—Calculus for Business and Economics .....	4
- Complete at least 9 credits that satisfy UAF's Baccalaureate Core in Perspectives on the Human Condition and Natural Sciences.

## Conditional Admission to Upper Division courses

A student wishing to take upper division courses may do so for one semester only, while completing lower level deficiencies, with approval of the director of undergraduate studies.

## Major—B.B.A. Degree

**Concentrations: Finance, General Business, Management and Organizations, Marketing**

- Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: PHIL 322X\* or PS 300X\* or NRM 303X\*; and MATH 262X\*.)
- Complete the B.B.A. degree requirements (page 113. As part of the Common Body of Knowledge, complete AIS 310.)
- Complete the following:
 

BA 151—Introduction to Business .....	3
ENGL 314W/O/2—Technical Writing .....	3
- Complete the following program (major) requirements:
 

ACCT 352—Management Accounting .....	3
BA 307—Personnel Management .....	3
ECON 321—Intermediate Microeconomics (3) .....	
or ECON 322—Managerial Economics (3) .....	3
- Complete free electives:\*\* .....
- Complete 1 of the following concentrations:\*

### Finance

- Complete the following:
 

BA 423W—Investment Analysis .....	3
BA 424—Real Estate and Alternative Investments .....	3
BA 454O—Student Investment Fund .....	3
BA 455—Portfolio Management .....	3
BA 461—International Finance .....	3

### General Business

- Complete any 5 courses from these concentrations: finance, management and organizations, and marketing. .... 15

*Note: At least one course must be designated writing intensive (W).*

### Management and Organizations

- Complete the following:
 

BA 317W—Employment Law .....	3
BA 447W/O—Compensation Management .....	3
BA 456W—Small Business Management .....	3
BA 457—Training and Management Development .....	3
BA 460O—International Business .....	3

### Marketing

- Complete the following:
 

BA 436—Consumer Behavior .....	3
BA 441—Promotion Management .....	3
BA 445W—Marketing Research .....	3
BA 490—Services Marketing .....	3
BA 491—Current Topics in Marketing .....	3

- Minimum credits required ..... 124

\* Student must earn a C grade or better in each course.

\*\* Business students may earn a minor as long as their business degree requirements are first met.

*Note: The B.B.A. degree requires 50 percent of the accounting, business administration and economics credits to be earned in residence at UAF*

*Note: Only one bachelor of business administration degree may be earned with a concentration in general business, finance, management and organizations, or marketing.*

## Minor\*\*

### General Business

1. Complete the following:  
BA 151—Introduction to Business..... 3
2. Complete 4 of the following:  
ACCT 261—Accounting Concepts and Uses I ..... 3  
BA 307—Personnel Management..... 3  
BA 325—Financial Management..... 3  
BA 343—Principles of Marketing..... 3  
BA 360—Operations Management..... 3  
BA 390—Organizational Theory and Behavior ..... 3  
ECON 200—Principles of Economics ..... 4
3. Minimum credits required ..... 15

### Management and Organizations

1. Complete the following:  
BA 151—Introduction to Business..... 3  
BA 307—Personnel Management..... 3  
BA 390—Organizational Theory and Behavior ..... 3
2. Complete 2 of the following:  
BA 317W—Employment Law ..... 3  
BA 330—The Legal Environment of Business..... 4  
BA 447W,O—Compensation Management ..... 3  
BA 456W—Small Business Management ..... 3  
BA 457—Training and Management Development..... 3  
BA 460O—International Business..... 3
3. Minimum credits required ..... 15-16

## Marketing

1. Complete the following:  
BA 343—Principles of Marketing..... 3  
BA/PSY 436—Consumer Behavior ..... 3  
BA 441—Promotion Management ..... 3  
BA 490—Services Marketing..... 3
2. Complete 1 of the following:  
BA/JRN 326—Principles of Advertising ..... 3  
BA 445W—Marketing Research..... 3  
BA 491—Current Topics in Marketing..... 3  
JRN 433—Public Relations ..... 3
3. Minimum credits required ..... 15

\*\* For a bachelor of arts or bachelor of science degree.

Note: Students interested in pursuing a minor are reminded to review course descriptions for prerequisite requirements. The following is strongly emphasized by the School of Management:

ACCT 261, ECON 200 and 227, and MATH 262X are prerequisites for BA 360.

ECON 200 and STAT 200 are prerequisites for BA 325. BA 343 is highly recommended as a prerequisite for BA 441, 490 and 491. BA 343, STAT 200 or equivalent, upper-division standing are prerequisite requirements for BA 445.

JRN 301 or permission of instructor is prerequisite for JRN 433.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

- LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

- MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Chemistry

College of Science, Engineering and Mathematics  
Department of Chemistry and Biochemistry  
(907) 474-5510  
www.uaf.edu/chem/

## B.A., B.S. Degrees

Minimum Requirements for Degrees: 130 credits

Professional opportunities in chemistry have grown substantially with the creation of many synthetic products and the rapid introduction of chemical techniques in all branches of commerce. Graduates qualify for employment 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. 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.

The chemistry curriculum offers an opportunity for broad scientific study. All students specializing in chemistry will meet basic requirements in general inorganic, analytical, organic and physical chemistry, as well as mathematics and physics. These may be supplemented, according to the interest of the student, by courses in biology, education, engineering, geophysics, geology and advanced courses in biology, chemistry, mathematics and physics.

Chemistry laboratories house instrumentation for nuclear magnetic resonance spectrometry, infrared, ultraviolet/visible, and atomic absorption spectrophotometry, mass spectrometry, gas chromatography and HPLC. Equipment for specialized gas chromatography/mass spectrometry, x-ray diffractometry, electron microscopy and liquid scintillating counting is available in cooperation with other UAF departments and institutes.

The American Chemical Society accredits the chemistry department's curricula.

## Major—B.A. Degree

- Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X; PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)
- Complete the B.A. degree requirements (page 109. As part of the B.A. degree requirements, complete: MATH 201X.)
- Complete the following program (major) requirements:
 

CHEM 105X—General Chemistry .....	4
CHEM 106X—General Chemistry .....	4
CHEM 202—Basic Inorganic Chemistry .....	3
CHEM 212—Chemical Equilibrium and Analysis .....	3
CHEM 313—Chemical Analysis of Dynamic Systems .....	2
CHEM 321—Organic Chemistry .....	3
CHEM 322—Organic Chemistry .....	3
CHEM 324—Organic Laboratory .....	4
CHEM 331—Physical Chemistry .....	3
CHEM 332—Physical Chemistry .....	3
CHEM 412—Instrumental Analytical Methods .....	3
CHEM 413W—Analytical Instrumental Laboratory .....	3
CHEM 434W—Instrumental Methods in Physical Chemistry .....	3
CHEM 481—Seminar .....	1
CHEM 482O—Seminar .....	2

- Complete the following:
 

MATH 202X—Calculus .....	4
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- Minimum credits required ..... 130  
\* Student must earn a C grade or better in each course.

## Major—B.S. Degree

- Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X; PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)
- Complete the B.S. degree requirements (page 112. As part of the B.S. degree, complete: MATH 201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)
- Complete the program (major) requirements as listed under Chemistry—B.A. Degree.
- Complete the following:
 

CHEM 402—Inorganic Chemistry** .....	3
CHEM 451—General Biochemistry .....	3
CHEM 488—Undergraduate Chemistry and Biochemistry Research** .....	4
- Minimum credits required ..... 130  
\* Student must earn a C grade or better in each course.

\*\* Advanced courses in the physical or biological sciences or mathematics may be substituted with permission of the head of the chemistry and biochemistry department. However, the student will not receive an ACS-certified degree.

Note: Upon completing the recommended curriculum and fulfilling all general university requirements, the student will receive a baccalaureate degree certified by the American Chemical Society.

Note: The electives must include at least 6 credits at the upper division level (to satisfy the UAF general degree requirements for 39 upper division).

## Concentrations: Biochemistry/Molecular Biology, Environmental Chemistry, Juristic Chemistry

### Biochemistry/Molecular Biology

- Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X; PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)
- Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)
- Complete the following program (major) requirements:
 

BIOL 105X—Fundamentals of Biology I .....	4
BIOL 106X—Fundamentals of Biology II .....	4
BIOL 342—Microbiology (4)	
or BIOL 362—Principles of Genetics (4)	
or BIOL 418W—Developmental Biology (4)	
or BIOL 461—Cell Biology (4) .....	4
CHEM 105X—General Chemistry .....	4
CHEM 106X—General Chemistry .....	4
CHEM 212—Chemical Equilibrium and Analysis .....	3
CHEM 313—Chemical Analysis of Dynamic Systems .....	2
CHEM 321—Organic Chemistry .....	3
CHEM 322—Organic Chemistry .....	3
CHEM 324—Organic Laboratory .....	4

CHEM 331—Physical Chemistry .....	3
CHEM 332—Physical Chemistry .....	3
CHEM 413W—Analytical Instrumental Laboratory** (3) or CHEM 434W—Instrumental Methods in Physical Chemistry (3) .....	3
CHEM 451—General Biochemistry .....	3
CHEM 452W—Biochemistry Laboratory (3) or CHEM 488—Undergraduate Chemistry and Biochemistry Research (3) .....	3
CHEM 456—Advanced Biochemistry .....	3
CHEM 481—Seminar .....	1
CHEM 482O—Seminar .....	2
Major elective (approved by department head)*** .....	6

4. Complete the following:	
MATH 202X—Calculus .....	4

5. Minimum credits required .....	130
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\* Student must earn a C grade or better in each course.

\*\* Requires CHEM 412 as prerequisite.

\*\*\* CHEM 202, 402 required for ACS-accredited degree.

### Environmental Chemistry

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X; PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)	
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree, complete: MATH 201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)	
3. Complete the following:*	
CHEM 105X—General Chemistry .....	4
CHEM 106X—General Chemistry .....	4
CHEM 202—Basic Inorganic Chemistry .....	3
CHEM 212—Chemical Equilibrium and Analysis .....	3
CHEM 313—Chemical Analysis of Dynamic Systems .....	2
CHEM 321, 322—Organic Chemistry .....	6
CHEM 324—Organic Laboratory .....	4
CHEM 331, 332—Physical Chemistry .....	6
CHEM 412—Instrumental Analytical Methods .....	3
CHEM 413W—Analytical Instrumental Laboratory .....	3
CHEM 434W—Instrumental Methods in Physical Chemistry .....	3
CHEM 451—General Biochemistry .....	3
CHEM 481—Seminar .....	1
CHEM 482O—Seminar .....	2
CHEM 488—Undergraduate Chemistry and Biochemistry Research (Environmental Topic) .....	2
4. Complete the following:	
MATH 202X—Calculus .....	4
STAT 300—Statistics .....	3
5. Complete 2 of the following courses:*	
BIOL 105X—Fundamentals of Biology I .....	4
BIOL 106X—Fundamentals of Biology II .....	4
GEOS 101X—The Dynamic Earth .....	4
GEOS 125X—Humans, Earth, and the Environment .....	4
ATM 101X—Weather and Climate of Alaska .....	4

6. Complete 1 of the following advanced courses:*	
BIOL 271—Principles of Ecology .....	4
BIOL 342—Microbiology .....	4
BIOL 443—Microbial Ecology .....	3
BIOL 480—Water Pollution Ecology .....	3
BIOL 483—Stream Ecology .....	3
ENVE 458—Energy and the Environment .....	3
NRM 380W—Soils and the Environment .....	3
ATM 401—Fundamentals of Atmospheric Science .....	3
CHEM 402—Advanced Inorganic Chemistry .....	3

7. Complete 1 of the following advanced courses:*	
BIOL 442W/O/2—Advanced Microbiology .....	4
CHEM 406—Atmospheric Chemistry .....	3
CHEM 408—Global Chemical Cycles .....	3
CHEM 456—Advanced Biochemistry .....	3
CE 441—Environmental Engineering .....	4
GEOS 417—Introduction to Geochemistry .....	3

8. Minimum credits required .....	130
* Student must earn a C grade or better in each course.	

### Juristic Chemistry

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X; PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)	
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree, complete: MATH 201X. Chemistry foundation courses may be used toward partial fulfillment of the natural science requirement.)	
3. Complete the program (major) requirements as listed under Chemistry—B.A. degree.	
4. Complete the following chemistry requirements:*	
CHEM 402—Inorganic Chemistry .....	3
CHEM 451—General Biochemistry .....	3
CHEM 488—Undergraduate Chemistry and Biochemistry Research (Environmental Topic) .....	2
5. Complete the following justice requirements:*	
JUST 110—Introduction to Justice .....	3
JUST 222—Research Methods .....	3
JUST 251—Criminology .....	3
JUST 300X—Ethics and Justice** .....	3
JUST 354—Procedural Law .....	3
JUST 454W—Advanced Problems in Procedural Law .....	3
6. Minimum credits required .....	130

\* Student must earn a C grade or better in each course.

\*\* JUST 300X may not be used to fulfill core ethics requirement.



## Requirements for Chemistry Teachers (grades 7–12)

1. Complete all the requirements of the chemistry B.A. or B.S. degree you wish to seek.
2. All prospective chemistry teachers must complete the following:  
CHEM 451—General Biochemistry ..... 3  
CHEM 488—Undergraduate Chemistry and Biochemistry Research ..... 4
3. All prospective science teachers must complete one of the following:  
PHIL 380—Conceptual Foundations of Science (3)  
or PHIL 382—Science and Technological Limits (3)  
or PHIL 481—Philosophy of Science (3) ..... 3

*Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later for licensure in Chemistry.*

## Minor

### Chemistry

1. Complete the following foundation courses:  
CHEM 105X—General Chemistry ..... 4  
CHEM 106X—General Chemistry ..... 4
2. Complete the following approved electives  
CHEM 202—Basic Inorganic Chemistry ..... 3  
CHEM 212—Chemical Equilibrium and Analysis\* ..... 3  
CHEM 313—Chemical Analysis of Dynamic Systems\* ..... 2  
CHEM 321—Organic Chemistry ..... 3  
CHEM 322—Organic Chemistry ..... 3
3. Minimum credits required ..... 21–22  
*\* CHEM 324 may be substituted for both of these courses.*

### Biochemistry

1. Complete the following foundation courses:  
CHEM 105X—General Chemistry ..... 4  
CHEM 106X—General Chemistry ..... 4
2. Complete the following:  
CHEM 321—Organic Chemistry ..... 3  
CHEM 322—Organic Chemistry ..... 3  
CHEM 331—Physical Chemistry ..... 3  
CHEM 451—General Biochemistry ..... 3  
CHEM lab elective 200-level or above ..... 3
3. Minimum credits required ..... 23

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0–1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3–4)

**Complete 3–4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X–106X ..... (8) \_\_\_\_\_  
BIOL 111X–112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X–104X ..... (8) \_\_\_\_\_  
CHEM 105X–106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X–112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X–104X ..... (8) \_\_\_\_\_  
PHYS 211X–212X ..... (8) \_\_\_\_\_  
PHYS 211X–213X ..... (8) \_\_\_\_\_  
PHYS 212X–213X ..... (8) \_\_\_\_\_



# Civil Engineering

College of Science, Engineering and Mathematics  
Department of Civil and Environmental Engineering  
(907) 474-7241  
[www.uaf.edu/civileng/cee.html](http://www.uaf.edu/civileng/cee.html)

## B.S. Degree

Minimum Requirements for Degree: 133 credits

Civil engineers plan, design and supervise the construction of public and private structures such as space launching facilities, offshore structures, bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, and water treatment and distribution facilities.

Civil engineers use sophisticated technology and employ computer-aided engineering during design, construction, project scheduling and cost control. They are creative problem solvers involved in community development and the challenges of pollution, deteriorating infrastructure, traffic congestion, energy needs, floods, earthquakes and urban planning.

The civil engineering program at UAF began in 1922 and graduated its first major in 1931. Many of the more than 800 men and women who have graduated since then work in a wide range of positions all over Alaska. More than 60 percent of Alaska's professional engineers practice in civil engineering. The program at UAF has been accredited since 1940 and currently 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.

Graduate students may enter one of two programs: the master of civil engineering is for students whose goal is broad professional practice, and the master of science degree is for those who favor an emphasis on research and specialized study.

In addition to general civil engineering courses, the department offers specialties in transportation, geotechnical, structures, water resources, hydrology and environmental studies. These 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 environmental engineering administered within the civil engineering department is available.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X, CHEM 105X and CHEM 106X.)
  2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X; PHYS 211X and PHYS 212X.)
  3. Complete the following program (major) requirements:\*
- |   |    |
|---|----|
| CE 112—Elementary Surveying.....                        | 3  |
| CE 326W—Introduction to Geotechnical Engineering .....  | 4  |
| CE 334—Properties of Materials.....                     | 3  |
| CE 344—Water Resources Engineering.....                 | 3  |
| CE 400—FE Exam .....                                    | 0  |
| CE 402—Introduction to Transportation Engineering ..... | 3  |
| CE 431—Structural Engineering I .....                   | 3  |
| CE 432—Structural Engineering II .....                  | 3  |
| CE 438W/O—Design of Engineered Systems .....            | 3  |
| CE 441—Environmental Engineering.....                   | 4  |
| DRT 170—Beginning AutoCad .....                         | 3  |
| ES 101—Introduction to Engineering.....                 | 3  |
| ES 201—Computer Techniques .....                        | 3  |
| ES 209—Statics .....                                    | 3  |
| ES 210—Dynamics.....                                    | 3  |
| ES 301—Engineering Analysis.....                        | 3  |
| ES 331—Mechanics of Materials.....                      | 3  |
| ES 341—Fluid Mechanics .....                            | 4  |
| ESM 450W—Economic Analysis and Operations.....          | 3  |
| GE 261—General Geology for Engineers .....              | 3  |
| MATH 202X—Calculus.....                                 | 4  |
| MATH 302—Differential Equations .....                   | 3  |
| Technical electives** .....                             | 15 |
4. Minimum credits required.....133
- \* Student must earn a C grade or better in each course.
- \*\* Technical electives must include 9 credits of CE or ENVE or ESM courses, 3 credits of either ES 307 or ES 346, and 3 credits of approved technical courses. Students should consult their advisor. Four out of 5 electives must be taken from approved CE electives or ENVE elective graduate courses. Only 1 graduate-level course may count toward graduation as a technical elective and the student must be within 30 credits of graduation and have at least a 3.0 GPA to enroll. Students must earn a C grade or better in each technical elective course.
- Note: The ability to utilize computers for normal class work is expected in all engineering classes above the 100-level.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Communication

College of Liberal Arts  
Department of Communication  
(907) 474-6591  
[www.uaf.edu/comm/](http://www.uaf.edu/comm/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

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 doctoral study.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
  2. Complete the B.A. degree requirements (page 109).
  3. Complete the following program (major) requirements:\*
- a. Complete the following:
    - COMM 180—Introduction to Human Communication ..... 3
    - COMM 330—Intercultural Communication ..... 3
    - COMM 351—Gender and Communication ..... 3
    - COMM 401—Communication Research Methods ..... 3
    - COMM 425W—Communication Theory ..... 3
    - COMM 482W,O—Capstone Seminar in Communication ..... 3

- b. Complete 4 of the following:\*\*
  - COMM 300X—Communicating Ethics\*\*\* ..... 3
  - COMM 320—Communication and Language ..... 3
  - COMM 321W—Nonverbal Communication ..... 3
  - COMM 322W—Communication in Interpersonal Relationships... 3
  - COMM 331O—Advanced Group Communication..... 3
  - COMM 335O—Organizational Communication ..... 3
  - COMM 352—Family Communication ..... 3
  - COMM 432O—Professional Public Speaking ..... 3
  - COMM 441—Persuasion ..... 3
  - COMM 462W—Communication in Health Contexts..... 3
  - COMM 475W—Applied Communication in Training and Development..... 3

4. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

\*\* With approval of advisor, an appropriate level special topics or independent studies course in communication may be used to meet this requirement.

\*\*\* If taken to meet the upper division of baccalaureate core requirement for Ethics/Values and Choices in the Perspectives in the Human Condition, then the student must take an additional 300- or 400-level communication course to complete the major.

## Minor

1. Complete the following:
  - COMM 180—Introduction to Human Communication ..... 3
  - COMM 330—Intercultural Communication (3)
  - or COMM 351—Gender and Communication ..... 3
2. Complete communication electives at the 300-level or above .. 9
3. Minimum credits required ..... 15

Note: Courses designated as social science or humanities that are taken for the minor may also be used to fulfill social science and/or humanities distribution requirements for the B.A. degree.

Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

- ENGL 111X ..... (3) \_\_\_\_\_
- ENGL 211X OR 213X ..... (3) \_\_\_\_\_
- COMM 131X OR 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

- LS 100X OR 101X ..... (0-1) \_\_\_\_\_
- OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

- ANTH 100X OR SOC 100X ..... (3) \_\_\_\_\_
- ECON/PS 100X ..... (3) \_\_\_\_\_
- HIST 100X ..... (3) \_\_\_\_\_
- ART/MUS/THR 200X, HUM 201X OR ANS 202X ..... (3) \_\_\_\_\_
- ENGL/FL 200X ..... (3) \_\_\_\_\_
- PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X ..... (3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

- MATH 107X ..... (3) \_\_\_\_\_
- OR MATH 131X (except for BBA) ..... (3) \_\_\_\_\_
- OR MATH 161X ..... (3) \_\_\_\_\_
- MATH 200X ..... (4) \_\_\_\_\_
- MATH 201X ..... (4) \_\_\_\_\_
- MATH 202X ..... (4) \_\_\_\_\_
- MATH 262X ..... (4) \_\_\_\_\_
- MATH 272X ..... (3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

- ATM 101X ..... (4) \_\_\_\_\_
- BIOL 103X OR 104X ..... (4) \_\_\_\_\_
- BIOL 105X-106X ..... (8) \_\_\_\_\_
- BIOL 111X-112X ..... (8) \_\_\_\_\_
- CHEM 100X ..... (4) \_\_\_\_\_
- CHEM 103X-104X ..... (8) \_\_\_\_\_
- CHEM 105X-106X ..... (8) \_\_\_\_\_
- GEOG 205X ..... (4) \_\_\_\_\_
- GEOS 100X OR 120X OR 125X ..... (4) \_\_\_\_\_
- GEOS 101X-112X ..... (8) \_\_\_\_\_
- MSL 111X ..... (4) \_\_\_\_\_
- PHYS 102X OR 175X ..... (4) \_\_\_\_\_
- PHYS 103X-104X ..... (8) \_\_\_\_\_
- PHYS 211X-212X ..... (8) \_\_\_\_\_
- PHYS 211X-213X ..... (8) \_\_\_\_\_
- PHYS 212X-213X ..... (8) \_\_\_\_\_

# Computer Information Systems

School of Management  
Department of Accounting and Information Systems  
(907) 474-7121  
[www.uaf.edu/som/aisd.html](http://www.uaf.edu/som/aisd.html)

## Minor only

The computer information systems minor is designed to permit students in B.A. and B.S. degree programs to study a particular field of computer systems and to be introduced to a reasonable segment of information systems relating to the business enterprise.

## Minor

- Complete the following:  
ACCT 261—Accounting Concepts and Uses I ..... 3  
ACCT 262—Accounting Concepts and Uses II ..... 3  
AIS 101—Effective Personal Computer Use ..... 3  
AIS 310—Introduction to Information Systems ..... 3  
Approved elective\* ..... 3
- Minimum credits required ..... 15  
\* Approved by AIS department.

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Computer Science

College of Science, Engineering and Mathematics  
Department of Mathematical Sciences  
(907) 474-7332  
www.cs.uaf.edu/

## B.S., B.S./M.S. Degrees

Minimum Requirements for Degrees: B.S.: 120 credits;  
B.S./M.S.: 141 credits

Computer science is the study of information handling and its application to the problems of the world. Computing is widely used in support of science, engineering, business, law, medicine, education and the social sciences. The employment potential for computer science graduates is one of the highest of all majors in the College of Science, Engineering and Mathematics.

The B.S. and M.S. degrees follow the recommendations of the Association for Computing Machinery (ACM) and the Institute for Electrical and Electronic Engineers (IEEE). The B.S. degree is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

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.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X\* and any approved ethics course.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X\*, PHYS 211X and PHYS 212X.)
3. Complete the following:\*  
MATH 307—Discrete Mathematics ..... 3  
STAT 300—Statistics ..... 3
4. Complete 1 of the following:\*  
MATH 302—Differential Equations ..... 3  
MATH 308—Abstract Algebra ..... 3  
MATH 310—Numerical Analysis ..... 3  
MATH 314—Linear Algebra ..... 3  
MATH 371—Probability ..... 3  
MATH 408—Mathematical Statistics ..... 3  
MATH 460W,O—Mathematical Modeling ..... 3
5. Complete the following program (major) requirements:\*  
CS 201—Computer Science I ..... 3  
CS 202—Computer Science II ..... 3  
CS 301—Assembly Language Programming ..... 3  
CS 311—Data Structures and Algorithms ..... 3  
CS 321—Operating System ..... 3  
CS 331—Programming Languages ..... 3  
CS 402W,O—Senior Project and Professional Practice ..... 3  
CS 411—Analysis of Algorithms (3) ..... 3  
or CS 451—Automata and Formal Languages (3) ..... 3

CS 441—Computer Architecture (3) or EE 443—Computer Engineering (4).....	3-4
CS 471W—Software Engineering .....	3
EE 341—Digital and Computer Analysis and Design.....	4
ENGL 314W,O/2—Technical Writing .....	3
Electives in computer science at the 300- or 400-level or approved electives (such as EE 443) .....	9

6. Minimum credits required ..... 120  
\* Student must earn a C grade or better in each course.

## Major—B.S./M.S. Degree

1. Complete the following admission requirements:
  - a. CS major (junior preferred) or senior standing.
  - b. 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.
  - c. GRE (general).
  - d. Study goal statement.
  - e. Submit a UAF graduate application for admission.
2. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X\* and any approved ethics course.)
3. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X\*, PHYS 211X and PHYS 212X.)
4. Complete the following program (major) requirements:\*  
CS 201—Computer Science I ..... 3  
CS 202—Computer Science II ..... 3  
CS 301—Assembly Language Programming ..... 3  
CS 311—Data Structures and Algorithms ..... 3  
CS 321—Operating System ..... 3  
CS 331—Programming Languages ..... 3  
CS 402W,O—Senior Project and Professional Practice ..... 3  
CS 441—Computer Architecture ..... 3  
CS 471W—Software Engineering ..... 3  
EE 341—Digital and Computer Analysis and Design ..... 4  
ENGL 314W,O/2—Technical Writing ..... 3  
MATH elective at 300/400-level ..... 3  
MATH 307—Discrete Mathematics ..... 3  
STAT 300—Statistics ..... 3
5. Complete the following master core courses:  
CS 611—Complexity of Algorithms ..... 3  
CS 631—Programming Language Implementation ..... 3  
CS 641—Advanced Systems Architecture ..... 3  
CS 671—Advanced Software Engineering ..... 3  
CS 690—Graduate Seminar and Project ..... 3  
CS 691—Graduate Seminar and Project ..... 3  
CS upper division/graduate level electives ..... 3  
CS graduate level electives ..... 6
6. Pass a written comprehensive exam in the areas of computer algorithms/theory/complexity, computer architecture, computer language, and software engineering.

7. Minimum credits required for both degrees .....141

\* Student must earn a C grade or better in each course required for the B.S. degree.

Note: For the master's degree, a student must earn an A or B grade in 400-level courses. The C grade will be accepted in 600-level courses provided a B grade point average is maintained.

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) meet the B.S. degree requirements for Computer Science with option substituting CS 411/451 with CS 611/651.

## Minor

1. Complete the following:

CS 201—Computer Science I.....	3
CS 202—Computer Science II .....	3
Three electives at the 300- or 400-level from CS, EE 341, AIS 310, MATH 310, MATH 460; or electives approved by a computer science advisor .....	9

2. Minimum credits required .....15

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....	(3)	_____
ENGL 211X <b>OR</b> 213X .....	(3)	_____
COMM 131X <b>OR</b> 141X.....	(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X <b>OR</b> 101X .....	(0-1)	_____
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**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X <b>OR</b> SOC 100X .....	(3)	_____
ECON/PS 100X .....	(3)	_____
HIST 100X.....	(3)	_____
ART/MUS/THR 200X, HUM 201X <b>OR</b> ANS 202X .....	(3)	_____
ENGL/FL 200X .....	(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X <b>OR</b> JUST 300X.....	(3)	_____

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X .....	(3)	_____
<b>OR</b> MATH 131X (except for BBA) .....	(3)	_____
<b>OR</b> MATH 161X.....	(3)	_____
MATH 200X .....	(4)	_____
MATH 201X .....	(4)	_____
MATH 202X .....	(4)	_____
MATH 262X .....	(4)	_____
MATH 272X .....	(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X .....	(4)	_____
BIOL 103X <b>OR</b> 104X.....	(4)	_____
BIOL 105X-106X .....	(8)	_____
BIOL 111X-112X .....	(8)	_____
CHEM 100X.....	(4)	_____
CHEM 103X-104X.....	(8)	_____
CHEM 105X-106X.....	(8)	_____
GEOG 205X .....	(4)	_____
GEOS 100X <b>OR</b> 120X <b>OR</b> 125X .....	(4)	_____
GEOS 101X-112X.....	(8)	_____
MSL 111X .....	(4)	_____
PHYS 102X <b>OR</b> 175X.....	(4)	_____
PHYS 103X-104X.....	(8)	_____
PHYS 211X-212X.....	(8)	_____
PHYS 211X-213X.....	(8)	_____
PHYS 212X-213X.....	(8)	_____



# Earth Science

College of Science, Engineering and Mathematics  
Department of Geology and Geophysics  
(907) 474-7565  
[www.uaf.edu/geology/](http://www.uaf.edu/geology/)

## B.A. Degree

Minimum Requirements for Degree: 130 credits

This program provides broad training in various aspects of earth science. It is especially applicable to those wishing to teach earth science or who are entering a field such as resource management.

Basic course work is designed to meet the National Science Teachers Association requirements for teaching secondary school earth science. Students arrange additional required course work and specialization emphasis in consultation with an undergraduate advisor and a faculty member from the appropriate department. Students wishing to enroll in this degree program should contact the head of the geology and geophysics department.

The earth sciences B.A. degree meets the undergraduate requirements for prospective secondary earth science teachers (grades 7-12).

## Major—B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: NRM 303X\*, CHEM 103X and 104X or CHEM 105X and 106X or PHYS 103X and 104X).
2. Complete the B.A. degree requirements (page 109. As part of the B.A. degree requirements, complete: PHIL 380 or 382 or 481 for the humanities requirement.)
3. Complete the following program (major) requirements: \*

GEOG 339—Maps and Landscape Analysis (4)	
or GEOS 408—Photogeology (2)	2-4
GEOG 401—Weather and Climate	3
GEOG 402—Resources and Environment	3
GEOS 101X—The Dynamic Earth	4
GEOS 112X—The History of Earth and Life	4
GEOS 225—Field and Computer Methods In Geology	3
GEOS 262—Rocks and Minerals	3
GEOS 304—Geomorphology	3
GEOS 315W—Paleobiology and Paleontology (4)	
or BIOL 328O—Biology of Marine Organisms (3)	3-4
GEOS 422—Remote Sensing (3)	
or NRM 338—Introduction to GIS (3)	3
MSL 111X—The Oceans	4
NRM 101—Natural Resource Conservation and Policy	3
PHYS 175X—Introduction to Astronomy	3
4. Complete a specialization emphasis requirement: \*
  - a. Complete an additional approved 9 credits\*\* at the 300-level or above with emphasis in geology, geography, biology, natural resources management or other earth science-related field as approved by the undergraduate advisor.

5. Complete any UAF minor except geology. If appropriate, courses used to satisfy the specialization emphasis requirement can also be applied towards the requirements for a minor.
6. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

Note: The following courses are recommended to fulfill the upper division writing and oral intensive requirements (2 "W" courses and 1 "O" course): GEOS 475WO, GEOS 463O, GEOS 315W, GEOG 482WO, NRM 304O, or NRM 380W.

Note: Geography courses taken to meet the B.A. social science requirement may also be used to fulfill the specialization emphasis and (or) minor requirements. GEOG 402, a major requirement, also satisfies the B.A. social science requirement.

Note: In consultation with an undergraduate advisor, students should prepare an undergraduate study plan that includes specific courses to satisfy the major and minor complexes. This should be completed by the end of the sophomore year.

\*We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. The Earth Science B.A. degree requirements will apply to the UAF School of Education during spring 2006 or later, for licensure in secondary earth science.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X.....(0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Economics

School of Management  
Department of Economics  
(907) 474-7119  
[www.uaf.edu/som/ed.html](http://www.uaf.edu/som/ed.html)

## B.A., B.B.A. Degrees

Minimum Requirements for Degrees: B.A.: 120 Credits;  
B.B.A.: 130 Credits

Economics is the study of social activities concerned with the production, distribution and consumption of goods and services. Nearly all social phenomena and problems have economic aspects, and, therefore, knowledge of economic systems and their relations with each other is essential to an understanding of the complex world in which we live.

The department has three undergraduate instructional goals: to provide students with basic tools of analysis and the factual, statistical and descriptive materials they will need to perform their duties as citizens; to introduce economics majors to the various fields of economics to prepare them for positions in business and government and for graduate study; and to offer a course of study suitable for a minor in economics.

## Admission Standards to UAF School of Management's Upper-Division Courses, effective Fall 2005

1. Complete at least 30-40 credits with a cumulative GPA of 2.25 or higher.
2. Complete the following courses with a grade of "C" or better:  
ACCT 261—Accounting Concepts and Uses I ..... 3  
ACCT 262—Accounting Concepts and Uses II ..... 3  
STAT 200—Elementary Probability and Statistics ..... 3  
AIS 101—Effective Personal Computer Use ..... 3  
COMM 131X—Fundamentals of Oral Communication:  
Group Context (3)  
or COMM 141X Fundamentals of Oral Communication:  
Public Context (3) ..... 3  
ECON 200—Principles of Economics ..... 4  
ENGL 111X—Introduction to Academic Writing ..... 3  
ENGL 211X—Academic Writing about Literature (3)  
or ENGL 213X—Academic Writing about Social and Natural  
Sciences (3) ..... 3  
MATH 262X—Calculus for Business and Economics ..... 4
3. Complete at least 9 credits that satisfy UAF's Baccalaureate Core in Perspectives on the Human Condition and Natural Sciences.

## Conditional Admission to Upper Division courses

A student wishing to take upper division courses may do so for one semester only, while completing lower level deficiencies, with approval of the director of undergraduate studies.

## Major—B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 262X\*.)
  2. Complete the B.A. degree requirements (page 109. As part of the B.A. degree requirements, complete: MATH 161X\*, ECON 200\* and 3 credits of a political science elective.)
  3. Complete the following foundation requirements:\*
- |   |    |
|---|----|
| ACCT 261—Accounting Concepts and Uses I .....                 | 3  |
| ECON 227—Intermediate Statistics for Economics and Business.. | 3  |
| ECON 321—Intermediate Microeconomics .....                    | 3  |
| ECON 324—Intermediate Macroeconomics.....                     | 3  |
| ECON 463W—International Economics .....                       | 3  |
| STAT 200—Elementary Probability and Statistics.....           | 3  |
| Economics electives at the 300-level or above** .....         | 18 |
4. Minimum credits required .....120
- \* Student must earn a C grade or better in each course.  
\*\* Up to 6 credits of the following courses may be included: BA 325, 343 and 360. At least 6 credits of electives must be courses designated writing intensive (W).

## Major—B.B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 262X\*.)
  2. Complete the B.B.A. degree requirements (page 113. As part of the Common Body of Knowledge, complete AIS 310.)
  3. Complete the following program (major) requirements:\*
- |  |       |
|--|-------|
| ECON 321—Intermediate Microeconomics .....   | 3     |
| ECON 324—Intermediate Macroeconomics** ..... | 3     |
| ECON 463W—International Economics .....      | 3     |
| Economics electives *** .....                | 15-18 |
| Political science elective.....              | 3     |
4. Complete a minor complex (optional) or 20-21 free electives.
  5. Minimum credits required .....130
- \* Student must earn a C grade or better in each course.  
\*\* If not taken in the B.B.A. Common Body of Knowledge (CBK).  
\*\*\* Only 15 credits of economics electives are required if ECON 350 is taken as part of the CBK. At least 6 credits must be courses designated writing intensive (W).

## Minor

1. Complete the following:  
ECON 200—Principles of Economics ..... 4  
Approved economics courses at the 300-level or above..... 12
2. Minimum credits required .....16

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Education

School of Education  
(907) 474-7341  
[www.uaf.edu/educ/](http://www.uaf.edu/educ/)

## B.A. Degree

Minimum Requirements for Degree: 127 credits;  
Post baccalaureate elementary licensure: 35–39 credits;  
Post baccalaureate secondary licensure: 33 credits;  
Music K-12 licensure: 33 credits (Contact the Music Department  
(907) 474-7555)

UAF serves students from all of Alaska as well as from other states and nations. It is particularly committed to enhancing educational opportunities for the state's rural and Native populations. UAF education programs prepare educators to work in urban and rural Alaska and to work with multicultural and minority—especially Alaska Native—students.

Through its rural campuses, the university is responsive to local and regional needs, including open educational access to its programs. Special strengths exist in the use of educational technology which provides distance delivery of selected programs to many areas of the state.

The School of Education offers two degrees: a bachelor of arts in elementary education and a master of education. The school also offers post baccalaureate course work and internship experiences preparing candidates for Alaska state licensure in teaching (Type A).

The UAF 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 and school counselors. Education programs are offered and faculty are located on the Fairbanks campus and at the branch campus centers, in keeping with the university's commitment to preparing educators for rural Alaska. Courses are available on-site and by distance delivery through the Kuskokwim (Bethel), Bristol Bay (Dillingham and Naknek), Interior-Aleutians (Unalaska and rural education centers throughout the Interior), Chukchi (Kotzebue), and Northwest (Nome) 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 Student Services Office.

## Licensure Information

UAF education programs are approved by the Alaska State Board of Education as meeting National Association for State Directors of Teacher Education and Certification (NASDTEC) standards. For information about these programs, contact the Student Services Office in the UAF School of Education, or contact the rural faculty at the nearest campus.

Certification is awarded by the Alaska Department of Education and Early Development in Juneau. Therefore, students must meet all requirements specified by AK-DOEED at the time of their application for the teaching certificate. In addition to completing an approved teacher training program, as of December 1, 1998, the state of Alaska requires that all initial applicants for a regular Type A certificate provide evidence of passing Alaska qualifying scores on the Praxis I, Academic Skills Assessment including the Pre-Professional Skills Test (PPST), and/or the Computer-Based Academic Skills As-

essment (CBT).

DOEED also requires the completion of 3 credits of approved coursework in Alaska Studies and 3 credits in multicultural or cross-cultural education in order to receive an initial five-year teaching license. A two-year provisional license can be obtained without meeting this requirement. Contact the School of Education's Student Services Office for a current list of approved courses.

## B.A. Degree, Elementary Education

Students in the bachelor of arts in Elementary Education degree program are assessed relative to national and state standards, including National Council for Accreditation of Teacher Education (NCATE) standards, the Alaska Teacher Standards, the Alaska Student Content Standards, and the Alaska Standards for Culturally Responsive Schools. Course work provides students on the Fairbanks campus and in remote sites with the experience necessary to be eligible for an elementary teacher license. 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.

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 course work in the designated UAF core requirements; (2) additional subject area course work 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 capstone year-long school internship with a mentor teacher, with concurrent enrollment in professional course work 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.

Degree and program requirements include multiple types of on-going assessments throughout the programs. There is a strong emphasis on performance assessment and portfolio development and evaluation relative to national and state standards.

## Admission Requirements

Students admitted to the B.A. degree program in Elementary Education have the opportunity to enroll in subject area courses and education courses that provide a foundation for participation in the final Professional Internship year. However, 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. Declaring a B.A. major in Elementary Education does not guarantee acceptance 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 February 1. In making valid and reliable judgments about each applicant's knowledge, skills, and dispositions prior to approval for the year-long internship in a classroom with elementary children, faculty in the School of Education consider multiple criteria.



Students must submit the following information to the School of Education's Student Services Office by February 1:

1. Copies of transcripts from all institutions attended.
2. Evidence of completion of all B.A. degree in Elementary Education degree courses (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 the UAF Core communication courses and in all required education and math courses. Students with less than a 2.75 overall GPA may be considered for conditional admission in special circumstances.
3. Alaska passing scores from the Praxis I exams in reading, writing, and math.
4. Two letters of reference that address qualifications and potential as a teacher.
5. A current and complete resume/curriculum vitae.
6. Two one-page essays on topics determined by the School of Education.
7. Completed Elementary Teacher Education Academic Analysis and Life Experiences/Work Form and the Life Experiences 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.
8. A one-to-two-page autobiographical sketch (appropriate for presenting to prospective principals and mentor teachers).
9. An extemporaneous writing sample.
10. Evidence of technology competence at a level appropriate for the year-long internship.
11. Evidence of successful experiences in teaching and learning situations based on evaluations from teachers or community members who participated in applicant's previous classroom and community fieldwork experiences.
12. Evidence of ability to work collaboratively and respectfully in cross-cultural contexts.
13. Completed Alaska Student Teacher Authorization Packet (including fingerprint cards and criminal background check. Forms are available from the School of Education).
14. Interview, when appropriate.
15. Interns will be required to submit negative TB test results to their placement school. Some school districts may require interns to pass a general physical exam and require additional shot records.

*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.*

## Major—B.A. Degree

1. Complete the general university requirements (page 106). As part of the core curriculum requirements, complete the following\*: ANTH/SOC 100X, HIST 100X, PS 100X, MATH 107X\* or 161X\*, ART/MUS/THR 200X, BIOL 100X or 104X, CHEM 100X or PHYS 115X\*\*. Students who choose the language option to meet core perspectives on the human condition requirements can submit their language credits only for the ENGL/FL 200X and the core ethics requirements.)
2. Complete the following B.A. degree and program (major) requirements:
  - a. Complete the following mathematics requirements\*:
 

MATH 205—Mathematics for Elementary School Teachers I.....	3
MATH 206—Mathematics for Elementary School Teachers II.....	3
  - b. Complete 1 of the following:
 

GEOS 100X—Introduction to Earth Science .....	4
GEOS 125X—Humans, Earth and the Environment .....	4
PHYS 116X—Physical Science II ** .....	4
  - c. Complete the following social sciences requirements:
 

ANTH 242—Native Cultures of Alaska .....	3
GEOG 101—Introductory Geography (3) .....	3
or GEOG 203—World Economic Geography (3) .....	3
HIST 131—History of the U.S. ....	3
HIST 461W—History of Alaska (3) .....	3
or HIST 115—Alaska, Land and Its People (3) .....	3
PSY 101—Introduction to Psychology .....	3
PSY 245—Child Development .....	3
  - d. Complete the following humanities requirements:
 

ENGL 271—Introduction to Creative Writing—Fiction (3) .....	3
or ENGL 272—Introduction to Creative Writing—Poetry (3) .....	3
or ENGL 314W/O—Technical Writing (3) .....	3
or JRN 311W—Magazine Article Writing (3).....	3
ENGL 306—Survey of American Literature: Beginnings to the Civil War (3) .....	3
or ENGL 307—Survey of American Literature: Civil War to Present (3) .....	3
or ENGL 308—Survey of British Literature: Beowulf to the Romantic Period (3) .....	3
or ENGL 309—Survey of British Literature: Romantic Period to the Present (3) .....	3
or complete another literature-focus course (3) .....	3
JRN 486—Media Literacy (3) .....	3
or JRN 308—Film and TV Criticism (3) .....	3
LING 101—Nature of Language (3) .....	3
or LING 303W/O—Language Acquisition (3) .....	3
  - e. Demonstrate competence in technology skills through School of Education assessment) or completion of ED 429—Computer Application in the Classroom .....
  - f. Complete the following education requirements\*:
 

ED 110—Becoming a Teacher in the 21st Century.....	1
ED 201—Introduction to Education.....	3
ED 204—Literature for Children .....	3
ED 330—Assessment of Learning .....	3
ED 350—Communication in Cross-Cultural Classrooms (3) .....	3
or ED/ANS 420—Alaska Native Education (3) .....	3
or ED/ANS 461—Native Ways of Knowing (3) .....	3
ED 410W—Foundations of Literacy Development .....	3
EDSE 422—Curriculum and Strategies II: High Incidence .....	3
EDSE 482—Inclusive Classrooms for All Children .....	3
  - g. Complete the following professional internship year with integrated course work (first semester):
 

ED 411—Reading, Writing, Language Arts: Methods and Curriculum Development.....	3
ED 412W—Integrated Social Studies and Language Arts: Methods and Curriculum Development.....	3



- ED 466—Internship and Collaborative Student Teaching..... 3  
ED 467—Portfolio Development I..... 1  
ED 478—Mathematics and Science: Methods and Curriculum  
Development..... 4  
h. Complete the following professional internship year with  
integrated course work (second semester):  
ED 310—Art, Music and Drama in Elementary Classrooms ..... 2  
ED 327—Physical Education and Health in  
Elementary Classrooms ..... 2  
ED 468O—Internship and Student Teaching..... 6  
ED 469—Portfolio Development II..... 2  
3. Minimum credits required ..... 127  
*\* Student must earn a C grade or better in each core communications,  
mathematics and education course.*  
*\*\* If PHYS 115X is completed for the core, a student cannot take PHYS 116X to  
fulfill the science requirement in the major.*

### Minor—General Education

The General Education minor consists of two options. Option A is an education minor designed for students who intend to pursue a license in elementary education. Students who complete the Option A with a grade of C or better for each course, will be allowed to substitute this minor for ED 624, 625 and 626 in the post-baccalaureate Elementary Teacher Partnership Licensure (ETEP) Program available on the UAF campus.

Option B is designed for any student interested in education issues who does not intend to pursue a license in elementary education.

#### Option A\*

- Complete the following:  
ED 110—Becoming a Teacher in the 21<sup>st</sup> Century ..... 1  
ED 201—Introduction to Education..... 3  
ED 204—Literature for Children ..... 3  
ED 330—Assessment of Learning..... 3  
ED 350—Communication in Cross-Cultural Classrooms (3)  
or ANS/ED 420—Alaska Native Education (3) ..... 3  
ED 410—Foundations of Literacy Development ..... 3  
EDSE 482—Inclusive Classrooms for All Children ..... 3
- Minimum credits required ..... 19

#### Option B\*\*

- Complete the following:  
ED 110—Becoming a Teacher in the 21<sup>st</sup> Century ..... 1  
ED 201—Introduction to Education..... 3  
ED 299—Practicum in Education ..... 3  
ED 350—Communication in Cross-Cultural Classrooms (3)  
or ANS/ED 420—Alaska Native Education (3) ..... 3  
PSY 240—Lifespan Developmental Psychology (3)  
or PSY 245—Child Development (3) ..... 3  
Approved education electives\*\*\* ..... 6
- Minimum credits required ..... 19  
*\* Practicum required in each course.*  
*\*\* Practicum may be required in each education course.*  
*\*\*\* Contact the School of Education's Student Services Office for list of approved  
elective courses.*

### Elementary Post-Baccalaureate Licensure Program

This program is offered through the Elementary Teacher Education Partnership (ETEP) program in Fairbanks and through the Rural Educator Preparation Partnership (REPP) program through distance delivery.

The elementary teacher post-baccalaureate program is an intensive, year-long program designed to provide students with the course work and internship experience necessary to meet the Alaska Teacher

Standards and be eligible for licensure as a 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 have the option of completing the program at the undergraduate or graduate level. Students choosing the graduate option begin the program in the summer with a 9-credit block of courses. Please refer to the graduate degrees section of this catalog for application and admission procedures and general information.

Students who choose to complete the licensure requirements at the undergraduate level can complete the undergraduate courses ED 110, 201, 330, 410, and EDSE 482 and 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 internship.

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 Type A Elementary License. Students who have completed the Alaska Studies and the Multicultural Education/Cross-Cultural Communication courses required by the Alaska Department of Education will be eligible for a five-year license. Others will be eligible for a two-year provisional license.

### Undergraduate Admission and Application Information

It is recommended that students submit applications before December 15 to provide time to complete prerequisites if necessary. Applications will be reviewed as submitted. Deadline is March 1.

Admission includes meeting (1) the undergraduate admission process; and (2) the School of Education admission requirements.

Submit the following directly to the UAF Office of Admissions and a copy to the School of Education:

- Official transcript of bachelor's degree from an accredited institution, minimum grade point average of 2.75, undergraduate application and \$40 application fee.

Submit the following information directly to the School of Education:

- Alaska passing scores from the Praxis I exam in reading, writing and mathematics.
- Completed academic analysis form to provide information on breadth and depth of prior course work relative to 10 Alaska Student Content Standard areas. Additional course work may be required. If additional course work is required, it must be completed prior to beginning the program.
- Extemporaneous writing sample, autobiography, evidence of technology competence, evidence of successful paid or volunteer teaching/learning experience, evidence of successful cross-cultural experience.
- Completed Alaska Department of Education and Early Development authorization packet (fingerprint cards and criminal background check). Packet is available from the School of Education. Contact the School of Education for additional information.
- Interns will be required to submit negative TB test results to their placement schools. Some school districts may require interns to submit a physical examination form.

## Program Requirements

1. During the summer semester complete the following 9 graduate level credits; or complete ED 110, 201, 330, 410 and EDSE 482 prior to August 1st of the internship year.

ED 624—Foundations of Education in Alaska: From Segregation to Standards\* ..... 3

ED 625—Exceptional Learners and Child Development: Individual and Cultural Characteristics ..... 3

ED 626—Teaching Reading, Writing and Language Arts ..... 3

\* ED 624 meets the state of Alaska requirement for an approved multicultural/cross-cultural communication course.

2. Complete the following professional internship year with integrated course work. (fall and spring semester):

### Fall Semester

ED 411—Reading, Writing, Language Arts: Methods and Curriculum Development ..... 3

ED 412W—Integrated Social Studies and Language Arts: Methods and Curriculum Development ..... 3

ED 466—Internship and Collaborative Student Teaching ..... 3

ED 467—Portfolio Development ..... 1

ED 478—Integrated Mathematics and Science: Methods and Curriculum Development ..... 4

### Spring Semester

ED 310—Art, Music and Drama in the Elementary Classroom ..... 2

ED 327—Physical Education and Health Education for Elementary Teachers ..... 2

ED 468O—Internship and Student Teaching ..... 6

ED 469—Portfolio Development II ..... 2

3. Minimum credits required ..... 35-39

## Secondary Post-Baccalaureate Licensure Program

Offered in Fairbanks or by distance delivery through the Rural Educator Preparation Partnership Program (REPP), this is an intensive, classroom-based secondary licensure program (33 credits) that prepares post-baccalaureate candidates for secondary (grades 7-12) teaching positions. The program is specifically designed to prepare candidates to teach in multicultural settings in Alaska. Content that addresses multicultural issues in general, and Alaska rural issues in particular, is contained specifically in EDSC 457, Multicultural Education and School-Community Relations, and is a fundamental component of the course work within the program. In a year when funding is available, a rural practicum is required of all secondary candidates completing their program. Upon request and successful completion of a yearlong internship, course work and state of Alaska licensure requirements, candidates are recommended for a teaching license. Candidates who have completed a state of Alaska approved Alaska Studies course will be eligible for a five-year Type A license. Others will be eligible for a two-year Type A provisional license. The program is accredited by NASDTEC and under NASDTEC standards until 2006.

## Admissions Process and Requirements

Admission to the undergraduate secondary post-baccalaureate licensure program includes meeting requirements of the undergraduate admission process and the School of Education. Students will take their courses at the undergraduate (400) level and will NOT be able to apply these courses towards a Master of Education degree.

Submit the following information directly to UAF Office of Admissions:

1. UAF undergraduate application and application fee

2. Official transcript of bachelor's degree from accredited institution, minimum grade point average of 2.75

Submit the following information directly to the School of Education:

1. Alaska Passing scores from the Praxis I exam in reading, writing and mathematics.
2. Three current letters of reference that address qualifications and potential as a teacher.
3. A personal statement indicating reasons for becoming a teacher, assessment of academic and personal strengths relative to future teaching plans, description of direct experience with adolescents in supervisory or instructional capacities, and reason for selecting the secondary post-baccalaureate licensure program.
4. Extemporaneous writing sample. Contact the School of Education Advising Office for date, time, and location information.
5. Demonstrated evidence of technology competence or completion of ED 429, Computer Applications in the Classroom, or an equivalent course approved by the School of Education.
6. Demonstrated evidence of completion of degree in a content area suitable for teaching in a public secondary school as determined by the School of Education/Appropriate Academic Department.
  - a. Additional content courses may be recommended or required for placement in a secondary internship. Candidates should seek early advising regarding content requirements.
  - b. All candidates applying for admission to the secondary post-baccalaureate licensure program in Spring 2006 or later, will be required to meet new undergraduate degree requirements as listed in admission checklists.
  - c. Evaluation of transcript for equivalency of an academic major may be requested.
  - d. Candidates may request an evaluation for content equivalency from the School of Education in interdisciplinary social studies and interdisciplinary English/language arts.
  - e. Praxis II passing scores as set by the state of Alaska (currently available in mathematics, English, general science, French and German) may be used to support competency in these areas.
  - f. The Department of Education and Early Development will, upon request, add additional endorsement areas based on an 18 credit minor posted on an interns' transcript.
7. Applicants must submit a placement packet, contact School of Education for specifics. The School of Education determines placement approval, change or termination.

## Application Review Process

Applications are due on March 1 and are reviewed thereafter for admission in the summer semester. Applications of outstanding candidates may be considered through spring semester. A candidate may be admitted, not admitted, or admitted with stipulations. Stipulations are specified when additional development in particular area(s) is needed before beginning a secondary post-baccalaureate program.

The UAF School of Education coordinates with appropriate academic departments the review and evaluation of the candidate's qualifications, professional experiences and academic performance

based on the contents of his/her application. The secondary post-baccalaureate program is a selective teacher education program. A comprehensive system including more than one measure is used to assess the personal characteristics, communication skills, and basic skills proficiency of candidates preparing to teach. Multiple assessment measures include a review of transcripts, content area strengths and/or Praxis II scores, personal statement and/or writing proficiency exams, Praxis I scores and letters of reference. A personal interview will be required as part of the admission process.

### 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 professionals in the schools. Systematic approaches are used to assist education candidates who are making unsatisfactory progress in their programs, but still maintain potential for successful completion.

Specific criteria for entry to the secondary teaching internship are:

- \* Successful completion of summer program courses.
- \* Approval of faculty to enter the Secondary Education Internship.
- \* Candidates will be required to submit negative TB test results to their placement schools. Some school districts may require candidates to submit a physical examination form.
- \* State Alaska Certificate of Authorization, fingerprint cards and money order in the amount of \$66 to the School of Education by June 1st (this fee is non refundable once submitted to the state of Alaska). These materials will be submitted to the state

of Alaska for a criminal background check. Fees are subject to change. These materials will be provided to the student.

### Program Requirements

1. Complete the following for secondary licensure:
  - EDSC 402—Methods of Teaching in the Secondary School ..... 3
  - EDSC 407—Reading Strategies for Secondary Teachers ..... 3
  - EDSC 414—Learning, Development & Special Needs Instruction 3
  - EDSC 415—Foundations of Modern Educational Practices ..... 3
  - EDSC 424—Culturally Responsive Small School Programs for Alaska ..... 3
  - EDSC 431—Secondary Instruction and Assessment in the Content Area (3 credits)\*
  - or EDSC 432—English/Language Arts Secondary Instruction and Assessment (3 credits)\*
  - or EDSC 433—Mathematics Secondary Instruction and Assessment (3 credits)\*
  - or EDSC 434—Science Secondary Instruction and Assessment (3 credits)\*
  - or EDSC 435—Social Studies Secondary Instruction and Assessment ..... 3\*
  - EDSC 442—Portfolio Preparation: Integrating Theory and Practice ..... 3
  - EDSC 457—Multicultural Education and School-Community Relations ..... 3
  - EDSC 458—Classroom Organization and Management ..... 3
  - EDSC 471—Secondary Teaching: School Internship I and Seminar ..... 3
  - EDSC 472—Secondary Teaching: School Internship II and Seminar ..... 3
2. Minimum credits required ..... 33

\*Candidates must take the section or course that corresponds with their major teaching content areas.

*Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).*

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_

ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_

COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_

**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_

ECON/PS 100X ..... (3) \_\_\_\_\_

HIST 100X ..... (3) \_\_\_\_\_

ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_

ENGL/FL 200X ..... (3) \_\_\_\_\_

PHIL 322X, NRM 303X, COMM 300X, PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_

**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_

**OR** MATH 161X ..... (3) \_\_\_\_\_

MATH 200X ..... (4) \_\_\_\_\_

MATH 201X ..... (4) \_\_\_\_\_

MATH 202X ..... (4) \_\_\_\_\_

MATH 262X ..... (4) \_\_\_\_\_

MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_

BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_

BIOL 105X-106X ..... (8) \_\_\_\_\_

BIOL 111X-112X ..... (8) \_\_\_\_\_

CHEM 100X ..... (4) \_\_\_\_\_

CHEM 103X-104X ..... (8) \_\_\_\_\_

CHEM 105X-106X ..... (8) \_\_\_\_\_

GEOG 205X ..... (4) \_\_\_\_\_

GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_

GEOS 101X-112X ..... (8) \_\_\_\_\_

MSL 111X ..... (4) \_\_\_\_\_

PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_

PHYS 103X-104X ..... (8) \_\_\_\_\_

PHYS 211X-212X ..... (8) \_\_\_\_\_

PHYS 211X-213X ..... (8) \_\_\_\_\_

PHYS 212X-213X ..... (8) \_\_\_\_\_

# Electrical Engineering

College of Science, Engineering and Mathematics  
Department of Electrical and Computer Engineering  
(907) 474-7137  
[www.uaf.edu/ece/](http://www.uaf.edu/ece/)

## B.S. Degree

Minimum Requirements for Degree: 134 credits

Electrical and computing engineering encompasses telecommunications, electrical power generation, transmission and distribution, control systems, and computer applications and design. Electrical engineers can typically expect gainful employment in one or more of these areas after graduation.

Communication engineers design, build and operate communication devices and systems, including satellites, antennas, wireless devices and computer networks. Electric power engineers design and oversee the construction, installation and maintenance of electrical systems that provide light, heat and power. Power engineers are also instrumental in the development of systems using modern power electronic devices to control power generation and distribution and build electric drives. People trained in computer engineering automate businesses, factories, pipelines and refineries. They design control systems and computers that guide trains, planes and space vehicles. Electrical engineers design the integrated circuits and automatic control systems used in many areas of science and engineering. Process controls in the mining and petroleum industries are also largely the responsibility of the electrical and computer engineer.

Undergraduate research and design project opportunities are available at UAF in the areas of communications, radar, sonar, and lidar remote sensing, instrumentation and microwave circuit design, electric power and energy systems, digital and computer engineering and nanotechnology. The Student Rocket Project brings electrical and computer engineering and mechanical engineering students together to build and launch rockets at the Poker Flat Research Range, the only university-affiliated rocket range in the country. This program offers real engineering experience as well as fellowships, paid internships and scholarships.

The curriculum is designed to ensure that basic fundamentals and specialized skills are acquired by the student. The program prepares engineers to enter practice upon graduation and provides the theoretical background for students entering graduate studies. Candidates for the B.S. degree are required to take the state of Alaska Fundamentals of Engineering Examination in their general field.

The department's mission 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.

## Major—B.S. Degree

### Concentrations: Communications, Computer Engineering, Power and Control

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X, CHEM 105X and CHEM 106X or PHYS 213X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X and PHYS 212X.)

3. Complete the following program (major) requirements:\*
- |  |     |
|--|-----|
| EE 102—Introduction to Electrical Engineering .....                      | 3   |
| EE 203—Electrical Engineering Fundamentals I.....                        | 4   |
| EE 204—Electrical Engineering Fundamentals II .....                      | 4   |
| EE 303—Electrical Machinery .....  | 4   |
| EE 311—Applied Engineering Electromagnetics.....                         | 3   |
| EE 331—High Frequency Lab.....   | 1   |
| EE 333W—Physical Electronics .....                                       | 4   |
| EE 334—Electronic Circuit Design.....                                    | 4   |
| EE 343—Digital Systems Analysis and Design .....                         | 4   |
| EE 353—Circuit Theory.....   | 3   |
| EE 354—Engineering Signal Analysis.....                                  | 3   |
| EE 471—Fundamentals of Automatic Control .....                           | 3   |
| ES 101—Introduction to Engineering.....                                  | 2   |
| ES 201—Computer Techniques (3)<br>or CS 201—Computer Science I (3) ..... | 3   |
| ES 208—Mechanics.....  | 4   |
| ESM 450W—Economic Analysis and Operations.....                           | 3   |
| MATH 202X—Calculus.....  | 4   |
| MATH 302—Differential Equations .....                                    | 3   |
| Approved EE elective .....   | 3-4 |
| Approved EE design elective .....  | 3-4 |
| Approved engineering science elective** .....                            | 3   |
| Approved mathematics elective*** .....                                   | 3   |

4. Complete state of Alaska Fundamentals of Engineering examination.

5. Complete 1 of the following concentrations:\*

#### Communications

- a. Complete the following:

EE 312—Electromagnetic Waves and Devices.....	3
EE 332—Electromagnetics Laboratory .....	1
EE 461—Communication Systems .....	4
Approved engineering science elective** .....	3
- b. Minimum credits required .....

#### Computer Engineering

- a. Complete the following:

EE 443—Computer Engineering Analysis and Design .....	4
EE 451—Digital Signal Processing.....	4
EE 461—Communication Systems .....	4
- b. Minimum credits required .....

#### Power and Control

- a. Complete the following:

EE 404—Electric Power Systems .....	4
EE 406—Electrical Power Engineering.....	4
Approved engineering science elective** .....	3
- b. Minimum credits required .....

\* Student must earn a C grade or better in each electrical engineering course.

\*\* Engineering science elective to be chosen from ES 331, ME 334, ES 341 and ES 346.

\*\*\* Mathematics elective to be chosen from the following advanced topics: linear algebra and matrices, probability and statistics, partial differential equations, numerical analysis, advanced calculus or complex variables.

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.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# English

College of Liberal Arts  
Department of English  
(907) 474-7193  
[www.uaf.edu/english/](http://www.uaf.edu/english/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

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 and a three-year M.F.A. degree in creative writing. Teaching assistantships are available for both 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. is a terminal degree, culminating in the production of a publication-quality thesis manuscript of poetry, fiction, drama or creative non-fiction.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following:
  - a. ENGL 310—Literary Criticism ..... 3
  - b. Complete 1 of the following:
    - ENGL 301—Continental Literature in Translation: The Ancient World ..... 3
    - ENGL 302—Continental Literature in Translation: Medieval and Renaissance ..... 3
  - c. Complete 3 of the following:
    - ENGL 306—Survey of American Literature: Beginnings to the Civil War ..... 3
    - ENGL 307—Survey of American Literature: Civil War to the Present ..... 3
    - ENGL 308—Survey of British Literature: Beowulf to the Romantic Period ..... 3
    - ENGL 309—Survey of British Literature: Romantic Period to the Present ..... 3
  - d. Complete 1 of the following:
    - ENGL 422W,O/2—Shakespeare: History Plays and Tragedies ..... 3
    - ENGL 425W,O/2—Shakespeare: Comedies and Non-Dramatic Poetry ..... 3
  - e. Complete 1 of the following:
    - ENGL 317—Traditional English Grammar ..... 3
    - ENGL 318—Modern English Grammar ..... 3
    - ENGL 462—Applied English Linguistics ..... 3
    - ENGL 472—History of the English Language ..... 3
  - f. Complete 5 ENGL 300- and 400-level courses (at least 3 at the 400-level).
  - g. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

### Recommended Courses for Those Interested in Creative Writing:

- ENGL 313W—Writing Non-Fiction Prose ..... 3
- ENGL 371W,O—Intermediate Creative Writing ..... 3
- ENGL 471W—Undergraduate Writer's Workshop ..... 3

### Recommended Courses for Those Interested in Teaching:

- ENGL 472—History of the English Language ..... 3
- ENGL 485—Teaching Composition in the Schools ..... 3

## Minor

1. Complete 2 of the following:
  - ENGL 301—Continental Literature in Translation: The Ancient World (3)
    - or ENGL 302—Continental Literature in Translation: Medieval and Renaissance (3) ..... 3
  - ENGL 306—Survey of American Literature: Beginnings to the Civil War ..... 3
  - ENGL 307—Survey of American Literature: Civil War to the Present ..... 3
  - ENGL 308—Survey of British Literature: Beowulf to the Romantic Period ..... 3
  - ENGL 309—Survey of British Literature: Romantic Period to the Present ..... 3
2. Complete the following:
  - ENGL 422W,O/2—Shakespeare: History Plays and Tragedies (3)
    - or ENGL 425W,O/2—Shakespeare: Comedies and Non-Dramatic Poetry (3) ..... 3
  - ENGL electives at the 300- or 400-level ..... 9
3. Minimum credits required ..... 18

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Environmental Politics

College of Liberal Arts  
Department of Political Science  
(907) 474-7609  
[www.uaf.edu/polisci/](http://www.uaf.edu/polisci/)

## Minor only

Students in the minor program in environmental politics explore the local, national and international contexts within which key decisions about the environment are made. Courses examine philosophical and theoretical perspectives on the environment; ways in which different countries address issues of resource development and environmental regulations; international environmental laws, treaties, and institutions; relationships between environmental protection and national security; relationships between politics and environmental science; and the effects of environmental concerns on the international political economy.

The minor may be used in conjunction with any B.A. degree program, including political science, or as an optional addition to any B.S. degree program. For further information, contact the Department of Political Science.

1. Complete the following\*:  
PS 101—Introduction to American Government and Politics ..... 3
2. Complete 12 elective political science credits from the following.  
PS 447—U.S. Environmental Politics ..... 3  
PS 448—Environmental Politics of the Circumpolar North ..... 3  
PS 454—International Law and the Environment ..... 3  
PS 455—Political Economy of the Global Environment ..... 3  
PS 456—Science, Technology and Politics ..... 3  
PS 458—Comparative Environmental Politics ..... 3
3. Minimum credits required ..... 15  
\* PS 100X is recommended to fulfill the political economy requirement of the core curriculum.

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Eskimo

College of Liberal Arts  
Department of Alaska Native Languages  
(907) 474-7874  
[www.uaf.edu/anlc/](http://www.uaf.edu/anlc/)

## B.A. Degree

Minimum Requirements for Degree: 130 credits

Eskimo languages are spoken by far northern people from the north-eastern tip of Siberia, across Alaska and Canada, to East Greenland. The Eskimo languages include the four Yupik languages of Alaska and Siberia as well as Inuit, the Alaskan sector of which is called Inupiaq. In terms of population and numbers of speakers, Central Alaskan Yup'ik is by far the largest Alaska Native language; Inupiaq is the second largest. Eskimo languages are the linguistic heritage of more than half of Alaska's Native population.

Students who obtain a B.A. in Central Yup'ik or Inupiaq Eskimo may be employed as Native language instructors or language specialists for school districts or Native organizations. No other university in the United States offers a B.A. in Eskimo.

Students in linguistics or anthropology may want to complete a minor in Eskimo to add a distinctly Alaska emphasis to their education.

## Inupiaq Eskimo—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
- ANL 315—Alaska Native Languages: Eskimo-Aleut ..... 3
- ESK 111—Elementary Inupiaq Eskimo ..... 5
- ESK 112—Elementary Inupiaq Eskimo ..... 5
- ESK 211—Intermediate Inupiaq Eskimo ..... 3
- ESK 212—Intermediate Inupiaq Eskimo ..... 3
- ESK 417—Advanced Inupiaq Eskimo ..... 3
- LING 101—Nature of Language (3)  
or ANS 320W—Language and Culture:  
Application of Alaska (3) ..... 3
4. Complete 3 of the following:\*
- ANL 287—Teaching Methods for Alaska Native Languages ..... 3
- ANL 316—Alaska Native Languages: Indian Languages ..... 3
- ANS/ENGL 349—Narrative Art of Alaska Native  
Peoples (in English Translation) ..... 3
- ANTH 242—Native Cultures of Alaska ..... 3
- ANTH 380—The People of Alaskan Southwest: Aleuts, Kodiak  
Islanders and the Chugach ..... 3
- ANTH 381—The Inupiaq and Yup'ik Peoples ..... 3
- ESK 417—Advanced Inupiaq Eskimo (additional) ..... 3
- HIST 110—History of Alaska Natives ..... 3
- LING/ED 303W,O—Language Acquisition ..... 3
- LING 318—Introduction to Phonetics and Phonology ..... 3
- LING 320—Introduction to Morphology ..... 3
- LING 4100—Theory and Methods of Second Language  
Teaching ..... 3
- LING 430—Historical Linguistics ..... 3
- LING 4500—Language, Policy and Planning ..... 3
- MUS 223—Native Alaskan Music ..... 3
- PS 263—Alaska Native Politics ..... 3
- Yup'ik Eskimo course or approved course ..... 3

5. Minimum credits required ..... 130

\* Student must earn a C grade or better in each course.

## Yup'ik Eskimo—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
- ANL 315—Alaska Native Languages: Eskimo-Aleut ..... 3
- ESK 101—Elementary Central Yup'ik Eskimo ..... 5
- ESK 102—Elementary Central Yup'ik Eskimo ..... 5
- ESK 201—Intermediate Central Yup'ik ..... 3
- ESK 202—Intermediate Central Yup'ik ..... 3
- ESK 301—Advanced Central Yup'ik Eskimo ..... 3
- ESK 415—Additional Topics in Advanced Yup'ik Eskimo ..... 3
- LING 101—Nature of Language (3)  
or ANS 320W—Language and Culture:  
Application of Alaska (3) ..... 3
4. Complete 2 of the following:\*
- ANL 287—Teaching Methods for Alaska Native Languages ..... 3
- ANL 316—Alaska Native Languages: Indian Languages ..... 3
- ANS/ENGL 349—Narrative Art of Alaska Native Peoples  
(in English Translation) ..... 3
- ANTH 242—Native Cultures of Alaska ..... 3
- ANTH 380—The People of Alaskan Southwest: Aleuts, Kodiak  
Islanders and the Chugach ..... 3
- ANTH 381—The Inupiaq and Yup'ik Peoples ..... 3
- HIST 110—History of Alaska Natives ..... 3
- LING/ED 303W,O—Language Acquisition ..... 3
- LING 318—Introduction to Phonetics and Phonology ..... 3
- LING 320—Introduction to Morphology ..... 3
- LING 430—Historical Linguistics ..... 3
- LING 4500—Language, Policy and Planning ..... 3
- MUS 223—Native Alaskan Music ..... 3
- PS 263—Alaska Native Politics ..... 3
- Inupiaq Eskimo course or approved course ..... 3

5. Minimum credits required ..... 130

\* Student must earn a C grade or better in each course.

## Minor

1. Complete Eskimo electives ..... 15
2. Minimum credits required ..... 15

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

# Film Studies

College of Liberal Arts  
Department of Theatre  
(907) 474-6590  
[www.uaf.edu/theatre/](http://www.uaf.edu/theatre/)

## Minor only

The interdisciplinary film studies program combines courses in theatre, English and journalism to give students a broad understanding of the role of film and video in modern society. Independent study courses are available, and students can tailor their programs to meet particular needs and career objectives.

## Minor

- Complete the following:  
ENGL 217—Introduction to the Study of Film ..... 3  
JRN 105—History of the Cinema..... 3  
THR 215—Dramatic Literature..... 3  
THR 331—Fundamentals of Film and Stage Directing..... 3  
THR 334W—Movies and Films ..... 3  
THR 470—Film and Video Directing..... 3
- Minimum credits required ..... 18

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

- LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

- MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Fisheries

School of Fisheries and Ocean Sciences  
Fisheries Program  
(907) 474-7289  
[www.sfos.uaf.edu/fishdiv/acad/degrees.html](http://www.sfos.uaf.edu/fishdiv/acad/degrees.html)

## B.S. Degree

Minimum Requirements for Degree: 130 credits

The fisheries undergraduate program offers broad basic education and training, preparing graduates to work in management, law enforcement, public information and education. The program provides a solid foundation for graduate study for students contemplating careers in research, administration, advanced management or teaching. The undergraduate program is offered only on the UAF main campus.

Graduate students in fisheries attend classes and work with faculty in Juneau and/or Fairbanks. Students can develop academic programs in one of three subject areas: fisheries management (Juneau and Fairbanks), fish/invertebrate biology (Juneau and Fairbanks), and aquaculture (Juneau). Research assistantships are available. Applicants should contact the fisheries program for further information and application forms.

With a number of subarctic streams and lakes within easy reach, Fairbanks offers an excellent location for the study of interior Alaska aquatic habitats. Access to the marine environment from the Fairbanks campus is in Prince William Sound and Cook Inlet.

The Juneau Center, School of Fisheries and Ocean Sciences, houses the UAF fisheries science program near the Auke Bay National Marine Fisheries Service Laboratory north of Juneau. The Juneau Center has freshwater and seawater wet labs, computer labs and ready access to marine and freshwater habitats. The Fishery Industrial Technology Center, located in Kodiak, has new facilities for work in harvest technology, seafood technology, seafood biochemistry and microbiology.

Fisheries students in Fairbanks and Juneau have an opportunity to associate with personnel of federal and state conservation agencies and these agencies hire students for summer fieldwork. Bachelor of science candidates are strongly urged to obtain work experience in fisheries with public resource agencies or private firms. Faculty members can help students contact potential employers. Fisheries undergraduate students are asked each fall to describe their work experience of the previous year.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete MATH 200X or 272X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete MATH 201X or STAT 401.)
3. Complete the following fisheries core requirements:\*\*\*
  - BIOL 105X—Fundamentals of Biology I\*\* ..... 4
  - BIOL 106X—Fundamentals of Biology II\*\* ..... 4
  - BIOL 271—Principles of Ecology ..... 4
  - BIOL 310—Animal Physiology ..... 4
  - BIOL 362—Principles of Genetics ..... 4
  - BIOL 473W—Limnology (4)
    - or MSL 411—Current Topics in Oceanographic Research (3) ..... 3-4
  - CHEM 105X—General Chemistry\*\* ..... 4
  - CHEM 106X—General Chemistry\*\* ..... 4
  - CS or CIOS elective ..... 3
  - ECON 200—Principles of Economics (4)
    - or ECON 235—Introduction to Natural Resource Economics (3)
    - or ECON 201—Principles of Economics I: Microeconomics (3) and ECON 202—Principles of Economics II: Macroeconomics (3) ..... 3-6
  - ENGL 314W/O/2—Technical Writing (3)
    - or ENGL 414W—Research Writing (3) ..... 3
  - FISH 336-J—Introduction to Aquaculture (3)
  - FISH 400W—Fisheries Science ..... 3
  - FISH 401W/O/2—Fisheries Management ..... 3
  - FISH 427W/O—Ichthyology (4)
    - or BIOL 305—Invertebrate Zoology (5) ..... 4-5
  - MSL 111X—The Oceans\*\* ..... 4
  - NRM 101—Natural Resources Conservation and Policy ..... 3
  - PHYS 103X—College Physics\*\* ..... 4
  - PHYS 104X—College Physics\*\* ..... 4
  - STAT 200—Elementary Probability and Statistics (3)
    - or STAT 300—Statistics (3) ..... 3
4. Complete electives\* from the following:\*\*\*\*
  - ANTH 242—Native Cultures of Alaska ..... 3
  - BA 307—Personnel Management ..... 3
  - BIOL 305—Invertebrate Zoology ..... 5
  - BIOL 317—Comparative Anatomy of Vertebrates ..... 4
  - BIOL 328O—Biology of Marine Organisms ..... 3
  - BIOL 342—Microbiology ..... 4
  - BIOL 407—Aquatic Entomology ..... 3
  - BIOL 418W—Developmental Biology ..... 3
  - BIOL 442W/O/2—Bacteriology and Immunology ..... 5
  - BIOL 471W—Population Ecology ..... 3
  - BIOL 472—Community Ecology ..... 3
  - BIOL 480—Water Pollution Biology ..... 3
  - CHEM 212—Chemical Equilibrium and Analysis ..... 3
  - CHEM 321—Organic Chemistry (3)
    - and CHEM 322—Organic Chemistry (3)
    - and CHEM 324—Organic Laboratory (4) ..... 10
  - CHEM 451—General Biochemistry ..... 3
  - CHEM 452W—Biochemistry Laboratory ..... 3
  - GEOG 205—Elements of Physical Geography ..... 3
  - GEOG 302—Geography of Alaska ..... 3
  - GEOG 338—Introduction to Geographic Information Systems ..... 3
  - GEOG 402—Resources and Environment ..... 3
  - GEOS 304—Geomorphology ..... 3
  - JRN 101—Introduction to Mass Communications ..... 3
  - JRN 311W—Magazine Article Writing ..... 3

NRM 204—Public Lands Law and Policy .....	3
NRM 277—Introduction to Conservation Biology .....	3
NRM 303X—Environmental Ethics and Actions.....	3
NRM 370—Introduction to Watershed Management .....	3
NRM 407—Environmental Law .....	3
PS 201—Comparative Politics .....	3
PS 212—Introduction to Public Administration.....	3
PS 263—Alaska Native Politics .....	3
PS 302—Congress and Public Policy .....	3
SOC 309—Urban Sociology .....	3
STAT 402—Scientific Sampling.....	3
WLF 303W—Wildlife Management Techniques .....	3
WLF 419O/2—Waterfowl and Wetlands Ecology and Management	

4

## 5. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

\*\* Courses completed in the fisheries core may be used to meet the core natural sciences or B.S. degree natural science requirements but not both.

\*\*\* Courses completed in the fisheries core may be used to meet the core mathematics or B.S. degree mathematics requirements, but not both.

\*\*\*\* Recommended electives. Other courses may be substituted.

Note: Fisheries majors are encouraged to reinforce their fisheries qualifications by earning a minor in a program related to fisheries. Some examples are biology, business management, chemistry, economics, mathematics, natural resources management (animal science), northern studies, statistics and wildlife.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....	(3)	_____
ENGL 211X <b>OR</b> 213X .....	(3)	_____
COMM 131X <b>OR</b> 141X.....	(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X <b>OR</b> 101X .....	(0-1)	_____
<b>OR</b> Successful completion of library skills competency test.		

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X <b>OR</b> SOC 100X .....	(3)	_____
ECON/PS 100X .....	(3)	_____
HIST 100X.....	(3)	_____
ART/MUS/THR 200X, HUM 201X <b>OR</b> ANS 202X .....	(3)	_____
ENGL/FL 200X .....	(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X <b>OR</b> JUST 300X.....	(3)	_____

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X .....	(3)	_____
<b>OR</b> MATH 131X (except for BBA) .....	(3)	_____
<b>OR</b> MATH 161X.....	(3)	_____
MATH 200X .....	(4)	_____
MATH 201X .....	(4)	_____
MATH 202X .....	(4)	_____
MATH 262X .....	(4)	_____
MATH 272X .....	(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X .....	(4)	_____
BIOL 103X <b>OR</b> 104X.....	(4)	_____
BIOL 105X-106X .....	(8)	_____
BIOL 111X-112X .....	(8)	_____
CHEM 100X.....	(4)	_____
CHEM 103X-104X.....	(8)	_____
CHEM 105X-106X.....	(8)	_____
GEOG 205X .....	(4)	_____
GEOS 100X <b>OR</b> 120X <b>OR</b> 125X .....	(4)	_____
GEOS 101X-112X.....	(8)	_____
MSL 111X .....	(4)	_____
PHYS 102X <b>OR</b> 175X.....	(4)	_____
PHYS 103X-104X.....	(8)	_____
PHYS 211X-212X.....	(8)	_____
PHYS 211X-213X.....	(8)	_____
PHYS 212X-213X.....	(8)	_____



# Food Science and Nutrition

School of Fisheries and Ocean Sciences  
School of Natural Resources and Agricultural Sciences  
(907) 474-7824  
(907) 474-7083  
[www.uaf.edu/snrns/](http://www.uaf.edu/snrns/)

Food science is the study of the chemical, biological and engineering aspects of food and its components. Knowledge from diverse scientific disciplines is integrated to develop new methods for processing and fabricating foods while assuring safe, nutritious and acceptable products.

From a chemical, microbiological and physical standpoint, food is the most complex of all natural products. Food science is a high-technology field; the results of research and development reach people and animals daily as safe, nutritious and acceptable foods.

This program emphasizes the food uses of fish, game and other traditional foods. It provides students majoring in a natural science, engineering, northern agriculture or management with a strong emphasis area in food science and nutrition. The food industry is the largest employer in the United States, and job openings are available for people trained as food technologists.

**The following courses are part of the food science and nutrition program:**

FISH 261-F—Introduction to Seafood Science and Nutrition .....	3
FISH/FSN 460-K—Food Science and Technology Internship.....	3-6
NRM 321—Applied Animal Nutrition .....	3
NRM 420—Animal Nutrition and Metabolism.....	3

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X .....	(3)	_____
ENGL 211X <b>OR</b> 213X .....	(3)	_____
COMM 131X <b>OR</b> 141X .....	(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X <b>OR</b> 101X .....	(0-1)	_____
<b>OR</b> Successful completion of library skills competency test.		

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X <b>OR</b> SOC 100X .....	(3)	_____
ECON/PS 100X .....	(3)	_____
HIST 100X .....	(3)	_____
ART/MUS/THR 200X, HUM 201X <b>OR</b> ANS 202X .....	(3)	_____
ENGL/FL 200X .....	(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X <b>OR</b> JUST 300X .....	(3)	_____

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X .....	(3)	_____
<b>OR</b> MATH 131X (except for BBA) .....	(3)	_____
<b>OR</b> MATH 161X .....	(3)	_____
MATH 200X .....	(4)	_____
MATH 201X .....	(4)	_____
MATH 202X .....	(4)	_____
MATH 262X .....	(4)	_____
MATH 272X .....	(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X .....	(4)	_____
BIOL 103X <b>OR</b> 104X .....	(4)	_____
BIOL 105X-106X .....	(8)	_____
BIOL 111X-112X .....	(8)	_____
CHEM 100X .....	(4)	_____
CHEM 103X-104X .....	(8)	_____
CHEM 105X-106X .....	(8)	_____
GEOG 205X .....	(4)	_____
GEOS 100X <b>OR</b> 120X <b>OR</b> 125X .....	(4)	_____
GEOS 101X-112X .....	(8)	_____
MSL 111X .....	(4)	_____
PHYS 102X <b>OR</b> 175X .....	(4)	_____
PHYS 103X-104X .....	(8)	_____
PHYS 211X-212X .....	(8)	_____
PHYS 211X-213X .....	(8)	_____
PHYS 212X-213X .....	(8)	_____

# Foreign Languages

College of Liberal Arts  
Department of Foreign Languages and Literatures  
(907) 474-7396  
faforei@uaf.edu  
www.uaf.edu/language/

## B.A. Degree

Minimum Requirements for Degree: 120 credits

Language is the embodiment of culture and an expression of a people's way of thinking, feeling, and viewing the world. We have an increasing need to communicate directly with other peoples to achieve mutual understanding. To learn a new language opens new avenues of thought, new modes of expression, and new models of understanding. The study of foreign languages and literatures liberates the student from the confines of one culture.

Foreign language majors are encouraged to spend one or both semesters of their junior year in an exchange program appropriate to their language focus.

## Major—B.A. Degree

### Concentrations: Second Language, Language Studies

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete 1 of the following concentrations:\*

#### Second Language

- a. Complete the first language requirements with 1 language from the following French, German, Japanese, Russian or Spanish courses:

201—Intermediate .....	3-4
202—Intermediate .....	3-4
301—Advanced .....	3
302—Advanced .....	3
431—Studies in the Culture .....	3
432—Studies of Literature .....	3
- b. Complete 6 first language credits from the following:\*\*

431—Studies in the Culture .....	3
432—Studies of Literature .....	3
482—Selected Topics .....	3
488—Individual Study: Senior Project .....	3
LING 4100—Theory and Methods of Second Language Teaching 3	
400-level elective*** .....	3
- c. Complete the second language requirements with 4 courses in 1 language from the following French, German, Japanese, Russian or Spanish courses:\*\*\*\*

201—Intermediate .....	3-4
202—Intermediate .....	3-4
301—Advanced .....	3
302—Advanced .....	3
400-level** .....	3-6

#### Language Studies

Students completing this concentration are strongly encouraged to spend one or two semesters on a study abroad program.

- a. Complete the following from 1 language (French, German or Spanish):

201—Intermediate .....	3-4
202—Intermediate .....	3-4
301—Advanced .....	3

- |                                  |   |
|----------------------------------|---|
| 302—Advanced .....               | 3 |
| 431—Studies in the Culture ..... | 3 |
| 432—Studies of Literature .....  | 3 |
- b. Complete 6 credits from the following:\*\*

431—Studies in the Culture .....	3
432—Studies of Literature .....	3
482—Selected Topics .....	3
488—Individual Study: Senior Project .....	3
497—Individual Study .....	3

- c. Complete 1 of the following emphasis areas:

#### Studies in Culture—German or Spanish

Complete a minimum of 12 credit hours at the 200, 300, or 400-level through an approved study abroad program for German or Spanish.

#### Studies in Culture—French

Complete a minimum of 12 credits in French approved by advisor or complete one of the following:

- Complete additional 4 courses through a study abroad program in a Francophone country
- or complete additional 2 courses through a study abroad program (one semester) and 2 courses on Francophone culture from the following:

FREN 434W—La Literature Quebecoise .....	3
FREN 482W—Selected Topics in French .....	3
- or complete 2 courses on Francophone culture (from the courses listed above) and 2 courses from the following:

HIST 101—Western Civilization (3) .....	6
and HIST 102—Western Civilization (3) .....	6
HIST 316—Europe since 1945 .....	3
HIST 354—Canadian History to 1867 .....	3

#### Teaching in German, Spanish, or French

- a. Complete the following:

FL 451—Foreign Language Teaching Practicum .....	4
LING 101—Nature of Language .....	3
LING 4100—Theory and Methods of Second Language Teaching 3	
- b. Complete 1 course from the following:

LING/ED 303W,O—Language Acquisition .....	3
LING 340W—Aspects of Bilingualism .....	3
LING 402—Second Language Acquisition .....	3
LING or ED course approved by advisor .....	3-4

## Literature/Business

a. Complete a minimum of 12 credits approved by advisor.

### 4. Minimum credits required .....120

\* Student must earn a C grade or better in each course.

\*\* Students may repeat any 400-level language course for credit if the topics vary.

\*\*\* 400-level course from another discipline appropriate to the major language may be accepted if approved by your foreign language advisor.

\*\*\*\* The second language does not satisfy the minor requirements.

Note: Choosing a minor: 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 101 and LING 216.

Note: 100-level language courses (which are preparatory to, but not part of the foreign language degree) may be counted toward fulfillment of requirements specified under Perspectives on the Human Condition and/or Humanities. Each language counts as a separate discipline.

Note: A minimum grade of 70 on the Spanish Proficiency Exam (to be administered on the first day of any class numbered 202-492) is required for any Spanish class numbered over 201. Students receiving less than 70 will be placed in SPAN 201.

## Minor

### 1. Complete the following:

Foreign language courses at the 100-level or above..... 3

Foreign language courses at the 200-level or above..... 12

### 2. Minimum credits required .....15

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_

ENGL 211X **OR** 213X.....(3) \_\_\_\_\_

COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_

**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_

ECON/PS 100X.....(3) \_\_\_\_\_

HIST 100X.....(3) \_\_\_\_\_

ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_

ENGL/FL 200X.....(3) \_\_\_\_\_

PHIL 322X, NRM 303X, COMM 300X,

PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_

**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_

**OR** MATH 161X.....(3) \_\_\_\_\_

MATH 200X.....(4) \_\_\_\_\_

MATH 201X.....(4) \_\_\_\_\_

MATH 202X.....(4) \_\_\_\_\_

MATH 262X.....(4) \_\_\_\_\_

MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_

BIOL 103X **OR** 104X.....(4) \_\_\_\_\_

BIOL 105X-106X.....(8) \_\_\_\_\_

BIOL 111X-112X.....(8) \_\_\_\_\_

CHEM 100X.....(4) \_\_\_\_\_

CHEM 103X-104X.....(8) \_\_\_\_\_

CHEM 105X-106X.....(8) \_\_\_\_\_

GEOG 205X.....(4) \_\_\_\_\_

GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_

GEOS 101X-112X.....(8) \_\_\_\_\_

MSL 111X.....(4) \_\_\_\_\_

PHYS 102X **OR** 175X.....(4) \_\_\_\_\_

PHYS 103X-104X.....(8) \_\_\_\_\_

PHYS 211X-212X.....(8) \_\_\_\_\_

PHYS 211X-213X.....(8) \_\_\_\_\_

PHYS 212X-213X.....(8) \_\_\_\_\_

# General Science

College of Science, Engineering and Mathematics  
Department of Physics  
(907) 474-6108  
[www.uaf.edu/physics/](http://www.uaf.edu/physics/)

## B.S. Degree

Minimum Requirements for Degree: 130 credits

The B.S. degree program in general science provides a broad background in the natural sciences. The program allows specialization in at least two disciplines within the natural sciences as well as an additional area of associated interest. This degree offers more breadth in the natural sciences than other degree programs and may be classified as an interdisciplinary degree.

### Major—B.S. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.S. degree requirements (page 112).
3. Complete the following program (major) requirements:\*
- BIOL 105X—Fundamentals of Biology I..... 4
- BIOL 106X—Fundamentals of Biology II ..... 4
- CHEM 105X—General Chemistry\*\* ..... 4
- CHEM 106X—General Chemistry\*\* ..... 4
- GEOS 101X—The Dynamic Earth ..... 4
- GEOS 112X—The History of Earth and Life..... 4
- MATH 107X—Functions for Calculus..... 3
- MATH 108—Trigonometry ..... 3
- MATH 200X—Calculus\*\*\* ..... 4
- PHYS 103X—College Physics\*\* ..... 4
- PHYS 104X—College Physics\*\* ..... 4
4. Select 1 of the following by the start of the junior year:\*\*\*
  - a. Two majors.
  - b. One major and two minors.
5. Complete 1 major from the following: biological sciences, chemistry, geosciences or physics. The major requires the completion of at least 20 credits in addition to the foundation courses in the discipline.\* .....20
6. Complete 1 of the following:
  - a. Complete a second major from the following: biological sciences, chemistry, geosciences, physics or mathematics. The major requires the completion of at least 20 credits in addition to the foundation courses in the discipline.\* .....20
  - b. Complete 2 minors, one of which must be in the natural sciences or mathematics, while the other may be selected from the following disciplines: anthropology, English, French, German, Spanish, Russian, history, political science or economics. The minor must include 12 or more credits in addition to the foundation courses in that discipline.\* .....24

7. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

\*\* PHYS 211X, 212X and 213X may substitute for PHYS 103X and 104X. CHEM 212 may substitute for CHEM 105X and 106X. Complete a B.S. degree mathematics elective for 3 credits if MATH 107X and MATH 108 are not taken.

\*\*\* A student does not need to take MATH 107X and MATH 108 if the student completes MATH 200X with a C or better.

\*\*\*\* A general science student, after meeting with his/her general science advisor, should contact the head of the major/minor department as early as possible to determine course requirements in that discipline. These courses will be determined by the department head of the discipline and will reflect the student's needs as well as the intent of the general science program.

Note: One year of German or Russian is recommended.

### Requirements for General Science Teachers (grades 7–12)\*

1. Complete all the requirements of the general science B.S.
2. If the student opts for one major and two minors, both must represent science or mathematics disciplines:
3. All prospective science teachers must complete one of the following:
  - PHIL 380—Conceptual Foundations of Science (3)
  - or PHIL 382—Science and Technological Limits (3)
  - or PHIL 481—Philosophy of Science (3) ..... 3

Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later for licensure in General Science.

Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Geography

School of Natural Resources and Agricultural Sciences  
Department of Geography  
(907) 474-7494  
[www.uaf.edu/geography/](http://www.uaf.edu/geography/)

## B.A., B.S. Degrees

Minimum Requirements for Degrees: B.A.: 120 credits; B.S.: 120 credits

Geography provides an organized view of the earth as a whole and of its regions and human activities. Geography serves as a bridge between the natural and social sciences by studying the interrelationships between the earth's physical and biological systems, and how these environmental systems provide a natural resource base for human societies. Geographers are interested in patterns of human settlement, natural resources distribution, resources use and conservation. Geographers are interested in the sense of place among the peoples of the world.

Geographic methodologies include observation, measurement, description and analysis of places or areas including their likenesses, differences, interdependence and importance.

Geographic professions are diverse and include opportunities in mapping, remote sensing, demographics, international relations, landscape analysis, environmental assessment and planning, regional planning, and weather and climate analysis. Also, geography provides an excellent background for specialized or interdisciplinary graduate study.

The geography B.A. degree program provides a broad cultural background in the liberal arts, a geographic perspective based on world regions, preparation for teaching geography, earth science or social science in elementary or secondary schools, and technical training for professional geographic work in government, business or industry.

The geography B.S. degree is subtitled "environmental studies." The program provides the foundation necessary for understanding the natural and social environment, the analysis of environmental issues from an interdisciplinary geographic perspective, a diverse technical and scientific approach to environmental issues, and the ability to find balanced solutions to environmental problems.

Students may elect advanced work in geography, or other disciplines, to provide a concentration in either physical or social science. A minor in geography is also available.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
- a. Complete the following:
  - GEOG 101—World Regional Geography (3)  
or GEOG 203—World Economic Geography (3) ..... 3
  - GEOG 205—Elements of Physical Geography ..... 3
  - GEOG 339—Maps and Landscape Analysis (3)  
or GEOG 401—Weather and Climate (3) ..... 3
  - GEOG 482W,O—Geography Seminar ..... 3
  - GEOG elective ..... 3
- b. Complete 3 of the following regional courses:
  - GEOG 302—Geography of Alaska ..... 3
  - GEOG 303—Geography of United States and Canada ..... 3
  - GEOG 305W—Geography of Europe ..... 3
  - GEOG 306—Geography of Russia ..... 3
  - GEOG 311W—Geography of Asia ..... 3
  - GEOG 427—Cold Lands ..... 3
- c. Complete 2 of the following cultural courses:
  - GEOG 402—Resources and Environment ..... 3
  - GEOG 404W—Urban Geography ..... 3
  - GEOG 405—Political Geography ..... 3
- d. Complete 1 of the following techniques courses:
  - GEOG 309—Cartography ..... 4
  - GEOG 408—Quantitative Research Techniques ..... 3
4. Complete approved electives ..... open
5. Minimum credits required ..... 120

## Major—B.S. Degree (Environmental Studies)

1. Complete the general university requirements (page 106).
2. Complete the B.S. degree requirements (page 112).
3. Complete the following program (major) requirements:\*
- a. Complete the following:
  - GEOG 101—World Regional Geography ..... 3
  - GEOG 205—Elements of Physical Geography ..... 3
  - GEOG 339—Maps and Landscape Analysis ..... 3
  - GEOG 401—Weather and Climate ..... 3
  - GEOG 402—Resources and Environment ..... 3
  - GEOG 408—Quantitative Research Techniques ..... 3
  - GEOG 482W,O—Geography Seminar ..... 3
- b. Complete 6 credits from the following environmental studies electives:
  - GEOG/NRM 463—Wilderness Concepts ..... 3
  - NRM 303X—Environmental Ethics and Actions\*\* ..... 3
  - NRM 407—Environmental Law ..... 3
- c. Complete 9 credits from the following environmental system electives:
  - ANTH 428W—Ecological Anthropology and Regional Sustainability\*\*\* ..... 3
  - BIOL 271—Principles of Ecology\*\*\* ..... 4
  - BIOL/NRM 277—Introduction to Conservation Biology\*\*\* ..... 3
  - GEOS 304—Geomorphology ..... 3
  - NRM 375—Forest Ecology\*\*\* ..... 3
  - NRM 380W—Soils and the Environment\*\*\* ..... 3
  - NRM/FISH 400W—Fisheries Science\*\*\* ..... 3



- d. Complete 3 credits from the following environmental management electives:
- |   |   |
|---|---|
| FISH 401W/O/2—Fisheries Management***                   | 3 |
| NRM 365W—Principles of Outdoor Recreation Management    | 3 |
| NRM 430—Resource Management Planning                    | 3 |
| NRM/WLF 431—Wildlife Law and Policy***                  | 3 |
| NRM 450—Forest Management***                            | 3 |
| NRM 480—Soil Management for Quality and Conservation*** | 3 |
- e. Complete 1 of the following techniques courses:
- |   |   |
|---|---|
| GEOG 301—Geographic Field Research Techniques               | 3 |
| GEOG 309—Cartography  | 4 |
| GEOG/NRM 338—Introduction to Geographic Information Systems | 3 |
4. Complete approved electives .....open
5. Minimum credits required .....120
- \* Student must earn a C grade or better in each course.
- \*\* If used to fulfill core requirements, NRM 303X may not also count towards geography major.
- \*\*\* Prerequisites required.

## Minor

1. Complete the following:
- |  |     |
|--|-----|
| GEOG 101—World Regional Geography (3)    |     |
| or GEOG 203—World Economic Geography (3) | 3   |
| GEOG 205—Elements of Physical Geography  | 3   |
| GEOG electives                           | 8-9 |
2. Minimum credits required .....15

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X	.....(3)	_____
ENGL 211X OR 213X	.....(3)	_____
COMM 131X OR 141X	.....(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X OR 101X	.....(0-1)	_____
OR Successful completion of library skills competency test.		

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X OR SOC 100X	.....(3)	_____
ECON/PS 100X	.....(3)	_____
HIST 100X	.....(3)	_____
ART/MUS/THR 200X, HUM 201X OR ANS 202X	.....(3)	_____
ENGL/FL 200X	.....(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X OR JUST 300X	.....(3)	_____

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X	.....(3)	_____
OR MATH 131X (except for BBA)	.....(3)	_____
OR MATH 161X	.....(3)	_____
MATH 200X	.....(4)	_____
MATH 201X	.....(4)	_____
MATH 202X	.....(4)	_____
MATH 262X	.....(4)	_____
MATH 272X	.....(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X	.....(4)	_____
BIOL 103X OR 104X	.....(4)	_____
BIOL 105X-106X	.....(8)	_____
BIOL 111X-112X	.....(8)	_____
CHEM 100X	.....(4)	_____
CHEM 103X-104X	.....(8)	_____
CHEM 105X-106X	.....(8)	_____
GEOG 205X	.....(4)	_____
GEOS 100X OR 120X OR 125X	.....(4)	_____
GEOS 101X-112X	.....(8)	_____
MSL 111X	.....(4)	_____
PHYS 102X OR 175X	.....(4)	_____
PHYS 103X-104X	.....(8)	_____
PHYS 211X-212X	.....(8)	_____
PHYS 211X-213X	.....(8)	_____
PHYS 212X-213X	.....(8)	_____

# Geological Engineering

School of Mineral Engineering  
Department of Mining and Geological Engineering  
(907) 474-7388  
[www.uaf.edu/sme/GeolEng.html](http://www.uaf.edu/sme/GeolEng.html)

## B.S. Degree

Minimum Requirements for Degree: 134 credits

Geological engineering deals with the application of geology. Geological engineers work with the environment in the true sense of the word. Properties of earth materials exploration activities, geophysical and geochemical prospecting, site investigations and engineering geology are all phases of geological engineering.

The undergraduate and graduate programs prepare students for employment with industry, consulting companies and government agencies.

## Major—B.S. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.S. degree requirements (page 112).
3. Complete the following program (major) requirements:\*

CHEM 105X—General Chemistry**	4
CHEM 106X—General Chemistry**	4
ES 201—Computer Techniques	3
ES 208—Mechanics	4
ES 331—Mechanics of Materials	3
ES 341—Fluid Mechanics	4
GE 101—Introduction to Geological Engineering	1
GE 261—General Geology for Engineers	3
GE 365—Geological Materials Engineering	3
GE 375—Principles of Engineering Geology and Terrain Analysis	3
GE 381W—Field Methods and Applied Design I	2
GE 382W—Field Methods and Applied Design II	4
GE 405—Exploration Geophysics	4
GE 420—Subsurface Hydrology	3
GE 471—Remote Sensing for Engineering	3
GE 480W—Senior Design	3
GEOS 213—Mineralogy	4
GEOS 214—Petrology and Petrography	4
GEOS 332—Ore Deposits and Structure	3
GEOS 421—Sedimentology	3
MATH 200X—Calculus**	4
MATH 201X—Calculus**	4
MATH 202X—Calculus**	4
MATH 302—Differential Equations	3
MIN 202—Mine Surveying	3
MIN 370—Rock Mechanics	3
MIN 408O—Mineral Valuation and Economics	3
PHYS 211X—General Physics**	4
PHYS 212X—General Physics**	4
STAT 200—Elementary Probability and Statistics	3
Technical electives***	6

## 4. Minimum credits required .....134

\* Student must earn a C grade or better in each ES, GE, GEOS, MIN and technical elective courses.

\*\* Satisfies core or B.S. degree requirements but not both.

\*\*\* Technical elective credits must contain engineering design and be selected by the student from a list of approved technical electives from the geological engineering program in conference with his or her advisor and approved by the department.

Note: Candidates for the B.S. degree in geological engineering are required to take a proficiency exam at the end of their sophomore year. They must also take a comprehensive exit exam in their general field before graduation (as well as the state of Alaska Fundamentals of Engineering examination). Fundamentals of Engineering examination is a first step toward registration as professional engineers.

Note: Students may initiate their geological engineering program in Anchorage and transfer to Fairbanks upon completion of the freshman and sophomore years. Students intending to transfer to UAF should communicate with a faculty member of the UAF mining and geological engineering department.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Geology

College of Science, Engineering and Mathematics  
Department of Geology and Geophysics  
(907) 474-7565  
[www.uaf.edu/geology/](http://www.uaf.edu/geology/)

## B.S. Degree

Minimum Requirements for Degree: 130 credits

Graduates in geology have broad backgrounds in the earth sciences and firm foundations in mathematics, physics and chemistry. There are many concentrations available in the geological sciences, and the suggested curricula are intended to be flexible enough to allow students to pursue their own emphasis in the junior and senior years. The bachelor's degree prepares students for positions with industry or government or for graduate studies. 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.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete MATH 200X, CHEM 105X and 106X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree, complete: STAT 200 or 300; PHYS 103X and 104X, or PHYS 211X and 212X.)
3. Complete the following program (major) requirements: \*  
GEOS 101X—The Dynamic Earth ..... 4

GEOS 112X—The History of Earth and Life.....	4
GEOS 213—Mineralogy.....	4
GEOS 214—Petrology and Petrography.....	4
GEOS 225—Field and Computer Methods in Geology.....	2
GEOS 304—Geomorphology.....	3
GEOS 314—Structural Geology.....	4
GEOS 315W—Paleobiology and Paleontology.....	4
GEOS 322—Stratigraphy and Sedimentation.....	4
GEOS 351W—Field Geology**.....	6
GEOS 430—Statistics and Data Analysis in Geology.....	3
MATH 201X—Calculus.....	4
Electives.....	open

4. Complete 15 credits of upper division GEOS courses or upper division courses as approved by the undergraduate advisor.\*
5. Minimum credits required ..... 130

\* Student must earn a C grade or better in each GEOS course and in all courses that fulfill requirement 4.

\*\* GEOS 351 is offered at UAF when there is sufficient demand. In years when GEOS 351 is not offered (decision made early in fall semester), students are required to take a 6-credit field geology class at another institution. The Department of Geology and Geophysics will offer financial assistance to geology majors when GEOS 351 is not offered to attend an approved field camp at another institution. The geology and geophysics undergraduate advisor will assist students in placement in a field geology class and will inform the department head about students requiring financial aid.

Studies in geophysics: Students interested in pursuing a program in geophysics are encouraged to pursue a major in geology which includes GEOS 418 and 416 with a minor in physics. Students should consult with the geology department regarding constructing a plan of study.

## Minor

1. Complete the following:  
GEOS 101X—The Dynamic Earth ..... 4  
Approved GEOS electives..... 12
2. Minimum credits required ..... 16

*Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).*

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....	(3)	_____
ENGL 211X OR 213X.....	(3)	_____
COMM 131X OR 141X.....	(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X OR 101X.....	(0-1)	_____
----------------------	-------	-------

OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X OR SOC 100X.....	(3)	_____
ECON/PS 100X.....	(3)	_____
HIST 100X.....	(3)	_____
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....	(3)	_____
ENGL/FL 200X.....	(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X OR JUST 300X.....	(3)	_____

OR Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language. **MATHEMATICS (3-4)**

**Complete 3-4 credits from the following:**

MATH 107X.....	(3)	_____
OR MATH 131X (except for BBA).....	(3)	_____
OR MATH 161X.....	(3)	_____
MATH 200X.....	(4)	_____
MATH 201X.....	(4)	_____
MATH 202X.....	(4)	_____
MATH 262X.....	(4)	_____
MATH 272X.....	(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....	(4)	_____
BIOL 103X OR 104X.....	(4)	_____
BIOL 105X-106X.....	(8)	_____
BIOL 111X-112X.....	(8)	_____
CHEM 100X.....	(4)	_____
CHEM 103X-104X.....	(8)	_____
CHEM 105X-106X.....	(8)	_____
GEOS 205X.....	(4)	_____
GEOS 100X OR 120X OR 125X.....	(4)	_____
GEOS 101X-112X.....	(8)	_____
MSL 111X.....	(4)	_____
PHYS 102X OR 175X.....	(4)	_____
PHYS 103X-104X.....	(8)	_____
PHYS 211X-212X.....	(8)	_____
PHYS 211X-213X.....	(8)	_____
PHYS 212X-213X.....	(8)	_____

# History

College of Liberal Arts  
Department of History  
(907) 474-7126  
[www.uaf.edu/history/](http://www.uaf.edu/history/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

The history department seeks to make students aware of the human cultural heritage, the great problems that have faced humans throughout history and how we have sought to solve them.

The department also trains students to apply the historical method which offers analysis based on the dimension of time. Discussion, focused on concrete, specific events, persons and judgments, explains why things are as they are. Students learn effective historical research and writing.

Through the study of history, students prepare for careers in public service agencies; as members of management teams, particularly in the area of policy analysis; for careers in teaching; or for advanced work in history and other social sciences.

## Major—B.A. Degree

1. Complete the general university requirements (page 106). As part of the core curriculum requirements, complete HIST 100X.\*
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*

- a. Complete 3 of the following:
  - HIST 101—Western Civilization..... 3
  - HIST 102—Western Civilization..... 3

*Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).*

- HIST 121—East Asian Civilization ..... 3
- HIST 122—East Asian Civilization ..... 3
- HIST 131—History of the U.S. .... 3
- HIST 132—History of the U.S. .... 3
- b. Complete the following:
  - HIST 275—Perspectives on History ..... 3
- c. Complete 5 HIST courses at the 300- or 400-level, at least 2 of which must be at the 400-level. .... 15
- d. Of the courses for the major, at least two (at any level) must be taken in each of the following three fields. These courses must be approved by an advisor.
  1. United States history
  2. European history
  3. Other areas, such as
    - Northern history (including Alaska)
    - World or non-western (non-US, non-Europe) history
    - Women's history
- e. Complete the following:
  - HIST 475W—Historiography..... 3
  - HIST 476W/O—Senior Thesis ..... 3
- 4. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

*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.*

## Minor

1. Complete HIST electives at the 300-level or above ..... 6
2. Complete HIST electives..... 12
3. Minimum credits required ..... 18

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- ENGL 111X.....(3) \_\_\_\_\_
- ENGL 211X **OR** 213X.....(3) \_\_\_\_\_
- COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

- LS 100X **OR** 101X..... (0-1) \_\_\_\_\_
- OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_
- ECON/PS 100X.....(3) \_\_\_\_\_
- HIST 100X.....(3) \_\_\_\_\_
- ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_
- ENGL/FL 200X.....(3) \_\_\_\_\_
- PHIL 322X, NRM 303X, COMM 300X, PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

- MATH 107X ..... (3) \_\_\_\_\_
- OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_
- OR** MATH 161X..... (3) \_\_\_\_\_
- MATH 200X ..... (4) \_\_\_\_\_
- MATH 201X ..... (4) \_\_\_\_\_
- MATH 202X ..... (4) \_\_\_\_\_
- MATH 262X ..... (4) \_\_\_\_\_
- MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- ATM 101X ..... (4) \_\_\_\_\_
- BIOL 103X **OR** 104X..... (4) \_\_\_\_\_
- BIOL 105X-106X ..... (8) \_\_\_\_\_
- BIOL 111X-112X ..... (8) \_\_\_\_\_
- CHEM 100X..... (4) \_\_\_\_\_
- CHEM 103X-104X..... (8) \_\_\_\_\_
- CHEM 105X-106X..... (8) \_\_\_\_\_
- GEOG 205X ..... (4) \_\_\_\_\_
- GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_
- GEOS 101X-112X..... (8) \_\_\_\_\_
- MSL 111X ..... (4) \_\_\_\_\_
- PHYS 102X **OR** 175X..... (4) \_\_\_\_\_
- PHYS 103X-104X..... (8) \_\_\_\_\_
- PHYS 211X-212X..... (8) \_\_\_\_\_
- PHYS 211X-213X..... (8) \_\_\_\_\_
- PHYS 212X-213X..... (8) \_\_\_\_\_



# Interdisciplinary Studies

(907) 474-7464

## B.A., B.S., B.T. Degrees

Minimum Requirements for Degrees: 130 credits

The UAF interdisciplinary program provides flexibility to students with well-defined goals who do not fit into one of the established majors offered by the university. The program is available to undergraduate and graduate students (see page 191 for graduate information).

Students may submit a proposal for an interdisciplinary program after completing 15 credits at UAF as long as they have at least 30 credits remaining in the proposed degree program. The proposed curriculum must differ significantly from established degree programs at UAF and will require evidence that the necessary facilities and faculty are available to ensure an approximation of a normal undergraduate degree. All general requirements for the B.A., B.S., or B.T. degree must be met.

In developing an interdisciplinary proposal, the student should specify the degree (B.A., B.S., or B.T.), include an explanation of how the proposed program differs substantially from established UAF programs, and include a discussion that current UAF resources are adequate to meet the requirements of the proposed program. (A minimum of two disciplines is required for the interdisciplinary degree.) The student then obtains an advisory committee of at least three faculty members from the appropriate disciplines and holds at least one formal meeting with the full committee to review the proposal. The committee will appoint a chair, review the proposed program, select a degree title in concert with the student and make its recommendation. Applicants then submit to the vice provost for instructional affairs their proposal for the program they wish to pursue, specifying the

degree, proposed curriculum work sheet and rationale. The degree is awarded through the school or college of the chair of the committee, subject to approval by the vice provost for instructional affairs.

Students interested in pursuing an undergraduate interdisciplinary degree can contact the Office of the Graduate School and Interdisciplinary Programs for help in finding faculty advisors and developing their curriculum proposal.

## B.A., B.S. or B.T. degree

1. Contact the UAF Office of the Graduate School and Interdisciplinary Programs for materials and procedures.
2. Contact three faculty to serve as the INDS committee.
3. Prepare rationale/justification letter.
4. Conduct committee meeting to finalize degree proposal, title of degree, and assessment plan.
5. Submit proposal to appropriate dean for approval.
6. Submit to the vice provost for instructional affairs for final approval.
7. Minimum credits required .....130

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X OR 213X ..... (3) \_\_\_\_\_  
COMM 131X OR 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X OR 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X OR SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X OR 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X OR 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_



# Japanese Studies

College of Liberal Arts  
Interdisciplinary Program  
[www.uaf.edu/cla/](http://www.uaf.edu/cla/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

This program provides an in-depth study of Japanese language and culture aimed at applying linguistic skills and cultural insights to specific career opportunities.

Japanese is classified among the most difficult of foreign languages for American students. The highlight of the major is, therefore, one semester of intensive study in Japan during the junior or senior year. This interdisciplinary program culminates in a senior seminar on contemporary Japan. Students will begin their research project for the seminar while studying at our exchange university, Nagoya Gakuin, or at another pre-approved program. Students are encouraged to use this major in conjunction with a discipline-based major.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:<sup>\*</sup>  
GEOG 311W—Geography of Asia (3)  
or PS 321—International Politics (3)  
or PS 464W—East Asian Governments and Politics (3) ..... 3  
HIST 122—East Asian Civilization (3)  
or HIST 331—Modern Japan (3) ..... 3  
JPN 301—Advanced Japanese\*\* (3) and

- JPN 302O—Advanced Japanese\*\* (3)  
or JPN 431—Studies in Japanese Culture (3) and  
JPN 432—Studies in Japanese Language (3)  
or equivalent in Japan (6) ..... 6  
JPN 331W—Women's Voices in Japanese Literature (3)  
or JPN 332—Japanese Cultural Traditions and Arts (3) ..... 3  
JPN 397—Advanced language study in Japan (12)  
or JPN 497—Advanced language study in Japan (12) ..... 12  
JPN 475—Seminar on Contemporary Japan ..... 3

4. Complete 1 career concentration area:\*\*\* ..... 6
5. Minimum credits required ..... 120

<sup>\*</sup> Student must earn a C grade or better in each course.

<sup>\*\*</sup> These courses are offered in the Japanese language. Students may study in Japan during their junior year, as long as they complete a minimum of 18 credits of Japanese language at the upper division level to fulfill the Japanese studies core requirements. 15 credits of language may be taken in Japan, and at least three upper division language credits must be taken in residence at UAF.

<sup>\*\*\*</sup> Complete 2 additional courses (minimum 6 within or closely related to the minor discipline at the upper division level. Because Japanese Studies is an interdisciplinary program, students are required to select a minor within a specific discipline. For example, general business minor with two additional courses in marketing. Written approval of advisor required.

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 (BA/BBA) are not subject to double counting restrictions.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

- ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X OR 213X ..... (3) \_\_\_\_\_  
COMM 131X OR 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

- LS 100X OR 101X ..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

- ANTH 100X OR SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X ..... (3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

- MATH 107X ..... (3) \_\_\_\_\_  
OR MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
OR MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

- ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X OR 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X OR 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Journalism

College of Liberal Arts  
Department of Journalism  
(907) 474-7761  
www.uaf.edu/journal/

## B.A. Degree

Minimum Requirements for Degree: 123-124 credits

The journalism program offers a solid curriculum designed to prepare students to leave the classroom and be ready to take their places in the nation's newsrooms.

In addition to the solid academic background they receive in the classroom, students get practical experience by working with media on and off campus. On campus, these include public television and public radio stations, a student-owned FM station and the campus newspaper. Off campus, students have opportunities to intern with a variety of radio and television stations, newspapers and other media-related businesses and organizations, both in and out of Alaska.

The department runs several laboratory facilities including a news writing/digital photography lab, a multimedia lab, a digital audio production lab, a digital video editing lab, two photography labs and a photography studio, and an electronic newsroom. The department is fully accredited by the Accrediting Council on Education in Journalism and Mass Communication.

## Major—B.A. Degree

**Concentrations: Broadcast Journalism, New Media, News-Editorial, Photojournalism**

1. Complete the general university requirements (page 106).
  2. Complete the B.A. degree requirements (page 109. As part of the B.A. degree requirements, complete HIST 132.)
  3. Complete the following program (major) requirements:\*
- |  |   |
|--|---|
| JRN 101—Introduction to Mass Communications .....  | 3 |
| JRN 301W—News Reporting and Writing .....          | 3 |
| JRN 400—Professional Media Internship .....        | 3 |
| JRN 413—Mass Media Law and Regulation .....        | 3 |
| JRN 421—Journalism in Perspective .....            | 3 |
| JRN 490—Online Publication: "Extreme Alaska" ..... | 3 |
4. Complete credits outside of journalism\*\* .....90
  5. Complete 1 of the following concentrations:\*

### Broadcast Journalism

- a. Complete the following:
- |  |   |
|--|---|
| JRN 215—Radio Production .....                   | 3 |
| JRN 451O—Television Production .....             | 4 |
| JRN 452W—Radio and Television News Writing ..... | 3 |
| JRN 453—Television News Reporting .....          | 3 |
- b. Complete 2 courses from the list of approved journalism electives.
  - c. Minimum credits required .....124

### New Media

- a. Complete the following:
- |   |   |
|---|---|
| JRN 323—Editing for Journalists .....           | 3 |
| JRN 324—Typography and Publication Design ..... | 3 |
| JRN 390—Web Design for Journalists .....        | 3 |
| JRN 484—Multimedia Theory and Practice .....    | 3 |

- b. Complete 3 courses from the list of approved journalism electives.\*\*\*\*
- c. Minimum credits required .....123

### News-Editorial

- a. Complete the following:
- |  |   |
|--|---|
| JRN 311—Magazine Article Writing ..... | 3 |
| JRN 323—Editing for Journalists .....  | 3 |
| JRN 401—Beat Reporting .....           | 3 |
| JRN 444W—Investigative Reporting ..... | 3 |
- b. Complete 3 courses from the list of approved journalism electives.
  - c. Minimum credits required .....123

### Photojournalism

- a. Complete the following:
- |                                    |   |
|------------------------------------|---|
| JRN 203—Basic Photography .....    | 3 |
| JRN 402—Advanced Photography ..... | 3 |
| JRN 404—Photojournalism I .....    | 3 |
| JRN 406—Photojournalism II .....   | 3 |
- b. Complete 2 courses from the list of approved journalism electives.
  - c. Minimum credits required .....123

### Approved journalism electives:\*

JRN 203—Basic Photography .....	3
JRN 215—Radio Production .....	3
JRN 240—Foreign Corresponding .....	3
JRN 250—Website Design I .....	3
JRN 311W—Magazine Article Writing .....	3
JRN 323—Editing for Journalists .....	3
JRN 324—Typography and Publication Design .....	3
JRN/BA 326—Principles of Advertising .....	3
JRN 340—Mass Media and Society .....	3
JRN 350—Adobe Photoshop .....	3
JRN/WMS 380O—Women, Minorities and the Mass Media .....	3
JRN 401—Beat Reporting .....	3
JRN 402—Advanced Photography .....	3
JRN 403—Color Photography .....	3
JRN 404—Photojournalism I .....	3
JRN 405—Advanced Photography Seminar .....	3
JRN 406—Photojournalism II .....	3
JRN 411W—Writing for a Living .....	3
JRN 424—Magazine Production .....	3
JRN 433—Public Relations .....	3
JRN 440—Ethics and Reporting in the Far North .....	3
JRN 444W—Investigative Reporting .....	3
JRN 451O—Television Production .....	4
JRN 452—Radio and Television News Writing .....	3
JRN 453—Television News Reporting .....	3
JRN 454—Advanced TV News Production .....	3
JRN/ART 484—Multimedia Theory and Practice .....	3
JRN/ED 486—Media Literacy .....	3
JRN 493—Special Topics .....	3
JRN 497—Independent Study .....	3

\* Student must earn a C grade or better in each course in the major requirements and any course offered through the Department of Journalism.

\*\* To assure the journalist a broad liberal arts education, 80 credits must be outside of journalism, 65 of which should be from traditional liberal arts courses offered by any of these departments: AKNP, ALST, ANL, ANS, ANTH, ART, ASLG, ATM, BIOL, CHEM, COMM, ECON, ENGL, ENVE, ESK, FISH, FL, FREN, FSN, GEOG, GEOS, GER, HIST, HONR, HUM, JPN, JUST, LING, LS, MATH, MSL, MUS, NORS, NRM, PHIL, PHYS, PS, PSY, RUSS, SOC, SPAN, STAT, THR, WMS.

\*\*\* JRN 102, 308, 408 and 486 may not be used as approved JRN electives in this concentration. However, any of the following courses may be substituted for one of the 3 approved JRN electives: BA 343, 436 or 445W.

\*\*\*\* JRN 471O and 472O may be used as approved JRN electives in this concentration.

## Minor\*

- Complete the following:  
JRN 101—Introduction to Mass Communications ..... 3  
JRN 301W—News Reporting and Writing ..... 3  
Approved JRN electives ..... 9
- Minimum credits required ..... 15  
*\* Student must earn a C grade or better in all department courses used to satisfy minor requirements.*

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Justice

College of Liberal Arts  
Justice Program  
(907) 474-5500  
[www.uaf.edu/justice/](http://www.uaf.edu/justice/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

The justice discipline represents a melding of theoretical and applied concepts, and the B.A. degree in justice, as well as the M.A. degree in administration of justice, reflects that dichotomy. Consequently, students explore theoretical models associated with different aspects of the criminal justice system, but also study the structure and administration of the criminal justice system.

The applied science nature of the discipline results in graduates with a B.A. degree in justice being able to favorably compete for professional positions within various justice employment fields. This also creates opportunities for internships with various justice agencies for justice juniors and seniors.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:\*
 

JUST 110—Introduction to Justice .....	3
JUST 125—Introduction to Addictive Processes.....	3
JUST 222—Research Methods.....	3
JUST 251—Criminology .....	3
JUST 300X—Ethics and Justice** .....	3

- |  |   |
|--|---|
| JUST 340—Rural Justice in Alaska ..... | 3 |
| JUST 358—Juvenile Delinquency .....    | 3 |
| JUST 460O—American Crime Control.....  | 3 |
4. Complete 18 credits from the following:\*
    - a. Justice electives.....12
    - b. Six credits from the following:
 

ANTH 242—Native Cultures of Alaska .....	3
ANTH 320W—Language and Culture: Applications to Alaska (3) or COMM 330—Intercultural Communications (3) .....	3
HSV 205—Basic Principles of Group Counseling.....	3
PSY 330—Social Psychology .....	3
PSY 370—Drugs and Drug Dependence .....	3
SOC 201—Social Problems .....	3
SOC 301—Rural Sociology .....	3
SOC 335—Deviance and Social Control .....	3
JUST electives .....	3-6
  5. Minimum credits required .....

\* Student must earn a C grade or better in each course.

\*\* If taken to meet the upper division of baccalaureate core requirement for ethics/values and choices in the Perspectives on the Human Condition, then student must take an additional upper division justice elective for 3 credits to complete the major.

## Minor

1. Complete the following:
 

JUST 110—Introduction to Justice .....	3
JUST electives .....	12
2. Minimum credits required .....

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- |                         |     |       |
|-------------------------|-----|-------|
| ENGL 111X.....          | (3) | _____ |
| ENGL 211X OR 213X ..... | (3) | _____ |
| COMM 131X OR 141X.....  | (3) | _____ |

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

- |                       |       |       |
|-----------------------|-------|-------|
| LS 100X OR 101X ..... | (0-1) | _____ |
|-----------------------|-------|-------|
- OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- |  |     |       |
|--|-----|-------|
| ANTH 100X OR SOC 100X .....                                  | (3) | _____ |
| ECON/PS 100X .....   | (3) | _____ |
| HIST 100X.....   | (3) | _____ |
| ART/MUS/THR 200X, HUM 201X OR ANS 202X .....                 | (3) | _____ |
| ENGL/FL 200X .....   | (3) | _____ |
| PHIL 322X, NRM 303X, COMM 300X,<br>PS 300X OR JUST 300X..... | (3) | _____ |

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

- |                                     |     |       |
|-------------------------------------|-----|-------|
| MATH 107X .....                     | (3) | _____ |
| OR MATH 131X (except for BBA) ..... | (3) | _____ |
| OR MATH 161X.....                   | (3) | _____ |
| MATH 200X .....                     | (4) | _____ |
| MATH 201X .....                     | (4) | _____ |
| MATH 202X .....                     | (4) | _____ |
| MATH 262X .....                     | (4) | _____ |
| MATH 272X .....                     | (3) | _____ |

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- |                                 |     |       |
|---------------------------------|-----|-------|
| ATM 101X .....                  | (4) | _____ |
| BIOL 103X OR 104X.....          | (4) | _____ |
| BIOL 105X-106X .....            | (8) | _____ |
| BIOL 111X-112X .....            | (8) | _____ |
| CHEM 100X.....                  | (4) | _____ |
| CHEM 103X-104X.....             | (8) | _____ |
| CHEM 105X-106X.....             | (8) | _____ |
| GEOG 205X .....                 | (4) | _____ |
| GEOS 100X OR 120X OR 125X ..... | (4) | _____ |
| GEOS 101X-112X.....             | (8) | _____ |
| MSL 111X .....                  | (4) | _____ |
| PHYS 102X OR 175X.....          | (4) | _____ |
| PHYS 103X-104X.....             | (8) | _____ |
| PHYS 211X-212X.....             | (8) | _____ |
| PHYS 211X-213X.....             | (8) | _____ |
| PHYS 212X-213X.....             | (8) | _____ |

# Pre-Professional Opportunities

UAF students may develop a program of study that prepares them for a variety of professional or graduate programs. Pre-professional advising provides information about groundwork for admission to a specific graduate program or professional school.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_



# Dentistry

Pre-Professional Advising  
(907) 474-6396

Dentistry is concerned with the prevention, diagnosis and treatment of oral disease and disorders. Professional dental study typically involves a four-year program of graduate classroom instruction, lab work and hands-on patient treatment. Students who wish to specialize within the field may pursue advanced training at the post-doctoral level. Specialists and general dentists must be licensed by the state before practicing.

While a definite pre-dentistry curriculum is not required for admission to dental school, students planning to apply should include specific courses in their undergraduate studies. At UAF, these are biology (BIOL 105X and 106X), chemistry (CHEM 103X and 104X, or 105X and 106X), organic chemistry with lab (CHEM 321, 322, and 324), and physics (PHYS 103X and 104X). Some schools suggest additional science course work in areas such as anatomy and physiology (BIOL 211X and 212X).

Dental schools expect students to have a broad general background in the social sciences and humanities. Some dental schools accept applicants after their third year of undergraduate work, but the majority of students entering dental school have completed a bachelor's degree. A strong undergraduate academic record and high scores on the Dental Admission Test (DAT) are desirable for admission.

Students who are considering dentistry as a career should contact the Academic Advising Center. An academic advisor will help students plan an appropriate undergraduate program and explore professional schools, licensing requirements and financial aid.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_



# Law

Pre-Professional Advising  
(907) 474-6396

Law education prepares students to become attorneys, judges, public servants, teachers or administrators in government or the private sector. Attorneys are concerned with the interpretation of law and its application to specific situations. This involves in-depth research, writing reports and briefs, advising clients, and representing parties in the courts.

Law school consists of three years of graduate-level study. Instruction includes classroom lectures and discussion, considerable research and practice of courtroom procedures. Law school graduates must pass a state bar exam in order to practice.

Completion of a bachelor's degree is required for admission to most law schools. Students should have a strong academic record and high scores on the Law School Admission Test (LSAT). While law schools do not prescribe a specific undergraduate major for admission, a liberal education is the best preparation. Students planning a legal career should select courses that enhance oral and written communication skills, expand understanding of human values and institutions, and develop analytical reasoning and logical thinking. English, philosophy, history, literature and the social sciences are valuable areas of pre-law study. Courses in accounting and economics are helpful as well. Recent trends indicate that students with an undergraduate degree in the natural sciences are gaining in favor for law school admission.

Students interested in a legal career can obtain assistance through the Academic Advising Center for discussing program planning, professional schools, and financial planning.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Library Science

Pre-Professional Advising  
(907) 474-6396

A graduate degree in library and information science prepares students for professional positions in the management of information in libraries and other environments. According to one graduate program description, the “contemporary librarian has become an essential part of the complex communication/information network that now encircles the globe. Today’s information professional must understand how information is created and disseminated in society; must be familiar with print, non-print, and electronic media; and must be adept in the use of computers, automated techniques, and information networks.”

One to two years of graduate course work in a broad spectrum of areas is generally required for a professional career in library science. The program covers planning and evaluation related to acquiring, organizing and accessing information in library settings. Students also learn to manage, design and deliver information services. Some programs may offer special emphasis on topics such as law or medicine.

Library schools prepare professionals from a variety of academic backgrounds. The caliber of the applicant’s undergraduate work and results of the Graduate Record Exam (GRE) are important considerations for acceptance to a professional library studies program.

At UAF, pre-library science students pursue an extensive general undergraduate education. Courses in computer applications and programming, statistics, and foreign languages help to satisfy the demands and admission requirements of graduate programs in library science. A background in the social and physical sciences is equally important as the number of special libraries increases. Advisement for students interested in library science is available through the Academic Advising Center.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0–1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3–4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X–106X.....(8) \_\_\_\_\_  
BIOL 111X–112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X–104X.....(8) \_\_\_\_\_  
CHEM 105X–106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X–112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X–104X.....(8) \_\_\_\_\_  
PHYS 211X–212X.....(8) \_\_\_\_\_  
PHYS 211X–213X.....(8) \_\_\_\_\_  
PHYS 212X–213X.....(8) \_\_\_\_\_

# Medicine

Pre-Professional Advising  
(907) 474-7608 or 474-6396

Physicians serve a broad range of medical functions. They diagnose disease, prescribe treatment, supervise patient care, and participate in the improved delivery of health services. Many physicians branch off into basic and applied medical research, teaching, or administration.

Professional medical education consists of four years of graduate-level study. Typically, the first two years of medical school are composed of classroom instruction and laboratory work, and the second two years consist of clinical rotations. Medical school graduates may elect to continue their training in a one-year internship and/or a one-to three-year residency. The residency option is required in order to specialize in medicine.

Medical schools evaluate each applicant's overall academic achievement together with results of the Medical College Admission Test (MCAT). While medical schools do not require a specific undergraduate major, they generally expect applicants to have a foundation in biology, chemistry and physics. UAF courses that satisfy this are biology (BIOL 105X and 106X), chemistry (CHEM 103X and 104X, or 105X and 106X), organic chemistry with lab (CHEM 321, 322, and 324), and physics (PHYS 103X and 104X). Other science course work such as anatomy and physiology (BIOL 211X and 212X), as well as a background in the social sciences and humanities, is not usually required for admission but can strengthen a pre-med curriculum. Medical schools will consider applicants for admission after their third year of undergraduate work, but most entering medical students have completed a bachelor's degree.

Students who are considering medicine as a career choice should contact the dean of the College of Science, Engineering and Mathematics or the Academic Advising Center. An academic advisor will help the student with pre-med program advisement, exploration of professional schools and licensing requirements, and financial planning.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language. **MATHEMATICS (3-4)**

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Physical Therapy

Pre-Professional Advising  
(907) 474-6396

Physical therapists are dedicated to the promotion of health and the prevention of disease. Specifically, they provide assessment, evaluation, and rehabilitation of the muscular, skeletal and nervous systems after injury or disease. Physical therapists work in hospital rehabilitation units, in private rehabilitation practices, and in orthopedic and sports medicine clinics. Many also serve as administrators, researchers and educators.

Physical therapy education typically consists of a two-year program leading to a certificate, a bachelor's or a master's degree. The current trend across the nation is toward the master's, which requires completion of a bachelor's degree before admission. As in most health care professions, the first half of physical therapy training consists of classroom instruction and the second half emphasizes clinical practice. After completion of programs accredited by the American Physical Therapy Program, students are eligible to test for licensure in all 50 states.

Acceptance to physical therapy programs is very competitive and is based on overall academic performance (most require a minimum 3.0 GPA), achievement in foundational sciences, and work experience in health care. Graduate programs usually require the Graduate Record Examination and/or the Miller Analogies Test. UAF does not prescribe a specific pre-physical therapy major, but offers a complete series of courses required for admission to most graduate programs. These include physics (PHYS 103X, 104X), anatomy and physiology (BIOL 211X, 212X), and statistics (STAT 300). Careful planning is necessary, as course requirements differ among schools.

Students considering a career in physical therapy should contact the Academic Advising Center. An advisor will help plan a program of study and explore professional schools and licensing requirements.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Veterinary Medicine

Pre-Professional Advising

(907) 474-6396

Veterinary medicine is concerned with two primary areas: the first is the diagnosis, prognosis, therapy and prevention of animal health problems; and the second is protection of the public from animal borne disease through food safety inspection and other methods. Veterinarians also work in the fields of research and education.

A professional program in veterinary medicine generally requires four years of graduate study. In the first three years, students gain a solid foundation through classroom instruction and laboratory work. The final year consists of clinical rotations. Specialization within veterinary medicine requires further study at the post-doctoral level.

Although a bachelor's degree is not required for admission into veterinary school, most entering students have completed a four-year undergraduate degree. Veterinary schools will consider applicants from all disciplines, but because specific course requirements vary among schools, students must be sure check the admission standards of the school they are interested in. In general, pre-veterinary students should include the following undergraduate courses: introductory chemistry (CHEM 105X, 106X), organic chemistry (CHEM 321, 322, 324), biochemistry (CHEM 451, 452), biology (BIOL 105X, 106X, 342,362, 418), mathematics (STAT 200), and physics (PHYS 103X, 104X).

Admission to veterinary school is based on the strength of the applicant's undergraduate academic record and test scores on either the Veterinary College Admissions Test (VCAT) or the Graduate Record Exam (GRE). Work experience in veterinary medicine is highly recommended.

Advising for students considering veterinary medicine as a career choice is available through the Academic Advising Center.

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_



# Law and Society

College of Liberal Arts  
Department of Political Science  
(907) 474-7609  
[www.uaf.edu/polisci/](http://www.uaf.edu/polisci/)

## Minor only

This program helps students understand law in relationship to the larger society. It is based firmly on the view that the law is a rich humanistic tradition and study of legal ideas and institutions will promote sustained reflection on such fundamental concepts and values as equality, freedom, privacy, justice and rights.

While the programs is of special interests to students who plan graduate studies in law or careers in government service, it is recommended for any student who desires to understand the role of law in society. The program provides students with tools for reasoned appraisal of how the law works, ideas and policies that underlie it, and the ability to think clearly and analyze arguments critically.

## Minor

1. Complete the following 9 credits:  
PS 303—Politics and the Judicial Process..... 3  
PS 435W—Constitutional Law I: Federalism ..... 3  
PS 436W—Constitutional Law II: Civil Rights and Liberties ..... 3
2. Complete 6 credits from the following:  
ANS 425—Federal Indian Law and Alaska Natives ..... 3  
BA 317W—Employment Law ..... 3  
BA 330—The Legal Environment of Business..... 4  
JRN 413—Mass Media Law and Regulation..... 3  
JUST 352—Criminal Law..... 3  
JUST 354—Procedural Law..... 3  
PS 322—International Law and Organization  
PS 450—Comparative Aboriginal Rights and Policies ..... 3
3. Minimum credits required ..... 15

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X **OR** 213X.....(3) \_\_\_\_\_  
COMM 131X **OR** 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X.....(3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X.....(3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA).....(3) \_\_\_\_\_  
**OR** MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X **OR** 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X **OR** 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Leadership and Civic Engagement

College of Liberal Arts  
Northern Studies Program  
(907) 474-7126  
[www.uaf.edu/northern/](http://www.uaf.edu/northern/)

## Minor only

The minor in leadership and civic engagement is administered by the northern studies program. Its purpose is to strengthen the abilities of UAF graduates to lead and contribute effectively in both the public and private spheres, especially in the Alaska public policy context.

## Minor

1. Complete the following:  
NORS 205—Leadership, Citizenship and Choice..... 3  
NORS 486—Senior Seminar in Leadership and Civic Engagement 3
2. Complete three courses from the following. At least one course must be a PS elective and one course must be a HIST elective.  
PS 202—Democracy and Global Society..... 3  
PS 263—Alaska Native Politics..... 3  
PS 301—American Presidency..... 3  
PS 315—American Political Thought..... 3  
PS 462—Alaska Government and Politics..... 3  
HIST 131—History of the United States..... 3  
HIST 361—Early American History..... 3  
HIST 364—History of the U.S. 1945 – Present..... 3  
RD 300W—Rural Development in a Global Perspective..... 3  
RD 325—Community Development Strategies..... 3
2. Minimum credits required..... 15

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X..... (3) \_\_\_\_\_  
ENGL 211X OR 213X..... (3) \_\_\_\_\_  
COMM 131X OR 141X..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X..... (3) \_\_\_\_\_  
ECON/PS 100X..... (3) \_\_\_\_\_  
HIST 100X..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X..... (3) \_\_\_\_\_  
ENGL/FL 200X..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X..... (3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X..... (3) \_\_\_\_\_  
OR MATH 131X (except for BBA)..... (3) \_\_\_\_\_  
OR MATH 161X..... (3) \_\_\_\_\_  
MATH 200X..... (4) \_\_\_\_\_  
MATH 201X..... (4) \_\_\_\_\_  
MATH 202X..... (4) \_\_\_\_\_  
MATH 262X..... (4) \_\_\_\_\_  
MATH 272X..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X..... (4) \_\_\_\_\_  
BIOL 103X OR 104X..... (4) \_\_\_\_\_  
BIOL 105X-106X..... (8) \_\_\_\_\_  
BIOL 111X-112X..... (8) \_\_\_\_\_  
CHEM 100X..... (4) \_\_\_\_\_  
CHEM 103X-104X..... (8) \_\_\_\_\_  
CHEM 105X-106X..... (8) \_\_\_\_\_  
GEOG 205X..... (4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X..... (4) \_\_\_\_\_  
GEOS 101X-112X..... (8) \_\_\_\_\_  
MSL 111X..... (4) \_\_\_\_\_  
PHYS 102X OR 175X..... (4) \_\_\_\_\_  
PHYS 103X-104X..... (8) \_\_\_\_\_  
PHYS 211X-212X..... (8) \_\_\_\_\_  
PHYS 211X-213X..... (8) \_\_\_\_\_  
PHYS 212X-213X..... (8) \_\_\_\_\_

# Linguistics

College of Liberal Arts  
Linguistics Program  
(907) 474-6884  
[www.uaf.edu/linguist/](http://www.uaf.edu/linguist/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

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. The undergraduate degree program seeks to give an overview of the discipline to raise students' awareness of the many aspects of that uniquely human phenomenon, language.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following program (major) requirements:
  - a. Complete the following background-related requirements:\*\*  
Foreign or Native language (4 semesters or equivalent) and a second language (2 semesters).\*\*\* 12-16  
LING 101—Nature of Language ..... 3
  - b. Complete the following:\*  
ENGL 318—Modern English Grammar..... 3  
LING 318—Introduction to Phonetics and Phonology ..... 3  
LING 320—Introduction to Morphology ..... 3  
LING 430—Historical Linguistics (3)  
or LING 420—Semantics (3) ..... 3

LING 482—Seminar in Linguistics .....	3
c. Complete 6 of the following:*	
ANL 251—Introduction to Athabascan Linguistics .....	3
ANL 315—Alaska Native Languages: Eskimo-Aleut .....	3
ANL 316—Alaska Native Languages: Indian Languages .....	3
ANS 320W—Language and Culture: Applications of Alaska .....	3
ANTH/WMS 308W,O—Language and Gender .....	3
COMM 320—Communication and Language .....	3
ENGL 462—Applied English Linguistics.....	3
ENGL 472—History of the English Language .....	3
LING 216—Languages of the World.....	3
LING/ED 303W,O—Language Acquisition .....	3
LING 402—Second Language Acquisition .....	3
LING 410O—Theory and Methods of Second Language Teaching	3
LING 420—Semantics.....	3
LING 430—Historical Linguistics.....	3
LING 431—Field Methods in Descriptive Linguistics.....	3
LING 440W—Aspects of Bilingualism.....	3
LING 450O—Language, Policy and Planning .....	3

4. Minimum credits required ..... 120

## Minor

1. Complete LING electives.\*\*\* ..... 15
2. Minimum credits required ..... 15

\* Student must earn a C grade or better in each course.

\*\*Where appropriate, these courses may be counted toward fulfillment of core requirements or B.A. degree requirements, but not both.

\*\*\* It is recommended that at least one of the languages be other than an Indo-European language.

\*\*\*\* Three of these credits may be from related courses in other departments listed in the linguistics major under 3c.

*Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).*

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.**  
**Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X.....	(3)	_____
ENGL 211X <b>OR</b> 213X .....	(3)	_____
COMM 131X <b>OR</b> 141X.....	(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X <b>OR</b> 101X .....	(0-1)	_____
<b>OR</b> Successful completion of library skills competency test.		

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X <b>OR</b> SOC 100X .....	(3)	_____
ECON/PS 100X .....	(3)	_____
HIST 100X.....	(3)	_____
ART/MUS/THR 200X, HUM 201X <b>OR</b> ANS 202X .....	(3)	_____
ENGL/FL 200X .....	(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X <b>OR</b> JUST 300X.....	(3)	_____

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.**MATHEMATICS (3-4)**

**Complete 3-4 credits from the following:**

MATH 107X .....	(3)	_____
<b>OR</b> MATH 131X (except for BBA) .....	(3)	_____
<b>OR</b> MATH 161X.....	(3)	_____
MATH 200X .....	(4)	_____
MATH 201X .....	(4)	_____
MATH 202X .....	(4)	_____
MATH 262X .....	(4)	_____
MATH 272X .....	(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X .....	(4)	_____
BIOL 103X <b>OR</b> 104X.....	(4)	_____
BIOL 105X-106X .....	(8)	_____
BIOL 111X-112X .....	(8)	_____
CHEM 100X.....	(4)	_____
CHEM 103X-104X.....	(8)	_____
CHEM 105X-106X.....	(8)	_____
GEOG 205X .....	(4)	_____
GEOS 100X <b>OR</b> 120X <b>OR</b> 125X .....	(4)	_____
GEOS 101X-112X.....	(8)	_____
MSL 111X .....	(4)	_____
PHYS 102X <b>OR</b> 175X.....	(4)	_____
PHYS 103X-104X.....	(8)	_____
PHYS 211X-212X.....	(8)	_____
PHYS 211X-213X.....	(8)	_____
PHYS 212X-213X.....	(8)	_____

# Mathematics

College of Science, Engineering and Mathematics  
Department of Mathematical Sciences  
(907) 474-7332  
www.cs.uaf.edu

## B.A., B.S. Degrees

Minimum Requirements for Degrees: 120 credits

The number of new fields in which professional mathematicians find employment grows continually. This department prepares students for careers in industry, government and 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.

The department maintains a math lab which is available for assistance to all students studying mathematics at the baccalaureate level.

The Department of Mathematical Sciences also offers programs in computer science and statistics (see separate listings).

## Major—B.A. or B.S. Degree

- Complete the following pre-major requirement:
  - Students must be ready to matriculate into MATH 200, before they will be allowed to declare mathematics as their major.
- Complete the general university requirements (page 106).
- Complete the B.A. or B.S. degree requirements (page 109 or 112. As part of the B.S. degree requirements, complete PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)
- Complete the following program (major) requirements:
 

MATH 200X—Calculus**	4
MATH 201X—Calculus**	4
MATH 202X—Calculus	4
MATH 215—Introduction to Mathematical Proofs	2
MATH 308—Abstract Algebra	3
MATH 314—Linear Algebra	3
MATH 401W—Advanced Calculus	3
MATH 490O—Senior Seminar	1
- Complete 21 credits of an elective package.\* The following are suggested elective packages:
  - Pure math electives:
 

MATH 305—Geometry	3
MATH 307—Discrete Mathematics	3
MATH 402—Advanced Calculus	3
MATH 404W—Topology	3
Approved electives	9
  - Applied math electives:
 

MATH 302—Differential Equations	3
MATH 421—Applied Analysis	4
MATH 422—Introduction to Complex Analysis	3
MATH 460W,O—Mathematical Modeling	3
Approved electives	3

 Complete 2 of the following:
 

MATH 307—Discrete Mathematics	3
MATH 310—Numerical Analysis	3
MATH 402—Advanced Calculus	3
STAT 300—Statistics	3
- Requirements for mathematics teachers (grades 7 - 12):\*\*\*\*

CS 201—Computer Science I	3
MATH 305—Geometry	3
MATH 306—Introduction to the History and Philosophy of Mathematics	3
STAT 300—Statistics (3) or MATH 371—Probability and MATH 408—Mathematical Statistics (6)	3-6
Two courses chosen from:	
MATH 302—Differential Equations (3)	
MATH 307—Discrete Mathematics (3)	
MATH 310—Numerical Analysis (3)	
MATH 460W,O—Mathematical modeling (3)	6
Approved Upper Division MATH and/or STAT electives	0-3
d. Statistics concentration electives:	
MATH 371—Probability	3
MATH 408—Mathematical Statistics	3
MATH 460W,O—Mathematical Modeling	3
STAT 300—Statistics	3
STAT 401—Regression and Analysis of Variance	4
Approved electives	6

## 6. Minimum credits required 120

\* Student must earn a C grade or better in each course.

\*\* Satisfies core or B.A. or B.S. degree requirements.

\*\*\* An elective package must be approved by a mathematical sciences advisor and must include at least 12 credits at the 300-level or above. Students who are obtaining a single B.S. or B.A. with mathematics as a second major may substitute up to 9 credits of approved courses with strong mathematical content for mathematical sciences electives.

\*\*\*\*We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year.

Note: All mathematics majors—including double majors—must have an advisor from the mathematical sciences department.

Note: In addition to meeting all the general requirements for the specific degree, certain mathematics courses are required of all mathematics majors. (At least 12 approved mathematics credits at the 300-level or above must be taken while in residence on the Fairbanks campus.) All electives must be approved by the department.

## Minor

- Complete the following:
 

Math 200X—Calculus	4
Math 201X—Calculus	4
Math 202X—Calculus	4

 At least 9 additional credits from MATH 215, STAT 300, any 300- or 400-level MATH course; or electives approved by mathematics advisor 9
- Minimum credits required 21
 

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_



# Mechanical Engineering

College of Science, Engineering and Mathematics  
Department of Mechanical Engineering  
(907) 474-7136  
[www.uaf.edu/mechengr/](http://www.uaf.edu/mechengr/)

## B.S. Degree

Minimum Requirements for Degree: 130 credits

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.

The goals and objectives of the mechanical engineering program are to: offer a mechanical engineering program designed to prepare its graduates for careers at the professional level; to maintain, as a base, ABET accreditation of the undergraduate program; provide continuing educational opportunities for graduate engineers; serve as a resource of technical knowledge for the state as well as the nation; conduct research in all areas of mechanical engineering including cold regions mechanical engineering; and offer a graduate program in mechanical engineering at the M.S. and Ph.D. levels. The Engineering Accreditation Commission of ABET has accredited the B.S. degree program in mechanical engineering since 1980.

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 to 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.

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 the engineering science—extensions to the basic sciences forming the foundation to 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 an emphasis in aerospace engineering. Because of UAF's unique location, special emphasis is placed on cold regions engineering problems. This fact is highlighted in the technical

elective, arctic engineering. 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.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X; CHEM 105X and CHEM 106X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X and PHYS 212X.)
3. Complete the following: program (major) requirements:\*
 

ME 302—Mechanical Design I.....	4
ME 313—Mechanical Engineering Thermodynamics .....	3
ME 321—Industrial Processes .....	3
ME 334—Elements of Material Science/Engineering.....	3
ME 403—Mechanical Design II .....	3
ME 408—Dynamics of Systems .....	3
ME 415W—Thermal Systems Laboratory.....	3
ME 441—Heat and Mass Transfer .....	3
ME 487W,O—Design Project .....	3
ME electives** .....	6
Technical electives*** .....	3
4. Complete the following program (major) requirements:
 

ES 101—Introduction to Engineering.....	2
ES 201—Computer Techniques .....	3
ES 209—Statics .....	3
ES 210—Dynamics .....	3
ES 301—Engineering Analysis.....	3
ES 307—Elements of Electrical Engineering .....	3
ES/ME 308—Instrumentation and Measurement* .....	3
ES 331—Mechanics of Materials* .....	3
ES 341—Fluid Mechanics* .....	4
ES 346—Basic Thermodynamics*.....	3
ESM 450W—Economic Analysis and Operations.....	3
MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
Electives.....	2
5. Minimum credits required .....130

\* Student must earn a C grade or better in each mechanical engineering, technical elective, ES/ME 308, ES 331, ES 341 and ES 346 course.

\*\* Mechanical engineering course at 400-level or above.

\*\*\* Engineering course at 400-level or above.

Note: Students electing to complete an emphasis in aerospace engineering must complete the sequence of aerospace courses (ME 450, ME 451, ME 452 and ME 453) as part of their program requirements.

Note: Students must plan their elective courses in consultation with their mechanical engineering faculty advisor, and all elective courses must be approved by their mechanical engineering faculty advisor.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Military Science

College of Liberal Arts  
Department of Military Science  
(907) 474-7501  
[www.uaf.edu/ROTC/](http://www.uaf.edu/ROTC/)

## Minor only

The Army Reserve Officers' Training Program (ROTC) 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 is an approved minor for the B.A. degree. Through academic instruction and practical experience laboratories, the student becomes familiar with the leadership, management and decision-making 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 specific needs of individual students who desire to enroll but are past their freshman year. 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. 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.

The ROTC rifle team competes with civilian and military teams in Alaska throughout the year. All necessary equipment is furnished by the military science department at no cost to the student.

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 PMS prior to 1 June annually for information concerning the basic camp.

Awards are made annually at the UAF awards ceremony. Awards, including the governor's and chancellor's medals, are presented for outstanding achievement in the ROTC program, academic achievement and leadership.

Students selected who desire to compete for a commission are provided a stipend (\$200 per month) and incur a military obligation. Students who wish to enroll in advanced classes but do not desire to earn a commission may do so with the approval of the department head. The obligation and subsistence allowance will be waived for those students.

Advanced course students receive a monthly subsistence allowance during the school year (about \$3,000 for the two-year period). This allowance is tax free.

Students enrolled in military science are furnished uniforms and texts by the department.

Army ROTC scholarships (\$3,000 to \$12,000) pay for tuition and lab fees, and provide a book allowance in addition to the stipend. Scholarships are awarded for two or three years on a competitive basis. Interested students should contact the military science department for further details.

## Minor

1. Complete the following:  
MILS electives\* ..... 19
2. Minimum credits required ..... 19

*\* Electives must be approved by the department.*

*Note: A maximum of 23 credits in military science courses may be used as elective credit toward fulfillment of baccalaureate degree requirements.*

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Mining Engineering

School of Mineral Engineering  
Department of Mining and Geological Engineering  
(907) 474-7388  
[www.uaf.edu/sme/MinEng.html](http://www.uaf.edu/sme/MinEng.html)

## B.S. Degree

Minimum Requirements for Degree: 132 credits

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. 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 faculty of the UAF mining engineering department.

Candidates for the B.S. degree in mining engineering must take a comprehensive examination in their general field (completion of the state of Alaska Fundamentals of Engineering examination will satisfy this requirement). The state of Alaska Fundamentals of Engineering is a first step toward registration as a professional engineer.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: CHEM 105X, CHEM 106X, LS 101X and MATH 200X.)
  2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X and PHYS 212X.)
  3. Complete the following program (major) requirements:\*
- |  |   |
|--|---|
| ES 201—Computer Techniques .....                             | 3 |
| ES 208—Mechanics.....  | 4 |
| ES 307—Elements of Electrical Engineering .....              | 3 |
| ES 331—Mechanics of Materials.....                           | 3 |
| ES 341—Fluid Mechanics .....                                 | 4 |
| ES 346—Basic Thermodynamics.....                             | 3 |
| GE 261—General Geology for Engineers .....                   | 3 |
| GEOS 262—Rocks and Minerals .....                            | 3 |
| GEOS 332—Ore Deposits and Structure.....                     | 3 |
| MIN 103—Introduction to Mining Engineering.....              | 1 |
| MIN 104—Mining Safety and Operations Lab.....                | 1 |
| MIN 106—Mining Operations I.....                             | 1 |
| MIN 202—Mine Surveying .....                                 | 3 |
| MIN 206—Mining Operations II .....                           | 1 |
| MIN 301—Mine Plant Design.....                               | 3 |
| MIN 302—Underground Mine Environmental Engineering .....     | 3 |
| MIN 313—Introduction to Mineral Preparation.....             | 3 |
| MIN 370—Rock Mechanics .....                                 | 3 |
| MIN 407W—Mine Reclamation and Environmental Management ..... | 2 |
| MIN 408O—Mineral Valuation and Economics .....               | 3 |

MIN 409—Operations Research and Computer Applications in Mineral Industry .....	3
MIN 443—Principles and Applications of Industrial Explosives ...	3
MIN 454—Underground Mining Methods .....	3
MIN 484—Surface Mining Methods II.....	2
MIN 490W—Mining Design Project.....	3
MIN 485—Mining Engineering Exit Exam.....	0

4. Complete the following program (major) requirements:

MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
5. Complete 6 credits\* from the following recommended technical electives:\*\*

GE 440—Slope Stability .....	3
MIN 401—Mine Site Field Trip.....	2
MIN 447—Placer Mining.....	3
MIN 472—Ground Control .....	3
MIN 481—Computer Aided Mine Design I.....	3
MIN 482—Computer Aided Mine Design II.....	3
Approved technical electives .....	3-6
6. Minimum credits required .....

\* Student must earn a C grade or better in each course.

\*\* Students must plan their elective courses in consultation with their mining engineering faculty advisor. Technical electives are selected from the list of the approved technical electives for mining engineering program and other programs course listing. All elective courses must be approved by the department head.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Music

College of Liberal Arts  
Department of Music  
(907) 474-7555  
[www.uaf.edu/music/department/](http://www.uaf.edu/music/department/)

## B.A., B.M. Degrees

Minimum Requirements for Degrees: B.A.: 130 credits;  
B.M.: 120-144 credits

The curriculum is designed to satisfy cultural and professional objectives. The B.A. degree in music provides a broad, liberal education with a concentration in music. The B.M. degree in music education offers thorough preparation in teacher training with sufficient time to develop excellence in performance areas. The B.M. degree in performance offers intensive specialization for those desiring professional training in music performance.

Recitals and concerts provide students with a variety of musical experiences which expand their regular curriculum.

The music department of UAF is a full member of the National Association of Schools of Music, the national accrediting organization.

## Major—B.A. Degree

- Complete the general university requirements (page 106).
- Complete the B.A. degree requirements (page 109).
- Complete a piano placement test during the first week of classes.
- Complete the following program (major) requirements:\*
  - Complete the following:
 

MUS 131 and 132—Basic Theory .....	4
MUS 133 and 134—Basic Ear Training .....	4
MUS 161 - 462—Private Lessons (major area)** .....	8
MUS 190—Recital Attendance*** .....	0
MUS 221 and 222—History of Music .....	6
MUS 231 and 232—Advanced Theory .....	4
MUS 233 and 234—Advanced Ear Training .....	2
MUS 253—Piano Proficiency .....	0
MUS 331—Form and Analysis .....	3
Large ensembles**** .....	6
  - Complete 6 credits from the following:
 

MUS 421W—Music before 1620 .....	3
MUS 422W—Music in the Seventeenth and Eighteenth Centuries .....	3
MUS 423W—Music of the Nineteenth Century .....	3
MUS 424W—Music in the Twentieth Century .....	3
- Minimum credits required .....

\* Student must earn a C grade or better in each course.

\*\* Competency level of MUS 362 must be achieved in one performance area.

\*\*\* Recital attendance (MUS 190) is required of music majors enrolled in private lessons (MUS 161 - 462). MUS 190 must be successfully completed 8 times to meet the degree requirements.

\*\*\*\* Pianists may substitute up to 2 credits of MUS 307—Chamber Music (piano accompanying) in place of enrollment in large ensemble organizations.

Note: Additional information applies to this degree. See "Notes for All Undergraduate Music Degrees" in the notes following the Music—B.M. degree (Music Education).

## Major—B.M. Degree (Performance)

- Complete the following B.M. degree admission requirement:
  - Audition on the major instrument.
- Complete the general university requirements (page 106). As part of the core curriculum requirements, voice performance majors must complete one year of language study. Selection of the language will be done in conjunction with the voice advisor.)
- Complete the following B.M. degree requirement: 3 credits of Mathematics, Computer Science or Statistics.
- Complete a piano placement test during the first week of classes.
- Complete the following degree and program (major) requirements:\*
  - Complete the following:
 

MUS 161 - 462—Private Lessons (major) .....	24
MUS 131 and 132—Basic Theory .....	4
MUS 133 and 134—Basic Ear Training .....	4
MUS 221 and 222—History of Music .....	6
MUS 231 and 232—Advanced Theory .....	4
MUS 233 and 234—Advanced Ear Training .....	2
MUS 331—Form and Analysis .....	3
MUS 351O—Conducting .....	3
MUS 390—Junior Recital .....	0
Large ensembles** .....	8
MUS 190—Recital Attendance*** .....	0
MUS 253—Piano Proficiency .....	0
MUS 490—Senior Recital .....	0
  - Complete 6 credits from the following:
 

MUS 332—Introduction to Computer-based Music Technology .....	3
MUS 431—Counterpoint .....	3
MUS 432—Orchestration and Arranging .....	3
MUS 433—Seminar in Musical Composition .....	3
MUS 434—Advanced Harmonic Analysis .....	3
  - Complete 6 credits from the following:
 

MUS 421W—Music before 1620 .....	3
MUS 422W—Music in the Seventeenth and Eighteenth Centuries .....	3
MUS 423W—Music of the Nineteenth Century .....	3
MUS 424W—Music in the Twentieth Century .....	3
  - Complete 12 credits from the following secondary area:\*\*\*\*
 

MUS 124—Music in World Cultures .....	3
MUS 153—Functional Piano .....	1
MUS 161-162, 261-262, 361-362, 461-462—Private Lessons (secondary performance area) .....	2 or 4
MUS 223—Native Alaskan Music .....	3
MUS 253—Piano Proficiency .....	0
MUS 307—Chamber Music .....	1
MUS 313—Opera Workshop .....	1-3
MUS 317—Arctic Chamber Orchestra .....	1
MUS 493—Special Topics .....	1-6

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

6. Minimum credits required ..... 120-121

\* Student must earn a C grade or better in each course.

\*\* MUS 101, 203, 205, 207 or 211. Wind and percussion instrumentalists are required to take a minimum of 4 credits in MUS 205 (Wind Ensemble). Piano majors may substitute up to 2 credits of MUS 307 (Piano Accompanying).

\*\*\* Recital attendance (MUS 190) is required of music majors enrolled in private lessons (MUS 161 - 462). MUS 190 must be successfully completed 8 times to meet the degree requirements.

\*\*\*\* Courses from 5b and 5c not already applied to program requirements may also meet this requirement.

Note: MUS 493 is repeatable up to 6 credits.

Note: MUS 153, 307, 313, 317 are repeatable for credit.

Note: MUS 161-162, 261-262, 361-362, 461-462 are repeatable up to 6 credits.

Note: Additional information applies to this degree. See "Notes for All Undergraduate Music Degrees" in the notes following the Music—B.M. degree (Music Education).

**Major—B.M. Degree (Music Education)**

**Concentrations: Elementary, Secondary, K-12**

1. Complete the following B.M. degree admission requirement:

- a. Audition on the major instrument.

2. Complete the general university requirements (page 106).

3. Complete the following B.M. degree requirement: 3 credits of Mathematics, Computer Science, or Statistics.

4. Complete a piano placement test during the first week of classes.

5. Complete the following degree and program (major) requirements:\*

Large ensembles**	8
MUS 131 and 132—Basic Theory	4
MUS 133 and 134—Basic Ear Training	4
MUS 161-461—Private Lessons (major)	14
MUS 190—Recital Attendance***	0
MUS 221 and 222—History of Music	6
MUS 231 and 232—Advanced Theory	4
MUS 233 and 234—Advanced Ear Training	2
MUS 253—Piano Proficiency	0
MUS 315—Music Methods and Techniques	10
MUS 331—Form and Analysis	3
MUS 351O—Conducting	3
MUS 390—Junior Recital	0
MUS 432—Orchestration and Arranging	3

6. Complete the following education requirements:\*

- a. Contact the School of Education for application procedures for admission to the teacher education program. \*\*\*\*
- b. Complete the following:
- |  |   |
|--|---|
| ED 201—Introduction to Education                         | 3 |
| ED 299—Practicum in Education                            | 3 |
| ED 330—Assessment of Learning (3)                        |   |
| or ED 350—Communication in Cross-Cultural Classrooms (3) | 3 |
| PSY 240—Lifespan Developmental Psychology                | 3 |
- c. Complete an Alaska Studies elective\*\*\*\*\*
- d. Complete a multicultural elective\*\*\*\*\*

7. Complete 1 of the following concentrations:\*

**Elementary**

a. Complete the following:

MUS 309—Elementary School Music Methods	3
ED 452O—Elementary Student Teaching	12

b. Minimum credits required .....138

**Secondary**

a. Complete the following:

MUS 405W—Secondary School Music Methods	3
ED 453O—Secondary Student Teaching	12

b. Minimum credits required .....138

**K-12**

a. Complete the following:

MUS 309—Elementary School Music Methods	3
MUS 405W—Secondary School Music Methods	3
ED 454O—Student Teaching K - 12	15

b. Minimum credits required .....144

\* Student must earn a C grade or better in each course.

\*\* MUS 101, 203, 205, 207 or 211. Wind and percussion instrumentalists are required to take a minimum of 4 credits in MUS 205—Wind Ensemble. Piano majors may substitute up to 2 credits of MUS 307—Piano Accompanying

\*\*\* Recital attendance (MUS 190) is required of music majors enrolled in private lessons (MUS 161 - 462). MUS 190 must be successfully completed 8 times to meet degree requirements.

\*\*\*\* Music education majors must have completed the necessary prerequisites and have been admitted to the teacher education program prior to acceptance for placement in student teaching.

\*\*\*\*\* Contact the Office of Certification and Advising (School of Education) for a list of approved courses that meet this requirement.

Note: Additional information applies to this degree. See "Notes for All Undergraduate Music Degrees" in the notes following the Music—B.M. degree (Music Education) degree.

**Notes for All Undergraduate Music Degrees**

Note: The various music organizations maintained by the department offer participation for students in all academic divisions of the university. Music majors will be required to earn a minimum of 8 credits in large ensembles: MUS 101 (University Chorus), MUS 203 (Fairbanks Symphony Orchestra), MUS 205 (Wind Ensemble), MUS 207 (UAF Jazz Band), or MUS 211 (Choir of the North). Students must be enrolled in one large ensemble during each semester of attendance at UAF.

Note: Each student (major or non-major) who enrolls in private applied or class lessons (excluding MUS 151K-Class Piano, MUS 151M-Class Voice, and MUS 151S-Class Guitar) must be concurrently enrolled in a large or small ensemble.

Note: Attendance at recitals and concerts provides students with a variety of musical experiences which expand their regular curriculum; therefore, attendance is mandatory for all majors. All applied music students are expected to perform in student recitals during each semester of study.

Note: At the end of the sophomore year, all music majors must demonstrate a satisfactory level of proficiency of performance in their applied major in order to advance to upper-division courses in music. A student may elect to continue study at the 200-level to prepare to pass requirements for admission to upper-division study.

Note: A piano proficiency jury examination must be successfully completed by the end of the student's second year in the program. See music department handbook for details.

Note: Students who desire to enroll in music theory or ear training courses will complete a placement examination and be allowed to enter at their appropriate level.

## Minor

1. Complete 1 of the following options:

### Option A

- a. Complete the following:  
Music theory, history and appreciation courses\* ..... 12
- b. Complete 2 credits from the following:  
MUS 101, 203, 205, 211 ..... 2
- c. Complete 4 credits from the following:  
MUS 151, 153, 161-462 (private lessons) ..... 4
- d. Minimum credits required ..... 18

### Option B

- a. Complete 4 credits from the following:  
MUS 101, 203, 205, 211, 307 (all sections) and MUS 319 ..... 4
- b. Complete 8 credits from the following:  
MUS 161, 162, 261, 262 and 361 ..... 8
- c. Complete 6 credits from the following:  
MUS 103, 123, 124, 131, 132, 221, 222 and 223 ..... 6
- d. Minimum credits required ..... 18

\* Courses to be selected with approval of department head.

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- ENGL 111X ..... (3) \_\_\_\_\_
- ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_
- COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

- LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_
- OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_
- ECON/PS 100X ..... (3) \_\_\_\_\_
- HIST 100X ..... (3) \_\_\_\_\_
- ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_
- ENGL/FL 200X ..... (3) \_\_\_\_\_
- PHIL 322X, NRM 303X, COMM 300X, PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

- MATH 107X ..... (3) \_\_\_\_\_
- OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_
- OR** MATH 161X ..... (3) \_\_\_\_\_
- MATH 200X ..... (4) \_\_\_\_\_
- MATH 201X ..... (4) \_\_\_\_\_
- MATH 202X ..... (4) \_\_\_\_\_
- MATH 262X ..... (4) \_\_\_\_\_
- MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- ATM 101X ..... (4) \_\_\_\_\_
- BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_
- BIOL 105X-106X ..... (8) \_\_\_\_\_
- BIOL 111X-112X ..... (8) \_\_\_\_\_
- CHEM 100X ..... (4) \_\_\_\_\_
- CHEM 103X-104X ..... (8) \_\_\_\_\_
- CHEM 105X-106X ..... (8) \_\_\_\_\_
- GEOG 205X ..... (4) \_\_\_\_\_
- GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_
- GEOS 101X-112X ..... (8) \_\_\_\_\_
- MSL 111X ..... (4) \_\_\_\_\_
- PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_
- PHYS 103X-104X ..... (8) \_\_\_\_\_
- PHYS 211X-212X ..... (8) \_\_\_\_\_
- PHYS 211X-213X ..... (8) \_\_\_\_\_
- PHYS 212X-213X ..... (8) \_\_\_\_\_

# Natural Resources Management

School of Natural Resources and Agricultural Sciences  
(907) 474-7083  
[www.uaf.edu/snras/](http://www.uaf.edu/snras/)

## B.S. Degree

Minimum Requirements for Degrees: 130 credits

Natural resources management is making and implementing decisions to develop, maintain or protect ecosystems to meet human needs and values. The core natural resources management curriculum provides students with a broad education in the various natural resources and their related applied fields. Programs can be tailored to enhance a student's depth or breadth in a given field of interest. The program is designed for students desiring careers in resources management or in other fields requiring knowledge of resources management, students planning advanced study, as well as those wishing to be better informed citizens.

The B.S. degree has three concentrations: forestry; plant, animal, and soil sciences; and resources. The forestry concentration offers students the opportunity to focus on the multi-resource management of forests and associated ecosystems for the sustained production of goods and services and to prepare for forestry related employment.

The natural resources management/forestry program is the only accredited four-year forestry program in Alaska.

The goals of UAF's forestry program are: to produce graduates who are highly competitive in obtaining professional employment, who have the knowledge to perform well on the job and who are valued for work in Alaska and the circumpolar North; maintain close student interaction with faculty and provide opportunity for students to obtain practical professional experience as part of their education; and to prepare students for lifelong learning and responsible participation in decision making about the use of natural resources.

The university provides students with a foundation in the biological, social and physical sciences and a blend of classroom, laboratory and field work to develop skills for a career in forestry. The forestry program leads to a professional degree in forestry. The program is accredited by the Society of American Foresters (SAF).

The plant, animal and soil sciences concentration offers opportunities for scientific study and education in areas such as: field and greenhouse plant production, domestication and propagation of native plants, revegetation, domestic and native animal production, and agricultural and ecological aspects of soil science. The resources concentration emphasizes responsible stewardship in the management of multiple resources that occur in natural systems. Field and laboratory activities and applications of knowledge gained are stressed throughout the program. Internships and work-study arrangements are often available for qualified students.

State and federal agencies such as the Alaska Department of Natural Resources, Agricultural Research Service, U.S. Forest Service, Bureau of Land Management, Natural Resource Conservation Service, and U.S. Fish and Wildlife Service contribute significantly to the instructional program, by providing guest lecturers and internship and field work opportunities for students.

## Major—B.S. Degree

**Concentrations: Forestry; Plant, Animal and Soil Sciences; Resources**

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete a MATH—Calculus course.)
  2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete STAT 200\*.)
  3. Complete the following (major) requirements:\*
- |  |   |
|--|---|
| BIOL 105X—Fundamentals of Biology I**                      | 4 |
| BIOL 106X—Fundamentals of Biology II**                     | 4 |
| BIOL 271—Principles of Ecology                             | 4 |
| CHEM 105X—General Chemistry***                             | 4 |
| CHEM 106X—General Chemistry***                             | 4 |
| ECON 235—Introduction to Natural Resource Economics        | 3 |
| NRM 101—Natural Resources Conservation and Policy          | 3 |
| NRM 106—Orientation to Natural Resource Management         | 1 |
| NRM 304O—Perspectives in Natural Resources Management      | 3 |
| NRM 380W—Soils and the Environment                         | 3 |
| NRM 405W—Senior Thesis in Natural Resources Management I.. | 2 |
| NRM 406W—Senior Thesis in Natural Resources Management II. | 2 |
4. Complete 1 of the following concentrations:\*

### Forestry

- a. Complete the following:

BIOL 239—Introduction to Plant Biology (4)	
or NRM 211—Introduction to Applied Plant Science (3)	3-4
ECON 335O—Intermediate Natural Resource Economics	3
GEOS 101X—The Dynamic Earth	4
NRM 204—Public Lands Law and Policy	3
NRM 251—Silvics and Dendrology	4
NRM 290—Resource Management Issues at High Latitudes	2
NRM 338—Introduction to Geographic Information Systems	3
NRM 340—Natural Resources Measurement and Inventory	3
NRM 365W—Principles of Outdoor Recreation Management	3
NRM 370—Introduction to Watershed Management	3
NRM 375—Forest Ecology	3
NRM 430—Resource Management Planning	3
NRM 450—Forest Management	3
NRM 451W—Silviculture	3
NRM 452—Forest Health and Protection	3
NRM 453—Harvesting and Utilization of Forest Products	3
WLF 201—Wildlife Management Principles (3)	
or FISH 401W,O/2—Fisheries Management (3)	3

- b. Complete 3 of the following to total at least 8 credits:\*\*\*\*

1. Complete at least one of the following non-measurements courses:

BIOL 331—Systematic Botany	4
FIRE—Any course on wildland fire control/management	3
GEOS 408—Photogeology	2
NRM 277—Introduction to Conservation Biology	3
NRM 300—Internship in Natural Resources Management****	1-6
NRM 303X—Environmental Ethics and Actions*****	3
NRM 312—Introduction to Range Management	3
WLF 201—Wildlife Management Principles (3)	
or FISH 401W,O/2—Fisheries Management (3)	3



2. Complete at least one of the following measurements courses:  
 CE 112—Elementary Surveying..... 3  
 GEOS 422—Geoscience Applications of Remote Sensing..... 3  
 NRM 341—GIS Analysis ..... 4  
 STAT 401—Regression and Analysis of Variance ..... 4  
 STAT 402—Scientific Sampling..... 3
5. Minimum credits required .....130
- \* Student must earn a C grade or better in each course.*  
*\*\* Satisfies core natural science requirement.*  
*\*\*\* Satisfies B.S. degree natural science requirement.*  
*\*\*\*\* Courses other than those listed must be approved by student's advisor.*  
*\*\*\*\*\* Must be forestry related.*  
*\*\*\*\*\* If used to fulfill the baccalaureate core requirement for ethics/values and choices in the perspectives on the human condition, NRM 303X may not also count toward a natural resources management major. However, in this case, only two courses that total at least 5 credits are required from this list, exclusive of NRM 303X.*

### Plant, Animal and Soil Sciences

- a. Complete the following:  
 BIOL 331—Systematic Botany (4)  
     or BIOL 310—Animal Physiology (4)  
     or BIOL 317—Comparative Anatomy of Vertebrates (4) ..... 4  
 NRM 211—Introduction to Applied Plant Science..... 3  
 NRM 290—Resource Management Issues at High Latitudes ..... 2  
 NRM 320—Animal Science..... 3  
 NRM 480—Soil Management for Quality Conservation (3)  
     or NRM 485—Soil Biology (3) ..... 3
- b. Complete at least 8 credits in biology, botany, physics, chemistry, geosciences and/or mathematics, in addition to the above basic courses. Courses must be approved for science majors.
- c. Complete at least 9 credits in the following natural resources management electives:  
 NRM 102—Practicum in Natural Resources Management (1-2) and/or NRM 300—Internship in Natural Resources Management (1-3) .....1-3  
 NRM 204—Public Lands Law and Policy ..... 3  
 NRM 215—Plant Propagation..... 3  
 NRM 251—Silvics and Dendrology ..... 4  
 NRM 312—Introduction to Range Management ..... 3  
 NRM 313—Introduction to Plant Pathology ..... 4  
 NRM 338—Introduction to Geographic Information Systems ..... 3  
 NRM 340—Natural Resources Measurement and Inventory ..... 3  
 NRM 341—GIS Analysis ..... 4  
 NRM 370—Introduction to Watershed Management ..... 3  
 NRM 404—Environmental Impact Statement Law..... 3  
 NRM 412—Field Crop Production ..... 3  
 NRM 420—Animal Nutrition and Metabolism..... 3  
 NRM 480—Soil Management for Quality and Conservation\* (3)  
     or NRM 485—Soil Biology\* (3) ..... 3
- d. Complete at least 12 credits beyond those taken to fulfill categories above 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: animal science, chemistry, communications, education, engineering, forestry, geography, marketing, natural resources management, nutrition, plant science, rural development and soils. The courses must be approved by the student's academic advisor prior to attaining senior standing.
5. Minimum credits required .....130
- \* The same course can not be used to satisfy requirements in both sections a and c.*

### Resources

- a. Complete the following:  
 ECON 335O—Intermediate Natural Resource Economics..... 3  
 GEOS 101X—The Dynamic Earth ..... 4  
 NRM 204—Public Lands Law and Policy ..... 3  
 NRM 251—Silvics and Dendrology ..... 4  
 NRM 290—Resource Management Issues at High Latitudes ..... 2  
 NRM 312—Introduction to Range Management (3)  
     or NRM 480—Soil Management for Quality and Conservation (3)..... 3  
 NRM 338—Introduction to Geographic Information Systems ..... 3  
 NRM 340—Natural Resources Measurement and Inventory ..... 3  
 NRM 365W—Principles of Outdoor Recreation Management ..... 3  
 NRM 370—Introduction to Watershed Management ..... 3  
 NRM 430—Resource Management Planning ..... 3  
 WLF 201—Wildlife Management Principles (3)  
     or FISH 401W/O/2—Fisheries Management (3)..... 3
- b. Complete at least 9 credits from the humans and the environmental electives category. Courses involve human effects on the environment and its products through management. Substitutions may be made only with the permission of the student's academic advisor and the department head.  
 ANTH 428W—Ecological Anthropology and Regional Sustainability..... 3  
 ECON 437W—Regional Economic Development ..... 3  
 FISH 261-F—Introduction to Seafood Science and Nutrition ..... 3  
 FISH 401W/O/2—Fisheries Management..... 3  
 FIRE 256—Wildland Fire Planning and Multiple Use Management..... 3  
 GEOG 427—Cold Lands..... 3  
 MIN 101—Minerals, Man and the Environment ..... 3  
 MIN 400—Practical Engineering Report ..... 1  
 MIN 407W—Mine Reclamation and Environmental Management..... 3  
 NRM 277—Introduction to Conservation Biology ..... 3  
 NRM 300—Internship in Natural Resources Management..... 3  
 NRM 312—Introduction to Range Management ..... 3  
 NRM 404—Environmental Impact Statement Law..... 3  
 NRM/WLF 431—Wildlife Law and Policy ..... 3  
 NRM 450—Forest Management..... 3  
 NRM 451—Silviculture ..... 3  
 NRM 465—Outdoor Recreation Planning ..... 3  
 NRM 480—Soil Management for Quality and Conservation..... 3  
 RD 255—Rural Alaska Land Issues..... 3  
 RD 265—Perspectives on Subsistence in Alaska..... 3  
 RD 350O—Indigenous Knowledge and Community Research..... 3  
 WLF 201—Wildlife Management Principles ..... 3  
 WLF 419O/2—Waterfowl and Wetlands Ecology and Management..... 4
- c. Select at least 9 credits in an approved support field. Selections may include courses listed within the humans and the environmental elective category, and need not be limited to those with NRM designators. Courses are selected for their clear pertinence to a cohesive program and must be approved by the student's academic advisor prior to attaining senior standing. Examples include but are not limited to: communications, data management, economics, marketing, recreation or resources policy. Support fields may also include subject areas in forest and plant, animal, and soil sciences.
5. Minimum credits required .....130
- Note: Courses required for the majors may also be used to satisfy the general university and B.S. degree requirements as appropriate.*

## Minor

- Complete the following:  
NRM 101—Natural Resources Conservation and Policy ..... 3  
NRM electives\* ..... 15
- Minimum credits required ..... 18  
*\* At least 6 credits must be upper division. The minor program must be approved by an NRM advisor.*

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Northern Studies

College of Liberal Arts  
Interdisciplinary Program  
(907) 474-7126  
[www.uaf.edu/northern/](http://www.uaf.edu/northern/)

## B.A. Degree

Minimum Requirements for Degrees: 130 credits

The northern studies program offers an interdisciplinary study of northern problems and policy issues. The purpose of the northern studies program is to give interested students a broader study of the northern region—its environment, peoples and problems.

The geographic location of UAF is outstanding for the study of northern issues. Students examine the countries and regions throughout the circumpolar North, and their distinctive problems, such as the survival of indigenous populations, environmental and wilderness issues, high rates of alcoholism and suicide, fragile environments, adaptation to extreme cold and cycles of light and darkness and adult development in small frontier societies.

The northern studies curriculum is centered around an interdisciplinary course (NORS 484W—Seminar in Northern Studies) which is taken in the senior year.

For information on studying at McGill University, Montreal, Canada; the University of Copenhagen, Denmark; or opportunities for study in the former U.S.S.R., see International Study Abroad and Exchange Programs, page 60.

## Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete the following northern studies core requirements:\*
 

ANL 315—Alaska Native Languages: Eskimo-Aleut .....	3
ANTH 242—Native Cultures of Alaska .....	3
BIOL 104—Natural History of Alaska.....	3
GEOG 427—Cold Lands.....	3
HIST 483W—20th Century Circumpolar History .....	3
NORS 484W—Seminar in Northern Studies .....	3
PS 263—Alaska Native Politics (3)	
or PS 462—Alaska Government and Politics (3) .....	3
4. Complete 15 credits\* from 2 of the following groups:\*\*
  - a. Anthropology
 

ANTH 309—Circumpolar Archaeology .....	3
ANS/ANTH 320W—Language and Culture: Applications to Alaska .....	3
ANTH 380—The People of Alaskan Southwest: Aleuts, Kodiak Islanders and the Chugach .....	3
ANTH 381—The Inupiaq and Yup'ik Peoples.....	3
ANTH 382—The People of Alaskan Southeast.....	3
ANTH 383—Athabaskan Peoples of Alaska and Adjacent Canada.3	
  - b. Geography
 

GEOG 302—Geography of Alaska.....	3
GEOG 303—Geography of United States and Canada .....	3
GEOG 306—Geography of Russia .....	3
  - c. History
 

HIST 320—Modern Scandinavia.....	3
HIST 354—Canadian History to 1867 .....	3
HIST 355—Canadian History: 1867 to Present .....	3
HIST 375W—History of the Northern Pacific .....	3
HIST 460—Russian America .....	3

HIST 461W—History of Alaska .....	3
HIST 464—History of Russia .....	3
HIST 481—Polar Exploration and Its Literature .....	3
d. Political Science	
PS 321—International Politics .....	3
PS 322—International Law and Organization.....	3
PS/ANS 325—Native Self-Government .....	3
PS/ANS 450—Comparative Aboriginal Rights and Policies.....	3
PS 468W—Government and Politics of Russia.....	3
e. Humanities	
ART 365—Native Art of Alaska.....	3
ENGL 349—Narrative Art of Alaska Native Peoples (in English Translation).....	3
ENGL 350—Literature of Alaska and the Yukon Territory .....	3
MUS 441—Alaska Native Music and Social Change.....	3
Northern language*** .....	10

5. Minimum credits required ..... 130

\* Student must earn a C grade or better in each course.

\*\* Students are encouraged to use the major in conjunction with a discipline-based major. Double majors linking Northern Studies with, for example, Alaska Native studies, anthropology, geography, history or political science majors may double count a maximum of 9 credits from the above groupings toward the second major. Other majors may double count a maximum of 9 credits toward their university distribution requirements.

\*\*\* Two semesters of a northern language, such as Eskimo or Russian.

## Minor

1. Complete the following:
 

ANL 315—Alaska Native Languages: Eskimo-Aleut .....	3
ANTH 242—Native Cultures of Alaska .....	3
BIOL 104—Natural History of Alaska.....	3
GEOG 427—Cold Lands.....	3
HIST 483W—20th Century Circumpolar History .....	3
PS 263—Alaska Native Politics (3)	
or PS 462—Alaska Government and Politics .....	3
2. Minimum credits required ..... 18

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Petroleum Engineering

School of Mineral Engineering  
Department of Petroleum Engineering  
(907) 474-7734  
[www.uaf.edu/petrol/](http://www.uaf.edu/petrol/)

## B.S. Degree

Minimum Requirements for Degree: 134 credits

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.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X, CHEM 105X, CHEM 106X, and LS 101X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X and PHYS 212X.)
3. Complete the following program (major) requirements:\*
 

ES 201—Computer Techniques .....	3
ES 208—Mechanics.....	4
ES 331—Mechanics of Materials.....	3
ES 341—Fluid Mechanics .....	4
ES 346—Basic Thermodynamics.....	3
GE 261—General Geology for Engineers (3)	
or GEOS 101X—The Dynamic Earth (4) .....	3-4
GEOS 370—Sedimentary and Structural Geology for Petroleum Engineers .....	4
PETE 103—Survey of Energy Industries .....	1
PETE 104—Fundamentals of Petroleum .....	1
PETE 205—Fundamentals of Drilling Practices .....	1
PETE 206—Introduction to Petroleum Production.....	1
PETE 301—Reservoir Rock and Fluid Properties.....	4
PETE 302—Well Logging .....	3
PETE 303W—Reservoir Rock and Fluid Properties Laboratory ....	1
PETE 407—Petroleum Production Engineering.....	3
PETE 411W—Drilling Fluids Laboratory.....	1
PETE 421—Reservoir Characterization .....	3
PETE 426—Drilling Engineering.....	3
PETE 431—Natural Gas Engineering .....	2
PETE 456—Petroleum Evaluation and Economic Decisions.....	3
PETE 466—Petroleum Recovery Methods.....	3
PETE 476—Petroleum Reservoir Engineering.....	3
PETE 478—Well Test Analysis.....	2
PETE 481W—Well Completions and Stimulation Design .....	3
PETE 487A—Petroleum Project Design** .....	1
PETE 487BW,O—Petroleum Project Design .....	1
PETE 489—Reservoir Simulation .....	2

Engineering elective*** .....	3
Technical elective**** .....	3

4. Complete the following program (major) requirements:
 

MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
MATH 310—Numerical Analysis .....	3
5. Complete the Fundamentals of Engineering Exam (as approved by the Board of Architects, Engineers and Land Surveyors).
6. Minimum credits required .....134

\* Student must earn a C grade or better in each course.

\*\* PETE 487A is prerequisite for PETE 487B. Must take both courses to meet the oral communication and writing intensive requirements.

\*\*\* As approved by advisor (e.g. ME 416 or ES 307).

\*\*\*\* As approved by advisor (e.g. CE 603).

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X.....(0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Philosophy

College of Liberal Arts  
Department of Philosophy and Humanities  
(907) 474-7343  
[www.uaf.edu/philo/](http://www.uaf.edu/philo/)

## B.A. Degree

Minimum Requirements for Degree: 130 credits

The courses in philosophy are designed to confront the student with the fundamental problems of both Western and non-Western philosophical heritages and introduce the student to independent reflection on them, thus broadening his/her perspectives for the various areas of specialization in science, the social sciences and humanities.

### Major—B.A. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. degree requirements (page 109).
3. Complete 2 years of non-English language study at the college level.\*
4. Complete the following program (major) requirements:\*\*
  - a. Complete the following:

PHIL 102—Introduction to Philosophy.....	3
PHIL 202—Introduction to Eastern Philosophy.....	3
PHIL 204—Introduction to Logic.....	3
PHIL 351—History of Ancient Greek Philosophy.....	3
PHIL 352—History of Modern Philosophy: Descartes to Kant.....	3
PHIL 471—Contemporary Philosophical Problems.....	3
PHIL 488—B.A. Thesis Research.....	3
PHIL 499W—B.A. Thesis in Philosophy.....	3
  - b. Complete 4 of the following electives:

PHIL 108—Science, Critical Thinking and Pseudoscience.....	3
PHIL 110—Introduction to Political Philosophy.....	3
PHIL 275—Yup'ik Practices in Spirituality and Philosophy.....	3
PHIL 322X—Ethics***.....	3
PHIL 341O—Epistemology.....	3
PHIL 342—Metaphysics.....	3
PHIL 361—Philosophy in Literature.....	3
PHIL 362—Feminist Philosophy.....	3
PHIL 375—Native American Religion and Philosophy.....	3
PHIL 380—Conceptual Foundations of Science.....	3
PHIL 381—Topics in Logics.....	3
PHIL 382—Science and Technological Limits.....	3
PHIL 402—Biomedical Ethics.....	3
PHIL 411W,O—Classical Political Theory.....	3
PHIL 412W—Modern Political Theory.....	3
PHIL 417—Social Theory and Public Policy.....	3
PHIL 421—Aesthetics.....	3
PHIL 436—Ethical Theory.....	3
PHIL 476—Ethics and Public Policy I.....	3
PHIL 477—Ethics and Public Policy II.....	3
PHIL 481—Philosophy of Science.....	3
PHIL 482—Comparative Philosophy.....	3
PHIL 483—Philosophy of Social Science.....	3
PHIL 485—Topics in Comparative Philosophies.....	3
PHIL 493—Special Topics.....	3
5. Complete successfully an oral defense of the senior thesis as administered by the department faculty.

6. Minimum credits required.....130

### Minor

1. Complete the following:

PHIL 102—Introduction to Philosophy.....	3
PHIL 351—History of Ancient Greek Philosophy.....	3
PHIL 352—History of Modern Philosophy: Descartes to Kant.....	3
PHIL elective at the 400-level.....	3
2. Complete 2 of the following:

PHIL 202—Introduction to Eastern Philosophy.....	3
PHIL 204—Introduction to Logic.....	3
PHIL 322X—Ethics***.....	3
PHIL 341O—Epistemology.....	3
PHIL 342—Metaphysics.....	3
PHIL/PS 411W,O—Classical Political Theory.....	3
PHIL/PS 412W—Modern Political Theory.....	3
PHIL 421—Aesthetics.....	3
PHIL 481—Philosophy of Science.....	3
PHIL 482—Comparative Philosophy.....	3
PHIL 483—Philosophy of Social Science.....	3
PHIL 485—Topics in Comparative Philosophies.....	3
3. Minimum credits required.....18

\* Non-English language may be used to meet general degree requirements.  
\*\* Student must earn a C grade or better in each course.  
\*\*\* PHIL 322X may not be counted toward a philosophy major or minor if used to fulfill core requirements.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Physics

College of Science, Engineering and Mathematics  
Department of Physics  
(907) 474-7339  
[www.uaf.edu/physics/](http://www.uaf.edu/physics/)

## B.A., B.S. Degrees

Minimum Requirements for Degrees: 130 credits

The science of physics is concerned with the nature of matter and energy in all physical systems, from elementary particles to the structure and origin of the universe. 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 the 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 that also require refined abilities in problem solving.

The Physics Department is also responsible for the baccalaureate degree programs in general science and applied physics. These programs are also described in this catalog.

### Major—B.A. Degree

- Complete the general university requirements (page 106).
- Complete the B.A. degree requirements (page 109).
- Complete the following program (major) requirements:
  - Complete the following:\*
 

PHYS 113—Concepts of Physics.....	1
PHYS 211X—General Physics.....	4
PHYS 212X—General Physics.....	4
PHYS 213X—Elementary Modern Physics .....	4
PHYS approved electives .....	20
  - Complete the following:
 

MATH 200X—Calculus** .....	4
MATH 201X—Calculus** .....	4
MATH 202X—Calculus.....	4
MATH electives at the 300-level or above .....	6
- Minimum credits required .....130
 

\* Student must earn a C grade or better in each course.  
\*\* Satisfies core curriculum or B.A. degree requirements, but not both.

### Major—B.S. Degree

- Complete the general university requirements (page 106. As part of the core curriculum requirements, these courses are suggested: CHEM 105X and CHEM 106X; GEOS 101X; BIOL 105X.)
- Complete the B.S. degree requirements (page 112).
- Complete the following program (major) requirements:\*
 

PHYS 113—Concepts of Physics.....	1
PHYS 211X—General Physics.....	4
PHYS 212X—General Physics.....	4
PHYS 213X—Elementary Modern Physics .....	4
PHYS 311—Mechanics.....	4
PHYS 312—Mechanics.....	4

PHYS 313—Thermodynamics and Statistical Physics.....	4
PHYS 331—Electricity and Magnetism.....	3
PHYS 332—Electricity and Magnetism.....	3
PHYS 381W,O—Physics Laboratory .....	3
PHYS 382W—Physics Laboratory.....	3
PHYS 411—Modern Physics .....	4
PHYS 412—Modern Physics .....	4
PHYS 445—Solid State Physics and Physical Electronics .....	4
PHYS 462—Geometrical and Physical Optics.....	4

- Complete the following program (major) requirements:
 

MATH 200X—Calculus** .....	4
MATH 201X—Calculus** .....	4
MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
MATH electives at the 300-level or above*** .....	9
- Minimum credits required .....130
 

\* Student must earn a C grade or better in each course.  
\*\* Satisfies core curriculum or B.S. degree requirements, but not both.  
\*\*\* Suggested electives: MATH 314, 421 and 422.  
Note: Other courses suggested to fulfill minimum credit requirements: ES 201, 307 and 308.

### Requirements for physics teachers (grades 7 - 12)

- Complete all the requirements of the Physics B.A. or B.S. degree.
- All prospective physics teachers must complete the following:
 

CHEM 105X and CHEM 106X—General Chemistry.....	8
MATH 302—Differential Equations .....	3
PHYS 311 and PHYS 3112—Mechanics.....	8
PHYS 313—Thermodynamics & Statistical Physics .....	4
PHYS 331 and PHYS 332—Electricity and Magnetism .....	6
PHYS 381W,O and PHYS 382W—Physics Laboratory.....	6
PHYS 411 and PHYS 412—Modern Physics .....	8
PHYS 445—Solid State Physics and Physical Electronics .....	4
PHYS 462—Geometrical and Physical Optics.....	4
- All prospective science teachers must complete one of the following:
 

PHIL 380—Conceptual Foundations of Science (3)	
or PHIL 382—Science & Technological Limits (3)	
or PHIL 481—Philosophy of Science (3) .....	3

Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year.

### Minor

- Complete the following:
 

PHYS 103X-104X—College Physics (8)	
or PHYS 211X-212X—General Physics (8) .....	8
- Complete the following:
 

PHYS 213X—Elementary Modern Physics .....	4
Electives at the 300-400-level .....	8
- Minimum credits required .....20

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

# Physics, Applied

College of Science, Engineering and Mathematics  
Department of Physics  
(907) 474-7339  
[www.uaf.edu/physics/](http://www.uaf.edu/physics/)

## B.S. Degree

Minimum Requirements for Degree: 130 credits

The science of physics is concerned with the nature of matter and energy for all physical systems, from elementary particles to the structure and origin of the universe. 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 fields such as the biosciences and medicine.

The field of applied physics encompasses those areas that have developed practical applications from fundamental research in physics in the last century, including space physics, plasma physics, condensed matter physics, device physics, surface physics, biophysics, laser physics and reactor physics.

The undergraduate curriculum provides a solid foundation in general physics. Students may study in areas of applied physics such as atmospheric physics, computational physics and engineering physics.

## Major—B.S. Degree

### Concentrations: Atmospheric Physics, Computational Physics

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X\* and PHYS 212X\*.)
3. Complete the following program (major) requirements:
  - a. Complete the following:

MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
PHYS 213X—Elementary Modern Physics* .....	4
PHYS 311—Mechanics* .....	4
PHYS 331—Electricity and Magnetism* .....	3
  - b. Complete mathematics credits at the 200-level or above .....9
  - c. Complete physics credits at the 300-level or above\* .....12
  - d. Complete credits in applied physics\* (see note) .....20
4. Minimum credits required .....130

## Atmospheric Physics

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X\* and PHYS 212X\*.)
3. Complete the following program (major) requirements:
  - a. Complete the following:

MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
PHYS 213X—Elementary Modern Physics* .....	4
PHYS 311—Mechanics* .....	4
PHYS 331—Electricity and Magnetism* .....	3
  - b. Complete mathematics credits at the 200-level or above .....9
  - c. Complete physics credits at the 300-level or above\* .....12
  - d. Complete the following:

ATM 401—Introduction to Atmospheric Science .....	3
ATM 409—Atmospheric Thermodynamics .....	3
ATM 413—Atmospheric Radiation .....	3
ATM 445—Atmospheric Dynamics .....	3
  - e. Complete credits in other relevant upper-division courses\* .....8  
(see note)
4. Minimum credits required .....130

## Computational Physics

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X.)
2. Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X, PHYS 211X\* and PHYS 212X\*.)
3. Complete the following program (major) requirements:
  - a. Complete the following:

MATH 202X—Calculus.....	4
MATH 302—Differential Equations .....	3
PHYS 213X—Elementary Modern Physics* .....	4
PHYS 311—Mechanics* .....	4
PHYS 331—Electricity and Magnetism* .....	3
  - b. Complete mathematics credits at the 200-level or above .....9
  - c. Complete physics credits at the 300-level or above\* .....12
  - d. Complete the following:

PHYS 220—Introduction to Computational Physics .....	4
MATH 310—Numerical Analysis .....	3
CS 201—Computer Science I.....	3
CS 202—Computer Science II .....	3
  - Complete credits in other relevant upper-division courses\* (see note)4
4. Minimum credits required .....130

\* Student must earn a C grade or better in each course.

Note: These 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.

Note: Must exclude PHYS 103X and 104 from core curriculum Natural Science requirement.

See General Science. **Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Political Science

College of Liberal Arts  
Department of Political Science  
(907) 474-7609  
[www.uaf.edu/polisci/](http://www.uaf.edu/polisci/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

The study of political science provides education for citizenship in a changing nation and world. Political science provides a sound preparation in the social sciences. 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, national and international politics will benefit any student throughout his or her career.

Courses are offered in the traditional fields of international and comparative politics, American government, political theory, public policy, and public law. The department also offers classes in environmental policy and politics, Native American studies, the politics of science, and women's studies. Political science majors and minors graduate with excellent communications skills. We provide several writing- and oral-intensive courses, as well as two core curriculum requirements. In addition to our course offerings and faculty expertise, our department presents real world opportunities for political science 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 model United Nations simulations, join the political science honor society Pi Sigma Alpha, aid faculty as research assistants, 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 assistants.

The department provides students with stepping-stones to success in a variety of careers. The political science B.A. has led our 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 non-profits 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. Our majors have been admitted to the nation's top law schools. The study of political science also prepares students for work in various fields of government. Alaska offers exciting job prospects for our graduates as managers in state and local governments and as legislators and legislative staff members. Our students are also qualified to work outside of Alaska in numerous public and private sector jobs.

## Major—B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: PS 100X, PS 300X and HIST 100X.)
2. Complete the B.A. degree requirements (page 109).

3. Complete the following major (program) requirements:
  - PS 101—Introduction to American Government and Politics..... 3
  - PS 222—Political Science Research Methods..... 3
  - PS 492W—Senior Seminar in Political Science..... 3
4. Complete 24 credits in political science. Include at least 1 course from 4 of the following sub-disciplinary groups:
  - a. Group A—American Government and Politics
    - PS 212—Introduction to Public Administration..... 3
    - PS 301—American Presidency ..... 3
    - PS 302—Congress and Public Policy ..... 3
    - PS 401W—Political Behavior..... 3
    - PS 403W—Public Policy ..... 3
    - PS 462—Alaska Government and Politics ..... 3
  - b. Group B—Public Law
    - PS 303—Politics and the Judicial Process..... 3
    - PS/JUST 404—Introduction to Legal Research and Writing ..... 3
    - PS 435W—Constitutional Law I: Federalism ..... 3
    - PS 436W—Constitutional Law II: Civil Rights and Liberties ..... 3
  - c. Group C—Comparative Politics
    - PS 201—Comparative Politics ..... 3
    - PS 202—Democracy and Global Society ..... 3
    - PS 460W—Government and Politics of Canada ..... 3
    - PS 464W—East Asian Governments and Politics ..... 3
    - PS/HIST 467W—Political Development in Latin America and the Caribbean..... 3
    - PS 468W—Government and Politics of Russia..... 3
  - d. Group D—International Politics
    - PS 321—International Politics ..... 3
    - PS 322—International Law and Organization..... 3
    - PS 323—International Political Economy..... 3
    - PS 437—United States Foreign Policy ..... 3
  - e. Group E—Political Theory
    - PS 314W—Political Ideologies..... 3
    - PS 315—American Political Thought ..... 3
    - PS/WMS 340—Women and Politics..... 3
    - PS/PHIL 411W,O—Classical Political Theory..... 3
    - PS/PHIL 412W—Modern Political Theory ..... 3
5. Minimum credits required .....120
 

*\* Student must earn a C grade or better in each course.*

## Minor

1. PS 101—Introduction to American Government and Politics ..3
2. Complete at least 1 course from 4 of the sub-disciplinary groups listed in the requirements for the B.A. degree in political science. ....12
3. Minimum credits required .....15

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Psychology

College of Liberal Arts  
Department of Psychology  
(907) 474-7007  
[www.uaf.edu/psych/](http://www.uaf.edu/psych/)

## B.A., B.S. Degrees

Minimum Requirements for Degrees: 120 credits

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, concern for social justice, as well as respect for and knowledge of diverse perspectives that include feminist, multicultural, indigenous, and gay and lesbian.

In addition to active engagement in the classroom, students 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.

The Alaska Natives into Psychology (ANPsych) program helps train Alaska Natives and American Indians as psychologists or other behavioral health professionals to address the significant shortage of these professionals in Alaska, particularly rural Alaska. ANPsych supports native communities in building wellness in their villages. The ANPsych program is housed in the departments of Psychology at UAF and UAA and serves as a training pipeline to provide social, financial and academic support for students and behavioral health paraprofessionals who wish to continue their education. The program strives to attract Native high school and undergraduate students seeking a degree in psychology. In addition, a select group of Native students receive similar support for advanced training in psychology at the graduate level through the UAF M.A. program in community psychology and the UAA M.S. program in clinical psychology.

## Major—B.A. or B.S. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. or B.S. degree requirements (page 109 or 112).
3. Complete the following program (major) requirements:
  - a. Complete the following:
    - PSY 101—Introduction to Psychology ..... 3
    - PSY 275—Introduction to Social Science Research Methods ..... 3
    - PSY 485—Senior Seminar ..... 3
  - b. Complete 1 course from each of the following specialized areas:

### Research

- PSY/SOC 250—Introductory Statistics for Behavioral Sciences ..... 3
- PSY 475W—Research Design and Analysis in Psychology ..... 3
- PSY/SOC 480W—Qualitative Social Science Research ..... 3

### Biological Perspectives

- PSY 335—Physiological Psychology ..... 3
- PSY/SOC 370—Drugs and Drug Dependence ..... 3

- PSY 470—Sensation and Perception ..... 3

## Social Perspectives

- PSY/SOC 330—Social Psychology ..... 3
- PSY 390W,O—Industrial and Organizational Psychology ..... 3

## Psychological Perspectives

- PSY 304—Personality ..... 3
- PSY 345—Abnormal Psychology ..... 3
- PSY 440—Learning and Cognition ..... 3

## Multicultural/Diversity

- PSY 310O—Cross-Cultural Psychology ..... 3
- PSY/SOC 333/WMS 332—Human Sexuality Across Cultures ..... 3
- PSY/WMS 360O—Psychology of Women Across Cultures ..... 3
- PSY 444—Advanced Multicultural Lifespan Development ..... 3

- c. Complete 12 additional credits from the following (you may also choose from the courses listed in the specialized areas above):

- PSY 240—Lifespan Developmental Psychology ..... 3
- PSY 320—History and Systems of Psychology ..... 3
- PSY 337W—Sport Psychology ..... 3
- PSY 350—Comparative Psychology ..... 3
- PSY 380—Environmental Psychology ..... 3
- PSY/BA 436—Consumer Behavior ..... 3
- PSY 455—Clinical Psychology ..... 3
- PSY 469—Health Psychology ..... 3
- PSY 393/493—Special Topics ..... 3

- d. Complete 1 community service course. \*\*

2. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

\*\* Community service courses: PSY 310, 345, 445 and 470.

Note: Student may not count more than 6 hours of any combination of PSY 497 and 498 toward the degree.

Note: Student may apply an unlimited number of PSY 392/492 and PSY 393/493 toward the degree provided the topics are different for each course.

## Minor

1. Complete the following:
  - PSY 101—Introduction to Psychology ..... 3
  - PSY electives ..... 12
2. Minimum credits required ..... 15

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_



# Rural Development

College of Rural Alaska  
Department of Alaska Native and Rural Development  
Fairbanks Campus (907) 474-6528  
Statewide toll-free number (800) 770-9531  
Anchorage office (907) 279-2700  
Bristol Bay Campus (907) 842-4687  
Chukchi Campus (907) 442-3400  
Interior-Aleutians Campus (907) 474-6433  
Kuskokwim Campus (907) 543-4582  
Northwest Campus (907) 443-2201  
[www.uaf.edu/uafrrural/](http://www.uaf.edu/uafrrural/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

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.

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, computer business applications, and 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 non-profits, and state/federal agencies.

Undergraduate degree students develop a concentration in one of five areas: community business and economic development; community research and indigenous knowledge; land, resources and environmental management; rural health and human services management; or tribal and local government administration.

Special application requirements and deadlines apply for distance B.A. degree programs. For more information contact the department toll-free 1-800-770-9531 or visit our website.

## Major—B.A. Degree

**Concentrations: Community Business and Economic Development; Community Research and Indigenous Knowledge; Land, Resources and Environmental Management; Rural Health and Human Services Management; Tribal and Local Government Administration**

- Complete the general university requirements (page 106).
- Complete the B.A. degree requirements (page 109).
- Complete the following:
 

RD 300W—Rural Development in a Global Perspective .....	3
RD 325—Community Development Strategies.....	3
RD 350O—Indigenous Knowledge and Community Research.....	3
RD 351—Strategic Planning for Rural Communities.....	3
RD 352—Rural Business Planning and Proposal Development.....	3
RD 400—Rural Development Internship .....	3
RD 450—Managing Rural Projects and Programs .....	3
RD 451—Human Resources Management for Indigenous Communities .....	3
RD 475W—Rural Development Senior Project .....	3

- Complete the following elective courses:
 

RD elective.....	3
RD, ANS or ED electives .....	3

- Complete 1 of the following concentrations:

### Community Business and Economic Development

Complete 21 credits from the following:

ABUS 151—Village Based Entrepreneurship.....	2
ABUS 179—Fundamentals of Supervision.....	3
ABUS 211—Tax for Business Entities .....	2
ABUS 232—Contemporary Management Issues*** .....	3
ABUS 233—Financial Management .....	3
ABUS 241—Applied Business Law.....	3
ABUS 272—Small Business Planning.....	3
ABUS 273—Managing a Small Business.....	3
ABUS 101—Principles of Financial Accounting I.....	3
ABUS 201—Principles of Financial Accounting II.....	3
ANS 310—The Alaska Native Lands Settlement.....	3
ANS 425—Federal Indian Law and Alaska Natives .....	3
BA 151—Introduction to Business*** .....	3
CIO 111—Computer Software for Beginners.....	2
CIO 264—Filing/Records Management .....	3
CS 101—Computers and Society .....	3
ECON 111—Economics of Rural Alaska .....	3
ECON 200—Principles of Economics .....	4
ENGL 212—Business, Grant, and Report Writing.....	3
ENGL 314W/O/2—Technical Writing .....	3
ENGL 414W—Research Writing.....	3
RD 430—Indigenous Economic Development and Planning*** .....	3
RD 492—Rural Development Leadership Seminar .....	1-3
SOC 407—Formal Organization .....	3
Approved electives .....	3 or more

*Note: Designed for students interested in creating sustainable economic development for 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.*

### Community Research and Indigenous Knowledge

- Complete 21 credits from the following:

ANL 315—Alaska Native Languages: Eskimo-Aleut .....	3
ANL 316—Alaska Native Languages: Indian Languages .....	3
ANS/ANTH 320W—Language and Culture: Applications to Alaska.....	3
ANS 350W/O—Cross Cultural Communication: Alaskan Perspectives.....	3
ANS 351—Practicum in Native Cultural Expression.....	1-3
ANS 401—Cultural Knowledge of Native Elders*** .....	3
ANTH 230—The Oral Tradition: Folklore and Oral History .....	3
APAR 100—Basic Video Workshop.....	1
APAR 103—Editing Videotape .....	1
CIO 111—Computer Software for Beginners.....	2
COMM 330—Intercultural Communication .....	3
CS 101—Computers and Society .....	3
ENGL 313W—Writing Non-Fiction Prose .....	3
ENGL 314W/O/2—Technical Writing .....	3
ENGL 349—Narrative Art of Alaska Native Peoples (in English Translation).....	3
ENGL 414W—Research Writing.....	3
HIST 250—Alaska History for Local Historians .....	3
HIST 470W—Researching and Writing Alaska History .....	3
JRN 215—Radio Production .....	3
JRN 311W—Magazine Article Writing .....	3
JRN 404—Photojournalism I.....	3
JRN 452W—Radio and Television News Writing .....	3
LS 309—Information Resources.....	1

MSM 211—Fundamentals of Museum Studies I.....	3
MSM 212—Fundamentals of Museum Studies II.....	3
MSM 311—Museum Administration.....	3
MSM 312—Museum Collection Management.....	3
RD 425—Cultural Impact Analysis***.....	3
RD 465—Community Healing and Wellness***.....	3
RD 492—Rural Development Leadership Seminar.....	1-3
SOC 250—Introductory Statistics for Behavioral Sciences.....	3
SOC/SWK 473W—Social Science Research Methods.....	3
Approved electives.....	3 or more

*Note: Designed for students with interests in researching Alaska Native communities, cultures, languages, ceremonial performances and histories. Students learn principles of ethical research, explore issues of intellectual and cultural property rights, and acquire skills in doing ethnographies, oral histories, community surveys and needs assessments, and archival research. Graduates find employment with museums, ANCSA corporations, tribal governments, and federal and state agencies.*

### Land, Resources and Environmental Management

Complete 21 credits from the following:

ABUS 223—Real Estate Law.....	3
ANS 310—The Alaska Native Lands Settlement.....	3
ANS 425—Federal Indian Law and Alaska Natives.....	3
BIOL 104—Natural History of Alaska.....	3
BIOL 150—Introduction to Marine Biology.....	3
BIOL 271—Principles of Ecology.....	4
BIOL 277—Introduction to Conservation Biology.....	3
CIO 111—Computer Software for Beginners.....	2
CE 112—Elementary Surveying.....	3
CS 101—Computers and Society.....	3
ECON 111—Economics of Rural Alaska***.....	3
ECON 235—Introduction to Natural Resource Economics.....	3
ENGL 314W/O/2—Technical Writing.....	3
ENGL 414W—Research Writing.....	3
EQS 201—Environmental Management.....	3
FISH 101—Introduction to Fisheries.....	3
FISH 401W/O/2—Fisheries Management.....	3
GEOG 338—Introduction to Geographic Information Systems.....	3
GEOS 101X—The Dynamic Earth.....	4
MIN 101—Minerals, Man and the Environment.....	3
MSL 111X—The Oceans.....	4
NRM 101—Natural Resources Conservation and Policy***.....	3
NRM 204—Public Lands Law and Policy.....	3
NRM 340—Natural Resources Measurement and Inventory.....	3
NRM 404—Environmental Impact Statement Law.....	3
NRM 430—Resource Management Planning.....	3
RD 255—Rural Alaska Land Issues***.....	3
RD 256—Co-Management of Renewable Resources.....	3
RD 265—Perspectives on Subsistence in Alaska.....	3
RD 280—Resource Management Research Techniques.....	3
RD 492—Rural Development Leadership Seminar.....	1-3
WLF 201—Wildlife Management Principles.....	3
WLF 303—Wildlife Management Techniques.....	3
Approved electives.....	3 or more

*Note: Designed for students with an interest in land and resources co-management, development and conservation. Students learn about traditional ecological knowledge, principles of natural resources management and policy, adaptive management, and skills for effective public/private/tribal collaboration in resources management. Graduates find employment with ANCSA corporations, regional and tribal entities, state and federal agencies, and private businesses.*

### Rural Health and Human Services Management

Complete 21 credits from the following:

ABUS 154—Human Relations.....	3
ABUS 179—Fundamentals of Supervision.....	3
ABUS 231—Introduction to Personnel.....	3
ANS/PS 325—Native Self-Government.....	3
ANS 425—Federal Indian Law and Alaska Natives.....	3
ENGL 314W/O/2—Technical Writing.....	3
ENGL 414W—Research Writing.....	3

HSV 120—Cultural Diversity in Human Service.....	3
HSV 125—Introduction to Addictive Processes.....	3
HSV 205—Basic Principles of Group Counseling.....	3
HSV 210—Crisis and Grief Counseling.....	3
HSV 215—Individual Interviewing.....	3
HSV 250—Current Issues in Human Service.....	3
HSV 301—Ethics in Human Service.....	3
HSV 305—Substance Abuse Counseling.....	3
JUST 340—Rural Justice in Alaska.....	3
PSY 240—Lifespan Developmental Psychology.....	3
RD 427—Tribal Contracting and Compacting***.....	3
RD 462—Rural Health and Human Service Systems***.....	3
RD 465—Community Healing and Wellness***.....	3
RD 492—Rural Development Leadership Seminar.....	1-3
RHS 110—Cross-Cultural Bridging Skills.....	2
RHS 120—Family Systems I.....	2
RHS 130—Processes of Community Change.....	2
RHS 140—Alaska Native Values and Principles.....	2
RHS 150—Introduction to Rural Counseling.....	2
RHS 220—Family Systems II.....	2
RHS 260—Addictions: Intervention and Treatment.....	2
RHS 265—Interpersonal Violence.....	2
RHS 270—Networking, Negotiating and Conflict Resolution.....	2
RHS 285—Case Management.....	2
RHS 290—Grief and Healing.....	2
SOC 242—The Family: A Cross-Cultural Perspective.....	3
SOC 301—Rural Sociology.....	3
SOC 370—Drugs and Drug Dependence.....	3
SWK 103—Introduction to Social Work.....	3
SWK 320—Rural Social Work.....	3
Approved electives.....	3 or more

*Note: Designed for students interested in leadership for healthy communities, management of rural health programs and issues of community healing and wellness. Students learn principles and practices of community wellness, skills in financial and human resources management, and contemporary issues of importance in leading toward healthy communities. Graduates find employment with rural health corporations, tribal and municipal governments, educational institutions, and state and federal agencies.*

### Tribal and Local Government Administration

Complete 21 credits from the following:

ABUS 101—Principles of Financial Accounting I.....	3
ABUS 154—Human Relations.....	3
ABUS 179—Fundamentals of Supervision.....	3
ABUS 201—Principles of Financial Accounting II.....	3
ABUS 232—Contemporary Management Issues.....	3
ACCT 414—Governmental and Nonprofit Accounting.....	3
ANS 310—The Alaska Native Lands Settlement.....	3
ANS/PS 325—Native Self-Government***.....	3
ANS 350W/O—Cross Cultural Communication: Alaskan Perspectives.....	3
ANS 425—Federal Indian Law and Alaska Natives***.....	3
ANS 450—Comparative Aboriginal Rights and Policies.....	3
BA 330—The Legal Environment of Business.....	4
CIO 111—Computer Software for Beginners.....	2
COMM 330—Intercultural Communication.....	3
COMM 335O—Organizational Communication.....	3
CS 101—Computers and Society.....	3
ECON 351—Public Finance.....	3
ENGL 212—Business, Grant, and Report Writing.....	3
ENGL 314W/O/2—Technical Writing.....	3
ENGL 414W—Research Writing.....	3
JUST 340—Rural Justice in Alaska.....	3
NRM 204—Public Lands Law and Policy.....	3
NRM 430—Resource Management Planning.....	3
PS 101—Introduction to American Government and Politics.....	3
PS 212—Introduction to Public Administration.....	3
PS 263—Alaska Native Politics***.....	3
PS 403W—Public Policy.....	3

PS 462—Alaska Government and Politics .....	3
RD 492—Rural Development Leadership Seminar .....	1-3
SOC 250—Introductory Statistics for Behavioral Sciences .....	3
SOC 407—Formal Organization .....	3
Approved electives .....	3 or more

*Note: Designed for students interested in development and operations of tribal and municipal governments in rural Alaska. Students develop an understanding of the history and constitutional basis for tribal governance, basics of federal Indian law, and principles and practices of self-determination. They develop skills in planning, budgeting, and human resources management. Graduates find employment with tribal and municipal governments and organizations, ANCSA corporations, and state and federal agencies.*

#### 6. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

\*\* Elective credits may also fulfill the humanities, social science or mathematics general requirements for the B.A. degree. Prerequisites are required for many of these courses; however, prerequisites do not apply to the credit requirement.

\*\*\*Recommended courses. Course substitutions may be made with approval of the faculty advisor.

### Minor

#### 1. Complete the following:

RD 300—Rural Development in a Global Perspective .....	3
RD electives at the 200-level or above.....	15

#### 2. Minimum credits required ..... 18

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X .....	(3)	_____
ENGL 211X <b>OR</b> 213X .....	(3)	_____
COMM 131X <b>OR</b> 141X .....	(3)	_____

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X <b>OR</b> 101X .....	(0-1)	_____
------------------------------	-------	-------

**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X <b>OR</b> SOC 100X .....	(3)	_____
ECON/PS 100X .....	(3)	_____
HIST 100X .....	(3)	_____
ART/MUS/THR 200X, HUM 201X <b>OR</b> ANS 202X .....	(3)	_____
ENGL/FL 200X .....	(3)	_____
PHIL 322X, NRM 303X, COMM 300X, PS 300X <b>OR</b> JUST 300X .....	(3)	_____

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X .....	(3)	_____
<b>OR</b> MATH 131X (except for BBA) .....	(3)	_____
<b>OR</b> MATH 161X .....	(3)	_____
MATH 200X .....	(4)	_____
MATH 201X .....	(4)	_____
MATH 202X .....	(4)	_____
MATH 262X .....	(4)	_____
MATH 272X .....	(3)	_____

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X .....	(4)	_____
BIOL 103X <b>OR</b> 104X .....	(4)	_____
BIOL 105X-106X .....	(8)	_____
BIOL 111X-112X .....	(8)	_____
CHEM 100X .....	(4)	_____
CHEM 103X-104X .....	(8)	_____
CHEM 105X-106X .....	(8)	_____
GEOG 205X .....	(4)	_____
GEOS 100X <b>OR</b> 120X <b>OR</b> 125X .....	(4)	_____
GEOS 101X-112X .....	(8)	_____
MSL 111X .....	(4)	_____
PHYS 102X <b>OR</b> 175X .....	(4)	_____
PHYS 103X-104X .....	(8)	_____
PHYS 211X-212X .....	(8)	_____
PHYS 211X-213X .....	(8)	_____
PHYS 212X-213X .....	(8)	_____

# Russian Studies

College of Liberal Arts  
Interdisciplinary Program  
[www.uaf.edu/cla/](http://www.uaf.edu/cla/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

Students majoring in Russian studies are encouraged to spend one or two semesters on an exchange program in Russia.

### Major—B.A. Degree

1. Complete the general university requirements (page 106).
  2. Complete the B.A. degree requirements (page 109).
  3. Complete the following Russian studies core requirements:\*
- |   |   |
|---|---|
| RUSS 201—Intermediate Russian I.....                | 4 |
| RUSS 202—Intermediate Russian II.....               | 4 |
| RUSS 301W,O—Advanced Russian.....                   | 3 |
| RUSS 302W,O—Advanced Russian.....                   | 3 |
| RUSS 431—Studies in Russian Culture.....            | 3 |
| RUSS 432—Studies of Russian Literature.....         | 3 |
| RUSS 482—Selected Topics in Russian Literature..... | 3 |

4. Complete 9 credits from the following Russian Studies electives:\*
- |  |   |
|--|---|
| ANTH 302—Ethnography of Siberia.....           | 3 |
| BA 460O—International Business.....            | 3 |
| ECON 463W—International Economics.....         | 3 |
| GEOG 306—Geography of Russia.....              | 3 |
| HIST 315—Europe: 1900-1945.....                | 3 |
| HIST 460—Russian America.....                  | 3 |
| HIST 464—History of Russia.....                | 3 |
| PS 468W—Government and Politics of Russia..... | 3 |

5. Minimum credits required.....120

\* Student must earn a C grade or better in each course.

Note: BA 460 and ECON 463 are recommended for students who are planning to minor in business administration. Please contact the business administration department for prerequisites.

### Minor

1. Complete 15 credits from the Russian studies core or an advisor-approved combination from the Russian studies core and Russian studies electives.
2. Minimum credits required.....15

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

- |                        |     |       |
|------------------------|-----|-------|
| ENGL 111X.....         | (3) | _____ |
| ENGL 211X OR 213X..... | (3) | _____ |
| COMM 131X OR 141X..... | (3) | _____ |

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

- |                      |       |       |
|----------------------|-------|-------|
| LS 100X OR 101X..... | (0-1) | _____ |
|----------------------|-------|-------|
- OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

- |  |     |       |
|--|-----|-------|
| ANTH 100X OR SOC 100X.....                                   | (3) | _____ |
| ECON/PS 100X.....  | (3) | _____ |
| HIST 100X.....   | (3) | _____ |
| ART/MUS/THR 200X, HUM 201X OR ANS 202X.....                  | (3) | _____ |
| ENGL/FL 200X.....  | (3) | _____ |
| PHIL 322X, NRM 303X, COMM 300X,<br>PS 300X OR JUST 300X..... | (3) | _____ |

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

- |                                    |     |       |
|------------------------------------|-----|-------|
| MATH 107X.....                     | (3) | _____ |
| OR MATH 131X (except for BBA)..... | (3) | _____ |
| OR MATH 161X.....                  | (3) | _____ |
| MATH 200X.....                     | (4) | _____ |
| MATH 201X.....                     | (4) | _____ |
| MATH 202X.....                     | (4) | _____ |
| MATH 262X.....                     | (4) | _____ |
| MATH 272X.....                     | (3) | _____ |

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

- |                                |     |       |
|--------------------------------|-----|-------|
| ATM 101X.....                  | (4) | _____ |
| BIOL 103X OR 104X.....         | (4) | _____ |
| BIOL 105X-106X.....            | (8) | _____ |
| BIOL 111X-112X.....            | (8) | _____ |
| CHEM 100X.....                 | (4) | _____ |
| CHEM 103X-104X.....            | (8) | _____ |
| CHEM 105X-106X.....            | (8) | _____ |
| GEOG 205X.....                 | (4) | _____ |
| GEOS 100X OR 120X OR 125X..... | (4) | _____ |
| GEOS 101X-112X.....            | (8) | _____ |
| MSL 111X.....                  | (4) | _____ |
| PHYS 102X OR 175X.....         | (4) | _____ |
| PHYS 103X-104X.....            | (8) | _____ |
| PHYS 211X-212X.....            | (8) | _____ |
| PHYS 211X-213X.....            | (8) | _____ |
| PHYS 212X-213X.....            | (8) | _____ |



# Social Work

College of Liberal Arts  
Department of Social Work  
(907) 474-7240  
Chukchi Campus (907) 442-3400  
Kuskokwim Campus (907) 543-4500  
Northwest Campus (907) 443-2201  
[www.uaf.edu/socwork/](http://www.uaf.edu/socwork/)

## B.A. Degree

Minimum Requirements for Degree: 120 credits

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 work with people on a personal level and are placed in a social agency as part of their course work during the senior year. A Title IV-E entitlement grant provides stipends to senior students doing practicums in child protection.

The UAF baccalaureate social work program is accredited by the Council on Social Work Education.

## Major—B.A. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete SOC 100X.)
  2. Complete the B.A. degree requirements (page 109. As part of the B.A. degree requirements, complete: ANTH 242 and PSY 101.)
  3. Complete the following program (major) requirements:\*
  - a. Complete the following:
    - SOC 250—Introductory Statistics for Behavioral Sciences (3)  
or STAT 200—Elementary Probability and Statistics (3)..... 3
    - SOC/SWK 473W—Social Science Research Methods ..... 3
    - SWK 103—Introduction to Social Work..... 3
    - SWK 220—Ethics, Values and Social Work Practice ..... 3
    - SWK 305—Social Welfare History ..... 3
    - SWK 306W—Social Welfare: Policies and Issues ..... 3
    - SWK 320—Rural Social Work..... 3
    - SWK 341—Human Behavior in the Social Environment I..... 3
    - SWK 342O—Human Behavior in the Social Environment II ..... 3
    - SWK 460—Social Work Practice I ..... 3
    - SWK 461—Practicum in Social Work I ..... 6
    - SWK 463—Social Work Practice II ..... 3
    - SWK 464—Practicum in Social Work II ..... 6
  - b. Complete 2 courses from the following special problems areas:
    - ANS 350W,O—Cross Cultural Communication: Alaskan  
Perspectives..... 3
    - JUST 340—Rural Justice in Alaska ..... 3
    - JUST 358—Juvenile Delinquency ..... 3
    - PSY 345—Abnormal Psychology ..... 3
    - RD/WMS 460—Women, Gender and Development ..... 3
    - SWK 350W—Women's Issues in Social Welfare and Social Work  
Practice..... 3
    - SWK 360—Child Abuse and Neglect..... 3
    - SWK 370—Social Work and the Aging Society ..... 3
    - SWK 470—Theories of Chemical Dependency and Social Work  
Practice..... 3
    - SWK 484—Seminar in Social Work Practice Areas ..... 3
4. Minimum credits required ..... 120
- \* Student must earn a C grade or better in each course.

## Minor

1. Complete the following:
  - SWK 103—Introduction to Social Work..... 3
  - SWK 220—Ethics, Values and Social Work Practice ..... 3
  - SWK 305—Social Welfare History (3)  
or SWK 306—Social Welfare: Policies and Issues (3) ..... 3
  - SWK 320—Rural Social Work..... 3
  - SWK 341—Human Behavior in the Social Environment I (3)  
or SWK 342O—Human Behavior in the Social  
Environment II (3)..... 3
  - One course from special problems area in section 3b ..... 3
2. Minimum credits required ..... 18

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**



## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Sociology

College of Liberal Arts  
Department of Sociology  
(907) 474-7240  
[www.uaf.edu/social/](http://www.uaf.edu/social/)

## B.A., B.S. Degree

Minimum Requirements for Degrees: 120 credits

Sociology is a scientific discipline that teaches us about ourselves and the groups of which we are a part. The sociological perspective equips the graduate with critical thinking and analytical problem-solving skills necessary for a variety of careers. A person with a sociology undergraduate degree can apply sociology in any work environment, including human services, government, business, community activism and public health agencies. The sociology department also prepares individuals to pursue graduate studies in sociology or professional programs for careers in law, medicine, business, education and social policy.

## Major—B.A. or B.S. Degree

1. Complete the general university requirements (page 106).
2. Complete the B.A. or B.S. degree requirements (page 109 or 112).
3. Complete the following program (major) requirements:\*  
SOC 101—Introduction to Sociology ..... 3  
SOC/PSY 250—Introductory Statistics for Behavioral Sciences..... 3  
SOC/PSY 330—Social Psychology..... 3  
SOC 363—Social Inequality and Stratification ..... 3  
SOC 402—Theories of Sociology ..... 3

SOC 408—Race and Ethnic Relations..... 3  
SOC/SWK 473W—Research Methods in the Social Sciences ..... 3

4. Complete 12 credits \* from the following electives:\*\*  
SOC 201—Social Problems ..... 3  
SOC 242—The Family: A Cross-Cultural Perspective ..... 3  
SOC 301—Rural Sociology ..... 3  
SOC 307O—Demography ..... 3  
SOC 309—Urban Sociology ..... 3  
SOC 310—Sociology of Later Life..... 3  
SOC/WMS 320—Sociology of Gender ..... 3  
SOC/PSY 333—Human Sexuality Across Cultures ..... 3  
SOC 335—Deviance and Social Control ..... 3  
SOC/ED 345—Sociology of Education ..... 3  
SOC 350W—Childhood and Society ..... 3  
SOC/PSY 370—Drugs and Drug Dependence..... 3  
SOC 405O—Social Movements and Social Change ..... 3  
SOC 407—Formal Organizations..... 3  
SOC/PSY 480W—Qualitative Social Science Research ..... 3

5. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

\*\* Courses from this group not used toward the major may be applied toward B.A. general degree requirements where applicable.

## Minor

1. Complete the following:  
SOC 101—Introduction to Sociology ..... 3  
SOC electives..... 15
2. Minimum credits required ..... 18

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X OR 213X ..... (3) \_\_\_\_\_  
COMM 131X OR 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X OR 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X OR SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X OR 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X OR 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_

# Statistics

College of Science, Engineering and Mathematics  
Department of Mathematical Sciences  
(907) 474-7332  
www.cs.uaf.edu

## B.S. Degree

Minimum Requirements for Degree: 120 credits

Statistics is a collection of methods and theories for making decisions or estimating 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 of application.

The curriculum for the B.S. degree program in statistics was developed using guidelines proposed by the American Statistical Association and provides graduates with a strong mathematics, computation and statistics background and integrates this with an area of application. The program allows considerable flexibility in the choice of the area of application by requiring a minor in any area offered by UAF.

The statistics program is administered by the Department of Mathematical Sciences. In addition to the B.S. in statistics, the department offers a bachelor's degree in mathematics with an emphasis in statistics. A minor in statistics is also available.

## Major—B.S. Degree

- Complete the following pre-major requirement:
  - Students must be ready to matriculate into MATH 200X before they will be allowed to declare statistics as their major.
- Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: MATH 200X\*. ENGL 314 is recommended to fulfill one of the writing intensive course requirements.)
- Complete the B.S. degree requirements (page 112. As part of the B.S. degree requirements, complete: MATH 201X\*.)
- Complete the following statistics core courses: \*

MATH 202X—Calculus.....	4
MATH 314—Linear Algebra.....	3
MATH 371—Probability.....	3
MATH 408—Mathematical Statistics .....	3
STAT 200—Elementary Probability and Statistics (3) or STAT 300—Statistics (3).....	3
STAT 401—Regression and Analysis of Variance .....	4
STAT 402—Scientific Sampling .....	3
STAT 498—Senior Project .....	3
- Complete 2 of the following statistics or mathematics electives: \*

MATH 307—Discrete Mathematics.....	3
MATH 310—Numerical Analysis .....	3
MATH 401W—Advanced Calculus.....	3
MATH 402—Advanced Calculus .....	3
MATH 460W,O—Mathematical Modeling .....	3
STAT 461—Applied Multivariate Statistics .....	3
STAT, MATH or statistical discipline oriented course approved by the statistics program coordinator .....	3

- Complete 2 of the following computational electives: \*

CS 103—Introduction to Computer Programming (3) or any higher-level CS course (3) .....	3
AIS 101—Effective Personal Computer Use .....	3
NRM 338—Introduction to Geographic Information Systems .....	3
NRM 341—GIS Analysis .....	4

- Complete a minor in any discipline in which UAF offers a minor. A mathematics minor is completed by all statistics majors and may be used to meet this requirement.

- Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

Note: A double major in statistics and math may be obtained by completing the following: 2, 3, 4, 5 and 6 above, MATH 215, 308, 401W, 490O and 9 additional credits in upper division math or statistics. A math elective package is MATH 371 and MATH 408, and STAT 401 and STAT 402 plus 8 credits upper division MATH or STAT. The statistics elective package is MATH 215 and MATH 401W. Minimum credits required is 60 including MATH 200X and MATH 201X. Other double majors are available.

## Minor

- Complete the following:

STAT 200—Elementary Probability and Statistics (3) or STAT 300—Statistics (3).....	3
STAT 401—Regression and Analysis of Variance .....	4
MATH 371—Probability* .....	3
MATH 408—Mathematical Statistics .....	3
MATH, STAT or STAT related course work** .....	3
  - Minimum credits required ..... 15
- \*MATH 371 requires MATH 200X, 201X and 202X as prerequisites.  
\*\* e.g., BA 360, GEOS 430, ANTH 424, MATH 460W,O, 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 need only complete MATH 371 and MATH 408 in addition to their fisheries requirements to obtain a minor in statistics.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.

### COMMUNICATIONS (9)

Complete the following:

ENGL 111X.....(3) \_\_\_\_\_  
ENGL 211X OR 213X.....(3) \_\_\_\_\_  
COMM 131X OR 141X.....(3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

Complete the following:

LS 100X OR 101X..... (0-1) \_\_\_\_\_  
OR Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

Complete either the following six courses:

ANTH 100X OR SOC 100X.....(3) \_\_\_\_\_  
ECON/PS 100X.....(3) \_\_\_\_\_  
HIST 100X.....(3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X OR ANS 202X.....(3) \_\_\_\_\_  
ENGL/FL 200X.....(3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X OR JUST 300X.....(3) \_\_\_\_\_

OR Complete 12 cr from the above list PLUS two semester-length courses in a single non-English or Alaska Native language at the university level OR three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

Complete 3-4 credits from the following:

MATH 107X.....(3) \_\_\_\_\_  
OR MATH 131X (except for BBA).....(3) \_\_\_\_\_  
OR MATH 161X.....(3) \_\_\_\_\_  
MATH 200X.....(4) \_\_\_\_\_  
MATH 201X.....(4) \_\_\_\_\_  
MATH 202X.....(4) \_\_\_\_\_  
MATH 262X.....(4) \_\_\_\_\_  
MATH 272X.....(3) \_\_\_\_\_

NOTE: Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

Complete 8 credits from the following:

ATM 101X.....(4) \_\_\_\_\_  
BIOL 103X OR 104X.....(4) \_\_\_\_\_  
BIOL 105X-106X.....(8) \_\_\_\_\_  
BIOL 111X-112X.....(8) \_\_\_\_\_  
CHEM 100X.....(4) \_\_\_\_\_  
CHEM 103X-104X.....(8) \_\_\_\_\_  
CHEM 105X-106X.....(8) \_\_\_\_\_  
GEOG 205X.....(4) \_\_\_\_\_  
GEOS 100X OR 120X OR 125X.....(4) \_\_\_\_\_  
GEOS 101X-112X.....(8) \_\_\_\_\_  
MSL 111X.....(4) \_\_\_\_\_  
PHYS 102X OR 175X.....(4) \_\_\_\_\_  
PHYS 103X-104X.....(8) \_\_\_\_\_  
PHYS 211X-212X.....(8) \_\_\_\_\_  
PHYS 211X-213X.....(8) \_\_\_\_\_  
PHYS 212X-213X.....(8) \_\_\_\_\_

# Technology

Interdisciplinary Program  
(907) 474-7464

## B.T. Degree

Minimum Requirements for Degree: 120 credits

This program offers qualified applicants the opportunity to expand upon their vocational/technical education.

The interdisciplinary studies B.T. degree allows the exceptional student to tailor a baccalaureate program to their unique needs. Information and advising for this degree is through the Office of the Graduate School and Interdisciplinary Programs.

### Major—B.T. Degree

1. Complete the general university requirements (page 106).
2. Complete the following B.T. degree requirements.
3. Complete the following:  
ENGL 314W/O/2—Technical Writing ..... 3  
MATH/CS/STAT elective at the 100-level ..... 3  
TTCH 301—Technology and Society ..... 3  
Computer competency ..... 3  
Specialty Electives ..... 6  
(Advisor approved upper division internship or advanced technical experience.)

4. Complete 30 credits of interdisciplinary studies approved by a faculty committee.\*
5. Complete 30 credits at UAF (either completed in residence or accepted by transfer as equivalent to specific UAF courses) from one of the following areas of specialization:
  - a. An associate of applied science degree from an accredited institution of higher education. In general, the name of the degree shall be bachelor of technology.
  - b. Substitute 1 of the following qualifications in an applied or technical field with the approval of the Curricular Affairs Committee of the Faculty Senate:
    - A.A.S. or similar degree earned at a non-accredited institution, deemed appropriate by the faculty.
    - State or federal certification deemed appropriate by the faculty.
    - Journeyman status in trades and industry, deemed appropriate by the faculty.

6. Minimum credits required ..... 120

\* Student must earn a C grade or better in each course.

See "Interdisciplinary Studies" in the degrees program section.

Note: At least 39 credits must be 300-level or above.

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

- LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

- MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_



# Theatre

College of Liberal Arts  
Department of Theatre  
(907) 474-6590  
(907) 474-7751 Ticket Office  
(907) 474-7048 Fax  
[www.uaf.edu/theatre/](http://www.uaf.edu/theatre/)

## B.A. Degree

Minimum Requirements for Degrees: 130 credits

The theatre department teaches basic and advanced courses in theatre arts, technology and appreciation.

The department recognizes the importance of the role of the fine arts within the humanities program of a liberal arts education. Courses in theatre help develop a student's sense of self worth while encouraging independent, original and creative thinking.

Classes and productions are open to theatre majors and minors and students in other fields. These experiences provide unique opportunities for creative expression and development when coupled with other programs.

## Major—B.A. Degree

**Concentrations: Design/Technical Theatre, Directing, Film, Performance**

1. Complete the general university requirements (page 106).
  2. Complete the B.A. degree requirements (page 109).
  3. Complete the following program (major) requirements:\*
- |   |   |
|---|---|
| THR 101—Theatre Practicum (3)                                 |   |
| or THR 201—Theatre Practicum (3)                              |   |
| or THR 301—Theatre Practicum (3)                              |   |
| or THR 401—Theatre Practicum (3)                              | 3 |
| THR 121—Fundamentals of Acting                                | 3 |
| THR 190—Audition or Portfolio Review Participation            | 0 |
| THR 191—Musical Audition or Portfolio Review Participation    | 0 |
| THR 241—Basic Stagecraft                                      | 4 |
| THR 247—Introduction to Theatrical Design                     | 3 |
| THR 254—Costume Design and Construction I                     | 3 |
| THR 290—Audition or Portfolio Review Participation II         | 0 |
| THR 291—Musical Audition or Portfolio Review Participation II | 0 |
| THR 331—Fundamentals of Film and Stage Direction              | 3 |
| THR 411W—Theatre History I                                    | 3 |
| THR 412W—Theatre History II                                   | 3 |
| THR 499—Thesis Project  | 3 |

4. Complete 1 of the following concentrations:\*

### Design/Technical Theatre

- a. Complete 1 of the following:

THR 221—Intermediate Acting	3
THR 225—Movement for the Actor	3
THR 351—Makeup for Theatre	3
- b. Complete 3 of the following:

THR 341—Intermediate Stagecraft	3
THR 343—Scene Design	3
THR 347—Lighting Design	3
THR 355—History of Fashion and Dress	3
- c. Complete the following:

THR 245—Stage Management	3
THR 348—Sound Design in the Theatre	3
THR 447—Lighting Design II	3
THR 456—Advanced Topics in Costume Design and Construction	3

### Directing

- a. Complete 2 of the following:

THR 221—Intermediate Acting	3
THR 225—Movement for the Actor	3
THR 321—Advanced Acting	3
THR 351—Makeup for Theatre	3
- b. Complete 2 of the following:

THR 341—Intermediate Stagecraft	3
THR 343—Scene Design	3
THR 347—Lighting Design	3
THR 355—History of Fashion and Dress	3
- c. Complete the following:

THR 215—Dramatic Literature	3
THR 245—Stage Management	3
THR 413W—Playscript Analysis	3
THR 470—Film and Video Directing	3

### Film

- a. Complete the following:

ENGL 217—Introduction to the Study of Film	3
JRN 105—History of the Cinema	3
JRN 308—Film Criticism	3
THR 215—Dramatic Literature	3
THR 334W—Movies and Films	3
THR 347—Lighting Design	3
THR 413W—Playscript Analysis	3
THR 470—Film and Video Directing	3

### Performance

- a. Complete the following:

THR 215—Dramatic Literature	3
THR 221—Intermediate Acting	3
THR 225—Movement for the Actor	3
THR 321—Advanced Acting	3
THR 351—Makeup for Theatre	3
- b. Complete 1 of the following:

THR 341—Intermediate Stagecraft	3
THR 343—Scene Design	3
THR 347—Lighting Design	3
THR 355—History of Fashion and Dress	3
- c. Complete 2 of the following:

THR 161—Introduction to Alaska Native Performance	3
THR 220—Voice and Diction for the Theatre	3
THR 361—Advanced Alaska Native Performance	3
THR 413W—Playscript Analysis	3

5. Minimum credits required.....130

## Minor

- Complete the following:  
THR 121—Fundamentals of Acting..... 3  
THR 215—Dramatic Literature..... 3  
THR 241—Basic Stagecraft..... 4  
THR electives\* ..... 8

- Minimum credits required ..... 18

*\* No more than 5 credits in theatre practicum may be applied to the minor.  
The minor program requires the approval of a member of the theatre faculty  
in advance of formally declaring the minor, preferably no later than the first  
semester of the junior year.*

*Note: Production participation requirement—Theatre, being a collaborative art,  
is dependent on the participation of people in all aspects of theatrical production:  
acting, designing, crew work, box-office, publicity, directing, etc. For this reason,  
students majoring or minoring in theatre are expected to participate actively and  
continuously in the production activities of the theatre department throughout  
their academic career at UAF. Theatre majors are required to take three credits  
of theatre practicum and are encouraged to take it for elective credits as well.  
Theatre majors and minors are expected to attend all theatre department “Town  
Meetings” and to talk regularly with a theatre department faculty member (an  
advisor) regarding their participation so that they may plan a working course of  
action to fulfill this requirement.*

*See Film Studies.*

**Note: Page numbers refer to the UAF 2004-2005 academic catalog,  
which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses.  
Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

- ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0–1)

**Complete the following:**

- LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

- ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length  
courses in a single non-English or Alaska Native language at  
the university level **OR** three semester-length courses (9 cr) in  
American Sign Language.

### MATHEMATICS (3–4)

**Complete 3-4 credits from the following:**

- MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

- ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X–106X ..... (8) \_\_\_\_\_  
BIOL 111X–112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X–104X ..... (8) \_\_\_\_\_  
CHEM 105X–106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X–112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X–104X ..... (8) \_\_\_\_\_  
PHYS 211X–212X ..... (8) \_\_\_\_\_  
PHYS 211X–213X ..... (8) \_\_\_\_\_  
PHYS 212X–213X ..... (8) \_\_\_\_\_

# Wildlife Biology

College of Science, Engineering and Mathematics  
Department of Biology and Wildlife  
(907) 474-7671  
mercury.bio.uaf.edu/biolwild/

## B.S. Degree

Minimum Requirements for Degree: 130 credits

The undergraduate wildlife program provides basic education and training. This degree is designed for students whose objective is to do the research needed to provide additional information on wild animal populations, their habitat and habitat-animal relationships. This degree is also for students whose primary interests involve interpreting, applying or disseminating research findings, rather than their acquisition. A wildlife B.S. degree is appropriate for students contemplating careers in wildlife agency administration, in developing and implementing wildlife management plans and in public information and education. The curriculum provides a solid foundation for graduate study and meets requirement for certification by The Wildlife Society.

The geographic location of the university is particularly advantageous for the study of wildlife biology. Spruce forest, aspen-birch forest, alpine tundra, bogs and several types of aquatic habitats are within easy reach. Studies can be made in many other habitats ranging from the dense forests of southeastern Alaska to arctic tundra.

Adequate study collections of plants and animals are available, and a 2,000-acre study area is near the campus. Wildlife biology students have ample opportunity for close association with the personnel of the Alaska Cooperative Fish and Wildlife Research Unit, Institute of Arctic Biology and several local offices of the federal and state conservation agencies. These agencies often provide support for graduate student projects, and program faculty usually hire a number of students for summer field work. Thus, an unusually good opportunity is available for students to gain experience and to make job connections.

The Department of Biology and Wildlife, the Institute of Arctic Biology, and the Alaska Cooperative Fish and Wildlife Research Unit cooperate in offering graduate work leading to the M.S. and Ph.D. degrees. Persons desiring detailed information on the graduate program in wildlife biology and management may obtain this from the chair, Wildlife Program.

The Alaska Cooperative Fish and Wildlife Research Unit and Institute of Arctic Biology offer a limited number of research assistantships. Teaching assistantships are available from the Department of Biology and Wildlife.

## Major—B.S. Degree

1. Complete the general university requirements (page 106. As part of the core curriculum requirements, complete: COMM 141X.)
2. Complete the B.S. degree requirements (page 112).
3. Complete the following program (major) requirements:\*
- a. Complete the following:
  - BIOL 105X—Fundamentals of Biology I\*\*\* ..... 4
  - BIOL 106X—Fundamentals of Biology II\*\*\* ..... 4
  - BIOL 239—Introduction to Plant Biology..... 4
  - BIOL 271—Principles of Ecology..... 4
  - BIOL 310—Animal Physiology ..... 4
  - BIOL 317—Comparative Anatomy of Vertebrates ..... 4

BIOL 331—Systematic Botany .....	4
BIOL 362—Principles of Genetics .....	4
BIOL 425—Mammalogy.....	3
BIOL 426W,O/2—Ornithology.....	3
BIOL 471—Population Ecology .....	3
ENGL 314W,O/2—Technical Writing (3)	
or ENGL 414W—Research Writing (3).....	3
NRM 101—Natural Resources Conservation and Policy .....	3
NRM/WLF 431—Wildlife Law and Policy (3)	
or NRM 407—Environmental Law (3).....	3
WLF 101—Survey of Wildlife Science .....	1
WLF 201—Wildlife Management Principles .....	3
WLF 303W—Wildlife Management Techniques .....	3
WLF 410—Wildlife Populations and Their Management .....	3
WLF 460—Nutrition and Physiological Ecology of Wildlife.....	3
b. Complete the following:	
CHEM 105X—General Chemistry** .....	4
CHEM 106X—General Chemistry** .....	4
MATH 200X—Calculus (4)** .....	3-4
or MATH 272X—Calculus for Life Sciences (3)** .....	3-4
PHYS 103X—College Physics .....	4
STAT 200—Elementary Probability and Statistics (3)***	
or STAT 300—Statistics (3)*** .....	3
STAT 401—Regression and Analysis of Variance*** .....	4
c. Complete 3 of the following:	
BIOL 303—Principles of Metabolism and Biochemistry.....	4
BIOL 406—Entomology.....	4
BIOL 407—Aquatic Entomology .....	3
BIOL 427W,O—Ichthyology .....	3
BIOL 441W,O/2—Animal Behavior.....	3
BIOL 444—Reproductive Biology .....	3
BIOL 472—Community Ecology .....	3
BIOL 473W—Limnology .....	4
BIOL 474—Plant Ecology .....	4
BIOL 480—Water Pollution Biology.....	3
BIOL 481—Principles of Evolution .....	3
NRM 312—Introduction to Range Management .....	3
NRM 338—Introduction to Geographic Information Systems .....	3
NRM 341—GIS Analysis .....	4
NRM 370—Introduction to Watershed Management .....	3
NRM 380W—Soils and the Environment.....	3
NRM 450—Forest Management.....	3
WLF 305—Wildlife Diseases .....	3
WLF 419O/2—Waterfowl and Wetlands Ecology and Management.....	4

4. Complete electives
5. Minimum credits required ..... 130

\* Student must earn a C grade or better in each course.

\*\* Satisfies a core requirement.

\*\*\* Satisfies a B.S. degree requirement.

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.

**Requirements for****biology teachers (grades 7-12):\*****Minor**

1. Complete all the requirements of the wildlife biology B.S. degree.
2. All prospective biology teachers must complete the following:  
 BIOL 342—Microbiology ..... 4  
 BIOL 481—Principles of Evolution ..... 4  
 BIOL 303—Principles of Metabolism and Biochemistry (4)  
 or CHEM 321 and CHEM 322—Organic Chemistry (6).....4-6
3. All prospective science teachers must complete one of the following:  
 PHIL 380—Conceptual Foundations of Science (3)  
 or PHIL 382—Science and Technological limits (3)  
 or PHIL 481—Philosophy of Science (3) .....3

*\*We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later, for licensure in biology.*

1. Complete the following:  
 WLF 303W—Wildlife Management Techniques ..... 3  
 WLF 410—Wildlife Populations and Their Management ..... 3  
 WLF 460—Nutrition and Physiological Ecology of Wildlife..... 3  
 Approved BIOL and WLF electives\* ..... 6
2. Minimum credits required .....15

*\* Only biology or wildlife electives that are not required for the student's major.*

*Note: Prerequisites for required courses include BIOL 105X-106X, BIOL 271, BIOL 310, STAT 200 or STAT 300, and WLF 201. Depending upon a student's major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.*

**Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).**

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
 ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
 COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
 ECON/PS 100X ..... (3) \_\_\_\_\_  
 HIST 100X ..... (3) \_\_\_\_\_  
 ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
 ENGL/FL 200X ..... (3) \_\_\_\_\_  
 PHIL 322X, NRM 303X, COMM 300X,  
 PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language.

### MATHEMATICS (3-4)

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
 MATH 200X ..... (4) \_\_\_\_\_  
 MATH 201X ..... (4) \_\_\_\_\_  
 MATH 202X ..... (4) \_\_\_\_\_  
 MATH 262X ..... (4) \_\_\_\_\_  
 MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
 BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
 BIOL 105X-106X ..... (8) \_\_\_\_\_  
 BIOL 111X-112X ..... (8) \_\_\_\_\_  
 CHEM 100X ..... (4) \_\_\_\_\_  
 CHEM 103X-104X ..... (8) \_\_\_\_\_  
 CHEM 105X-106X ..... (8) \_\_\_\_\_  
 GEOG 205X ..... (4) \_\_\_\_\_  
 GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
 GEOS 101X-112X ..... (8) \_\_\_\_\_  
 MSL 111X ..... (4) \_\_\_\_\_  
 PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
 PHYS 103X-104X ..... (8) \_\_\_\_\_  
 PHYS 211X-212X ..... (8) \_\_\_\_\_  
 PHYS 211X-213X ..... (8) \_\_\_\_\_  
 PHYS 212X-213X ..... (8) \_\_\_\_\_

# Women's Studies

Interdisciplinary Program  
(907) 474-6249  
[www.uaf.edu/women/](http://www.uaf.edu/women/)

## Minor only

This program brings together a choice of courses from many disciplines.

## Minor

1. Complete the following:  
WMS 201—Introduction to Women's Studies ..... 3
2. Complete at least 15 additional credits from courses cross-listed with WMS, subject to the approval of a women's studies advisor.
3. Minimum credits required ..... 18

**Note:** Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).

## General University Requirements

**All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.**

### COMMUNICATIONS (9)

**Complete the following:**

ENGL 111X ..... (3) \_\_\_\_\_  
ENGL 211X **OR** 213X ..... (3) \_\_\_\_\_  
COMM 131X **OR** 141X ..... (3) \_\_\_\_\_

### LIBRARY & INFORMATION SKILLS (0-1)

**Complete the following:**

LS 100X **OR** 101X ..... (0-1) \_\_\_\_\_  
**OR** Successful completion of library skills competency test.

### PERSPECTIVES ON THE HUMAN CONDITION (18)

**Complete either the following six courses:**

ANTH 100X **OR** SOC 100X ..... (3) \_\_\_\_\_  
ECON/PS 100X ..... (3) \_\_\_\_\_  
HIST 100X ..... (3) \_\_\_\_\_  
ART/MUS/THR 200X, HUM 201X **OR** ANS 202X ..... (3) \_\_\_\_\_  
ENGL/FL 200X ..... (3) \_\_\_\_\_  
PHIL 322X, NRM 303X, COMM 300X,  
PS 300X **OR** JUST 300X ..... (3) \_\_\_\_\_

**OR** Complete 12 cr from the above list **PLUS** two semester-length courses in a single non-English or Alaska Native language at the university level **OR** three semester-length courses (9 cr) in American Sign Language. **MATHEMATICS (3-4)**

**Complete 3-4 credits from the following:**

MATH 107X ..... (3) \_\_\_\_\_  
**OR** MATH 131X (except for BBA) ..... (3) \_\_\_\_\_  
**OR** MATH 161X ..... (3) \_\_\_\_\_  
MATH 200X ..... (4) \_\_\_\_\_  
MATH 201X ..... (4) \_\_\_\_\_  
MATH 202X ..... (4) \_\_\_\_\_  
MATH 262X ..... (4) \_\_\_\_\_  
MATH 272X ..... (3) \_\_\_\_\_

**NOTE:** Additional 3 cr of math needed for degree requirements.

### NATURAL SCIENCES (8)

**Complete 8 credits from the following:**

ATM 101X ..... (4) \_\_\_\_\_  
BIOL 103X **OR** 104X ..... (4) \_\_\_\_\_  
BIOL 105X-106X ..... (8) \_\_\_\_\_  
BIOL 111X-112X ..... (8) \_\_\_\_\_  
CHEM 100X ..... (4) \_\_\_\_\_  
CHEM 103X-104X ..... (8) \_\_\_\_\_  
CHEM 105X-106X ..... (8) \_\_\_\_\_  
GEOG 205X ..... (4) \_\_\_\_\_  
GEOS 100X **OR** 120X **OR** 125X ..... (4) \_\_\_\_\_  
GEOS 101X-112X ..... (8) \_\_\_\_\_  
MSL 111X ..... (4) \_\_\_\_\_  
PHYS 102X **OR** 175X ..... (4) \_\_\_\_\_  
PHYS 103X-104X ..... (8) \_\_\_\_\_  
PHYS 211X-212X ..... (8) \_\_\_\_\_  
PHYS 211X-213X ..... (8) \_\_\_\_\_  
PHYS 212X-213X ..... (8) \_\_\_\_\_