FORMAT 5

Submit originals and one copy and electronic copy to Governance/Faculty Senate Office (email electronic copy to fysenat@uaf.edu)

PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)

SUBMITTED BY:

Department	**Resources Management**	**College/School**	**SNRAS**
Prepared by	**Joshua Greenberg**	**Phone**	**474-7189**
Email Contact	**j.greenberg@alaska.edu**	**Faculty Contact**	**Joshua Greenberg**

See http://www.uaf.edu/uafgov/faculty/cd for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

DEGREE PROGRAM	**Natural Resources Management**
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	**BS**

A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)

This is a revision to the Resources Concentration to the BS in Natural Resources Management degree. The concentration title and description have been revised to better reflect the objective of the degree concentration. The concentration requirements have been modified and reorganized. The reorganization reflects the focus of this concentration on the social science aspect of natural resource management. The objective of the degree concentration is to provide students the skills to identify differing social values, understand the policy and legal foundations of resource management issues, and have knowledge of methods to develop management plans and implement decisions.

B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:

NATURAL RESOURCES MANAGEMENT
School of Natural Resources and Agricultural Sciences
907-474-7083
www.uaf.edu/snras/
B.S. Degree
Minimum Requirements for Degree: 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 and students planning advanced study, as well as those wishing to be better informed citizens.
The B.S. degree has three concentrations: forestry; high latitude agriculture; 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 high latitude agriculture 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; High Latitude Agriculture; Resources

1. Complete the general university requirements. (See page 122. As part of the core curriculum requirements, complete a MATH—Calculus course.)
2. Complete the B.S. degree requirements. (See page 127. As part of the B.S. degree requirements, complete STAT F200X*.)
3. Complete the following (major) requirements:*

BIOL F115X—Fundamentals of Biology I**.....4
BIOL F116X—Fundamentals of Biology II**.....4
BIOL F271—Principles of Ecology.....4
CHEM F105X—General Chemistry***.....4
CHEM F106X—General Chemistry***.....4
ECON F235—Introduction to Natural Resource Economics.....3
NRM F101—Natural Resources Conservation and Policy.....3
NRM F106—Orientation to Natural Resource Management.....1
NRM F304O—Perspectives in Natural Resources Management.3
NRM F380W—Soils and the Environment.....3
NRM F405W—Senior Thesis in Natural Resources Management I.....2
NRM F406W—Senior Thesis in Natural Resources Management II.....2

4. Complete one of the following concentrations:*

Forestry

a. Complete the following:
BIOL F239—Introduction to Plant Biology (4)
or NRM F211—Introduction to Applied
Plant Science (3).....3 – 4
ECON F335O—Intermediate Natural Resource Economics.....3
GEOS F101X—The Dynamic Earth.....4
NRM F204—Public Lands Law and Policy.....3
NRM F251—Silvics and Dendrology.....4
NRM F290—Resource Management Issues at High Latitudes...2
NRM F338—Introduction to Geographic Information Systems.3
NRM F340—Natural Resources Measurement and Inventory...3
NRM F365—Principles of Outdoor Recreation Management....3
NRM F370—Introduction to Watershed Management.....3
NRM F430—Resource Management Planning.....3
NRM F450—Forest Management.....3
NRM F440—Silviculture.....3
NRM F452—Forest Health and Protection.....3
NRM F453—Harvesting and Utilization of Forest Products.....3
WLF F201—Wildlife Management Principles (3)
or FISH F401W,O/2—Fisheries Management (3).....3
b. Complete three of the following to total at least 8 credits:****
1. Complete at least one of the following non-measurements courses:
BIOL F331—Systematic Botany.....4
FIRE—Any course on wildland fire control/management.....3
GEOS F408—Photogeology.....2
NRM F277—Introduction to Conservation Biology.....3
NRM F300—Internship in Natural Resources
Management*****.....1 – 6
NRM F303X—Environmental Ethics and Actions******.....3
NRM F312—Introduction to Range Management.....3
WLF F201—Wildlife Management Principles (3)
or FISH F401W,O/2—Fisheries Management (3).....3
2. Complete at least one of the following measurements courses:
CE F112—Elementary Surveying.....3
GEOS F422—Geoscience Applications of Remote Sensing...3
NRM F341—GIS Analysis.....4
STAT F401—Regression and Analysis of Variance.....4
STAT F402—Scientific Sampling.....3

** 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 F303X 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 F303X*

High Latitude Agriculture

a. Complete the following:
BIOL F331—Systematic Botany (4)

or BIOL F310—Animal Physiology (4)
or BIOL F317—Comparative Anatomy of Vertebrates (4).....4
NRM F211—Introduction to Applied Plant Science.....3
NRM F290—Resource Management Issues at High Latitudes...2
NRM F312—Range Management.....3
NRM F320—Animal Science.....3
NRM F480—Soil Management for Quality Conservation (3)
or NRM F485—Soil Biology* (3).....3
or NRM F466—Environmental Soil Chemistry (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 natural resources management electives:
NRM F102—Practicum in Natural Resources Management (1 – 2)
and any other NRM course at the F200-level or above that has not been used to meet other requirements.
NRM F204—Public Lands Law and Policy.....3
NRM F215—Plant Propagation.....3
NRM F251—Silvics and Dendrology.....4
NRM F312—Introduction to Range Management.....3
NRM F313—Introduction to Plant Pathology.....4
NRM F338—Introduction to Geographic Information Systems.3
NRM F340—Natural Resources Measurement and Inventory...3
NRM F341—GIS Analysis.....4
NRM F370—Introduction to Watershed Management.....3
NRM F404—Environmental Impact Statement Law.....3
NRM F412—Field Crop Production.....3
NRM F480—Soil Management for Quality and Conservation* (3)
or NRM F485—Soil Biology* (3)
or NRM F466—Environmental Soil Chemistry* (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 or soils. The courses must be approved by the student's academic advisor prior to attaining senior standing.
** The same course cannot be used to satisfy requirements in both sections a and c.*

Resources

a. Complete the following:
ECON F335O—Intermediate Natural Resource Economics.....3
GEOS F101X—The Dynamic Earth.....4
NRM F204—Public Lands Law and Policy.....3
NRM F251—Silvics and Dendrology.....4
NRM F290—Resource Management Issues at High Latitudes...2
NRM F312—Introduction to Range Management (3)
or NRM F480—Soil Management for Quality and Conservation (3).....3

NRM F338—Introduction to Geographic Information Systems.3
NRM F340—Natural Resources Measurement and Inventory...3
NRM F365—Principles of Outdoor Recreation Management....3
NRM F370—Introduction to Watershed Management.....3
NRM F430—Resource Management Planning.....3
WLF F201—Wildlife Management Principles (3)
or FISH F401W,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 F428—Ecological Anthropology and Regional Sustainability.....3
ECON F437W—Regional Economic Development.....3
FISH F261-F—Introduction to Seafood Science and Nutrition.3
FISH F401W,O/2—Fisheries Management.....3
FIRE F256—Wildland Fire Planning and Multiple Use Management.....3
GEOG F427—Cold Lands.....3
MIN F101—Minerals, Man and the Environment.....3
MIN F400—Practical Engineering Report.....1
MIN F407W—Mine Reclamation and Environmental Management.....3
NRM F277—Introduction to Conservation Biology.....3
NRM F300—Internship in Natural Resources Management.....3
NRM F312—Introduction to Range Management.....3
NRM F404—Environmental Impact Statement Law.....3
NRM/WLF F431—Wildlife Law and Policy.....3
NRM F450—Forest Management.....3
NRM F440—Silviculture.....3
NRM F465—Outdoor Recreation Planning.....3
NRM F480—Soil Management for Quality and Conservation...3
RD F255—Rural Alaska Land Issues.....3
RD F265—Perspectives on Subsistence in Alaska.....3
RD F350O—Indigenous Knowledge and Community Research.....3
WLF F201—Wildlife Management Principles.....3
WLF F419O/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 major may also be used to satisfy the general university and B.S. degree requirements as appropriate.

C. PROPOSED REQUIREMENTS AS IT WILL APPEAR IN THE CATALOG WITH THESE CHANGES:
(Underline new wording ~~strike through old wording~~ and use complete catalog format)

NATURAL RESOURCES MANAGEMENT
School of Natural Resources and Agricultural Sciences
907-474-7083
www.uaf.edu/snras/
B.S. Degree
Minimum Requirements for Degree: 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 and 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 high latitude agriculture 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.

<u>The Humans and the Environment concentration focuses on human interactions with the environment and the balancing of uses needs and values regarding natural resources. H&E students will gain a solid foundation in the physical sciences relevant to resources management, but will be distinguished by a focus on social science coursework. Examples of such coursework include policy and law, planning, economics, and survey research methods. Students have the opportunity to integrate international study into the degree option. H&E graduates will have skills to identify differing social values, understand the policy and legal foundations of resource management issues, and have knowledge of methods to develop management plans and implement decisions.</u>

Graduates will be well positioned for a variety of careers in public resource management agencies, tribal organizations, and private firms and non-profits.
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; High Latitude Agriculture; ~~Resources~~ Humans and the Environment
1. Complete the general university requirements. (See page 122. As part of the core curriculum requirements, complete a MATH—Calculus course.)
2. Complete the B.S. degree requirements. (See page 127. As part of the B.S. degree requirements, complete STAT F200X*.)
3. Complete the following (major) requirements:*
BIOL F115X—Fundamentals of Biology I**.....4
BIOL F116X—Fundamentals of Biology II**.....4
BIOL F271—Principles of Ecology.....4
CHEM F105X—General Chemistry***.....4
CHEM F106X—General Chemistry***.....4
ECON F235—Introduction to Natural Resource Economics.....3
NRM F101—Natural Resources Conservation and Policy.....3
NRM F106—Orientation to Natural Resource Management.....1
NRM F304O—Perspectives in Natural Resources Management.3
NRM F380W—Soils and the Environment.....3
NRM F405W—Senior Thesis in Natural Resources Management I.....2
NRM F406W—Senior Thesis in Natural Resources Management II.....~~2~~

4. Complete one of the following concentrations:*

Forestry
a. Complete the following:
BIOL F239—Introduction to Plant Biology (4)
or NRM F211—Introduction to Applied Plant Science (3).....3 – 4
ECON F335O—Intermediate Natural Resource Economics.....3
GEOS F101X—The Dynamic Earth.....4
NRM F204—Public Lands Law and Policy.....3
NRM F251—Silvics and Dendrology.....4
NRM F290—Resource Management Issues at High Latitudes...2
NRM F338—Introduction to Geographic Information Systems.3
NRM F340—Natural Resources Measurement and Inventory...3
NRM F365—Principles of Outdoor Recreation Management....3
NRM F370—Introduction to Watershed Management.....3
NRM F430—Resource Management Planning.....3
NRM F450—Forest Management.....3
NRM F440—Silviculture.....3
NRM F452—Forest Health and Protection.....3
NRM F453—Harvesting and Utilization of Forest Products.....3
WLF F201—Wildlife Management Principles (3)

or FISH F401W,O/2—Fisheries Management (3).....3
b. Complete three of the following to total at least 8 credits:****
1. Complete at least one of the following non-measurements courses:
BIOL F331—Systematic Botany.....4
FIRE—Any course on wildland fire control/management.....3
GEOS F408—Photogeology.....2
NRM F277—Introduction to Conservation Biology.....3
NRM F300—Internship in Natural Resources Management*****.....1 – 6
NRM F303X—Environmental Ethics and Actions******.....3
NRM F312—Introduction to Range Management.....3
WLF F201—Wildlife Management Principles (3)
or FISH F401W,O/2—Fisheries Management (3).....3
2. Complete at least one of the following measurements courses:
CE F112—Elementary Surveying.....3
GEOS F422—Geoscience Applications of Remote Sensing...3
NRM F341—GIS Analysis.....4
STAT F401—Regression and Analysis of Variance.....4
STAT F402—Scientific Sampling.....3
** 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 F303X 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 F303X*

High Latitude Agriculture
a. Complete the following:
BIOL F331—Systematic Botany (4)
or BIOL F310—Animal Physiology (4)
or BIOL F317—Comparative Anatomy of Vertebrates (4).....4
NRM F211—Introduction to Applied Plant Science.....3
NRM F290—Resource Management Issues at High Latitudes...2
NRM F312—Range Management.....3
NRM F320—Animal Science.....3
NRM F480—Soil Management for Quality Conservation (3)
or NRM F485—Soil Biology* (3).....3
or NRM F466—Environmental Soil Chemistry (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 natural resources management electives:
NRM F102—Practicum in Natural Resources Management (1 – 2)
and any other NRM course at the F200-level or above that has not been used to meet other requirements.
NRM F204—Public Lands Law and Policy.....3
NRM F215—Plant Propagation.....3

NRM F251—Silvics and Dendrology.....4
NRM F312—Introduction to Range Management.....3
NRM F313—Introduction to Plant Pathology.....4
NRM F338—Introduction to Geographic Information Systems.3
NRM F340—Natural Resources Measurement and Inventory...3
NRM F341—GIS Analysis.....4
NRM F370—Introduction to Watershed Management.....3
NRM F404—Environmental Impact Statement Law.....3
NRM F412—Field Crop Production.....3
NRM F480—Soil Management for Quality and Conservation* (3)
or NRM F485—Soil Biology* (3)
or NRM F466—Environmental Soil Chemistry* (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 or soils. The courses must be approved by the student's academic advisor prior to attaining senior standing.
** The same course cannot be used to satisfy requirements in both sections a and c.*

~~Resources~~ Humans and the Environment
~~a. Complete the following:~~
~~ECON F335O—Intermediate Natural Resource Economics.....3~~
~~GEOS F101X—The Dynamic Earth.....4~~
~~NRM F204—Public Lands Law and Policy.....3~~
~~NRM F251—Silvics and Dendrology.....4~~
~~NRM F290—Resource Management Issues at High Latitudes...2~~
~~NRM F312—Introduction to Range Management (3)~~
~~or NRM F480—Soil Management for Quality and Conservation (3).....3~~
~~NRM F338—Introduction to Geographic Information Systems.3~~
~~NRM F340—Natural Resources Measurement and Inventory...3~~
~~NRM F365—Principles of Outdoor Recreation Management....3~~
~~NRM F370—Introduction to Watershed Management.....3~~
~~NRM F430—Resource Management Planning.....3~~
~~WLF F201—Wildlife Management Principles (3)~~
~~or FISH F401W,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 F428—Ecological Anthropology and Regional Sustainability.....3~~
~~ECON F437W—Regional Economic Development.....3~~
~~FISH F261 F—Introduction to Seafood Science and Nutrition.3~~
~~FISH F401W,O/2—Fisheries Management.....3~~
~~FIRE F256—Wildland Fire Planning and Multiple Use Management.....3~~
~~GEOG F427—Cold Lands.....3~~

~~MIN F101—Minerals, Man and the Environment.....3~~
~~MIN F400—Practical Engineering Report.....1~~
~~MIN F407W—Mine Reclamation and Environmental Management.....3~~
~~NRM F277—Introduction to Conservation Biology.....3~~
~~NRM F300—Internship in Natural Resources Management.....3~~
~~NRM F312—Introduction to Range Management.....3~~
~~NRM F404—Environmental Impact Statement Law.....3~~
~~NRM/WLF F431—Wildlife Law and Policy.....3~~
~~NRM F450—Forest Management.....3~~
~~NRM F440—Silviculture.....3~~
~~NRM F465—Outdoor Recreation Planning.....3~~
~~NRM F480—Soil Management for Quality and Conservation...3~~
~~RD F255—Rural Alaska Land Issues.....3~~
~~RD F265—Perspectives on Subsistence in Alaska.....3~~
~~RD F350O—Indigenous Knowledge and Community Research.....3~~
~~WLF F201—Wildlife Management Principles.....3~~
~~WLF F419O/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.~~

b. Human Dimensions Courses: complete all courses, 24 credits

NRM 101—Natural Resource Conservation and Policy…….3
NRM 204—Public Lands Law and Policy…...3
NRM 304—Perspectives in Natural Resource Management…….....3
NRM 365—Principles of Outdoor Recreation Management …….... 3
NRM 430—Resource Management Planning..3
NRM 465—Survey Research in Natural Resources Management …… ……3
ECON 235—Introduction to Natural Resource Economics……3
ECON 335—Intermediate Natural Res Economics ……..3

** Courses taken abroad may be applied toward this requirement with departmental approval*

b. Resource Management Courses: complete 12 credits minimum

WLF 201— Wildlife Management Principles..3
NRM 312—Intro to Range Management……..3
NRM 340—Natural Resources Measurement

and Inventory……..……3
NRM 370—Introduction to Watershed Management……...3
NRM 410—Numerical Methods for Natural Resources Management ….…….3
NRM 450—Forest Management ….…..……...3
NRM 463—Wilderness Management……. .3
NRM 480—Soils Management for Quality and Conservation……3
FISH 487 W,O/2—Fisheries Management…..3

c. Applied Experiential Courses: complete 2 credits minimum

NRM 290—Resource Management Issues at High Latitudes…….2
NRM 300—Internship in Natural Resources Management and Geography (H).1-6
NRM 3xx[1]—Internship Abroad in NRM (International Study) ……..1-6
**Courses taken abroad may be applied toward this requirement with departmental approval*

d. Skills Building: complete 9 credits in a single topic area

Skills building provides depth of study in fields employed in Humans and the Environment related careers. Courses to be determined by students in consultation with their advisor and approval of department head.

Examples of Skills Building topics are:

- Forestry
- Agriculture
- Law Enforcement
- Computer application
- GIS/Remote Sensing
- Fire Science/Haz mat
- Business
- Statistics
- Aviation
- Language
- Fisheries management
- Wildlife management
- Curation
- Art
- Other

e. Electives in Humans and the Environment: complete 15 credits

Electives in Human and the Environment provide exposure to a breadth of Topic areas relevant to understanding human interaction with the natural environment. Nine credits must be at the 300 level or above.

Students are required to complete at least 3 credits from a minimum of 3 topic areas.

Topics:

Alaska and Native Alaskans:
GEOG 302—Geography of Alaska (s)……3

[1] Denotes new course

AKNP151—Alaska Native Claims Settlement Act…….3
AKNP 230—Federal Indian Law……....3
ANS 425—Federal Indian Law & Alaska Natives (s)……..…3
HIST 115—Alaska, Land & Its People (s)..3
TM 120, Intro to Tribal Natural Resource Management……..3
RD 255, Rural Alaska Land Issues (s)……3
RD 265—Perspectives on Subsistence in Alaska…….3
PS 263— Alaska Native Politics (s)……....3
PS 325—Native Self-Government (s)…….3
ANTH 242—Native Cultures of Alaska (s).3
ANTH 382, The People of Alaska Southeast
ANTH 383—Athabascan Peoples of Alaska & Adjacent Canada (s)……3

Parks and Wilderness:
NRM 161—Wilderness Leadership Education……3
NRM 361—Advanced Wilderness Leadership Education……..…3
NRM 461—Interpretive Services……3
NRM 463—Wilderness Concepts……...3
NRM 464—Wilderness Management…….3
ARSK 147—Arctic Survival…… 1--2
RD 268—Rural Tourism: Planning & Principles……3

Law and Politics:
NRM 303—Environmental Ethics and Actions (h)……3
NRM 407—Environmental Law……3
PS 212, Introduction to Public Administration (s) ……...3
PS 447—U.S. Environmental Politics (s)..3
PS 454—International Law & the Environment (s)……....3
PS 455 O—Political Economy of the Global Environment (s)……3
PS 458—Comparative Environmental Politics ……3

Energy and Minerals:
GEOG 420—Geopolitics of Energy (s)…..3
CE 341—Environmental Engineering…….3
ENVE 458—Energy and the Environment..3
ENVI 101—Introduction to Environmental Science……..3
MIN 101— Minerals, Man and the Environment…….3
PHYS 102—Energy and Society (n)……..3

Environmental Issues:
GEOG 402—Resources and Environment .3

GEOG 412, Geography of Climate and Environmental Change…….3
Soc 440 O—Environmental Sociology (s)..3
PS 447—U.S. Environmental Politics (s)…3
PS 458— Comparative Environmental Politics……...3
HIST 411— Environmental History……3
BIO 485—Global Change Biology…….3
ANTH 428—Ecological Anthropology and Regional Sustainability…….3

5. Minimum credits required.....130
Note: Courses required for the major may also be used to satisfy the general university and B.S. degree requirements as appropriate.

D. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

No new money is requested. There is one new course, which will not require classroom space. No expected impact to faculty. The new course is an extension of an existing courses. Internship Abroad in NRM (3xx) is an extension of Internship in Natural Resource Management and Geography (NRM 300).

E. IMPACTS ON PROGRAMS/DEPTS:

What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)

The Resources Management Department has had oversight of the Resource Concentration of the NRM BS degree. The SNRAS is responsible for the NRM BS program. The NRM core requirements are not changed by this revision to the Resource Concentration. No department or program outside of the SNRAS and the NRM BS will be affected.

F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:

Description of the student learning outcomes assessment process.)

Not a major change

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize program/degree change applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you drop a course, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the program is not compromised as a result.

The Resources concentration of the NRM BS program has not been updated in many years. The revision presented here is intended to keep the concentration current with changes that have occurred in natural resources management related fields while maintaining the overall rigor of the degree concentration. It is also intended to accommodate planned growth in enrollment in the NRM BS program. The reorganization provides students both a breadth and depth of knowledge in areas relevant to natural resources management, with a focus on the human dimension. The NRM major requirements are unchanged by this revision. Accordingly, the Forestry concentration and the High Latitude Agriculture concentration are unchanged.

The changes to Humans and the Environment degree concentration are as follows. The requirements of the degree concentration are structured under revised category headings that provide a clear rationale for the degree concentration. The 'Resources Management' category provides students flexibility in the specific courses they take based on their interests. NRM 312—Intro to Range Management, NRM 340—Natural Resources Measurement and Inventory, NRM 370—Introduction to Watershed Management, and NRM 480—Soils Management for Quality and Conservation that are currently required become optional courses in the revised degree concentration. The required courses under the 'Human Dimensions' category in the revised degree concentration are all required under the current degree concentration. The 'Applied Experiential' category provides students several choices to gain experienced based understanding of human interaction with the natural environment. NRM 290—Resource Management Issues at High Latitudes, currently a required course, becomes an optional course. NRM 300–Internship in Natural Resources Management and Geography is more prominently featured in the degree concentration. The internship offering is extended to include exposure to natural resource management in a foreign settings through the new course Internship NRM 3xx—Internship Abroad in NRM. The 'Support Field' category in the current degree concentration is re-titled 'Skills in the Field.' This category accommodates student exploration of study in fields employed in Humans and the Environment related careers. Examples of the 'Skill and the Fields' topics are now provided in the degree concentration description. Finally, the 'Humans and the Environmental Electives' category in the current degree concentration has been re-titled 'Electives in Humans and the Environment' and has been reorganized to assure student have exposure to a breadth of current topics relevant to understanding human interaction with the natural environment. The number of credits in this category has been increased from 9 to 15 so that student may also explore specific topics in greater detail. The list of elective courses included in this category has been updated based on current University course offerings and based on the contribution of courses to specific topic areas.

APPROVALS:

	Date		
Signature, Chair, Program/Department of:			
	Date		
Signature, Chair, College/School Curriculum Council for:			
	Date		
Signature, Dean, College/School of:			

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		