

MEMORANDUM

TO: Joan Braddock, Dean, CNSM
Ron Davis, Dean, CLA
Doug Goering, Interim Dean, CEM
Mark Herrmann, Interim Dean, SOM
James Huesmann, Dean, Libraries
Bernice Joseph, Vice Chancellor, CRCDC
Carol Lewis, Dean, SNRAS
Eric Madsen, Dean, SOEd
Pete Pinney, Interim Director, CES

MOTION:

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The UAF Faculty Senate moves to approve a Ph.D. Program in Natural Resources and Sustainability.

EFFECTIVE: Fall 2008 and/or
Upon Board of Regents approval.

RATIONALE: See the full program proposal #30 from the Fall 2007 review cycle on file in the Governance Office, 312 Signers' Hall.

President, UAF Faculty Senate Date

APPROVAL: _____ DATE: _____
Chancellor's Office

DISAPPROVED: _____ DATE: _____
Chancellor's Office

Brief Statement of the Proposed Program
Ph.D., Natural Resources and Sustainability

Alaska and the Circumpolar North face increasingly complex challenges in use and management of natural resources. These challenges require the education and training of high-level professionals with skills for considering the interaction of social and natural systems and informing the development and implementation of practices and policies that enhance natural resource management. The proposed Ph.D. in Natural Resources and Sustainability (NRS) at the University of Alaska Fairbanks would prepare future leaders as academic researchers, educators, agency and industry professionals and analysts of non-governmental organizations and communities for careers at the frontiers of science in the management of natural resources and environment. The program objectives and its curriculum center around three thematic areas of study, i) resource economics, ii) resource policy and sustainability science, iii) forest and agricultural sciences. In the proposed Ph.D. program, each student draws on a common set of core courses, and with his/her graduate committee, develops a program of coursework

and research that produces a unique intellectual contribution to the applied field of Natural Resource and Sustainability. Students elect to focus on one of the three thematic areas or they choose to integrate themes to develop their areas of knowledge and dissertation research.

The proposed Ph.D. program builds on existing resources at UAF and directly complements and supports the mission of several funded university and national initiatives. The Ph.D. program would require the addition of only one new course and no new faculty. It would complement the Resilience and Adaptation Program at UAF, which is funded by NSF - IGERT and focused on Ph.D. education and training in the integration of social and natural science to address questions of sustainability in the North. Students of the program would be eligible for support through the newly funded EPSCoR (Phase 3) “Resilience and Vulnerability of a Rapidly Changing North,” which is now being launched and for the next three years will fund approximately 22 graduate students per year. The EPSCoR program emphasis is on building the research capacity at UA to integrate social, biological, and physical sciences. Other initiatives and current research projects relevant to this Ph.D. program include The Alaska Center for Climate Assessment and Policy, part of NOAA’s national Regional Integrated Science Assessment program; the newly funded Scenarios Network for Alaska Planning project at UAF, which is funded by UA and part of a circumpolar IPY program, and the Center for Global Change at IARC, which funds graduate student research on global change. Our research indicates that at least 37 current UAF undergraduates would consider applying for this program if it were offered and, at least 30 current UAF graduate students, most in the UAF Interdisciplinary Ph.D. Studies program, would consider transferring into this program if it were available. Likewise 46 current UAF graduate students indicated that they would have considered applying had the program been available at the time of their application. The program therefore builds on the existing strengths of the university to fill a needed niche in Ph.D. studies.

Program objectives are:

1. Educate and train scholars at the Ph.D. level with in-depth and integrated knowledge in research and management of natural resources.
2. Develop leaders who will direct the use and management of natural resources in Alaska and other northern latitude settings.
3. Create a nationally recognized program in the natural resources and sustainability that will contribute to science and inform public decisions.
4. Contribute to the sustainable development of Alaska’s rural and urban environments.

Preliminary Catalog *Sample Course of Study*

Program in Natural Resources and Sustainability

School of Management, and
School of Natural Resources and Agricultural Sciences

Ph.D. Degree

Minimum requirement for Degree: 18 thesis credits

The joint Ph.D. Program in Natural Resources and Sustainability at the University of Alaska Fairbanks prepares future leaders as academic researchers, agency professionals and analysts of non-governmental organizations and communities for careers at the frontiers of science in the management of natural resources and environment.

Those who seek to explore and understand natural resource management systems need both a well defined skill set and a clear understanding of how specific problems are linked to broader cultural, ecological, and geopolitical contexts. Thus, the study of Natural Resources and Sustainability encompasses a spectrum of topics. In the UAF Ph.D. in NRS, we build on the existing strengths of SNRAS and SOM faculty members to educate students in specific areas, while training them to be conversant in the broader range of relevant topic areas.

The program objectives and its curriculum center around three thematic areas of study, i) resource economics, ii) resource policy and sustainability science, iii) forest and agricultural sciences. In the proposed Ph.D. program, each student draws on a common set of core courses, and with his/her graduate committee, develops a program of coursework and research that produces a unique intellectual contribution to the applied field of Natural Resource and Sustainability. Students elect to focus on one of the three thematic areas or they choose to integrate foci to develop their areas of knowledge and dissertation research.

Graduate Program—Ph.D.

Complete the admission process including the following:

1. Complete the general university requirements as listed in the UAF catalog
2. Complete the Ph.D. degree requirements as listed in the UAF catalog
3. Complete coursework in thematic area(s) as determined by the advisory committee.
4. Required and Elective Elements of the Plan of Study
 - a. Coursework: Students must complete the following core course requirements: NRM 647, NRM 649, and two semesters NRM 697.
 - b. Outreach activity of one annual public presentation.
 - c. Advancement to Candidacy occurs when the student demonstrates mastery in understanding of the problems and theories of natural resource management and sustainability and in-depth knowledge of the student's dissertation research topic area. Requirements for advancement to candidacy are determined by the academic committee of the student, and shall be consistent with the candidacy requirements for Ph.D. studies at UAF. The basis of the evaluation will be written and oral comprehensive exams.

- d. Dissertation Defense Seminar
- e. Dissertation Defense Examination
- f. Doctoral Dissertation

**RESOURCE COMMITMENT TO THE
PROPOSED DEGREE PROGRAM
(please see budget notes on next page)**

Resource	Existing	New	Total
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Signature

_____ Date

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_____ Mark Herrmann, Interim Dean, SOM

_____ Date

Signature

Notes on Resource Commitment

The School of Natural Resources and Agricultural Sciences and the School of Management are committed to delivering the proposed doctorate program in Natural Resources and Sustainability at zero additional cost to the two schools. This will be accomplished by reallocating existing resources within the Schools, including resources that are already committed through our graduate programs, and by utilizing externally sponsored research projects to fund additional requirements associated with student graduate work. Below are specific notes on the Resource Commitment form categories.

Regular Faculty: The School of Management will be offering one additional 3-unit course that is currently on the books but has never been taught (Econ 602 – Economic Modeling). The Economics Program will reallocate existing faculties time to teach this course. Thus, the 1/10 time to teach this course (\$9,926 salary and benefits) will be a workload reallocation.

The School of Natural Resources and Agricultural Sciences and the School of Management will jointly teach one additional 1-unit course (NRM/Econ 697 – SNRES Seminar). The Natural Resources Management and Economics programs will reallocate existing faculties' time to teach this course. Thus, the 1/30 time to teach this course (\$3,309 salary and benefits) will be a workload reallocation.

Instructional Facilities: For the two new courses there will be a need for approximately a 400 sq ft. classroom per course. The classroom used may replace one in another course or be offered during a non-peak time, such as evenings. Classroom requirements should not be a burden to UAF and most likely will be a reallocation of space.

Office Space: We estimated 1,392 sq ft. for students based on an assumption of a sustainable 12 students in the program using 116 sq ft. of office space. This space will be reallocated from existing uses.

Computers: As both schools upgrade their faculty computers the replaced computers will be made available for the new students. Other computer equipment will come from sponsored research.

Support Staff: The main support staff will be housed in the School of Natural Resources and Agricultural Sciences. The Administrative Assistant for the Natural Resource Management program and the Administrative Assistant for UA Geography program will have 1/10th of their annual time reallocated to provide administrative services to the NRS Ph.D. program (e.g., monitor and track student applications, coordinate academic paperwork, etc...). The Student Coordinator for SNRAS will have 1/10th of their time reallocated to provided student recruitment and support services. The expense listed, \$25,295, is calculated as the sum total of this 1/10th annual time reallocation for each of the current support staff based on their current salary and benefits.

Supplies: Supplies for students will be negligible. Any large supply needs will come from sponsored research.

Travel: Student travel will come from sponsored research or UAF travel grants.

University of Alaska Board of Regents

Program Approval Summary Form

MAU: UAF

Title: Ph.D. Natural Resources and Sustainability

Target admission date: Fall 2008

How does the program relate to the **Education** mission of the University of Alaska and the MAU?

The Ph.D. Program in Natural Resources and Sustainability (NRS) directly services the educational mission of the University of Alaska Fairbanks. The UAF Vision Statement (Strategic Plan 2010) states that UAF will “Offer undergraduate and graduate education that takes advantage of our location in the Far North.” This Ph.D. program focuses on the education of high-level professionals with skills for considering the interaction of social and natural systems and informing the development and implementation of practices and policies that enhance natural resource management with emphasis on Alaska and the Circumpolar North.

The University of Alaska Fairbanks is currently involved in several funded national initiatives that are relevant to the educational goals and objectives of the NRS Ph.D. program. The *Resilience and Adaptation Program* at UAF is focused on Ph.D. education and training in the integration of social and natural science to address questions of sustainability in the North. The NRS Ph.D. program would provide an important educational complement to the emphasis of the newly funded *EPSCoR* (Phase 3) on building the research capacity at UA to integrate social, biological, and physical sciences; The NRS Ph.D. program would also provide a key educational linkage to several other UAF initiatives and research projects including The Alaska Center for Climate Assessment and Policy, the newly funded Scenarios Network for Alaska Planning project at UAF, which is part of a circumpolar IPY program and the Center for Global Change at IARC, which funds graduate student research on global change.

What **State Needs** met by this program.

Alaska and the Circumpolar North face increasingly complex challenges in use and management of natural resources. These challenges require the education and training of high-level professionals with skills for considering the interaction of social and natural systems and informing the development and implementation of practices and policies that enhance natural resource management. The Ph.D. in Natural Resources and Sustainability at the University of Alaska Fairbanks would prepare future leaders as academic researchers, educators, agency and industry professionals and analysts of non-governmental organizations and communities for careers at the frontiers of science in the management of natural resources and environment.

What are the **Student** opportunities and outcomes? **Enrollment** projections?

Graduates electing a career in academics will find a range of faculty positions in schools of

opportunities related to integrated or interdisciplinary programs that explicitly link social, economic, and ecological dimensions. Several examples of this type of research currently exist through the National Science Foundation, and graduates of the program will be well positioned to serve as grant PIs. Those electing to pursue professional careers with government agencies, such as the National Park Service or the Alaska Department of Environmental Conservation, will find that their skills as applied resource management researchers will be in high demand as agencies address societal-ecological problems, such as the economic implications of climate change. Other professional tracks are available as well. There is currently a trend among nongovernmental organizations (i.e. non-profits) of Alaska and the US as a whole to build the organizational research capacity with internally hired Ph.D.'s. The Nature Conservancy, the Wilderness Society, and Audubon Society are examples of such organizations that currently employ research staff with Ph.D. training. These Ph.D.'s will also have ample opportunities to work as private consultants, especially given the need for rigorous analysis by private consultant firms that are hired to conduct environmental impact assessments. As well, the recent stated objective of the Alaska Federation of Natives board of directors to train more Alaskan Native Ph.D.'s reflects to the need for well-trained researchers to be staff organizations like the First Peoples Institute and Native profit and not-for-profit organizations. We anticipate that the demand for Ph.D.'s in the area of natural resources and sustainability will grow significantly as Alaska addresses future questions of sustainable development.

Targeted enrollment is five students per year. Total enrollment is seen as twenty students by year four of the program.

Describe **Research** opportunities:

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The UAF Faculty Senate moves to amend the Mandatory Placement criteria for English and Mathematics (page 33 of the 2007-2008 UAF Catalog).

CAPS = Addition

[[]] = Deletion

ENGLISH AND MATHEMATICS

On the basis of test scores, you may be required to take developmental English and/or mathematics. These courses are designed to help you achieve competencies necessary to succeed in college-level courses. [[Generally,]] You will be placed in [[developmental]] English **F111X** if your ACT English score is [[below]] 17 **OR ABOVE** (or **YOUR SAT** verbal score is [[below]] 430 **OR ABOVE, OR YOUR SCORE ON ANOTHER UNIVERSITY-APPROVED PLACEMENT TEST IS EQUIVALENT**). **HOWEVER, IF YOUR STANDARDIZED TEST SCORES ARE BELOW THESE MINIMUMS AND IF YOUR HIGH SCHOOL CUMULATIVE GPA IS 3.0 OR HIGHER, YOU MAY ENROLL IN ENGLISH WITH PERMISSION OF THE DIRECTOR OF COMPOSITION OR RURAL CAMPUS ENGLISH/HUMANITIES FACULTY.**

Mathematics course placement will vary according to the type of degree you are planning to pursue and the corresponding math course(s) needed (see the requirements for your degree program for more detail). ACT, SAT, COMPASS or ASSET test scores and your previous mathematical background are used to determine your math placement. Minimum test scores for placement into math courses are listed in Table 2 on the following page.

It is best to consult with your advisor or faculty in the English or math department(s) if you have questions regarding the appropriate course placement.

EFFECTIVE: Fall 2008

RATIONALE: If mandatory placement is implemented using current criteria, a significant number of students will be mistakenly sent to developmental English. Standardized test scores alone are not an indicator of how well a student will perform in the freshman level English course (English 111) at UAF. UAF PAIR data shows that in Fall, 2006, students

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The UAF Faculty Senate moves to revise the Fresh Start policy (pages 25 and 28 of the 2007-08 UAF catalog) for returning students.

CAPS = Addition

[[]] = Deletion

Fresh Start for Returning Students

Fresh Start can offer a new beginning for students who performed poorly at UAF when enrolled at least two years ago. Those who withdrew from school or were dismissed for academic reasons may apply for readmission ~~[[by disregarding]]~~ **AND REQUEST TO DISREGARD** their entire prior academic record. Those who apply on this basis begin their college study anew with no credits attempted or earned, and no quality points reflected in future GPA calculations. Fresh Start may be used only once.

Fresh Start application forms are available at the Office of Admissions. Admission on this basis requires that at least two years have elapsed since the ~~[[end]]~~ **BEGINNING** of the last

from classes is supported by the registrar, admissions, RSS, and the Academic Advising Center.

President, UAF Faculty Senate Date