



January 08, 2007

CONFIDENTIAL

Stephen B. Jones
Chancellor
University of Alaska Fairbanks
Signer's Hall
PO Box 757500
Fairbanks, AK 99775

Dear Dr. Jones:

It is my pleasure to report that the SAF Committee on Accreditation has granted continued accreditation of your Bachelor of Science in Natural Resources Management, Forestry Option. The Society of American Foresters is pleased to acknowledge the University of Alaska Fairbanks' continued dedication to excellence in forest resources education, and to acknowledge this achievement in the Society's publications and in contacts with prospective students who are seeking guidance in the selection of qualified programs.

At its meeting on October 24 and 25, 2006, the SAF Committee on Accreditation adopted the enclosed findings and action. Accreditation has been continued through 2016. No further action is required other than the submission of substantive change reports when appropriate.

It is our Society's sincere desire that this review provided faculty and administrators the opportunity to assess and improve the quality of forestry education within the Department of Forest Sciences. We appreciate your continued support of specialized accreditation review, and always encourage comments on our Society's process and procedures.

Should you have any comments or questions concerning this specific action, please address them to Terry Clark, Associate Director, Science and Education, at (301) 897-8720 extension 123 or by email at clarkt@safnet.org.

Again, congratulations on your program's achievement.

Sincerely,

Michael T. Goergen, Jr.
Executive Vice-President and CEO

Enclosures: SAF Committee on Accreditation Action

cc: Carol E. Lewis ✓
John A. Yarie





Society of American Foresters
Committee on Accreditation
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Bethesda, Maryland 20814-2198
(301) 897-8720 Extension 123

Committee on Accreditation

Summary Findings and Action

University of Alaska 2006

Current Review:

Continued Accreditation

Currently Accredited Curriculum:

Curriculum leading to a BS in Forestry (Forestry Option).

Initial Accreditation: 1996

Previous Onsite Visit: 1996

Interim Review: 2001

Substantive Change:

Progress Report:

Accreditation Expires: 2006

INTRODUCTION

An SAF Visiting Team was invited to University of Alaska Fairbanks on April 18 to 21, 2006 to review the Bachelor of Science in Natural Resources Management, Forestry Option, as administered within the School of Natural Resources and Agricultural Sciences at the University of Alaska Fairbanks. Accreditation of these curricula was continued through 2016.

The following summary findings and action by the SAF Committee on Accreditation are based upon a review of the visiting team's April 18 - 21, 2006 report, oral comments, and written responses provided to the Committee by Stephen B. Jones, Chancellor; Carol E. Lewis, Dean, School of Natural Resources & Agricultural Sciences; and John Yarie, Department Chair, University of Alaska; and Richard B. Standiford, chair of the visiting team.

SUMMARY FINDINGS

STANDARD I: FORESTRY PROGRAM MISSION, GOALS, AND OBJECTIVES

The forestry program mission draws from the School of Natural Resources and Agricultural Sciences strategic planning exercise which was adopted by the faculty and administration in 2004. The instruction, research, and public service goals and objectives are directly derived from the SNRAS mission statement.

The School's strategic plan had important input from the Dean's standing Board of Advisors, composed of a diverse array of professionals from most resource management agencies (both state and federal) as well as representatives of private industry, non-governmental organizations, policy makers, and alumni.

The general mission guided the development of specific teaching, research and service goals and objectives that are central to all academic planning as well as curriculum development of SNRAS. The SNRAS website and the description of the Natural Resource Management major in the University Course Catalog reflect the general tone of the mission statement. The course catalog also reflects specific goals and objectives of the Forestry Option of the NRM major. SAF Accreditation figures prominently in these general descriptions.

Overall, the mission and goals as stated are consistent with SAF Standards for Accreditation; reflect that forestry is an interdisciplinary profession; recognize the needs of the constituencies that the program seeks to serve; reflect sensitivity to the role of foresters in meeting diverse and changing social, cultural, economic, and environmental needs and values; and emphasize the professionalism necessary to manage and use forest resources for the benefit of society.

The standard is met.

STANDARD II: CURRICULUM

Continued accreditation is sought for the Bachelor of Science in Natural Resources Management with an option in Forestry. This requires a minimum of 130 semester credits for a degree from the University of Alaska Fairbanks.

The curriculum has been relatively stable since the previous site visit in 1996 with relatively modest adjustments in the names and content of the courses. The school has an active curriculum committee which regularly reviews course content issues and has also been active in the development of learning outcomes for the different degree options. The learning outcomes are presented in the self-evaluation report and are consistent with those of the Society of American Foresters. The learning outcomes were developed with input from the faculty, the university administration and other interested parties. The faculty are in the first year of actively compiling data on learning outcomes and are looking forward to seeing the results of their efforts and how well the various measures work.

General Education

The general education requirements for the forestry option are documented in the self-evaluation report (Volume I, pages 9-24). Each of the general education components is covered and there is a good balance across communications, science, mathematics, social sciences and humanities (Table 1). All of the general university core courses are required with students having no restricted electives in this area. All students completing a Bachelor of Science degree at UAF are required to complete math through “Calculus for the Life Sciences.”

Table 1. General Education Requirements

Communications	Science & Mathematics	Social Sciences & Humanities
10	31	15

Although there was no evidence of a specific course requirement in computer science among the general education requirements, it is clear that the students receive a solid education in this area as a part of their coursework throughout the overall program. The school has two computer labs for teaching. Employers remarked very positively about the students' GIS skills.

Professional Education

The forestry major has a reasonable distribution of credits across the four professional areas. Course syllabi were provided for all of the courses and the visiting team was well satisfied that courses for which credits were spread across two or more areas, did in fact, address the respective areas (Table 2).

Table 2. Professional Forest Resource Education

Ecology & Biology	Measurement of Forest Resources	Management of Forest Resources	Policy, Economics & Administration
24.5-25.5	10	23-24.5	11.5

Of the 130 semester hours required for a degree, no credits are allowed as “free electives.” The self-evaluation report indicated that a high degree of faculty/course interrelation occurs and a discussion of curricular structure was provided. Discussions with faculty also indicated a high degree of interaction and discussion among the faculty, with some courses being team-taught. It needs to be emphasized that this is a relatively small faculty, who have a long history of working together on both teaching and research. In some sense the faculty appear to interact like an extended family. The faculty within the school also have a high degree of interaction with faculty on the rest of the campus as well as other locations in Alaska.

There appear to be numerous examples of integration in the required course work. The senior project (a capstone course spanning two semesters) requires a high degree of coursework

integration. The course sequence involves the development of a project of the students' own choosing with data collection and analysis. The final project consists of a detailed (lengthy) written document and an oral presentation of the project. Writing is emphasized throughout the program

The core curriculum (university and forestry) emphasizes analytical and critical thinking. Courses use basic knowledge to examine forestry issues/problems while providing alternative solutions. As noted above, the senior project also plays a major role in this aspect of the students' education.

Similarly, ethics is covered in a variety of courses and students are expected to complete a university core curriculum course in Ethics.

Concerns

The Visiting Team was very concerned about the limited amount of course work related to forest measurements in general and specifically to forest/environmental sampling and growth and yield projection competencies.

Standard II requires the following competencies for the measurement of forest resources.

Measurement of Forest Resources:

Competencies must be documented as an:

1. Ability to identify and measure land areas and conduct spatial analysis.
2. Ability to design and implement comprehensive inventories that meet specific objectives using appropriate sampling methods and units of measurement.
3. Ability to analyze inventory data and project future forest, stand, and tree conditions.

Based on the information provided to the team in their self study report, it appeared that UAF students receive an adequate background with respect to the first competency and some background with respect to the second and third competencies. However, the team felt the self study document did not provide sufficient evidence to assure the team members that all three areas were adequately addressed by their curriculum. The students' training in growth and yield modeling appeared to be limited. Similarly, the student background in environmental sampling also appeared to be limited to three weeks in one course.

Employers interviewed during the site visit also expressed concerns about the limited measurement/field skills of UAF graduates. We also found that students frequently completed their forest measurements course prior to completing a basic course in probability and statistics and in some cases prior to completing their general math requirements.

It should also be noted that the previous accreditation team also noted that student training in the measurements was limited.

In response to the initial oral report to the faculty, the faculty under the leadership of John Yarie, Chair, provided the team with a supplemental document summarizing additional forest measurement instruction not listed in Document B-1 of the self study report shortly after the site visit.

The supplemental materials presented demonstrate that competencies 2 and 3 under forest measurements subcategory are addressed in more detail than the team originally understood and appear to meet the minimum requirements for the standard. It must be further stressed that students receive a great deal of one-on-one instruction within the program due the limited number of students in the program and the University of Alaska Fairbanks' emphasis on personalized instruction in all aspects of the curriculum. In addition, the quality of instruction appears to be very high.

In addition, the University of Alaska Fairbanks has hired a new faculty member the fall of 2006 who will be teaching a new course designed to further strengthen student's background in the measurements area. Although, neither the visiting team nor the COA has had opportunity to review the content of this new addition to UAF's curriculum for obvious reasons, we are nevertheless very pleased with this development.

Another area of concern was the lack of fire ecology course within the program. Historically, their students have taken a forest protection course, although, this course is not going to be offered due to a faculty retirement at the present time. The faculty at UAF has acknowledged this issue and is working aggressively to address it.

The standard is met.

STANDARD III: FORESTRY PROGRAM ORGANIZATION AND ADMINISTRATION

Administrator

The School is one of seven colleges at the University of Alaska Fairbanks. SNRAS is composed of four departments, namely Forest Sciences, Resources Management, Plant, Animal and Soil Sciences, and Geography. SNRAS is administered by a Dean, who also functions as the Director of the Agricultural and Forest Experiment Station. All faculty workload assignments, annual reviews for untenured faculty, and a formal post-tenure review are carried out by the Dean.

The Dean has formal responsibility for ensuring that the teaching curriculum for the two majors in the School, namely "Natural Resource Management" and "Geography," are carried out. The Dean has designated an Associate Dean for Academic Affairs with responsibility for the day to day management of the curriculum.

A Department Chair leads each of the four Departments. The Chairs have budgetary and faculty administrative authority, but do not conduct annual faculty evaluations of programs and authority over and responsibility for the department's budget. The Chair of the Forest Sciences Department has an important role in implementing the Forestry Option of the NRM degree.

The faculty of the University of Alaska Fairbanks are part of a faculty union. The union contract determines many of the employment policies and procedures for the faculty. Faculty participate

in the selection of new faculty and in recommendations regarding tenure and promotion of their peers.

Student Recruitment, Admissions and Transfers

The School's Recruitment Coordinator is especially active in recruitment. The office is well-coordinated with the campus career counselors, and regularly provides updated materials on the NRM major and career opportunities in forestry and natural resource management for use by career counselors. Basic high school preparation requirements are presented in recruiting materials distributed to prospective students. Recruitment includes direct mail, presentations on and off campus, advertisements and personal visits to community colleges. NRM has been classed as a "priority program" within UAF, which allows it to directly reach out to highly qualified high school prospects. The School has developed articulation standards with various state 2-year institutions.

The School and Department web sites provide updated major requirements and general descriptions of the major. Procedures and standards for evaluating and accepting students are clearly outlined in the General Catalog. Student admission standards for the Department are the same as those for other programs on campus.

The low number of Native American students in the program is a concern to administration and faculty. There will likely be needed a system wide academic preparation effort by UA at the very early secondary school level in rural villages to develop math and science skills for successful entrance to the program. State efforts are underway to develop tribal colleges to increase success in four year institutions, which will require new articulation requirements as these develop. With the large acreage of forest ownership and important natural resource stewardship of Native American Corporations in Alaska, development of forestry leaders in this community is a key priority.

Teaching

The School places a level of high importance on the teaching program. Typical faculty teaching assignments are 40 to 50 percent, with the remainder in research and service (through appointment in the Agricultural and Forest Experiment Station). There are systematic campus standards to evaluate faculty performance in teaching. All faculty members interviewed took their role in teaching very seriously, and made themselves readily available to students for advising and mentoring. Comments by the Dean, Department Chair, Provost, and Chancellor suggest that quality teaching is an important value at UAF.

Administrative Support

SNRAS has a Business Office which provides support in budget, accounting, purchasing and personnel matters of the various departments. The Business Office provides support for the Cooperative Extension Service program of UAF as well. The Dean's office also provides staff support for academic programs and contract and grants administration. The system appears to function efficiently for the School.

Program Planning and Outcomes Assessment

The School had a well-developed outcomes assessment to critically evaluate their success in teaching. This involved a survey of all students in the entry level survey class required of all NRM students (NRM 101), and a follow-up survey in a late upper division class (NRM 304). The Senior Thesis project, required of all students in the program, provides an excellent overview of the student's success in integrating all material in their undergraduate career into an independent, comprehensive project in an area of natural resource management. The Dean personally interviews all graduating seniors as the final stage in the outcomes assessment. The Dean also consults with her Board of Advisors for their input on the success of the program in meeting educational needs of the natural resource community.

SNRAS has a standing Program Review Committee with faculty members of each department to review and approve course and curriculum changes. The entire department is proactive in planning and updating course and curriculum changes.

The standard is met.

STANDARD IV: FACULTY

Academic and Professional Competency

The faculty background summary and academic summary information were provided in the Self-Evaluation Report and budgeted time and specific assignments for teaching in the forestry program clearly specified. The number of full-time-equivalent forestry faculty, regular forestry faculty plus those who directly support the forestry teaching program but have appointments in other departments, are in excess of the accreditation standard of eight full-time faculty.

A review of the educational backgrounds of faculty shows that they come from a wide variety of institutions, regions of the country and represent a diversity of disciplines. There is considerable gender and some cultural diversity reflected in the current faculty team. A low rate of staff turnover has presented few opportunities to change the current demographics. Over the next five to seven years there may be several opportunities to add cultural diversity to the ranks of the faculty due to retirements and refilling of positions and some new position development.

The faculty helps to maintain the visibility of the Department by serving on University committees, teaching courses with other schools such as Fisheries and Biology, and conducting regional, national and international continuing education programs and conferences, and public service activities. Most faculty have published in peer reviewed or other journals in the past five years. Faculty have participated in workshops for professionals with many giving papers. Faculty members generally teach in their areas of expertise, or allied disciplines. Breadth of faculty disciplines is generally adequate.

Teaching Skills

All indications are that the faculty provide a high quality of instruction in forestry courses and the other critical natural resource areas that support the forestry curriculum. During interviews, the administrators characterized the Department as being "student friendly." Interviews with

faculty and students indicated that faculty take pride in the undergraduate program and shows a genuine interest in teaching and student success. The prevailing attitude for all interviewed faculty indicated that they operate on an “open-door policy” for student access. As a result of this operational mode and the low student to faculty ratios, student counseling is exemplary and greatly contributes to student success. The faculty overall demonstrate a sense of collegiality and high esprit de corps.

Teaching assignments appear to be reasonably well balanced with other responsibilities. The course-load per teaching FTE appears to be slightly less to roughly equivalent to forestry programs across the country. Department faculty present the results of their research to appropriate audiences including their undergraduate and graduate students.

Most interviewed faculty indicated they are teaching in the areas for which they were trained. However, some faculty members have demonstrated their willingness to develop and teach undergraduate courses beyond general disciplinary specialization, when necessary. The Self-Evaluation Report details the sabbaticals taken by teaching faculty over the past five years and how these experiences have enhanced the teaching and research programs. The faculty support one another by accepting teaching overloads while others are on sabbatical leave. The faculty views their small size as an opportunity to work together as a team to make the best use of their expertise, mentor new faculty, and develop responsive curriculum, that serve the larger School of Natural Resources in addition to the Forestry Department.

The faculty acknowledge that climatic factors (extreme cold and short day lengths) limit opportunities for field training and hands-on practical applications during the academic year. In response, they encourage students to obtain practical on-the-job summer experience.

The standard is met.

STANDARD V: STUDENTS

The Visiting Team held discussions with a group of current undergraduate and graduate students, and past graduates who are now employed in various aspects of forestry and natural resources management. All of the interviewed students were very positive and openly pleased with their academic experiences in the Department, especially the small class sizes and opportunities for individualized instruction; however, all also offered suggestions for program enhancement. Concerns were expressed by students regarding a perceived lack of sufficient opportunity for field study and demonstrations, and development of field skills. Students indicated that educational instruction in biometrics/modeling, fire ecology/management and other disturbance ecology concepts is lacking or perceived to be insufficient. Students also perceived that University student recruitment efforts for forestry and other natural resource disciplines are minimal or lacking.

Employers were complimentary of student’s abilities and preparedness for the workplace, citing spatial-analysis, communication, and problem solving skills as good. However, these employers also cited needs for strengthened training of students in fire and fuels management concepts, and field sampling techniques. The overall job market remains good. Most students (80%) are employed within 6 months of graduation in either forestry or other natural resource management positions.

Forestry students attend classes with students in the other School of Natural Resources programs and the general University, giving them the opportunity to interact with individuals of differing perspectives. Interested students have some opportunity for hands-on experience through volunteer and internship opportunities in faculty research as their schedule permits. Many students participate actively in the Student Resource Management Club, and/or other extracurricular natural resources clubs and organizations in the School. The Resource Management Club is viewed as a leader in resource issues on campus, and during the review team visit, the club sponsored a gubernatorial candidates' debate forum on resource issues, attracting statewide visibility.

Recruitment and Retention

Undergraduate enrollment in the School of Natural Resources and Agricultural Sciences averaged 71 students/year with approximately 43% female, and 8% percent U.S. minority, during the last three years. Undergraduate enrollment reflects gender diversity, but ethnic diversity is limited. In the current year, various minorities were represented in total enrollment as follows: American Indian 2%, Hispanic 2%, Asian 2% and 2% other. Student representation of Native American Alaskans is far lower than the proportional population distribution in the State. Program outreach staff acknowledged that there are opportunities for increasing enrollment of Alaskan Natives, and that greater emphasis will be made to do so in the future.

Natural Resource majors who graduate with a Forestry degree option typically compose approximately one-third of total enrollment of this program. Near-future enrollment of Natural Resource majors is targeted to increase by 5% annually. By 2009, total Natural Resources program enrollment is projected to be 17% greater than the current year.

An average of \$8,000 to \$10,000 per year is available specifically for undergraduate forestry major scholarships. This level is substantially lower than other institutions of similar size, and represents an opportunity for future increases through a more aggressive development campaign. However, other opportunities are available for student financial assistance. A much larger amount of non major-specific scholarships are available through the general University of Alaska programs.

Advising

Student and faculty alike recognized the School's Placement Services as a valuable resource. The Department provides academic advisors who play a key role in locating both professionally acceptable summer jobs for students while in school, as well as full-time employment following graduation. However, the faculty play an important supplemental role in career planning and job placement. Faculty are interested that students receive clear academic advice and they make themselves available for consultation on the classes they teach or on academic and professional issues. All Department students met by the visiting team were pleased with the quality and availability of faculty advising.

The standard is met.

STANDARD VI: PARENT INSTITUTION SUPPORT

Forestry Program Support

The Department is funded with a combination of both state general funds and federal formula funds through the Agricultural Experiment Station. National level issues related to the long-term stability of formula funds from USDA for both Hatch and McIntire-Stennis funds are of major concern to the future support for the programs of the School.

Support appears to be similar to other programs at the University. There appears to be good support for the importance of the forestry program at the Offices of the President and Chancellor, and by other high level campus administration.

The low rate of turnover in faculty in the Department would suggest that salaries are not an impediment to retaining faculty. Salaries are competitive with other similar forestry programs in the West. There is very limited start-up support from the campus level, with small campus pools for equipment and instructional equipment. The school is expected to assume the major role for start-up funds for new faculty. There is a 50 percent return of indirect cost funds to individual units, which is higher than many institutions. However, many forestry-related contracts and grants operate with low overhead rates, meaning returns to the School are much lower than to units on campus with higher rates. This may lead to differential support over time for laboratory renovation and infrastructure enhancements when compared to other units on campus.

Supporting Programs

Supporting programs at the university seem to be of high quality and readily available. Faculty in SNRAS interact with the various arctic, marine, and atmospheric institutes on campus. Wildlife and fisheries programs in other colleges and schools are important links with the forestry program in SNRAS.

Physical Resources and Facilities

The faculty in the forestry program in SNRAS are in several physically separated buildings on the western edge of campus. The faculty have been positive about the soil chemistry facilities on campus and at the AES facility in Palmer. There appears to be a good collaborative use of analytical chemistry equipment by the soils faculty. The GIS lab is located in two rooms in O'Neill Hall. There is good equipment and software support for the GIS lab, although the physical location of one of the rooms in a converted wet lab facility is not ideal. Much of the lab, office and classroom space is inadequate for modern science, and a substantial infrastructure upgrade is needed. It is clear that there is a strong need for a modern natural resources building to house the lab, classroom, and offices of the School.

University library facilities are good and are easily accessed by forestry students and faculty. The library system at UAF is the largest in the state, and is located in a main location in the eastern campus, and two satellite locations near the SNRAS faculty on the western part of campus. Faculty and students felt that most of their needs were met with the collection on campus, and they were very pleased by the responsiveness of the interlibrary loan program which could deliver almost any material within several days.

The forestry program benefits from land grant forest property held by the University of Alaska immediately adjacent to the north end of campus, and a large watershed area approximately 30 miles northeast of campus. The program also relies on lab and field facilities at AES field locations in Palmer and Delta. A 5000 acre Long-term Ecological Reserve operated by the USDA Forest Service, located at Bonanza Creek, is heavily used by faculty and graduate student research, undergraduate senior papers, and various class field trips.

The system wide University of Alaska has recently added new land grants of over 200,000 acres throughout the state, including 50,000 acres of forest land in the Tannana River Basin, immediately adjacent to Bonanza Creek. There is a very good opportunity for these lands contributing to the forestry research, teaching and outreach programs of UAF. Many forestry programs rely on university forests to provide research and demonstration sites, as well as generating income streams to support the forestry programs of their institutions. These new land grants, plus the existing forest properties, should have an integrated forest management plan developed to look at income possibilities and unique research, teaching and outreach opportunities.

The standard is met.

COMMITTEE ACTION

The SAF Committee on Accreditation accepts the self study and visiting team report and continues accreditation through 2016, of the Bachelor of Science in Natural Resources Management, Forestry Option as administered within the School of Natural Resources and Agricultural Sciences at the University of Alaska Fairbanks. Further, the Committee requests that concerns expressed under Standard II be addressed in Annual Accreditation Substantive Change Reports as appropriate.

By:



Keith A. Blatner, CF, Chair
SAF Committee on Accreditation

Date: January 08, 2007