

Natural Resources and Environment - Bachelor of Science - Mid-Cycle Review & SLOA Year

Current Compliance Year: 2022-2023

Mid-Cycle review

Recent Recommendations

Feedback will include recommendations from the last Expedited Review or from your most recent review by your school or college. You may not see any feedback or recommendations until you have completed your first full or mid-cycle review.

Response to Previous Recommendations (if any):

No previous feedback was provided by the Portal. However, all programs offered by DNRE underwent "Expedited Program Review" during AY 2021, and received "Revision or Restructure" recommendations, which in essence encouraged DNRE to follow through on efforts identified in the SWOT analysis designed to attract more students. For the BS, we have focused on the following efforts: 1. participated in the ongoing "Climate and Environmental Change" BS program (pending), 2. developing a set of GIS MOOCs (now in place and highly successful; efforts now focused on how to get more of those students to look at UAF for a degree), 3. development of new courses in cannabis cultivation (offered fall 2022, but under-enrolled) and Alaska Native Themed natural resources (rejected, but will offer as special topics course, revise, and re-submit), 4. applied for and received DNRE's 1st GER designation for a course, NRM 111 (registration currently 20 and approaching capacity for spring 2023). We also are interested in supporting a potential BA in Climate and Environmental Change, which we heard was in early stages of discussion between CLA and the Honors College.

Student Learning Outcomes

The previous Student Learning Outcomes Assessment has been submitted as its own report. Going forward you will use the following prompts to discuss the success of your most recent SLOA plan and address your assessment activities since your last SLOA report (typically the past two years or since your last program review).

Learning outcomes feedback from last review:

Feedback will be provided once you have completed a full or mid-cycle review.

Discuss your SLOA findings, changes you are making and what you hope to see as a result:

In June 2021, we sought and received feedback on our current SLOA plans and data collected to date from Dr. [REDACTED] in her capacity as faculty fellow in the Office of Assessment and Accreditation. Her feedback noted a strong alignment between plans and reports, and appropriate usage of AAC&U rubric tools. Reports showed broad success in achieving SLOs with no consistent deficiencies, and noted that our "academic programs emerge strong, collaborative, and important." Most discussion has focused on maintaining success in SLOs in a challenging environment of declining budgets, faculty, and course offerings. The main suggestion relevant to this degree program was that department faculty

should collaborate to ensure consistent scoring in the rubric, especially in areas like development of critical thinking.

Discuss the curricular changes made based on assessing your SLO. If you haven't made any curricular changes, please explain why not and address what you did notice in the review, including strengths of your curriculum through the assessment of your outcomes:

Our last SLOA report concluded that “While it does not appear significant changes to curriculum are warranted, faculty will discuss strategies for boosting the rubrics with mean scores near or below 3.0/close to or fewer than 70% or scores achieving a 3 or 4 [on the rubric scale].” We also indicated a desire to improve the oral presentation of research content to engage diverse audiences. We already have several undergraduate courses emphasizing oral presentations, so students are getting multiple opportunities for practice and feedback. Although many are within a classroom setting involving the instructor and other students in the class, three required courses provide opportunities outside that venue: NRM 370 (Introduction to Watershed Management) involves presentations to members of the public, including children, NRM 430 (Natural Resource Planning) has occasionally invited members of the public and university to their final plan presentations, and NRM 483 encourages (but does not require) that students participate in the annual Undergraduate Research and Creative Activity Day hosted by URSA. Our SLO assessments have not fully taken advantage of these opportunities for assessment, and so our next step is to do that.

Are communication outcomes embedded in the SLOA Plan?

As of 2017 all Baccalaureate programs were required to embed the communication outcomes within their SLOA Plans, this is optional for non-Baccalaureate programs.

Embedded

Student Success

To access the Student Success Dashboard please sign into a UA computer with VPN connection (if not on campus). You will need your UA credentials and it is best accessed with the most updated version of Chrome, Edge, Firefox or Safari browsers; Internet Explorer is not supported. You will need to filter the data to see your programs. If you need assistance in finding the data for your programs, please contact your data liaison or [Julia Manfredini](#) in the PAIR office.

Data Liaisons

Each school or college has a team of Data Liaisons to help you analyze the data provided in the portal and may be able to help you see your data in multiple contexts. You can find a list of data liaisons on the resources page for Program Review.

The college or school level committee will also have access to this data with the goal that by providing these visualizations data availability will be increased.

Data supplied within the dashboard linked below is intended for Academic Program Review and not for any other purpose.

[Student Success Data Dashboard](#)

Previous Feedback

Feedback will be provided once you have completed a full or mid-cycle review.

Student Success Data Trends:

Equity gaps, Decline in majors, Decline in degrees awarded, Decline in SCH

If equity gaps were found in any of your disaggregated student success data, please explain how you plan to address those gaps. Please contact your data liaison or make an appointment with [Julia Manfredini](#) to learn more about analyzing your data.

We have observed increasing numbers of our students identifying as [REDACTED], and we are committed to ensuring that our pedagogy works for them and all of our students. To that end, we have increasingly incorporated Indigenous scholars in classes, and where appropriate shared recordings with other DNRE faculty and classes. Dr. [REDACTED] also shared an 8/2022 workshop on Indigenizing pedagogy with DNRE faculty. Many DNRE faculty will attend the planned "Difficult Dialogs" (Indigenizing pedagogy) training May or Sept 2023, with some attending monthly trainings through the rest of academic year. There also will be a faculty workshop on science co-production in March 2023, which several faculty plan to attend.

Optional Data Explanation

Feel free to share more of your thoughts on the data provided.

The elephant in the room is the small and declining number of majors and student credit hours, which appears to us to be locked in a vicious cycle with declining faculty and resources. We have undertaken a number of initiatives, some outlined in this report, aimed at reversing those trends. For example, NRM 111 recently became our first GER course, and NRM 647 will be a required course for the new Earth System Science Sustainability concentration. Moreover, we are engaged in the CNSM Strategic Enrollment Planning effort to improve majors and student credit hours across the college. Most relevant to this degree is the development (led by Dr. [REDACTED]) of a new interdisciplinary BS in "Climate and Environmental Change", which makes use of most NRM undergraduate courses.

High Impact Practices

According to the AAC&U, High-Impact Educational Practices "have been widely tested and have been shown to be beneficial to college students from many backgrounds." UAF is particularly interested in Undergraduate Research and/or Scholarly Activity because it is one of our mission fulfillment indicators, but all of these researched High-Impact Educational Practices should be reflected in your program's student learning outcomes and curriculum.

Previous Feedback

Feedback will be provided once you have completed a full or mid-cycle review.

High-Impact Practices Used in this Program

Please use the following fields to discuss how your program is using the high-impact practices, successes and known issues and solutions, or ways you are considering incorporating them in the future. If you are not using any of the high-impact practices listed, please use the "Other or None of These," field to share what your program is doing to help students be successful.

High Impact Practices that currently apply to your program:

Collaborative Assignments and Projects, Undergraduate Research, Writing-Intensive Courses, "Service Learning, Community-based Learning", Capstone Courses and Projects, Internships

Other or None of these (explain)

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Submission

Submitter & Collaborator Names

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Submitter Email

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College or School Review Committee

The college or school committees set the tone for helping each program feel seen during this process. We have provided you with strength-based feedback tags to attach to this program review. Please select as many as applicable.

Overall Recommendations

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Explanation of Recommendations

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Student Learning Outcomes Assessment Feedback (tags)

Missing active verbs, Strong alignment with SLOA plan

Student Learning Outcomes Assessment Feedback (narrative)

Rather than one large outcome, the committee recommends that you split it into several components (for example disciplinary knowledge, communication, responsible decision making) and assess each separately. The program might consider revising the outcomes to include more “action” words. It is difficult to assess things like “understand” or “recognize.” “Identify”, “explain”, or “analyze” are clearer outcomes to assess. https://tips.uark.edu/blooms-taxonomy-verb-chart/ It seems that the outcomes are assessed and curricular revisions considered. For example, the department states that they are considering incorporating more opportunities to improve students’ communication skills and to enhance the SLOA plan. This kind of analysis and discussion is important.
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Profile Feedback

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Financial Feedback

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Student Success & Equity Feedback

The program recognizes that declining enrollment and graduates is a problem and has taken several steps to address this, including developing a Gen Ed course and a required course (NRM 647) by participating in the new Climate Change major (pending approval). Though it may take some time to see changes, it will be important to monitor enrollments. The programs in the department show an increase in [REDACTED] students and they have responded thoughtfully to support these students through faculty training and inclusive pedagogy. Data can be disaggregated at the program level, which would add more specificity to your report. The Accreditation and Assessment Office will follow up to walk you through the process. *This response is the same for all programs in the department because the report was the same for all programs.
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High-Impact Practices Feedback

You provide an excellent discussion of the many high impact practices that are incorporated into the program. We may ask you to share your practices!

UNIVERSITY OF ALASKA FAIRBANKS
Student learning Outcomes Assessment Plan
B.S., Natural Resources and Environment

College of Natural Sciences and Mathematics

Expanded Statement of Intuitional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
Mission Statement: UAF and Department of Natural Resources and Environment is committed to providing quality education through close student- faculty relationships, development of critical thinking and decision making skills, student participation in research and other scholarly activities, and recognizing student's individual interests and needs. Goal Statement: NRE majors will become professionals with knowledge of natural resources and related applied fields. They will have basic knowledge in the tools necessary to make responsible decisions concerning successful long term management for human use, maintenance, and protection of natural resources.	Graduates should be able to synthesize knowledge in the foundational areas of natural sciences, economics and other social sciences, ethics, and policy and to use them in thinking through problems to develop meaningful solutions, and should have reached cognitive and personal development levels to enable responsible decision making process as it relates to management of natural resources and to life in general	1. Selected 300 and 400-level course exams, term papers, and other projects will be reviewed with the following rubrics*: Critical Thinking (CT), Decision Making (DM), Quantitative Analysis (QA), NRE Concepts (NC), Sustainability Science (SS), Oral Communication (OC), Written communication (WC), and Inquiry and Analysis (IA), where 1 = benchmark, 2 and 3 = milestones, and 4 = capstone. The CT, DM, QA, NC, SS, and IA rubrics relate to the goal of successful responsible decisions; all rubrics relate to the goal of students becoming professionals. *Several were based on the Association of American Colleges and Universities (AACU) VALUE Rubrics, others were developed specific to our program.	1. During each term the instructors teaching 300 or 400-level classes will evaluate an exam, assignment or class project with the eight rubrics. The chair of the SLOA committee will develop a sampling matrix and coordinate with the instructors to ensure an even distribution of exams, assignments, and other class projects. The exam, assignment or other project to be evaluated will be selected at the beginning of the semester. The chair of the SLOA committee will summarize results and submit the biennial summary. 2. At the URSA Research Day, the SNRE Director of Academic Programs, SNRE Director of Research, and, faculty advisors of students presenting, and any other SNRE faculty in attendance will evaluate posters using

		Scores will be summarized (e.g., mean, median, distribution) across subjects and within assignment type (e.g., poster, exam, assignment, etc.). Scores => 3.0 will be taken as evidence of competence related to the goal. 2. Posters presented by SNRE students at the Undergraduate Research and Scholarly Activity (URSA) Research Day and other forums (e.g., conferences) will be evaluated with the CT, DM, QA, NC SS, OC, and WC rubrics (as applicable). 3. The SNRE Director of Academic Programs will conduct exit interviews with graduating students. A semi-structured interview will be used, allowing the identification of barriers to achieving learning outcomes and elements of the program that contributed most to learning outcomes. 4. Graduates will be tracked to assess career advancement.	the rubrics. The chair of the SLOA committee will summarize results. 3. Each spring the NRE Department Chair will conduct exit interviews with graduating seniors. The Chair will summarize results. 4. The NRE Department Chair will task the academic program assistant with the responsibility of tracking graduates. A qualitative report will summarize employment in the Natural Resources Management field.
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