

UNIT REPORT

Natural Resources-Academic - APR Self-Study Report by Academic Unit/Department

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Program Mission

CNR graduate program

Program Mission Statement:

To provide students with opportunities to develop professional and scientific skills in the natural resources.

MNR Program

Program Mission Statement:

The fundamental objective of the MNR graduate program is to integrate and scale various perspectives – ecology; planning, policy and society; and tools and technology – into a systems view of natural resources. This unique professional degree is accessible to students of diverse academic backgrounds and will help graduates develop credentials and skills for the effective management of natural resources.

Program Goal (add a minimum of 3 program goal "plan items")

Program Goal #1 - Retention

Goal Statement:

To increase retention of online graduate students .

Alignment to UI Strategic Plan Goals: Cultivate (Goal 4): Foster an inclusive, diverse community of students, faculty, and staff and improve cohesion and morale.

Indicators/Metrics to Evaluate Progress:

- MNR Fire Ecology and Management, Integrated Natural Resources, and Restoration Ecology and Habitat Management - Retention from Fall 2020 - Spring 2021 = 84.54% Total
 - Fire Ecology and Management Retention Fall 2020 - Spring 2021 = 80%
 - Integrated Natural Resource Retention Fall 2020 - Spring 2021 = 85.53.%
 - Restoration Ecology and Habitat Management Retention Fall 2020 - Spring 2021 = 100%

List of Actions the Program Will Take to Achieve Goals :

- Maintain continued contact with online graduate students
- Clear communication concerning online course requirements, course availability, and curriculum navigation.
- Develop curriculum navigation tools to conceptualize progress through MNR curriculum.
- Increase staff support in the Graduate Studies Office.

Goal Achievement Level: In Progress

Program Goal #3 - Recruitment efforts

Goal Statement:

Expanding the geographic diversity of graduate applicants.

Alignment to UI Strategic Plan Goals: Engage (Goal 2): Suggest and influence change that addresses societal needs and global issues, and advances economic development and culture.

Transform (Goal 3): Increase our educational impact.

Cultivate (Goal 4): Foster an inclusive, diverse community of students, faculty, and staff and improve cohesion and morale.

Indicators/Metrics to Evaluate Progress:

Increase the number of states and countries of applicants: Total 157

- Spring 2021 foreign applications: 18
- Spring 2021 non-resident applications 118
- Spring 2021 resident applications 21
- States: not able to determine from spring 2021 data
- Countries: 17

List of Actions the Program Will Take to Achieve Goals :

Graduate program materials to be sent to references providing letters of recommendation during the graduate admissions process.

Goal Achievement Level: In Progress

Program Goal #2 - Skill Development PhD

Goal Statement:

Graduates should be able to demonstrate effective oral communication skills.

Alignment to UI Strategic Plan Goals: Innovate (Goal 1): Scholarly and creative products of the highest quality and scope, resulting in significant positive impact for the region and the world.

Indicators/Metrics to Evaluate Progress:

We will use the quality of the dissertation defense to address the quality of the dissertation presentation. The metric might include:

- Feedback from committee members
- Audience feedback

List of Actions the Program Will Take to Achieve Goals :

- Gather data on the quality of the presentation from the committee members
- Develop surveys for audience feedback

Goal Achievement Level: In Progress

Student Learning Assessment Report (add one "plan item" for each major, degree, and/or certificate offered by dept)

Master of Natural Resource (MNR) - Integrated Natural Resources

Assessment Report Contact: Leda Kobziar, Kerri Vierling

Program Changes in Past Year:

In the past year, the MNR program has added two additional employees to work with the students: an Assistant Director Graduate Student Support and a new Graduate Programs Coordinator. Although both of these staff members work with students across programs, they have been integrating with the MNR program in impactful ways. Improvements include the creation of a community BBLearn portal where all MNR information for students is housed, and where students can network to develop cohesion and community, as well as to benefit their careers. Curricular changes have been limited to minor updates in name and/or number assignments for new courses, and the addition of some courses in each of the required bins as new online courses have been created.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

Please see below

1.

Articulation Skills

Students will master and integrate information and knowledge from ecological, social, economic and political perspectives – into a systems view of natural resource issues.

Academic Year 2020-2021: **Natural Res-Integrated Nat Res (M.N.R.)**

Term: **Overview**

Exceeded		76.92%	10
Met		7.69%	1
Partially Met		15.38%	2
Not Met		0%	0

Summary of Student Learning:

The majority of students met or exceeding this SLO. Some were less proficient in communicating how the ecological, social, and practical considerations are integrated, rather than just reported. We need to improve our guidance on this by providing examples of such integration to future students. This is not an easy thing to grapple with, or to communicate, and requires dedicated intentionality to find relationships across disciplines. Providing students with concrete examples will clearly demonstrate what we wish to see, and provide a model for them to use when selecting examples of assignments that meet the learning outcome.

Summary of Faculty Discussion:

Among the instructors of the NR 599 course (this is a rotating position), we have communicated to the current students that the integration (including the tradeoffs and challenges) among socio-political, practical, and ecological aspects of a natural resources challenge needs to be explored in their narrative description of the assignment they select as an example product. We learned that we need to provide better guidance on what this type of integration actually looks like, and how it can be communicated.

Our larger core group of faculty has not yet met to review these findings, but will do so before semester's end.

Summary of Changes/Improvements Being Considered:

We are not planning to make any changes to the actual assessment of learning, but do realize changes are needed in how we guide the students towards achieving the SLO.

Inter-rater Reliability:

We have moved to a new approach to evaluating SLOs for students graduating from the MNR program. In the past, we reviewed the students' capstone portfolio by committee. Now, we have rotating faculty who guide the students in their portfolio development: these faculty differ by semester. To improve inter-rate reliability during the first few iterations of this new process, the MNR Director also reviews the portfolios, and any differences in grading are discussed and a collaborative decision is reached.

Closing the Loop:

Student success has been greatly enhanced through the use of example portfolios submitted by students who have volunteered to share their work with their peers. We have identified a handful of excellent portfolios that represent a diversity of perspectives, and each achieve the SLOs at high levels of proficiency. These are now provided to the students, ameliorating past uncertainty about expectations and improving overall format, content, and presentation of the portfolios.

Attached Files

[MNR NR 599 Final Portfolio Rubric.pdf](#)

Master of Natural Resources (MNR)- Fire Ecology and Management

Assessment Report Contact: Dr. Leda Kobziar, Dr. Kerri Vierling

Program Changes in Past Year:

In the past year, the MNR program has added two additional employees to work with the students: an Assistant Director Graduate Student Support and a new Graduate Programs Coordinator. Although both of these staff members work with students across programs, they have been integrating with the MNR program in impactful ways. Improvements include the creation of a community BBLearn portal where all MNR information for students is housed, and where students can network to develop cohesion and community, as well as to benefit their careers. Curricular changes have been limited to minor updates in name and/or number assignments for new courses, and the addition of some courses in each of the required bins as new online courses have been created.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

1.

Articulation Skills

Students will master and integrate information and knowledge from ecological, social, economic and political perspectives – into a systems view of natural resource issues.

Academic Year 2020-2021: **Natural Res-Fire Ecol & Mgmt (M.N.R.)**

Term: **Overview**

Exceeded		100%	2
Met		0%	0
Partially Met		0%	0
Not Met		0%	0

Summary of Student Learning:

Although these students met this SLO, we think there is some room for improvement in communicating how the ecological, social, and practical considerations are integrated, rather than just reported. We need to improve our guidance on this by providing examples of such integration to future students. This is not an easy thing to grapple with, or to communicate, and requires dedicated intentionality to find relationships across disciplines. Providing students with concrete examples will clearly demonstrate what we wish to see, and provide a model for them to use when selecting examples of assignments that meet the learning outcome.

Attached Files

[MNR NR 599 Final Portfolio Rubric.pdf](#)

Summary of Faculty Discussion:

Among the instructors of the NR 599 course (this is a rotating position), we have communicated to the current students that the integration (including the tradeoffs and challenges) among socio-political, practical, and ecological aspects of a natural resources challenge needs to be explored in their narrative description of the assignment they select as an example product. We learned that we need to provide better guidance on what this type of integration actually looks like, and how it can be communicated.

Our larger core group of faculty has not yet met to review these findings, but will do so before semester's end.

Summary of Changes/Improvements Being Considered:

We are not planning to make any changes to the actual assessment of learning, but do realize changes are needed in how we guide the students towards achieving the SLO.

Inter-rater Reliability:

We have moved to a new approach to evaluating SLOs for students graduating from the MNR program. In the past, we reviewed the students' capstone portfolio by committee. Now, we have rotating faculty who guide the students in their portfolio development: these faculty differ by semester. To improve inter-rate reliability during the first few iterations of this new process, the MNR Director also reviews the portfolios, and any differences in grading are discussed and a collaborative decision is reached. Faculty all use a consistent NR 599 rubric to evaluate the presentation.

Closing the Loop:

Student success has been greatly enhanced through the use of example portfolios submitted by students who have volunteered to share their work with their peers. We have identified a handful of excellent portfolios that represent a diversity of perspectives, and each achieve the SLOs at high levels of proficiency. These are now provided to the students, ameliorating past uncertainty about expectations and improving overall format, content, and presentation of the portfolios.

Master of Natural Resources (MNR) - Environmental Education and Science Communication

Assessment Report Contact: Karla Eitel keitel@uidaho.edu, Leda Kobziar lkobziar@uidaho.edu

Program Changes in Past Year:

We have changed the curriculum so that each semester has a leadership component. We have also incorporated more professional development in the spring semester (in the leadership course) based on past feedback.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

Learning Outcomes

As a result of participation in this program, our graduates will know and be able to:

Learn and integrate

- demonstrate disciplinary specialization and the ability to integrate information across disciplines.
- comprehend the complexity of systems and emergent properties.
- demonstrate an understanding of the process of science as conducted in multiple epistemological frameworks.

Think and create

- demonstrate an ability to design and deliver inclusive, student-centered, inquiry-based, place-based programs
- develop a basic understanding of local ecological systems.
- creatively address complex problems.
- be able to use scholarly literature in a variety of practical contexts.
- have some basic knowledge of how to effectively analyze and visualize data

Communicate

- demonstrate the ability to effectively communicate science through a variety of media and with a diversity of audiences, understand its ethics, and identify its roles in the formulation of individual and public decisions.
- use effective written and oral communication.

Clarify purpose and perspective

- demonstrate empathy for diverse perspectives.
- demonstrate that they can care for the emotional, mental, physical needs of a group.
- be able to critically reflect on their own performance.

Practice citizenship

- demonstrate leadership in a variety of situations.
- exhibit tolerance for adversity and uncertainty.

Summary of Student Learning:

Based on end-of-program portfolio assessments, all graduating students demonstrated at least basic mastery of each learning outcome. Some demonstrated proficiency.

In addition to conducting a portfolio assessment, we conduct end of the program focus groups to get feedback from graduate students regarding what outcomes they think they achieved, and what experiences supported those outcomes.

Summary of Faculty Discussion:

Based on student feedback, a few changes will take place in the upcoming academic year:

1) In lieu of requiring a project and a portfolio, we have streamlined the program assessment so that we will now only require a portfolio. The portfolio allows students to demonstrate their learning from across all the courses in the program and highlights their professional growth. By eliminating the project requirement we believe that students will be able to spend more time reflecting and integrating learning from across all the courses in the process of creating a portfolio.

2) We will be hiring a new position that will focus on providing observations and mentorship during students' teaching practicum. Students have asked for more support during their teaching practicum. Due to staffing limitations, we have not been able to provide as much support as students wish for (and as much as we would like to provide). This new position will allow us to better serve students' needs.

Summary of Changes/Improvements Being Considered:

No changes are being planned to our assessment process.

Inter-rater Reliability:

We have a common rubric that is used to assess portfolios and a common set of questions for the focus group.

Closing the Loop:

We incorporated more professional development and networking opportunities as part of students' spring semester. We believe that this led to greater student success in finding jobs by the end of their program. Many students made use of Career Services, the Writing Center, and other campus resources because of their exposure to these services as part of the spring leadership course.

Attached Files

[Syllabus spring 2021 seminar_final.docx](#)

[Portfolio Expectations 2020-21.pdf](#)

[2020_spring_PD_seminar \(1\).docx](#)

Master of Natural Resources (MNR) - Restoration Ecology and Habitat Management

Assessment Report Contact: Leda Kobziar

Program Changes in Past Year:

This program was new starting Fall 2020.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

There were no students assessed this term as there are no students far enough along in the curriculum to register for the capstone experience course.

Summary of Student Learning:

There were no students assessed this term as there are no students far enough along in the curriculum to register for the capstone experience course.

Summary of Faculty Discussion:

There were no students assessed this term as there are no students far enough along in the curriculum to register for the capstone experience course.

Summary of Changes/Improvements Being Considered:

There were no students assessed this term as there are no students far enough along in the curriculum to register for the capstone experience course.

Inter-rater Reliability:

There were no students assessed this term as there are no students far enough along in the curriculum to register for the capstone experience course.

Closing the Loop:

There were no students assessed this term as there are no students far enough along in the curriculum to register for the capstone experience course.

Attached Files

[MNR NR 599 Final Portfolio Rubric.pdf](#)

Master of Natural Resources (MNR) - Fish and Wildlife Sciences Management

Assessment Report Contact: Leda Kobziar

Program Changes in Past Year:

This is a new program that started Fall 2021. No data from Spring 2021 available.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

This is a new program that started Fall 2021. No data from Spring 2021 available.

Summary of Student Learning:

This is a new program that started Fall 2021. No data from Spring 2021 available.

Summary of Faculty Discussion:

This is a new program that started Fall 2021. No data from Spring 2021 available.

Summary of Changes/Improvements Being Considered:

This is a new program that started Fall 2021. No data from Spring 2021 available.

Inter-rater Reliability:

This is a new program that started Fall 2021. No data from Spring 2021 available.

Closing the Loop:

This is a new program that started Fall 2021. No data from Spring 2021 available.

Master of Science Natural Resources - Thesis

Assessment Report Contact: Kerri Vierling

Program Changes in Past Year:

There were no changes to the NR MS thesis in 2020-2021.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

10.

Professionalism

Demonstrate self-defined pathway for career following defense

Academic Year 2020-2021: **Natural Resources (M.S.)**

Term: **Overview**

Exceeded		0%	0
Met		100%	9
Partially Met		0%	0
Not Met		0%	0

Summary of Student Learning:

100% of the students earning this degree were able to find a position within the discipline upon graduation. These data came from surveys filled in by the major adviser after the student had defended their thesis, and are indirect measures of accomplishment of this SLO.

Summary of Faculty Discussion:

The faculty learned that all of the MS students are successfully finding positions within their disciplines following graduation. In general, faculty are pleased with the fact that students across the disciplines are finding positions. However, events outside of the career path could influence the outcomes of this particular SLO so the CNR graduate council will meet to discuss whether this SLO should remain given that events outside of the career path could influence the outcome of this particular SLO.

Summary of Changes/Improvements Being Considered:

We will work with the CNR graduate council to determine whether additional information or direct measures would be helpful to assess this SLO.

Inter-rater Reliability:

The survey questions for the students are filled out by their major advisers. The questions for this SLO are straightforward "yes/no" questions and we have no concerns about inter-rater reliability. The questions are:

- a. Has the student received an offer for employment following completion of their degree?
- b. If yes, is this job relevant to their degree?

Closing the Loop:

Nothing to add since the outcome of this particular SLO at this time, but the CNR graduate council will continue to examine and revise SLOs to determine areas of improvement.

Attached Files

[MS-PhD-Survey.docx](#)

Master of Science Natural Resources - Non Thesis

Assessment Report Contact: Dr. Kerri Vierling

Program Changes in Past Year:

None

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

Entry Status	Created Date	Created By Name	CreatedBy Email	Last Updated Date	Last Updated By Name	Last Updated By Email	Subject Identifier	Subject Name	Subject Email	Total Score	Total %	599 Project Level
Complete	2021-10-20 2:29 PM	Elise Kokenge	ekokenge@uidaho.edu	2021-10-20 2:29 PM	Elise Kokenge	ekokenge@uidaho.edu	495104	Jesus Garcia	garc2664@vandals.uidaho.edu	100	100.00%	Complete
Complete	2021-10-20 2:29 PM	Elise Kokenge	ekokenge@uidaho.edu	2021-10-20 2:29 PM	Elise Kokenge	ekokenge@uidaho.edu	734660	Nelson Stauffer	stau8112@vandals.uidaho.edu	100	100.00%	Complete
Complete	2021-10-20 2:30 PM	Elise Kokenge	ekokenge@uidaho.edu	2021-10-20 2:30 PM	Elise Kokenge	ekokenge@uidaho.edu	631173	Timothy Gittelsohn	gitt4046@vandals.uidaho.edu	100	100.00%	Complete

Summary of Student Learning:

These data reflect a variety of non-thesis projects advised by different faculty. The grades reflect the satisfactory completion of the requirement. Project grades were a combination of pass/fail and A-F grading methods.

Summary of Faculty Discussion:

This track is utilized primarily for thesis masters students who opt not to continue with the thesis track.

Summary of Changes/Improvements Being Considered:

Discussion with faculty with non-thesis MS students to determine whether shifting to all graded projects would be supported. One proposal to be discussed is for faculty who are mentoring non-thesis MS students to complete an assessment on how the graduate student met the SLOs.

Inter-rater Reliability:

Currently non-existent.

Closing the Loop:

This has not been a focus of assessment due to the small number of students that transfer from thesis to non-thesis.

Attached Files

[MS-PhD-Survey.docx](#)

Natural Resources - Doctor of Philosophy

Assessment Report Contact: Dr. Kerri Vierling

Program Changes in Past Year:

None to report

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

10.

Communication Skills

Demonstrate skills in disseminating and presenting complex information to non-science groups

Academic Year 2020-2021: **Natural Resources (Ph.D.)**

Term: **Overview**

Exceeded		100%	7
Met		0%	0
Partially Met		0%	0
Not Met		0%	0

Summary of Student Learning:

All of our students presented to non-science groups, but we currently don't have a measure of the quality of these presentations.

Summary of Faculty Discussion:

Assessment tools are largely indirect and a review of SLOs and content should be concurrently undertaken.

Summary of Changes/Improvements Being Considered:

CNR Grad Council is discussing revision of the SLOs and how such presentations can be assessed for quality.

Inter-rater Reliability:

We currently ask the question as a yes/no response from faculty, there is no inter-rater reliability issue.

Closing the Loop:

Currently we do not know how past assessment data has been used, but we are at 100% of students presenting to non-science groups.

Attached Files

[MS-PhD-Survey.docx](#)

Student Achievement

New Student Achievement Item

Student Retention:

The CNR Natural Resources program (MS, PhD, MNR) tracks the retention of students using matriculation data from Banner and UI COGS. The numbers below are Spring 2021 - Fall 2021

NR Graduate - 91.34% overall

MNR Fire - 80%

MNR EESC - 100%

MNR Int - 85.3%

MNR REHM - 100%

MNR FWSM - this is a new program starting Fall 2021. No students to retain.

NR MS Thesis - 97.87%

NR MS Non Thesis - 100%

NR PhD - 93.85%

Student Persistence:

We have not tracked such data, but graduate students generally do not switch majors or programs once admitted.

Student Completion:

These data have not yet been compiled.

Student Postgraduate Success:

Exit surveys are provided by the graduate student's faculty advisor. Currently students have 100% employment within a field relevant to their degree after degree completion. These data are not separated by race, gender, ethnicity, age, gender, socio-economic status, or first gen status.

Identify Equity Gaps:

We have not compiled such data.

Effective Learning Environment and Closing Equity Gaps:

We will plan to start gathering these data on student completion and equity gaps.

Demand and Productivity

New Demand and Productivity Item

External Demand:

There is a great deal of external demand for our programs. Between Spring 2020 - Spring 2021, we saw in admissions for all programs except for the MS in NR. Overall, the program is seeing an increase in interest, which is carrying into the Fall 2021 semester. We are the largest natural resources graduate program in the country with over 300 students in the MNR and NR programs. The MNR program in particular is experiencing rapid growth and MNR has rolling admissions so the numbers are very dynamic. The time to completion can vary within that program, though, due to the fact that students in that program often take time off for family related reasons.

Attached Files

[spring 20 21 admission data.xlsx](#)

Internal Demand:

Demand for online courses that can be used for both the MNR and ENVIS programs have grown by almost 70% between Spring 2020 and Spring 2021, and we focus upon these courses because they represent the bulk of credit hour production. Included in the supporting documentation are the courses that were taught both semesters (Spring 2020 and Spring 2021) and are courses and not associated with research or project credits. While the growth is encouraging, a concern is class size. Several of these courses at the 400 level (REM 440, REM 429, etc.) are also of interest to students within the NR undergraduate degrees, although most of those students take the in-person option for these courses if they are available.

Attached Files

[SP 2020 and SP 2021 credit hour production for online courses.xlsx](#)

Credit Productivity:

The programs are generally growing and the focus here has been on the online programs because they are responsible for much of the credit our production within the NR graduate program. Course quality is a concern as class sizes increase, and additional instructional support may be necessary to maintain course quality.

Attached Files

[SP 2020 and SP 2021 credit hour production for online courses.xlsx](#)

Financial Health and Resources

New Financial Health and Resources Item

Financial Health:

The graduate programs (NR MS, NR PhD, MNR) are experiencing an overall growth and much of the growth is due to the MNR online courses. Providing additional instructional support where needed for the rapidly growing courses will ensure that the quality of the program can be maintained.

Efficient Use of Resources:

The CNR graduate studies office has a Director and two staff to advise ~ 400 students total, which includes administrative support for the ENVIS program, the MNR program and the NR graduate program. While the CNR dean is ultimately responsible for the budgeting for the CNR graduate studies office, we have tried to identify places where we can be effective in our use of resources. For instance, we have implemented a process whereby we send a thank you note to everyone who has written a letter of support for a graduate student application. The thank you note contains some information about the NR, MNR, and ENVIS graduate programs and is a no-cost avenue to increase our exposure.

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