PROGRAM COMPONENT (Group B) OR NON-SUBSTANTIVE MINOR REQUEST FORM
Short Form

Instructions: Please use one form for each request/action. Clearly mark all changes using Track Change or strikethroughs for deletions and underlines for additions. Following the approval of the appropriate college curriculum committee, a single representative for the college will e-mail the completed form to the Office of the Provost and Executive Vice President, provost@uidaho.edu for approval and then submission to the Academic Publications Editor in the Registrar’s Office for review by the University Curriculum Committee (UCC).

Deadline: This form must be submitted to the Office of the Provost and Executive Vice President by December 15th for inclusion in the next available General Catalog and to be available for scheduling beginning with the next summer session.

When applicable a Curriculum Change Form and Course Approval Forms must accompany the short form when submitted to provost@uidaho.edu

Submission Information
This section must be completed

<table>
<thead>
<tr>
<th>College:</th>
<th>Natural Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department/Unit:</td>
<td>Masters of Natural Resources/Natural Resources and Society</td>
</tr>
<tr>
<td>Dept/Unit Approval Date:</td>
<td>10/24/2016</td>
</tr>
<tr>
<td>College Approval Date:</td>
<td>12/5/16</td>
</tr>
<tr>
<td>CIP code (Consult Institutional Research):</td>
<td>31.0601</td>
</tr>
<tr>
<td>Primary Point of Contact (Name and Email):</td>
<td>Karla Eitel (<a href="mailto:keitel@uidaho.edu">keitel@uidaho.edu</a>)</td>
</tr>
</tbody>
</table>

Rationale and Overview of Program Component Request or Name Change
This section must be completed

Provide the rationale and overview of this request. Include an explanation of how the department will manage the added workload for a new program component; describe whether the program component curriculum and admissions requirements remain the same; describe the rationale for a name change or degree designation change if applicable.

We propose to create a new Masters of Natural Resources (MNR) option in the area of Environmental Education and Science Communication. The McCall-based curriculum and overall graduate program forms a strong professional, terminal degree in the field of environmental education and science communication. This degree option will be cohort based and will complement and extend the current McCall-based graduate certificate program to offer an immersive, hands-on experience for individuals wishing to advance to a career in environmental education, place-based education, and science communication. Students engage in a comprehensive suite of practical, classroom-based and field-based coursework in various outreach settings. Based on our speaking with and recruiting approximately 100 prospective graduate students per year, we find that there is significant market demand for such a degree option and that the option reflects the needs and interests of many of these prospective students. Through curricular changes we have slightly modified the program so that it aligns with MNR requirements without adding to faculty workload. By offering a professional degree we will be meeting the demands of the market and providing an attractive degree track within the MNR suite of options.

Name or Degree Change Only Requests
This section to be completed ONLY for changes to the name of: degree, major, minor, option, emphasis, certificate, teaching endorsement. If there are accompanying curriculum or course changes, complete the next section and attach the curriculum and/or course forms. **Note: a substantive change to a program degree, major, or program component may require a program proposal form.

<table>
<thead>
<tr>
<th>Current Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Name:</td>
</tr>
<tr>
<td>Current Degree:</td>
</tr>
<tr>
<td>New Degree:</td>
</tr>
</tbody>
</table>
### Program Component Request

Leave blank if not adding, discontinuing, or modifying a program component. Program components consist of option, emphasis, minor, academic certificate less than 30 credits, or teaching endorsement.

Clearly mark all changes to existing program components by using Track Change or strikethroughs for deletions and underlines for additions. A curriculum change form and/or course approval forms associated with this request are required to be submitted with this short form.

<table>
<thead>
<tr>
<th>Create New:</th>
<th>Modify:</th>
<th>Discontinue:</th>
<th>Implementation Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
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</tr>
</tbody>
</table>

If the request is for an option or emphasis, enter the associated major and degree:

<table>
<thead>
<tr>
<th>Major:</th>
<th>Degree:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resources</td>
<td>MNR</td>
</tr>
</tbody>
</table>

Enter the name of the program component in the appropriate row:

<table>
<thead>
<tr>
<th>Option:</th>
<th>Environmental Education and Science Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasis:</td>
<td></td>
</tr>
<tr>
<td>Minor:</td>
<td></td>
</tr>
<tr>
<td>Academic Certificate less than 30 credits:</td>
<td></td>
</tr>
<tr>
<td>Teaching Endorsement (Major/Minor):</td>
<td></td>
</tr>
</tbody>
</table>

### Learning Outcomes and Assessment Information

This section must be completed if program component request section is completed.

1. List the intended learning outcomes for the program component, using learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program:

   - Students will develop a basic understanding of local ecology and phenology.
   - Students will demonstrate an understanding of the process of science as conducted in multiple epistemological frameworks.
   - Students will be able to appreciate and communicate the complexity of systems.
   - Students will demonstrate empathy and appreciation for diverse perspectives.
   - Students will exhibit tolerance for adversity and uncertainty.
   - Students will demonstrate an ability to effectively plan for and carry out inclusive, place-based instruction.
   - Students will be able to lead in a variety of situations.
   - Students will demonstrate that they can care for the emotional, mental, physical needs of a group.
   - Students will be able to creatively address complex problems.
   - Students will use effective written and oral communication.
   - Students will be able to use scholarly literature in a variety of practical contexts.

2. Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component:

   Each course culminates with a “signature assignment”. These signature assignments will be gathered into a professional portfolio to be presented at the end of the program. These assignments include an ecology research project, a phenology project, a curriculum design project, an educational research project, a science communication project, a leadership project, teaching observations, group debriefs and reflective journals. These pieces will be evaluated as individual assignments and then again when they are compiled.
into the learning portfolio presented at the end of the one-year program. Additionally, students will create a capstone case study to explore how environmental education and science communication address complex environmental issues.

Assignments linked to specific outcomes are listed below:

1. Students will demonstrate a basic understanding of local ecology and phenology.
   a. Assessment: Students will score a passing grade on the end of semester ecology exam in NRS 560 (Place-based Ecology 1).
   b. Assessment: Students will successfully conduct and present a phenology project in NRS 565 (Science Communication).

2. Students will demonstrate an understanding of the process of science as conducted in multiple epistemological frameworks.
   a. Assessment: Students will identify the epistemological framework that guides their ecology project in NRS 560 (Place-based Ecology 1), and suggest alternative frameworks that could have been used.
   b. Assessment: Students will conduct an educational research project in NRS 563 and identify their main epistemological framework (paradigm) and alternative frameworks that could have been used.

3. Students will be able to appreciate and communicate the complexity of systems.
   a. Assessment: Through a phenology project in NRS 565 (Science Communication), students will successfully communicate the relationships between biotic components of an ecosystem and the abiotic seasonal forces (available water, temperature, length of day) that drive change in the system.
   b. Assessment: Through a curriculum development project in NRS 563 (Place-based Education), students will examine the relationship between National educational standards and individual educational philosophies to create a curriculum sequence that shows a logical progression from goals to assessment to learning activities while making room for student-centered instruction.
   c. Assessment: Through a science communication project in NRS 566 (Place-based Ecology II), students will effectively identify and address various stakeholders in an issue and tailor communication to communicate with those stakeholders.

4. Students will demonstrate empathy and appreciation for diverse perspectives.
   a. Assessment: In debriefs conducted as part of NRS 567 and 568 (teaching practicum), students will show empathy for diverse learners and varying perspectives between teachers, chaperones, field instructors and program staff.
   b. Assessment: In a curriculum development project in NRS 563, students will incorporate diverse student perspectives in student-centered activities.
   c. Assessment: Through a science communication project in NRS 566, students will show empathy and appreciation of diverse audience perspectives.

5. Students will exhibit tolerance for adversity and uncertainty.
   a. Assessment: In teaching observations conducted as part of the teaching practicum, students will demonstrate an ability to effectively lead a group through uncertain programmatic (e.g. new information from teachers or program staff), environmental and weather conditions.

6. Students will demonstrate an ability to effectively plan for and carry out inclusive, place-based instruction.
   a. Assessment: Students will demonstrate an ability to effectively plan for and carry out inclusive, place-based instruction in teaching observations conducted as part of the teaching practicum.
   b. Assessment: Students will demonstrate an ability to effectively plan for and carry out inclusive, place-based instruction through lesson plans turned in as part of the teaching practicum.

7. Students will be able to lead in a variety of situations.
   a. Assessment: Students will demonstrate that they can effectively lead groups of K12 students and their peers in a variety of contexts through observations while serving as a field instructor and program host.

8. Students will demonstrate that they can care for the emotional, mental, physical needs of a group.
   a. Assessment: Students will demonstrate that they can effectively lead groups of K12 students and their peers in a variety of contexts through observations while serving as a field instructor and program host.

9. Students will be able to creatively address complex problems.
   a. Assessment: Students will exhibit creativity in addressing complex problems through the creation of a science communication project that uses multiple forms of communication (digital media, sound, image) to communicate about and engage audiences in critical thought about complex problems.

10. Students will use effective written and oral communication.
    a. Assessment: Each course signature assignment (see particular assignments throughout above assessment pieces) will be assessed on effective written and oral communication as a component of the overall score.
    b. Assessment: In teaching observations, students will demonstrate an ability to effectively convey key concepts.

11. Students will be able to use scholarly literature in a variety of practical contexts.
a. Assessment: Each course signature assignment with a written component (ecology project, phenology project, curriculum design, educational research and science communication project) will include a review of relevant scholarly literature.

12. Students will be able to critically reflect on their own performance.
   a. Assessment: As part of the teaching practicum, students will prepare reflective teaching journals addressing their successes and struggles as a field instructor.
   b. Assessment: In presenting their learning portfolio, students will critically review the pieces that they created for each of the courses. The will identify their own growth and areas with needed improvement.

3. How will you ensure that the assessment findings will be used to improve the program?
   We conduct annual reviews to assess our program. These findings are used to modify courses, add or drop courses and modify assessment processes. We will compile results from each course to track student progress throughout the year and make adjustments as needed. The program is designed to be a one-year, cohort-based professional degree where all students take the same courses. Results of courses will be compiled throughout the year and reported on each year for the cohort finishing the prior academic year.

4. What direct and indirect measures will be used to assess student learning?
   Direct measures: End of course projects and exams, “signature assignments”, portfolio reflection, case study products.
   Indirect measures: Observations of grad students teaching K12 students, leading their peers as program host, journal reflections.

Rubrics are used to score the ecology exam, ecology project, curriculum design, educational research, phenology project, and science communication project. A qualitative feedback form is used to provide graduate students with feedback from teaching and program hosting observations.

5. When will assessment activities occur and at what frequency?
   Assessment occurs as part of each course. Additionally, we conduct annual “exit” interviews with students, a capstone presentation and portfolio presentation. Teaching observations take place once each semester. The entirety of the program will take place in one academic year and student progress will be assessed each semester and at the end of the program, allowing us to report on outcomes annually.

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Financial Impact

This section must be completed if program component request section is completed

<table>
<thead>
<tr>
<th>Greater than $250,000 per FY:</th>
<th>x</th>
<th>Less than $250,000 per FY:</th>
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</thead>
<tbody>
<tr>
<td>Brief Description of financial impact:</td>
<td>This program will be offered from start to completion at the McCall Field Campus and we therefore are requesting to assess students a self-support fee for this program. Expenses include faculty and staff salaries to deliver and administer the program, student travel for field trip sand professional conferences, conducting background checks, field equipment and supplies for courses and teaching, maintenance and repairs of field campus infrastructure and improvements, and the University of Idaho G &amp; A assessed at 10%. To offset these expenses, a self-support program fee will be collected in the amount of $19,805 per student.</td>
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Distance Education Availability

This section must be completed if program component request section is completed

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program may be completed via distance education. If the program component is to be offered via distance education, additional or different formwork may be required. Contact provost@uidaho.edu for assistance.

The U.S. Department of Education defines distance education as follows:

**Distance education means education that uses one or more of the technologies listed below to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor, either synchronously or asynchronously. The technologies may include:**

1. **The internet:**
(2) One-way and two-way transmissions through open broadcast, closed circuit, cable, microwave, broadband lines, fiber optics, satellite, or wireless communications devices;
(3) Audio conferencing; or
(4) Video cassettes, DVDs, and CD-ROMs, if the cassettes, DVDs, or CD-ROMs are used in a course in conjunction with any of the technologies listed in paragraphs (1) through (3).

Can 50% or more of the curricular requirements of this program component be completed via distance education?

<table>
<thead>
<tr>
<th>Yes*</th>
<th>No</th>
<th>X</th>
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*If Yes, can 100% of the curricular requirements of this program component be completed via distance education?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>x</th>
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Geographical Area Availability

This section must be completed if program component request section is completed

Identify the geographical area(s) this program component can be completed in:

<table>
<thead>
<tr>
<th>Moscow</th>
<th>Coeur d'Alene</th>
<th>Boise*</th>
<th>Idaho Falls*</th>
<th>Other**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>McCall Field Campus</td>
</tr>
</tbody>
</table>

*Note: Programs offered in regions 3, 4, and/or 5 may require additional formwork from the State Board of Education. Contact the Office of the Provost and Executive Vice President for additional information.

**Note: If Other is selected identify the specific area(s) this program component will be offered.

Office of the Registrar Information

<table>
<thead>
<tr>
<th>Implementation Effective Date:</th>
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</thead>
<tbody>
<tr>
<td>Date Received by the Office of the Provost and Executive Vice President:</td>
</tr>
<tr>
<td>Date Received by Budget Office, if applicable:</td>
</tr>
<tr>
<td>Date Received by Institutional Research and Assessment:</td>
</tr>
<tr>
<td>Date Received by UCC Secretary: 3-8-17</td>
</tr>
<tr>
<td>UCC Item Number: UCC-17-036b</td>
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<tr>
<td>UCC Approval Date:</td>
</tr>
<tr>
<td>Faculty Senate Item Number:</td>
</tr>
<tr>
<td>Faculty Senate Approval Date:</td>
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<tr>
<td>General Policy Report Number or Faculty Meeting Date:</td>
</tr>
<tr>
<td>Office of the President Approval Date:</td>
</tr>
<tr>
<td>State Board of Education Approval/Acknowledgement Date:</td>
</tr>
</tbody>
</table>
Environmental Education and Science Communication Option

1) Ecology and Management (8 credits)
   - NRS 560  Place-based Ecology  4 cr
   - NRS 566  Place-based Ecology II  4 cr

2) Human Dimensions (6 credits)
   - NRS 575  Leadership for the Environmental Educator  2 cr
   - NRS 565  Science Communication and the Environment  4 cr

3) Policy, Planning and Law (6 credits)
   - NRS 563  Place Based Environmental Education***  4 cr
   - NRS 568  Environmental Education Teaching Practicum II  2 cr

4) Tools and Technology (6 credits)
   - NRS 562  Field Science Teaching  2 cr
   - NRS 567  Environmental Education Teaching Practicum I  2 cr
   - NRS 564  Teaching Environmental Education in a Winter Environment  2 cr

5) Case Study Project (3 credits)
   - NRS 502  Directed Study  1-16 cr
   - NRS 599  Non-thesis Master’s Research  1-16 cr

6) 3 credits in the following
   - NRS 504  Special Topics: Integration Seminar  1 cr
   - NRS 569  Environmental Education Teaching Practicum III  2 cr  Sum

Courses for this option to total 32 credits

Note:
*** These courses have a significant component relating to educational policy and law/regulations relating to curricular standards development, content, and implementation. (e.g. Common Core Standards, Next Generation Science Standards, Idaho State Standards, etc.)