UNIVERSITY CURRICULUM COMMITTEE  
Curricular Proposal Form

Instructions: 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 Academic Publications Editor in the Registrar’s Office for review by the University Curriculum Committee (UCC).

Incomplete forms will be returned to the college for correction and may delay their approval.

Deadline: This form must be submitted to the Academic Publications Editor by December 15th for inclusion in the next available General Catalog and to be available for scheduling beginning with the next summer semester.

Submission Information

<table>
<thead>
<tr>
<th>College:</th>
<th>College of Natural Resources</th>
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</thead>
<tbody>
<tr>
<td>Department/Unit:</td>
<td>Forest, Rangeland, and Fire Sciences</td>
</tr>
<tr>
<td>Dept/Unit Approval Date:</td>
<td>September 14, 2015</td>
</tr>
<tr>
<td>College Approval Date:</td>
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Curricula Information

Clearly mark all changes using Track Change or strikethroughs for deletions and underlines for additions.

<table>
<thead>
<tr>
<th>Degree:</th>
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<tbody>
<tr>
<td>Major:</td>
<td></td>
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<tr>
<td>Minor:</td>
<td></td>
</tr>
<tr>
<td>Academic Certificate:</td>
<td>Fire Ecology, Management, and Technology – Graduate</td>
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<tr>
<td>Teaching Major/Minor:</td>
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Curriculum:

Original: [online] denotes courses available through distance learning

Note: A grade of ‘B’ or higher is required in all coursework for this academic certificate.

- Fire Ecology Course Group (3 cr):
  - For 326 Fire Ecology and Management (3 cr)
  - For 426 Global Fire Ecology and Management (3 cr)
  - For 526 Fire Ecology (3 cr)

- Ecology Course Group (2-4 cr):
  - For 330 Forest Soil and Canopy Processes (4 cr)
  - For 531 Invasion Biology (3 cr)
  - REM 429 Landscape Ecology (3 cr)
  - REM 440 Wildland Restoration Ecology (3 cr)
  - REM 459 Rangeland Ecology (2 cr)
  - REM 460 Integrating GIS and Field Studies in Rangelands (2 cr)

- Fuels and Fuels Management Course Group (2-3 cr):
  - For 427 Prescribed Burning Lab (3 cr)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>For 433</td>
<td>Fire and Fuel Modeling (2 cr)</td>
</tr>
<tr>
<td>For 450</td>
<td>Fire Behavior (2 cr)</td>
</tr>
<tr>
<td>For 451</td>
<td>Fuels Inventory and Management (3 cr)</td>
</tr>
</tbody>
</table>

Applied Tools and Analysis Course Group (3 cr):

- For 375: Introduction to Spatial Analysis for Natural Resource Management (3 cr)
- For 435 or For 535: Remote Sensing of Fire (3 cr)
- For 472 or REM 472: Remote Sensing of the Environment (4 cr)
- For 570: Advanced Remote Sensing Measurement Methods (3 cr)
- For 572: Spatial and Biophysical Modeling (3 cr)
- Geog 475: Intermediate GIS (3 cr)
- REM 407: GIS Application in Fire Ecology and Management (2 cr)

Management, Planning and Policy Course Group (2-4 cr):

- CSS 490: Wilderness and Protected Area Management (3 cr)
- CSS 573: Planning & Decision Making for Watershed Management (3 cr)
- For 424: Forest Dynamics and Management (4 cr)
- For 430: Forest Operations (3 cr)
- For 454: Air Quality, Pollution, and Smoke (3 cr)
- For 462: Watershed Science and Management (3 cr)
- For 484: Forest Policy and Administration (2 cr)
- For 529: Forest Ecosystem Analysis (3 cr)
- For 585: Natural Resources Policy Analysis (2 cr)
- REM 456: Integrated Rangeland Management (3 cr)
- WLF 492: Wildlife Management (4 cr)

**Electives to total 15 for the certificate**
Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Fire Core (8 cr)
- For 526  Fire Ecology (3 cr)
- FOR 546  Science Synthesis and Communication (3 cr)
- FOR 587  Wildland Fire Policy (2 cr)

Fire Ecology Course Group (3 cr):
- For 326  Fire Ecology and Management (3 cr)
- For 426  Global Fire Ecology and Management (3 cr)
- For 526  Fire Ecology (3 cr)

Ecology & Management Course Group (2-34 cr):
- REM 507  Landscape and Habitat Dynamics (3 cr)
- For 531  Invasion Biology (3 cr)
- REM 429  Landscape Ecology (3 cr)
- REM 440  Wildland Restoration Ecology (3 cr)
- REM 459  Rangeland Ecology (2 cr)
- For 529  Forest Ecosystem Analysis (3 cr)
- For 427  Prescribed Burning Lab (3 cr)
- FOR 557  Advanced Fire Behavior (3 cr)
- For 451  Fuels Inventory and Management (3 cr)

Fuels and Fuels Management Course Group (2-3 cr):
- For 427  Prescribed Burning Lab (3 cr)
- For 433  Fire and Fuel Modeling (2 cr)
- For 450  Fire Behavior (2 cr)
- For 451  Fuels Inventory and Management (3 cr)

Applied Tools and Analysis Course Tools & Technology Group (3-24 cr):
- For 435  or For 535  Remote Sensing of Fire (3 cr)
- For 472  or REM 472  Remote Sensing of the Environment (4 cr)
- REM 407  GIS Application in Fire Ecology and Management (2 cr)

Management, Planning and Policy Course Group (2-3 cr):
- CSS 573  Planning & Decision Making for Watershed Management (3 cr)
- FOR 584  Natural Resource Policy Development (3 cr)
- REM 456  Integrated Rangeland Management (3 cr)
- WLF 492  Wildlife Management (4 cr)
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 which may be completed via distance education.

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 be completed via distance education? | Yes** | X | No |
| **If Yes, can 100% of the curricular requirements of this program be completed via distance education? | Yes | X | No |

*Note: Programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

**Geographical Area Availability**

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

| Moscow | X |
| Coeur d'Alene | X |
Boise* X
Idaho Falls* X
Other* ** X Location(s): Everywhere – certificate can be completed online

*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 for additional information.

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

Rationale and Assessment Information

Rationale for approval of this request; include an explanation of how the department will manage the added workload of this new course and any relevant assessment information that applies to this course:

In the existing graduate certificate > 50% of its requirements can already be achieved via distance education.

Following program and curricula review by an employer’s summit and other stakeholder meetings, we are seeking to make the graduate certificate more accessible to students seeking a holistic understanding of fires role in the environment. These changes are made to (1) ensure that students can either complete the certificate either 100% online, (2) remove several undergraduate courses to put emphasis on graduate level education, (3) remove dormant course or courses that are not directly relevant to the degree, (4) add additional online graduate courses that have been recently developed, and (5) align the graduate certificate with the Fire Ecology and Management option in the online Masters of Natural Resources to better enable students to feed into that MS program.

These changes should not change faculty workload as existing faculty and courses are involved.

Office of the Registrar Information

<table>
<thead>
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<th>Date Received by UCC Secretary:</th>
<th>10/09/2015</th>
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<tbody>
<tr>
<td>UCC Item Number:</td>
<td>16-026a</td>
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<tr>
<td>UCC Approval Date:</td>
<td>01/25/2016</td>
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<tr>
<td>General Curriculum Report Number:</td>
<td>282</td>
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