Ecological Management and Restoration

(College of Agricultural and Environmental Sciences)

Faculty. See Plant Sciences, on page 476.

The Major Program

This major is designed for students who are interested in understanding how to manage and restore wildland and rangeland plant communities. Courses are selected to provide an interdisciplinary background that encompasses ecology, applied plant biology, and the social sciences. Students will acquire a core understanding of natural and managed ecosystems and how they function, interact with the natural environment, are connected with human society and social change, and are restored and managed.

The Program. The curriculum provides depth in the ecological and botanical sciences directed toward an integrated understanding of how communities and ecosystems function and how this knowledge assists in their management and restoration. Courses in environmental policy and law expose the students to the social drivers and constraints of ecosystem management. All students gain practical experience through practical field courses and a required internship. Students may also pursue an Honors thesis in their senior year.

Career Alternatives. Graduates from this program are prepared to pursue a wide range of careers, including positions in ecological restoration and ecosystem management; rangeland and reserve management; environmental consulting; public, private, or non-profit agencies concerned with restoration and natural resource management; Cooperative Extension; teaching; information and communication services. Graduates are qualified to pursue advanced studies in fields such as ecology, agroecology, environmental studies, geography or weed science.

B.S. Major Requirements:

<table>
<thead>
<tr>
<th>Preparatory Subject Matter</th>
<th>51-61</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences 1A, 1B, 1C or 2A, 2B, 2C</td>
<td>14-15</td>
</tr>
<tr>
<td>Chemistry 2A, 2B, 2C</td>
<td>10</td>
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<tr>
<td>Physics 2A, 2B, 2C</td>
<td>10</td>
</tr>
<tr>
<td>Mathematics 1A, 1B, 1C</td>
<td>10</td>
</tr>
<tr>
<td>Mathematics 2A, 2B, 2C</td>
<td>10</td>
</tr>
<tr>
<td>Plant Sciences 1A, 1B, 1C</td>
<td>10</td>
</tr>
<tr>
<td>Plant Sciences 1A, 1B, 1C</td>
<td>10</td>
</tr>
<tr>
<td>Soil Science 100</td>
<td>5</td>
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<tr>
<td>Plant Sciences 101 or Environmental Science and Policy 1</td>
<td>5</td>
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</tbody>
</table>

Depth Subject Matter | 60-80

Plant Sciences 140 or one from each of these two lists: 

- Plant Sciences 150 or Soil Science 109, Hydrology 110 or 124
- Environmental Science and Management 123

- Environmental Science and Management 141

- Environmental Science and Management 142 or Entomology 107 or Soil Science 112 or other course chosen in consultation with an advisor

- Landscaping Architecture 180F or Plant Sciences 163

- Environmental Horticulture 102 or Plant Biology 111 or Plant Sciences 157 or 158

- Environmental Science and Policy 160 or 161 or 172 or 179 and 179, 3-5

- Internship, Plant Sciences 192                                   2

Total Units for the Major .............................. 111-141

Major Adviser. T. P. Young

Advising Center for the major, including peer advising, is located in 1220 Plant and Environmental Sciences 530-752-1715

Ecology (A Graduate Group)

S.P. Lawler, Ph.D., Chairperson of the Group


Faculty

- Gwen Arnold, Ph.D., Assistant Professor
- Heidi L. Ballard, Ph.D., Associate Professor (School of Education)
- Marissa L. Baskett, Ph.D., Associate Professor (Environmental Science and Policy)
- Alison M. Berry, Ph.D., Professor (Plant Sciences)
- Robert L. Bettinger, Ph.D., Professor (Anthropology)
- Monique Borgerhoff Mulder, Ph.D., Professor (Anthropology)
- Louis W. Botofsky, Ph.D., Professor (Wildlife, Fish, and Conservation Biology)
- Walter M. Boyce, Ph.D., Professor (Pathology, Microbiology, and Immunology)
- Patrick H. Brown, Ph.D., Professor (Plant Sciences)
- Mary Cademasso, Ph.D., Associate Professor (Plant Sciences)
- James Carey, M., Professor (Entomology)
- Tim Caro, Ph.D., Professor (Wildlife, Fish, and Conservation Biology)
- Edward P. Caswell-Chen, Ph.D., Professor (Nematology)
- Ernest S. Chang, Ph.D., Professor (Bodega Marine Laboratory)
- Thomas Coombs-Hahn, Ph.D., Professor (Neurobiology, Physiology, and Behavior)
- Anthony V. Correll, Ph.D., Associate Professor (Entomology)
- Howard V. Cornell, Ph.D., Professor Emeritus (Environmental Science and Policy)
- Margaret Crofoot, Ph.D., Assistant Professor (Anthropology)
- Randy A. Dahlgren, Ph.D., Professor (Plant Sciences)
- Christann M. Darwent, Ph.D., Associate Professor (Entomology)
- Christian M. Darwent, Ph.D., Associate Professor (Animal Science)
- John M. Eldey, Ph.D., Professor (Wildlife, Fish, and Conservation Biology)
- Jonathan Eisen, Ph.D., Professor (Evolution and Ecology)
- Deborah L. Elbroch, Ph.D., Professor (Wildlife, Fish, and Conservation Biology)
- Holly Ernest, D.V.M., Ph.D., Associate Professor
- Valerie T. Evener, Ph.D., Associate Professor (Plant Sciences)
- Ian C. Falloon, Ph.D., Assistant Professor (Water, Air, and Resource Sciences)
- Nann A. Fangue, Ph.D., Assistant Professor (Wildlife, Fish Conservation Biology)
- Y. Hossein Farzin, Ph.D., Assistant Professor (Agricultural and Resource Economics)
- Howard Ferris, Ph.D., Professor (Nematology)
- Albert Fischer, Ph.D., Professor (Plant Sciences)
- Janet E. Foley, Ph.D., Professor (WV: Epidemiology)
- Brian Gaylord, Ph.D., Associate Professor (Evolution and Ecology)
- Shu Geng, Ph.D., Professor (Plant Sciences)
- Paul Geps, Ph.D., Professor (Plant Sciences)
- Matthew E. Gilbert, Ph.D., Assistant Professor (Environmental Design)
- Steven E. Greco, Ph.D., Associate Professor (Environmental Policy)
- Richard Groeb, Ph.D., Professor (Evolution and Ecology)
- Susan L. Handy, Ph.D., Professor (Environmental Science and Policy)
- Susan Harrison, Ph.D., Professor (Environmental Science and Policy)
- Alan Hastings, Ph.D., Professor (Environmental Science and Policy)
- Robert Hjilmans, Ph.D., Associate Professor (Environmental Science and Policy)
- Tessa Hill, Ph.D., Associate Professor (Geology)
- Marcel Holyoak, Ph.D., Professor (Environmental Science and Policy)
- William Horwath, Ph.D., Professor (Land, Air, and Water Resources)
- Benjamin Z. Houlton, Ph.D., Assistant Professor (Land, Air, and Water Resources)
- Silas S. O. Hung, Ph.D., Professor (Animal Science)
- Louise E. Jackson, Ph.D., Professor (Land, Air and Water Resources)
- Marie A. Jasieniuk, Ph.D., Associate Professor (Plant Sciences)
- Yulang Jm, Ph.D., Associate Professor (Land, Air and Water Resources)
- Richard Karban, Ph.D., Professor (Entomology)
- Erminia Kebreab, Ph.D., Professor (Animal Science)
- Douglas A. Kelt, Ph.D., Professor (Wildlife, Fish, and Conservation Biology)
- Christine Krueger Johnson, Ph.D., Associate Professor (VM: Wildlife Health Center)
- Dietmar Kuelth, Ph.D., Associate Professor (Animal Science)
- Emilio A. Laca, Ph.D., Professor (Plant Sciences)
- John Largier, Ph.D., Professor (Environmental Science and Policy)
- Andrew M. Latimer, Ph.D., Assistant Professor (Plant Sciences)
- Sharon F. Lawler, Ph.D., Professor (Entomology)
- Edwin E. Lewis, Ph.D., Professor (Nematology)
- C. Y. Cynthia Lin, Ph.D., Associate Professor (Agricultural Economics, Environmental Science and Policy)
- Mark Lubell, Ph.D., Professor (Environmental Science and Policy)
- Andrew Marshall, Ph.D., Associate Professor (Anthropology)
- Brenda McCauley, Ph.D., Professor (VM: Population Health and Reproduction)
- Richard L. McElenes, Ph.D., Associate Professor (Anthropology)
- Michael R. Miller, Ph.D., Assistant Professor (Animal Science)
- Frank M. Millochener, Ph.D., Associate Professor (Animal Science)
- Steven G. Morgan, Ph.D., Professor (Environmental Science and Policy, Bodega Marine Laboratory)
- Peter B. Moyle, Ph.D., Professor (Wildlife, Fish, and Conservation Biology)
- Steven A. Nadler, Ph.D., Professor (Nematology)
- Gabrielle Nevitt, Ph.D., Professor (Neurobiology, Physiology, and Behavior)
- Debbie A. Niemier, Ph.D., Professor (Civil and Environmental Engineering)
- Gregory Pasternack, Ph.D., Professor (Land, Air, and Water Resources)
- Gail L. Patricelli, Ph.D., Assistant Professor (Evolution and Ecology)
- Kyaw Tha Paw U, Ph.D., Professor (Land, Air, and Water Resources)

Quarter Offered: [Fall, Winter, Spring, Summer] 2013-2016 offering in parenthesis.