Conservation Biology Undergraduate Certificate

The Certificate in Conservation Biology is a multidisciplinary program of study integrating theoretical and applied topics associated with conservation biology. The certificate is intended for undergraduate students with majors in biology or in any other field who wish to develop a specialization in conservation. The certificate is offered by the Department of Biology in cooperation with the departments of Anthropology, Economics, History, Philosophy, and Political Science. Building on a core curriculum, students can elect courses from these departments to complete their requirements. Regularly enrolled undergraduates at UMSL or individuals with baccalaureate degrees who wish to receive a Certificate in Conservation Biology are eligible to participate in the conservation certificate program. To participate, students should design their program in consultation with their regular academic advisor and the Biology faculty professor of record for the certificate program. Guidelines for admission to the certificate program are also available. Individuals with baccalaureate degrees who are interested in this certificate must apply to the university as unclassified undergraduates. The certificate requires completion of 21 credit hours, outlined below. Students should consult the Bulletin with regard to prerequisites for any of the courses listed here.

Core Courses

Biology
BIOL 2102 Ecology 3
BIOL 3202 Conservation Biology 3
BIOL 3203 Conservation Biology Laboratory 2
BIOL 4299 Practicum in Conservation 2

Electives
The remaining 11 credits must be selected from courses listed below. Five credits must be taken from within biology and 6 credits outside biology, from at least two departments.

Anthropology
ANTHRO 2120 Native Peoples of North America
ANTHRO 2132 Archaeology of North America
ANTHRO 3228 People and Plants

Biology
BIOL 4102 Behavioral Ecology
BIOL 4182 Population Biology
BIOL 4192 Applications of Geographic Information Systems
BIOL 4245 Field Biology
BIOL 4402 Ornithology
BIOL 4403 Ornithology Laboratory
BIOL 4422 Entomology
BIOL 4423 Entomology Laboratory
BIOL 4501 Flowering Plant Families: Phylogeny and Diversification

Economics
ECON 4550 Natural Resource Economics
ECON 3500 The Economics of Government Spending and Taxation

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ECON 4160</td>
<td>Geospatial Analysis in the Social Sciences</td>
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<tr>
<td>ECON 4170</td>
<td>Fundamentals of Cost-Benefit Analysis</td>
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<td>History</td>
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<td>HIST 3000</td>
<td>Special Topics in History</td>
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<td>Political Science</td>
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<td>POL SCI 3480</td>
<td>Environmental Policy</td>
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<td>POL SCI 3850</td>
<td>International Organizations and Green</td>
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Total Hours 21

Learning Outcomes

Upon successful completion of the Conservation Biology Certificate program, students will be able to:

- Demonstrate knowledge of the principles of evolution, and wildlife and conservation biology and how they are used to manage wildlife and solve environmental problems
- Integrate aspects of social, political, and economic sciences to recognize and solve problems related to biological conservation
- Design conservation biology focused experiments and research protocols
- Collect field data using best-practice procedures
- Analyze conservation data and present evidence to scientific and lay audiences
- Synthesize conservation plans that incorporate traditional knowledge and diverse perspectives
- Apply research findings to the practical realities of managing regulated species