ECOLOGY AND CONSERVATION BIOLOGY - BS, FOREST RESOURCES TRACK

The Department of Ecology and Conservation Biology provides one of the most advanced educational opportunities available to prepare undergraduate students for leadership in the science and stewardship of terrestrial and aquatic ecological systems. The BS in ECCB degree will emphasize acquisition of fundamental ecological knowledge and its application to biodiversity conservation, environmental health, and the management of complex systems, such as interactions involving aspects of ecology from genes to ecosystems, landscape, hydrology, and climate. Four tracks (Ecology and Conservation Biology, Ecoinformatics, Forest Resources, and Vertebrate Zoology) are offered to provide flexibility in one's chosen career path.

Forest Resources Track
The Forest Resource track builds on the ecology and conservation foundation of the ECCB major core. As such, it prepares students for a broad array of career opportunities, from that of a professional forester or natural resources specialist with government natural resource agencies, forest resources companies, conservation and environmental organizations, environmental or forestry consulting firms, urban forestry companies and agencies, or pursuing a graduate degree in natural resources. Students obtaining a degree in Ecology and Conservation Biology gain an understanding of ecological concepts and practices, human-environmental interactions, and principles of conservation. Students in the ECCB Forest Resources track also learn important concepts in forest biology and ecology, assessment, and management and are exposed to exciting areas of increasing importance such as climate change, forest fire management, remote sensing, forest insects and diseases, and forest genetics. Students may use free electives to broaden their experience outside of natural resources or to add additional courses of interest within the other ECCB tracks, including Education Abroad.

Program Requirements

<table>
<thead>
<tr>
<th>First Year</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
</tr>
<tr>
<td>BIOL 111</td>
<td>Introductory Biology I</td>
</tr>
<tr>
<td>ECCB 101</td>
<td>Introduction to Ecology and Conservation Biology</td>
</tr>
<tr>
<td>MATH 140</td>
<td>Mathematics for Business and Social Sciences</td>
</tr>
<tr>
<td>ECCB 205</td>
<td>Fundamentals of Ecology</td>
</tr>
<tr>
<td>General elective 1</td>
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<td><strong>Semester Credit Hours</strong></td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>BIOL 112</td>
<td>Introductory Biology II</td>
</tr>
<tr>
<td>MATH 142</td>
<td>Business Calculus</td>
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<table>
<thead>
<tr>
<th>Second Year</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
</tr>
<tr>
<td>CHEM 119</td>
<td>Fundamentals of Chemistry I</td>
</tr>
<tr>
<td>ECCB 203</td>
<td>Forest Trees of North America</td>
</tr>
<tr>
<td>ECCB 302</td>
<td>Diversity and Evolution of Vertebrates</td>
</tr>
<tr>
<td>American history (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a>)</td>
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<td>Language, philosophy and culture (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture</a>)</td>
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<tr>
<td>Social and behavioral sciences (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences</a>)</td>
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<tr>
<td><strong>Semester Credit Hours</strong></td>
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<td><strong>Spring</strong></td>
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<tr>
<td>CHEM 222</td>
<td>Elements of Organic and Biological Chemistry</td>
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<tr>
<td>ECCB 215</td>
<td>Fundamentals of Ecology–Laboratory</td>
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<tr>
<td>ECCB 304</td>
<td>Conservation Biology</td>
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<tr>
<td>ECCB 310</td>
<td>Forest Tree Physiology and Breeding</td>
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<tr>
<td>STAT 302</td>
<td>Statistical Methods</td>
</tr>
<tr>
<td>Government/Political science (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science</a>)</td>
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<td>Creative arts (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a>)</td>
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<td><strong>Third Year</strong></td>
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<tr>
<td>ECCB 309</td>
<td>Forest Ecology</td>
</tr>
<tr>
<td>ECCB 351</td>
<td>Geographic Information Systems for Resource Management</td>
</tr>
<tr>
<td>ECCB 403</td>
<td>Population and Community Ecology</td>
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<tr>
<td>SCSC 301</td>
<td>Soil Science</td>
</tr>
<tr>
<td>Communication (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication</a>)</td>
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<td><strong>Semester Credit Hours</strong></td>
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<td>AGEC 350</td>
<td>Environmental and Natural Resource Economics</td>
</tr>
<tr>
<td>ECCB 301</td>
<td>Diversity and Evolution of Plants</td>
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<tr>
<td>ECCB 303</td>
<td>Fire Ecology and Biogeochemistry</td>
</tr>
<tr>
<td>ECCB 324</td>
<td>Forest Measurements</td>
</tr>
<tr>
<td>Government/Political science (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science</a>)</td>
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<td><strong>Semester Credit Hours</strong></td>
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### Fourth Year

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ECCB 319</td>
<td>Principles of Forestry</td>
<td>3</td>
</tr>
<tr>
<td>ECCB 325</td>
<td>Field Studies in Forest Ecosystems</td>
<td>3</td>
</tr>
<tr>
<td>ECCB 400</td>
<td>Molecular Ecology</td>
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<tr>
<td>ECCB 444</td>
<td>Remote Sensing of the Environment</td>
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<tr>
<td>RWFM 436</td>
<td>Natural Resources Policy</td>
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<td><strong>Semester Credit Hours</strong></td>
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#### Spring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ECCB 307</td>
<td>Forest Protection</td>
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</tr>
<tr>
<td>ECCB 405</td>
<td>Forest Resource Assessment and Management</td>
<td>3</td>
</tr>
<tr>
<td>ECCB 485</td>
<td>Directed Studies</td>
<td>1</td>
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<tr>
<td>Communication (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication">link</a>)</td>
<td>3</td>
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<tr>
<td>General elective&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>3</td>
</tr>
<tr>
<td><strong>Semester Credit Hours</strong></td>
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<td><strong>13</strong></td>
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</tbody>
</table>

**Total Semester Credit Hours** 120

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<sup>1</sup> Select from any 100-499 course not used elsewhere.

<sup>2</sup> Graduation requirements include a requirement for 3 hours of International and Cultural Diversity ([link](http://catalog.tamu.edu/undergraduate/general-information/international-cultural-diversity-requirements/)) courses and 3 hours of Cultural Discourse ([link](http://catalog.tamu.edu/undergraduate/general-information/cultural-discourse-requirements/)) courses. A course satisfying a Core category, a college/department requirement, or a general elective can be used to satisfy this requirement.

Must make a grade of C or better in BIOL 111, BIOL 112, and all ECCB major core coursework (ECCB 101, ECCB 205, ECCB 301, ECCB 302, ECCB 303, ECCB 304, ECCB 400, ECCB 403, and ECCB 485).