**CALS Biology: Natural Science**

Choose a minimum of 21 credits, with one course from each of the following seven subgroups:

### Vertebrate Animal Biology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Typically Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS 3319C</td>
<td>Reproductive Physiology and Endocrinology in Domestic Animals</td>
<td>4</td>
<td>ANS 3006, BSC 2010 and 2010L</td>
<td>Fall, Spring</td>
</tr>
<tr>
<td>FAS 4202C</td>
<td>Biology of Fishes</td>
<td>4</td>
<td>BSC 2011 and 2011L</td>
<td>Fall</td>
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<tr>
<td>PCB 4723C</td>
<td>Physiology and Molecular Biology of Animals</td>
<td>5</td>
<td>BSC 2011 and CMM 2046 with C or better; PHY 2654 and PCB 3063 and PCB 4674 recommended</td>
<td>Fall, Spring</td>
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<tr>
<td>WIS 3401</td>
<td>Wildlife Ecology and Management</td>
<td>3</td>
<td>BSC 2011 and 2011L</td>
<td>Fall, Spring</td>
</tr>
<tr>
<td>WIS 3402</td>
<td>Wildlife of Florida</td>
<td>3</td>
<td>None</td>
<td>Spring</td>
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<tr>
<td>ZOO 3713C</td>
<td>Functional Vertebrate Anatomy</td>
<td>4</td>
<td>BSC 2011 and 2011L with C or better</td>
<td>Spring</td>
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<tr>
<td>ZOO 4307C</td>
<td>Vertebrate Biodiversity</td>
<td>4</td>
<td>BSC 2011 and 2011L with C or better</td>
<td>Fall</td>
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<tr>
<td>ZOO 4472C</td>
<td>Avian Biology</td>
<td>4</td>
<td>BSC 2011 and 2011L with C or better; PCB4674 recommended</td>
<td>Spring</td>
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### Invertebrate Animal Biology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>ENY 3005 and 3005L</td>
<td>Principles of Entomology and Laboratory</td>
<td>3</td>
<td>None</td>
<td>Fall, Spring, Sum C</td>
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<tr>
<td>ENY 4161</td>
<td>Insect Classification</td>
<td>3</td>
<td>ENY 3005 and 3005L</td>
<td>Fall, Spring, Sum C</td>
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<tr>
<td>ENY 4455C</td>
<td>Social Insects</td>
<td>3</td>
<td>None</td>
<td>Fall</td>
</tr>
<tr>
<td>ENY 4573</td>
<td>Beekeeping</td>
<td>3</td>
<td>Junior Standing</td>
<td>Fall, Spring, Sum C</td>
</tr>
<tr>
<td>ENY 4590C</td>
<td>Mosquito Identification</td>
<td>3</td>
<td>Junior Standing</td>
<td>Spring</td>
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<tr>
<td>ENY 4592</td>
<td>Mosquito Biology</td>
<td>3</td>
<td>Junior Standing</td>
<td>Fall</td>
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<tr>
<td>NEM 3002</td>
<td>Principles of Nematology</td>
<td>3</td>
<td>None</td>
<td>Spring</td>
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<tr>
<td>ZOO 4205C</td>
<td>Invertebrate Biodiversity</td>
<td>4</td>
<td>BSC 2011 and 2011L with C or better</td>
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### Plant Biology

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BOT 2011C</td>
<td>Plant Diversity</td>
<td>4</td>
<td>BSC 2005 or BSC 2010 or BOT 2010C</td>
<td>Spring</td>
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<tr>
<td>BOT 2710C</td>
<td>Practical Plant Taxonomy</td>
<td>3</td>
<td>None</td>
<td>Fall</td>
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<tr>
<td>BOT 3115C</td>
<td>Local Flora of North Florida</td>
<td>3</td>
<td>None</td>
<td>Fall, Spring, Sum B</td>
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<tr>
<td>BOT 3503</td>
<td>Physiology and Molecular Biology of Plants</td>
<td>3</td>
<td>(BSC 2005 or BSC 2010 or BOT 2010C) and CMM2046 and 2046L</td>
<td>Spring</td>
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<tr>
<td>BOT 4851C</td>
<td>Medical and Forensic Plant Biology</td>
<td>3</td>
<td>BSC 2011 with B or better</td>
<td>Fall</td>
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<tr>
<td>FNR 3131C</td>
<td>Dendrology/Forest Plants</td>
<td>3</td>
<td>Refer to department</td>
<td>Fall</td>
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<tr>
<td>HOS 3305</td>
<td>Introduction to Plant Molecular Biology</td>
<td>3</td>
<td>APR 2150 or BOT 2010C or BSC 2010</td>
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<tr>
<td>HOS 4304</td>
<td>Horticultural Physiology</td>
<td>3</td>
<td>BOT 2010C or BSC 2010</td>
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### Geology and Soils

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<th>Credits</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>GLY 2010C</td>
<td>Physical Geology</td>
<td>4</td>
<td>None</td>
<td>Fall, Spring, Sum C</td>
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<tr>
<td>GLY 2030C</td>
<td>Environmental and Engineering Geology</td>
<td>3</td>
<td>None</td>
<td>Fall, Sum B</td>
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<tr>
<td>GLY 2038</td>
<td>Sustainability and the Changing Earth</td>
<td>3</td>
<td>None</td>
<td>Fall</td>
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<tr>
<td>SWS 3022</td>
<td>Introduction to Soils in the Environment</td>
<td>3</td>
<td>None</td>
<td>Fall, Spring</td>
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<tr>
<td>SWS 4223</td>
<td>Environmental Biogeochemistry</td>
<td>3</td>
<td>(BSC 2005 and 2005L) or (BSC 2010 and 2010L) and CMM 2045 and 2045L</td>
<td>Spring</td>
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### Water and Wetlands

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>AOM 4643</td>
<td>Environmental Hydrology: Principles and Issues</td>
<td>3</td>
<td>None</td>
<td>Fall</td>
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<tr>
<td>FNR 4343C</td>
<td>Forest Water Resources</td>
<td>3</td>
<td>SWS 3022 and 3022L</td>
<td>Spring</td>
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<tr>
<td>GLY 3882C</td>
<td>Hydrogeology and Human Affairs</td>
<td>3</td>
<td>Junior Standing</td>
<td>Fall</td>
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<tr>
<td>SWS 4207</td>
<td>Sustainable Agricultural and Urban Land Management</td>
<td>3</td>
<td>SWS 3022 or Instructor permission</td>
<td>Fall</td>
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<tr>
<td>SWS 4223</td>
<td>Soil and Water Conservation</td>
<td>3</td>
<td>None</td>
<td>Summer C</td>
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<td>SWS 4244</td>
<td>Wetlands</td>
<td>3</td>
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<tr>
<td>SWS 4245</td>
<td>Water Resource Sustainability</td>
<td>3</td>
<td>None</td>
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<tr>
<td>WIS 4443C</td>
<td>Wetland and Wildlife Ecology</td>
<td>4</td>
<td>WIS 3401</td>
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### General Ecology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>ALS 3153</td>
<td>Agricultural Ecology</td>
<td>3</td>
<td>None</td>
<td>Fall, Spring</td>
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<tr>
<td>FOR 3153C</td>
<td>Forest Ecology</td>
<td>3</td>
<td>None</td>
<td>Fall</td>
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<tr>
<td>PCB 3034C</td>
<td>Introduction to Ecology</td>
<td>4</td>
<td>BSC 2005 or BSC 2010 or BOT 2010C</td>
<td>Fall, Spring</td>
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<tr>
<td>PCB 3601C</td>
<td>Plant Ecology</td>
<td>3</td>
<td>BSC 2005 or BSC 2010 or BOT 2010C</td>
<td>Spring</td>
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<tr>
<td>PCB 4043C</td>
<td>General Ecology</td>
<td>4</td>
<td>BSC 2011 and 2011L with C or better</td>
<td>Fall</td>
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<tr>
<td>WIS 3404</td>
<td>Natural Resource Ecology</td>
<td>3</td>
<td>BSC 2011</td>
<td>Fall</td>
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### Human Ecology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Typically Offered</th>
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<tbody>
<tr>
<td>ANT 2402</td>
<td>Anthropology of Sustainability</td>
<td>3</td>
<td>None</td>
<td>Spring</td>
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<tr>
<td>ANT 2410</td>
<td>Cultural Anthropology</td>
<td>3</td>
<td>None</td>
<td>Fall, Spring, Sum B</td>
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<tr>
<td>ANT 2700</td>
<td>Intro to Applied Anthropology</td>
<td>3</td>
<td>None</td>
<td>Fall</td>
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<tr>
<td>ANT 4114</td>
<td>Principles of Archaeology</td>
<td>3</td>
<td>ANT 2140 or ANT 3141</td>
<td>Spring</td>
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<tr>
<td>ANT 4403</td>
<td>Environment and Cultural Behavior</td>
<td>3</td>
<td>None</td>
<td>Fall, Sum B</td>
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<tr>
<td>ENY 4020</td>
<td>Ecology of Vector-Borne Disease</td>
<td>2</td>
<td>BSC 2010</td>
<td>Fall</td>
</tr>
<tr>
<td>WIS 4523</td>
<td>Human Dimensions of Natural Resource Conservation</td>
<td>3</td>
<td>WIS 3401 or WIS 4554</td>
<td>Fall</td>
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