

# ECOLOGY AND CONSERVATION BIOLOGY - BS, ECOLOGY AND CONSERVATION BIOLOGY TRACK

## Program Requirements

### First Year

|                               |  | Semester<br>Credit<br>Hours |
|-------------------------------|--|-----------------------------|
| <b>Fall</b>                   |  |                             |
| BIOL 111                      | Introductory Biology I                           | 4                           |
| ECCB 101                      | Introduction to Ecology and Conservation Biology | 1                           |
| ECCB 205                      | Fundamentals of Ecology                          | 3                           |
| MATH 140                      | Mathematics for Business and Social Sciences     | 3                           |
| General elective <sup>1</sup> |  | 2                           |
| <b>Semester Credit Hours</b>  |  | <b>13</b>                   |

### Spring

|   |                         |           |
|---|-------------------------|-----------|
| BIOL 112  | Introductory Biology II | 4         |
| MATH 142  | Business Calculus       | 3         |
| 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> ) <sup>2</sup>                                       |                         | 3         |
| 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> ) <sup>2</sup> |                         | 3         |
| 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> ) <sup>2</sup>     |                         | 3         |
| <b>Semester Credit Hours</b>  |                         | <b>16</b> |

### Second Year

|   |  | Semester<br>Credit<br>Hours |
|---|--|-----------------------------|
| <b>Fall</b>   |  |                             |
| CHEM 119  | Fundamentals of Chemistry I            | 4                           |
| ECCB 302  | Diversity and Evolution of Vertebrates | 3                           |
| 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> ) <sup>2</sup> |  | 3                           |
| 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> ) <sup>2</sup>          |  | 3                           |
| 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> ) <sup>2</sup>          |  | 3                           |
| <b>Semester Credit Hours</b>  |  | <b>16</b>                   |

### Spring

|          |  |   |
|----------|--|---|
| CHEM 222 | Elements of Organic and Biological Chemistry | 3 |
| ECCB 215 | Fundamentals of Ecology--Laboratory          | 1 |
| ECCB 304 | Conservation Biology                         | 3 |

|   |                     |           |
|---|---------------------|-----------|
| STAT 302  | Statistical Methods | 3         |
| 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> ) <sup>2</sup>  |                     | 3         |
| 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> ) <sup>2</sup> |                     | 3         |
| <b>Semester Credit Hours</b>  |                     | <b>16</b> |

### Third Year

|   |  | Semester<br>Credit<br>Hours |
|---|--|-----------------------------|
| <b>Fall</b>   |  |                             |
| Select one of the following:  |  | 4                           |
| CHEM 120  | Fundamentals of Chemistry II   |                             |
| GEOL 101 & GEOL 102   | Principles of Geology and Principles of Geology Laboratory               |                             |
| OCNG 251 & OCNG 252   | The Blue Planet - Our Oceans and The Blue Planet - Our Oceans Laboratory |                             |
| PHYS 201  | College Physics  |                             |
| SCSC 301  | Soil Science   |                             |
| <b>Ecosystem</b>  |  |                             |
| Select one of the following:  |  | 3                           |
| ECCB 309  | Forest Ecology   |                             |
| ECCB 320  | Ecosystem Restoration and Management                                     |                             |
| ECCB 416  | Fire Ecology and Natural Resource Management                             |                             |
| RWFM 404  | Aquatic Ecosystems   |                             |
| 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> ) <sup>2</sup> |  | 3                           |
| Ecology practice <sup>3</sup>   |  | 3                           |
| General elective <sup>1</sup>   |  | 3                           |
| <b>Semester Credit Hours</b>  |  | <b>16</b>                   |

### Spring

|                               |                                   |           |
|-------------------------------|-----------------------------------|-----------|
| ECCB 285                      | Directed Studies                  | 1         |
| ECCB 301                      | Diversity and Evolution of Plants | 3         |
| ECCB 303                      | Fire Ecology and Biogeochemistry  | 3         |
| ECCB 400                      | Molecular Ecology                 | 3         |
| ECCB 403                      | Population and Community Ecology  | 3         |
| Ecology practice <sup>4</sup> |                                   | 2         |
| <b>Semester Credit Hours</b>  |                                   | <b>15</b> |

### Fourth Year

|  |  | Semester<br>Credit<br>Hours |
|--|--|-----------------------------|
| <b>Fall</b>                                |  |                             |
| Biodiversity <sup>5</sup>                  |  | 3                           |
| Ecology practice <sup>4</sup>              |  | 3                           |
| Ecology practice <sup>6</sup>              |  | 3-4                         |
| Human-environment interaction <sup>7</sup> |  | 3                           |
| Human-environment interaction <sup>8</sup> |  | 3                           |
| <b>Semester Credit Hours</b>               |  | <b>15</b>                   |

### Spring

|                              |                               |     |
|------------------------------|-------------------------------|-----|
| ECCB 485                     | Directed Studies              | 1   |
| <b>Individual Function</b>   |                               |     |
| Select one of the following: |                               | 3-4 |
| BESC 401                     | Bioenvironmental Microbiology |     |
| BIOL 318                     | Chordate Anatomy              |     |

|  |                                     |            |
|--|-------------------------------------|------------|
| ECCB 307                                   | Forest Protection                   |            |
| ECCB 310                                   | Forest Tree Physiology and Breeding |            |
| ECCB 422                                   | Behavioral Ecology                  |            |
| ECCB 448                                   | Fish Ecophysiology                  |            |
| ENTO 306                                   | Insect Structure and Function       |            |
| HORT 313                                   | Introduction to Plant Physiology    |            |
| Biodiversity <sup>5</sup>                  |                                     | 3          |
| Human-environment interaction <sup>9</sup> |                                     | 3          |
| General elective <sup>1</sup>              |                                     | 1-3        |
| <b>Semester Credit Hours</b>               |                                     | <b>13</b>  |
| <b>Total Semester Credit Hours</b>         |                                     | <b>120</b> |

<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 (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/>) courses and 3 hours of Cultural Discourse (<http://catalog.tamu.edu/undergraduate/general-information/degree-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.

<sup>3</sup> Select from ECCB 300/ENTO 300, ECCB 314, ECCB 316, ECCB 324, ECCB 417, ECCB 446, ECCB 450/ENTO 450, ECCB 451/ENTO 451, ECCB 462, ECCB 484, ECCB 485, ECCB 491; RWF 325, RWF 400/ ECCB 452, RWF 408, RWF 410, RWF 485.

<sup>4</sup> Select from ECCB 300/ENTO 300, ECCB 314, ECCB 316, ECCB 324, ECCB 351, ECCB 406/GEOG 462, ECCB 407, ECCB 417, ECCB 444, ECCB 446, ECCB 450/ENTO 450, ECCB 451/ENTO 451, ECCB 462, ECCB 484, ECCB 485, ECCB 491; PHYS 201, PHYS 202; RWF 325, RWF 400/ECCB 452, RWF 408, RWF 410, RWF 485; STAT 307.

<sup>5</sup> Select from BESC 204; ECCB 203, ECCB 311, ECCB 312, ECCB 313, ECCB 315, ECCB 401, ECCB 402; ENTO 201; RWF 302.

<sup>6</sup> Select from ECCB 351, ECCB 406/GEOG 462, ECCB 407, ECCB 444; PHYS 201, PHYS 202, STAT 307.

<sup>7</sup> Select from ECCB 319, ECCB 420; RWF 301, RWF 314, RWF 443, RWF 447, RWF 470.

<sup>8</sup> Select from AGE 350; ECCB 308, ECCB 318/RWF 318. ECCB 319, ECCB 405, ECCB 420, ECCB 460/RPTS 460; RWF 301, RWF 308, RWF 314, RWF 436, RWF 443, RWF 447, RWF 470.

<sup>9</sup> Select from AGE 350; ECCB 308, ECCB 318/RWF 318, ECCB 405, ECCB 460/RPTS 460; RWF 308, RWF 436.

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.)