WILDLIFE & CONSERVATION BIOLOGY

College of the Environment and Life Sciences (CELS)

Department: Natural Resources Science, 401-874-2026, http://www.nrs.uri.edu
Credits: 120

The Major: Students enrolled in the Wildlife & Conservation Biology major study a combination of the natural sciences and principles of managing wildlife populations and their habitats. This major is one of very few in the United States that fulfills the educational requirements for certification as an Associate Wildlife Biologist by The Wildlife Society, the international organization for wildlife professionals. This major also provides an excellent foundation for a career as a wildlife biologist with the federal government or graduate school.

Careers: Graduates of this major find employment with various state or federal agencies (such as the U.S. Fish and Wildlife Service, Park Service, or Forest Service, or Rhode Island Department of Environmental Management); with consulting firms; and with non-government organizations. Wildlife researchers work on habitat requirements of individual wildlife species and analyze the effects of such factors as pesticides, hunting, predation and land use on wildlife populations and their habitats. Wildlife managers operate refuges, regulate hunting and trapping seasons, manage public lands for the benefit of wildlife, and advise private landowners regarding wildlife management. Some wildlife biologists work for consulting firms that assess the environmental impact of proposed developments; others work in regulating land use in wetlands and coastal zones; still others teach in colleges, environmental education centers, and public schools.

Transfer out of UC: Must have completed at least 24 credits, minimum GPA of 2.00, and received permission from the UC Major Advisor.

The following is an example of the typical course schedule for the first 4 semesters for a student majoring in Wildlife and Conservation Biology. These are recommended course selections for WCB majors in University College; there will be variation based on course availability and schedule restraints. Some classes are not offered every semester. It is important to plan ahead and consult with your advisor to allow yourself time to enroll in the classes you wish to take.

<table>
<thead>
<tr>
<th>Semester I (Fall)</th>
<th>Semester II (Spring)</th>
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<tbody>
<tr>
<td>NRS 100 Natural Resource Conservation.. 3</td>
<td>NRS 223 Conservation Biology ..............4</td>
</tr>
<tr>
<td>NRS 101 Freshman in NRS ....................... 1</td>
<td>BIO 102, 104 Principles of Biology II ........4</td>
</tr>
<tr>
<td>URI 101 Freshman at URI ....................... 1</td>
<td>General Education (A, L, or FC) or ........ 3</td>
</tr>
<tr>
<td>BIO 101,103 Principles of Biology I.......... 4</td>
<td>WRT 104, 105 or 106 Composition ........... 3</td>
</tr>
<tr>
<td>MTH 111 Precalculus or 131* Calculus.... 3</td>
<td>CHM 103,105 General Chemistry, Lab.......... 4</td>
</tr>
<tr>
<td>COM 100 Communication Fundamentals 3</td>
<td>Total credits: 15</td>
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<td>Total credits: 15</td>
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<thead>
<tr>
<th>Semester III (Fall)</th>
<th>Semester IV (Spring)</th>
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</thead>
<tbody>
<tr>
<td>NRS 200 Seminar in NRS...............1</td>
<td>GEN ED (S, A, L, or FC) ..............3</td>
</tr>
<tr>
<td>NRS 212 Introduction to Soils........... 4</td>
<td>STA 308 Intro Statistics ............... 3</td>
</tr>
<tr>
<td>CHM 124,126 Organic Chemistry, Lab.... 4</td>
<td>CHM 124/126 Intro Organic Chem......... 3</td>
</tr>
<tr>
<td>GEN ED (S, A, L, or FC)...................3</td>
<td>EEC 105 Resource Economics............ 3</td>
</tr>
<tr>
<td>GEO 103 Understanding the Earth ....... 4</td>
<td>Free Elective......................... 3</td>
</tr>
<tr>
<td>Total credits: 16</td>
<td>Total credits: 15</td>
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*All students are required to take through MTH 131; some students may need to first take MTH 099 and/or MTH 111. A placement test is available in the math department.
WILDLIFE & CONSERVATION BIOLOGY, 120 CREDITS
College of the Environment & Life Sciences (CELS)
Department of Natural Resources Science

STUDENT__________________________   STUDENT ID _____________  ADVISOR__________________________

Wildlife Checksheet

General Education (36-37 credits)
Communications: COM 100:____ (3) or COM 110:____(4)
Writing: WRT 104, 105 or 106:____(3)
Math (MQ): (3 cr. from Basic Sciences below)
Natural Sci (N): (6 cr. Basic Sciences below)
Social Sci. (S): (3 cr. EEC 105 below), _______(3)
Letters (L): ______(3) ______(3)
Arts (A): ______(3) ______(3)
Foreign Lang (FC): ______(3) ______(3)
(Note: You need 15 cr. from L, A and FC;
See http://www.uri.edu/uc/pdf/2012-2013.pdf

Intro. to URI and NRS (2 credits)
URI 101:____ (1) NRS 101:____(1)

Intro. Professional Courses (19 credits): required:
NRS 100:____(3) NRS 212:____(4)
NRS 200:____(1) EEC 105:____(3)
NRS 223:____(4) GEO 103:____(4)

Basic Sciences (22 credits): required:
BIO 101:____(4)
BIO 102:____(4)
CHM 103, 105:____(4)
CHM 124, 126:____(4)
MTH 131:____(3)
STA 308:____(3) or STA 409:____(3)

(Note: 6 credits apply to Division N and 3 credits apply to Division MQ above.

Concentration (22-26 credits) at least 12 credits from NRS). All courses need a letter grade.
Required concentration courses:
NRS 305:____(3) NRS 309____(3)
NRS 406:____(4) or NRS 407____(3)
BIO 323:____(4)

Vertebrate Biology (6-8 credits): Select two courses from:
NRS 304:____(3)
NRS 324:____(4)
NRS 417:____(4)
BIO 366:____(3)

(Note: Must take either NRS 304, 324 or 417 if seeking TWS certification or federal biologist (GS-486 series)

Other Concentration courses, require a letter grade

Biometrics/Quantitative Sci (3-4 credits): Select one course from:
NRS 402/403:____(4)
Computer Sci >200 level:____(3)
NRS 516, or 522 or 533:____(3)

Optional: Graded Experiential Learning Courses:
NRS 491/492:____(3) NRS 497:____(6-12)
NRS 499:____(6)

Supporting Electives (21-25 credits; at least 6 credits must be NRS courses). Courses may be selected from the Concentration categories or from an approved list (see Page 4). Up to 12 credits of Letter Grade or S/U Experiential Learning Courses may be taken as Supporting Electives.

Highly recommended (Senior Colloquium):
NRS 480:____(2)

If seeking TWS certification or federal Wildlife Biologist job (GS-486 series):
Botany (1+): ________( )
Zoology (6): ________( ), ________ ( )

If seeking TWS certification (15 credits):
Ecology (3): BIO 262:____(4) or NRS 423:____(4)
Policy (6): _________( ), _________( )
Communications (6):_______( ), _________( )

Experiential Learning Courses S/U only (1-6 credits):
NRS 395:____(1-3) NRS 397:____(1-6)
NRS 495:____(3 ) NRS 498:____(1-3)

Other Supporting Electives:

Free Electives (6 credits)

Note: Credits for graduation must total at least 120 with a 2.0 GPA
# Wildlife and Conservation Biology

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<thead>
<tr>
<th>Freshman, Fall (15)</th>
<th>Freshman, Spring (15)</th>
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<tbody>
<tr>
<td>NRS 100: Natural Resource Conservation</td>
<td>NRS 223: Conservation Biology</td>
</tr>
<tr>
<td>NRS 101: Freshman Inquiry into NRS</td>
<td>BIO 102, 104: Principles of Biology II</td>
</tr>
<tr>
<td>URI 101: Traditions and Transformations: Freshman Seminar</td>
<td>WRT 104: Writing to Inform and Explain or WRT 105: Forms of College Writing or WRT 106: Intro to Research Writing or MTH 131: Applied Calculus</td>
</tr>
<tr>
<td>BIO 101, 103: Principles of Biology I</td>
<td>GEN ED (A, L, or FC)</td>
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<tr>
<td>COM 100: Communication Fundamentals</td>
<td>CHM 103, 105: Introductory Chemistry/ Lab</td>
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<td>MTH 111/131: Precalculus/ Applied Calculus</td>
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<th>Sophomore, Fall (15)</th>
<th>Sophomore, Spring (15)</th>
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<tbody>
<tr>
<td>NRS 200: Seminar in Natural Resources</td>
<td>CHM 124,126: Introduction to Organic Chemistry/ Lab</td>
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<tr>
<td>NRS Supporting Elective</td>
<td>GEN ED (A, L, or FC)</td>
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<tr>
<td>GEO 103: Understanding the Earth</td>
<td>EEC 105: Intro to Resource Economics</td>
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<tr>
<td>NRS 212: Introduction to Soil Science</td>
<td>STA 308: Introductory Statistics</td>
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<td>GEN ED (A, L, or FC)</td>
<td>Free Elective</td>
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<th>Junior, Fall (15)</th>
<th>Junior, Spring (15)</th>
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<tbody>
<tr>
<td>BIO 323: Field Botany and Taxonomy</td>
<td>NRS 305: Principles of Wildlife Ecology and Management</td>
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<tr>
<td>GEN ED (A, L, or FC)</td>
<td>NRS 309: Wildlife Management Techniques Lab</td>
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<tr>
<td>Free elective</td>
<td>NRS 324 or 402/403: Biology of Mammals or Wildlife Biometrics/Wildlife Biometrics Field Investigations</td>
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<tr>
<td>NRS Supporting Elective</td>
<td>NRS Supporting Electives</td>
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<tr>
<td>NRS Supporting Elective</td>
<td>GEN ED (A, L, or FC)</td>
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<tr>
<th>Senior, Fall (15)</th>
<th>Senior, Spring (15)</th>
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<tbody>
<tr>
<td>NRS 304 or BIO 366: Field Ornithology or Vertebrate Biology</td>
<td>NRS 406 or 407: Wetland Wildlife or Nongame and Endangered Species Management</td>
</tr>
<tr>
<td>NRS Supporting Elective</td>
<td>NRS 324 or 402/403: Biology of Mammals or Wildlife Biometrics/Wildlife Biometrics Field Investigations</td>
</tr>
<tr>
<td>NRS Supporting Elective</td>
<td>NRS 417: Herpetology</td>
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<tr>
<td>NRS Supporting Elective</td>
<td>NRS Supporting Elective</td>
</tr>
<tr>
<td>Free Elective</td>
<td>NRS Internship</td>
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### WILDLIFE & CONSERVATION BIOLOGY

#### APPROVED SUPPORTING ELECTIVE COURSES

A total of 21-25 credits may be taken from the following categories, with **at least 6 credits must be NRS courses**. The requirements in various categories are based on certification guidelines established by The Wildlife Society and federal government. These approved courses may change with availability. Other courses may be taken with approval of your advisor.

#### Botany (1+ credits; TWS and Federal Gov.)
- NRS 301 Forest Science 3
- NRS 423 Wetland Ecology 4
- NRS 445 Invasive Species 3
- NRS 485 Salt Marsh Ecology 3
- BIO 311 Plant Structure & Development 4
- BIO 321 Plant Diversity 3
- BIO 346 Plant Physiology 3
- BIO 352 Genetics 3
- BIO 418 Ecology of Marine Plants 4
- BIO 432 Mycology: Intro. to the Fungi 4
- BIO 454 Genetics Laboratory 3
- BIO 465 Biology of Algae 4

#### Ecology (3 credits; TWS certification)
- BIO 262 Intro to Ecology 4

#### Zoology (6 credits; TWS and Federal Gov.)
- AFS 352 General Genetics (= PLS 352) 3
- AFS 355 Genetics Lab (= PLS 355) 2
- NRS 304 Field Ornithology 3
- NRS 324 Mammalogy 4
- NRS 417 Herpetology 4
- NRS 505 Biology and Mange. of Mig. Birds 2
- NRS 534 Ecol. Fragmented Landscapes 2
- NRS 538 Physiological Ecology 3
- BIO 201 General Animal Physiology 3
- BIO 272 Intro Evolution 4
- BIO 286 Humans, Insects, and Disease 3
- BIO 302 Animal Development 3
- BIO 354 Invert. Zoology 3
- BIO 355 Marine Invert. of Southern N.E. 3
- BIO 360 Marine Biology 3
- BIO 366 Vertebrate Biology 3
- BIO 385 Introductory Entomology 3
- BIO 386 Introductory Entomology Lab 1
- BIO 404 Comparative Vertebrate Anatomy 4
- BIO 455 Marine Ecology 3
- BIO 457 Marine Ecology Lab 1
- BIO 458 Freshwater Ecology 4
- BIO 467 Animal Behavior 3

#### Resource Policy, Administration, Environmental Law, Law Enforcement or Land Use Planning (6 credits; TWS certification)
- CPL 434 Intro. to Environmental Law 3
- MAF 100 Human Use Marine Environment 3
- MAF 120 New England & The Sea 3
- MAF 220 Intro. Marine & Coastal Law 3
- MAF 312 Politics of the Ocean 3
- MAF 461 Coastal Zone Management 3
- MAF 471 Island Ecosystem Management 3
- MAF 484 Env. Anal. & Policy Coastal Mgt. 3
- NRS 300 Issues in Global Sustain.Dev. 3
- NRS 361 Watershed Hydrology and Mgt. 4
- NRS 401 Foundations in Restoration Ecology 4
- NRS 450 Soil Conservation & Land Use 4

#### Communications (6 credits- in addition to General Education requirements; TWS certification)
- JOR 110 Introduction to Mass Media 3
- JOR 220 Media Writing 3
- JOR 230 Intro. Radio & TV News 3
- JOR 340 Public Relations 3
- COM 202 Public Speaking 3
- COM 208 Debate 3
- COM 210 Persuasion: The Rhetoric of Influ. 3
- COM 251 Small Group Communication 3
- COM 310 Contemp. Oral Communication 3
- WRT 201 Argument. & Persuasive Texts 3
- WRT 235 Writing in Electronic Env. 3
- WRT 333 Scientific & Technical Writing 3
- WRT 533 Grad. Writing in Life Sciences 3

#### Other Supporting Electives:
- NRS 409 Concepts in GIS and Remote Sens. 3
- NRS 410 Fundamental of GIS lab 3
- NRS 415 Remote Sensing of the Environ. 3
- PHY 109/110 4

Courses may be selected from any of the above categories, from Concentration electives, from other 300- or 400-level NRS courses, or approval of advisor.
Experiential Learning Courses
Up to 12 credits of Experiential Learning Courses may be taken. A maximum of 10 credits of Letter Grade courses may be taken for Concentration credit; up to 12 credits of Letter Grade courses (in *italics* below) or S/U courses may be used as Supporting Electives.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NRS 395</td>
<td>Research Apprenticeship</td>
<td>1-3 credits/ea.</td>
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<tr>
<td>NRS 397</td>
<td>Internship</td>
<td>1-6 credits</td>
</tr>
<tr>
<td>NRS 491/492</td>
<td>Special Projects</td>
<td>1-3 credits/ea.</td>
</tr>
<tr>
<td>NRS 495</td>
<td>Advanced Apprenticeship</td>
<td>3 or 6 credits</td>
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<tr>
<td>NRS 497</td>
<td>Cooperative Internship</td>
<td>6-12 credits</td>
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<tr>
<td>NRS 498</td>
<td>Teaching Practicum</td>
<td>1-3 credits</td>
</tr>
<tr>
<td>NRS 499</td>
<td>Senior Thesis</td>
<td>6 credits</td>
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