Department: Natural Resources Science, 401-874-2495, http://www.nrs.uri.edu
UC Advisor: Dr. Thomas Husband, 401-874-2912, husband@mail.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 professionals in the wildlife field. It also provides an excellent foundation for graduate school. The URI Student Chapter of The Wildlife Society is heavily involved with career-related activities.

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 organizations like the Audubon Society and the National Wildlife Federation. 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.

**Semester I (Fall)**
- NRS 100 Natural Resource Conservation.. 3
- NRS 101 Freshman in NRS .................... 1
- URI 101 Freshman at URI .................... 1
- BIO 101 Principles of Biology I ............. 4
- MTH 111 Precalculus or 131* Calculus..... 3
- COM 100 Communication Fundamentals 3

**Total credits: 15**

**Semester III (Fall)**
- NRS 200 Seminar in NRS.................. 1
- NRS 212 Introduction to Soils ............... 3
- BIO 262 Ecology ............................ 3
- CHM 124,126 Organic Chemistry, Lab...... 4
- GEO 103 Understanding the Earth ........... 4
- General Education or MTH 131 ............. 3

**Total credits: 18**

**Semester II (Spring)**
- NRS 223 Conservation Biology ............ 4
- BIO 102 Principles of Biology II .......... 4
- General Education (A, L, or FC) ............ 3
- WRT 104, 105 or 106 Composition or
- MTH 131 Calculus ............................ 3
- CHM 103,105 General Chemistry, Lab...... 4

**Total credits: 17**

**Semester I (Fall)**
- NRS 100 Natural Resource Conservation.. 3
- NRS 101 Freshman in NRS .................... 1
- URI 101 Freshman at URI .................... 1
- BIO 101 Principles of Biology I ............. 4
- MTH 111 Precalculus or 131* Calculus..... 3
- COM 100 Communication Fundamentals 3

**Total credits: 15**

**Semester IV (Spring)**
- WRT 104, 105 or 106 or Gen. Educ ........ 3
- NRS 305 Wildlife Ecology & Mgt .......... 3
- NRS 309 Wildlife Field Techniques ......... 3
- EEC 105 Resource Economics ............... 3
- COM 100 or General Education ............. 3

**Total credits: 15**

*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.*
Requirements: 120 credits total, Bachelor of Science.

General Education (36 credits): All Category MQ (Mathematical & Quantitative Reasoning), N (Natural Sciences), and 3 cr. of S (Social Sciences) General Education requirements (12 cr.) are satisfied by courses taken as part of the major. Thus, to satisfy URI's General Education requirements, NRS students should take COM 100 or 110, and WRT 104, 105 or 106, 3 cr. of Category S, and then only select 15 credits of General Education courses from Category A (Fine Arts and Literature), L (Letters), or FC (Foreign Language/Culture). The URI Course Catalog (www.uri.edu/catalog/cataloghtml/) has a listing of all General Education courses.

Introductory Professional Courses (19 credits):
URI 101/NRS 101 Freshman Inquiry into URI and NRS
NRS 100 Natural Resources Conservation
NRS 200 Seminar in Natural Resources
NRS 212 Introduction to Soil Science
NRS 223 Conservation Biology
EEC 105 Introduction to Resource Economics
GEO 103 Understanding the Earth

Basic Sciences (26 credits; 9 applicable to General Education requirements):
BIO 101 Principles of Biology I
BIO 102 Principles of Biology II
BIO 262 Ecology
CHM 103, 105 General Chemistry, Lab
CHM 124, 126 Organic Chemistry, Lab
MTH 131 Basic Calculus I
STA 308 or 409 Statistics

Free Electives (6 credits)

Concentration (22-23 credits; must include at least 12 credits from NRS):

If seeking certification by The Wildlife Society
Required
NRS 305 Wildlife Ecology & Management
NRS 309 Wildlife Field Techniques
NRS 406 Wetland Wildlife Management
or 407 Nongame & Endangered Species Mgt.
BIO 323 Field Botany

Two of the following:
NRS 304 Field Ornithology
NRS 324 Biology of Mammals
BIO 366 Vertebrate Biology
BIO 467 Animal Behavior

Other Concentration Courses (9-10 cr. from an approved list available from the NRS Department. Letter Grade Experiential Learning Courses may be taken as Concentration Courses.)

And either:
NRS 402 & 403 Wildlife Biometrics
Or CSC 200 Computers for Science & Engineers
Or other approved quantitative science course

(continue to next page)
Supporting Electives (25-26 credits; must include at least 6 credits from NRS courses)
The following requirements are based on the requirements for certification established by The Wildlife Society. Other courses may be taken only with the approval of an advisor. We encourage students to take experiential learning courses in order to gain practical experience in addition to the extensive field and class work. Up to 12 credits of experiential learning courses may be taken (see box below).

**Category A: Botany** (3 credits)
- NRS 301 Forest Science 3
- NRS 445 Invasive Species 3
- NRS 423 Wetland Ecology 4
- BIO 311 Plant Structure & Development 4
- BIO 321 Plant Diversity 3
- BIO 346 Plant Physiology 3
- BIO 418 Ecology of Marine Plants 4
- BIO 432 Mycology: Intro. to the Fungi 4
- BIO 465 Biology of Algae 4
- BIO 524 Methods in Plant Ecology 3

**Category B: Zoology** (6 credits)
- AFS 352 General Genetics (=PLS 352) 3
- AFS 355 Genetics Lab (=PLS 355) 2
- NRS 532 Conservation Biology 2
- NRS 534 Ecol. Fragmented Landscapes 2
- NRS 538 Physiological Ecology 3
- BIO 201 General Animal Physiology 3
- BIO 203 Intro. Evolutionary Genetics 3
- BIO 205 Animal Diversity 3
- BIO 206 Pop. and Community Dynamics 3
- BIO 286 Humans, Insects, and Disease 3
- BIO 302 Animal Development 3
- BIO 304 Comparative Vertebrate Anatomy 4
- BIO 331 Parasitology 3
- BIO 345 Marine Env. Physiology 3
- BIO 350 Evolution 3
- BIO 355 Marine Invert. of Southern N.E. 3
- BIO 366 Vertebrate Biology 3
- BIO 385, 386 Introductory Entomology, Lab 3
- BIO 437 Fundamentals of Molecular Biol. 3
- BIO 441 Envr. Physiology of Animals 3
- BIO 455, 457 Marine Ecology, Lab 4
- BIO 458 Freshwater Ecology 4
- BIO 467 Animal Behavior 3

**Category C: Resource Policy, Environmental Law, Enforcement, Land Use Planning** (6 credits)
- 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 484 Env. Anal. & Policy Coastal Mgt. 3
- NRS 361 Watershed Hydrology and Mgt. 4
- NRS 401 Foundations in Restoration Ecology 3
- NRS 411 Population & Environmental Change 3
- NRS 414 Climate Change Science & Policy 3
- NRS 424 Wetlands & Land Use 4
- NRS 450 Soil Conservation & Land Use 3

**Category D: Communications** (6 credits - in addition to General Education requirements)
- NRS 480 Senior Colloquium 3
- JOR 110 Introduction to Mass Media 3
- JOR 220 Media Writing 3
- JOR 230 Intro. Radio & TV News 3
- JOR 321 Magaz. Art. & Feature Writing 3
- JOR 340 Public Relations 3
- COM 202 Public Speaking 3
- COM 210 Persuasion: The Rhetoric of Influ. 3
- COM 251 Small Group Communication 3
- COM 302 Advanced Public Speaking 3
- COM 310 Contemporary Oral Communication 3
- WRT 201 Argument & Persuasive Texts 3
- WRT 235 Writing in Electronic Environments 3
- WRT 333 Scientific & Technical Writing 3
- WRT 533 Grad. Writing in Life Sciences 3

**Other Supporting Electives:** (1-2 credits)
Courses selected from any of the above categories, from Concentration electives, from other 300- or 400-level NRS courses, or from the approved list on this page. The Senior Colloquium (NRS 480, 3 cr) is strongly recommended.

**Experiential Learning Courses:** Up to 12 credits of Experiential Learning Courses may be taken (less if seeking TWS Certification). A maximum of 6 credits of Letter Grade courses may be taken for Concentration credit; both Letter Grade courses (in italics below) and S/U courses may be used as Supporting Electives.

- NRS 395 Research Apprenticeship (1-3 credits/ea.)
- NRS 397 Internship (1-6 credits)
- NRS 491/492 Special Projects (1-3 credits/ea.)
- NRS 495 Advanced Apprenticeship (3 or 6 credits)
- NRS 497 Cooperative Internship (6-12 credits)
- NRS 498 Teaching Practicum (1-3 credits)
- NRS 499 Senior Thesis (6 credits)

**Note:** Concentration and Supporting Electives must total at least 45-46 credits. Also, total credits needed for graduation must equal 120.
### General Education (36 credits)
- **EC[D]:** COM 100 (3) or COM 110 (4)
- **ECw:** WRT 104, 105 or 106 (3)
- **MQ:** (3 cr. from Basic Sciences below)
- **N:** (6 cr. from Basic Sciences below)
- **S:** (6 cr. from NRS 100* and EEC 105 below)
- **L:** _____ (3) _____ (3)
- **A:** _____ (3) _____ (3)
- **FC:** _____ (3) _____ (3)

(Note: 15 cr. from L, A and FC)

### Intro. to URI and NRS (2 credits)
- URI 101 (1)
- NRS 101 (1)

### Intro. Professional Courses (17 credits)
- NRS 100 (3)
- NRS 212 (3)
- NRS 200 (1)
- EEC 105 (3)
- NRS 223 (3)
- GEO 103 (4)

### Basic Sciences (25 credits; 9 applicable to General Education requirements)*
- BIO 101 (4)
- BIO 102 (4)
- BIO 262 (3)
- CHM 103, 105 (4)
- CHM 124, 126 (4)
- MTH 131 (3)
- STA 308 (3) or STA 409 (3)

*Six credits apply to Division N and three credits apply to Division MQ above.

### Concentration (22-23 credits; must include at least 12 credits from NRS).
- NRS 305 (3)
- NRS 309 (3)
- NRS 406 (3) or NRS 407 (3)
- BIO 323 (4)

Other Concentration Courses (9-10 credits from an approved list available from NRS Dept):

- ______( ) ________( ) ________( )
- ______( ) ________( ) ________( )

### Supporting Electives (26-27 credits; at least 6 credits must be NRS courses). Courses may be selected from the Concentration categories or from an approved list (see back). Up to 12 credits of Letter Grade or S/U Experiential Learning Courses may be taken as Supporting Electives. Senior Colloquium (NRS 480, 2 cr.) is strongly recommended.

#### Note: if you are seeking certification by The Wildlife Society, Categories below must be completed (see back).

- **Botany (3):** ________( )
- **Zoology (6):** ________( )
- **Policy (6):** ________( )
- **Communications (6):** ________( )

Other Supporting Electives (5-6 credits):

- ________( ) ________( )

### Free Electives (6 credits)

- ________( ) ________( ) ________( )

#### Note: Concentration and Supporting Electives must total at least 49 credits. Credits for graduation must total at least 120.

*pending approval from CAC
WILDLIFE & CONSERVATION BIOLOGY

APPROVED SUPPORTING ELECTIVE COURSES

A total of 26-27 credits may be taken from the following categories. **At least 6 credits must be NRS courses.** The requirements in various categories are based on certification guidelines established by The Wildlife Society. These approved courses may change with availability. Other courses may be taken with approval of your advisor.

**Botany** (3 credits)
- NRS 301  Forest Science 3
- NRS 423  Wetland Ecology 4
- NRS 445  Invasive Species 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
- BIO 524  Methods in Plant Ecology 3

**Zoology** (6 credits)
- AFS 352  General Genetics (= PLS 352) 3
- AFS 355  Genetics Lab (= PLS 355) 2
- NRS 532  Conservation Biology 2
- NRS 534  Ecol. Fragmented Landscapes 2
- NRS 538  Physiological Ecology 3
- BIO 201  General Animal Physiology 3
- BIO 203  Intro. Evolutionary Genetics 3
- BIO 205  Animal Diversity 3
- BIO 206  Pop. and Community Dynamics 3
- BIO 286  Humans, Insects, and Disease 3
- BIO 302  Animal Development 3
- BIO 304  Comparative Vertebrate Anatomy 4
- BIO 331  Parasitology 3
- BIO 345  Marine Env. Physiology 3
- BIO 350  Evolution 4
- BIO 355  Marine Invert. of Southern N.E. 3
- BIO 366  Vertebrate Biology 3
- BIO 385  Introductory Entomology 3
- BIO 386  Introductory Entomology Lab 1
- BIO 437  Fundamentals of Molecular Biol. 3
- BIO 441  Envir. Physiology of Animals 3
- 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** (3 credits)
- 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 456  Polar Resources & Policy 3
- MAF 461  Coastal Zone Management 3
- MAF 471  Island Ecosystem Management 3
- MAF 484  Env. Anal. & Policy Coastal Mgt. 3
- NRS 361  Watershed hydrology and Mgt. 4
- NRS 401  Foundations in Restoration Ecology 3
- NRS 411  Population & Environmental Change 3
- NRS 414  Climate Change Science & Policy 3
- NRS 424  Wetlands & Land Use 4
- NRS 450  Soil Conservation & Land Use 3

**Communications** (6 credits- in addition to **General Education requirements**)
- 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 210  Persuasion: The Rhetoric of Influ. 3
- COM 251  Small Group Communication 3
- COM 302  Advanced Public Speaking 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:**
Courses may be selected from any of the above categories, from Concentration electives, or from other 300- or 400-level NRS courses.
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 Code</th>
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<th>Credits</th>
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<td>Research Apprenticeship</td>
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<td>Internship</td>
<td>1-6</td>
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