

College of Natural Resources and Environment  
Department of Fish and Wildlife Conservation  
Bachelor of Science in Fish and Wildlife Conservation  
Major in Wildlife Conservation (WLC)  
For students entering under UG Catalog 2021-2022

Minimum hours for degree is 120. A minimum cumulative GPA of 2.0 is required for all work applied to the major.

**Pathways Requirements (45 credits)**

**Concept 1f: Foundational Discourse (6 credits)**

- ENGL 1105 First-Year Writing (3)
- ENGL 1106 First-Year Writing (3)

**Concept 1a: Advanced/Applied Discourse (3 credits)**

- COMM 2004 Public Speaking (3)

**Concept 2: Critical Thinking in the Humanities (6 credits)**

- Concept 2 course: \_\_\_\_\_ (3)
- Concept 2 Ethics elective (3) (choose one):
  - FREC/LAR/NR 2554 Leadership for Global Sustainability (3)
  - PHIL 1304 Morality and Justice (3)
  - PHIL 2304 Global Ethics (3)

**Concept 3: Reasoning in the Social Sciences (6 credits)**

- Concept 3 course: \_\_\_\_\_ (3)
- Concept 3 Economics elective (3) (choose one):
  - AAEC 1005 or 1006 Economics of Food and Fiber Systems (3)
  - ECON 2005 or 2006 Principles of Economics (3)

**Concept 4: Reasoning in the Natural Sciences (6 credits)**

- BIOL 1105 Principles of Biology (3)
- BIOL 1106 Principles of Biology (3)

**Concept 5f: Foundational Quantitative and Computational Thinking (6 credits)**

- MATH 1025 Elementary Calculus (3)
- MATH 1026 Elementary Calculus (Pre: 1025) (3)

**Concept 5a: Advanced Quantitative and Computational Thinking (3 credits)**

- STAT 3615 Biological Statistics (Pre: MATH 1014 or MATH 1025 or MATH 1225 or MATH 1524 or ISC 1105) (3)

**Concept 6: Critique and Practice in Design and the Arts (6 credits)**

- Concept 6a course: \_\_\_\_\_ (3)
- Concept 6d course: \_\_\_\_\_ (3)

**Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)**

- Concept 7 course: \_\_\_\_\_ (3)

**Common Degree CORE Requirements (20-21 credits)**

- \_\_\_ BIOL 1115 Principles of Biology Laboratory (Pre: or Co: 1105) (1)
- \_\_\_ BIOL 1116 Principles of Biology Laboratory (Pre: or Co: 1106) (1)
- \_\_\_ BIOL 2704 Evolutionary Biology (Pre: (1005 or 1105 or 1205H or ISC 2105), (1006 or 1106 or 1206H)) (3)
- \_\_\_ FIW 2114 Principles of Fish and Wildlife Conservation (3)
- \_\_\_ FIW 4314 Conservation of Biological Diversity (Pre: 4414, 4434) (4) (Wildlife Majors) or FIW 4714 Fisheries Management (Pre: 3514) (4) (Fisheries Majors)
- \_\_\_ FIW 4414 Population Dynamics and Estimation (Pre: 2324) (3)
- \_\_\_ FIW 4464 Human Dimensions of Fisheries and Wildlife (Pre: 2114) (3)
- \_\_\_ NR 1234 FYE Natural Resources and Environment (3) – or - NR 2234 FSE for Transfer Students in CNRE (2)

**Additional Degree Requirements (15 credits)**

- \_\_\_ CHEM 1035 General Chemistry (Co: MATH 1025 or MATH 1225) (3)
- \_\_\_ CHEM 1036 General Chemistry (Pre: 1035 or 1055 or 1055H) (3)
- \_\_\_ CHEM 1045 General Chemistry Laboratory (Co: 1035) (1)
- \_\_\_ CHEM 1046 General Chemistry Laboratory (Pre: 1045 or 1065; Co: 1036) (1)
- \_\_\_ Experiential Learning Requirement (1) (choose one):  
(Department will process transaction when requirements have been met)  
FIW 2974 Independent Study (1-3)  
FIW 2994 Undergraduate Research (1-3)  
FIW 3964 Internship through Directed Field Study (1-3)  
FIW 4974 Independent Study (1-3)  
FIW 4994 Undergraduate Research (1-3)  
XXXX 3954 Study Abroad (1-3)
- \_\_\_ Legal Foundation Restricted Elective (3) (choose one):  
AAEC 3314 Environmental Law (3)  
FREC 4434 Natural Resource Policy (Pre: NR 4014 or FREC 4424 or ECON 4014) (3)  
UAP 3354 Introduction to Environmental Policy and Planning (3)  
UAP 4344 Law of Critical Environmental Areas (3)
- \_\_\_ Writing Restricted Elective (3) (choose one):  
ALCE 3624 Communicating Agriculture and Life Sciences in Writing (3)  
ENGL 3764 Technical Writing (Junior standing. Pre: 1106 or 1204H or COMM 1016) (3)  
ENGL 3774 Business Writing (Junior standing) (3)

**Major Requirements – 20 credits**

- \_\_\_ BIOL 3204 Plant Taxonomy (Pre: (1005 or 1105 or 1205H or ISC 2105), (1006 or 1106 or 1206H)) (3)
- \_\_\_ FIW 2314 Wildlife Biology (Pre: (BIOL 1105 or BIOL 1205H), (BIOL 1106 or BIOL 1106H)) (3)
- \_\_\_ FIW 2324 Wildlife Field Biology (3)
- \_\_\_ FIW 4214 Wildlife Field Techniques (Pre: 4414, STAT 3615) (3)
- \_\_\_ FIW 4434 Wildlife Habitat Ecology and Management (Pre: 2114) (3)

\_\_\_ FREC 2324 Dendrology Laboratory (1)

\_\_\_ Vertebrate Biology Restricted Elective (4credits - must include labs) (choose one):

BIOL 4404 Ornithology (Pre: 2804) (4)

FIW 4334 Mammalogy (Pre: BIOL 2704) (4)

FIW 4344 Herpetology (Pre: BIOL 2704 or BIOL 2704H) (4)

### **Additional Wildlife Conservation Requirements – 17-18 credits**

\_\_\_ FIW 4474 Wildlife Habitat Evaluation (Co: 4434) (1)

\_\_\_ Additional Vertebrate Biology Restricted Elective (4 credits - must include labs) (choose one):

BIOL 4404 Ornithology (Pre: 2804) (4)

FIW 4334 Mammalogy (Pre: BIOL 2704) (4)

FIW 4344 Herpetology (Pre: BIOL 2704 or BIOL 2704H) (4)

— Or —

BIOL/ENT 4354 Aquatic Entomology (Pre: (1005, 1006), (1015, 1016) or (1105, 1106, 1115, 1116)) (4)

FIW 4424 Ichthyology (4)

\_\_\_ Genetics (3) (choose one):

BIOL 2004 Genetics (Pre: (BIOL 1005 or BIOL 1105 or BIOL 1205H or ISC 2105) (BIOL 1006 or BIOL 1106 or BIOL 1206H), (CHEM 1036 or CHEM 1016 or CHEM 1036H or CHEM 1056H or ISC 2105) (3)

FIW/FREC 4324 Genetics of Natural and Managed Populations (Pre: BIOL 1105, 1106, (STAT 3005 or STAT 3615 or FREC 3214) (3)

\_\_\_ Geographic Information Systems Restricted Elective (3) (choose one):

FREC 4114 Information Technology for Natural Resources Management (Pre: FREC 2214 or GEOG 2314) (3)

FREC 4214 Forest Photogrammetry (Senior Standing) (3)

GEOG 2084 Principles of Geographic Information Systems (3)

GEOG 4354 Introduction to Remote Sensing (3)

\_\_\_ Ecology Restricted Elective (3) (choose one):

BIOL 2804 Ecology (Pre: BIOL 1005 or BIOL 1105 or BIOL 1205H or ISC 2105), (BIOL 1006 or BIOL 1106 or BIOL 1206H) (3)

FREC 3314 Forest Ecology and Silvics (Pre: (FREC 2314), (FREC 2214) (3)

FREC 3364 Environmental Silviculture (Pre: FREC 2324) (3)

\_\_\_ Physical Science Restricted Elective (3-4) (choose one):

CHEM 2514 Survey of Organic Chemistry (Pre: (1035 or 1055 or 1055H), (1036 or 1056 or 1056H), (1045 or 1065), (1046 or 1066)) (3)

CHEM 2535 Organic Chemistry (Pre: 1036 or 1056 or 1056H or ISC 1106 or ISC 1106) (3)

CSES 3114 Soils (Pre: CHEM 1036) (3) and CSES 3124 Soils Lab (1)

CSES 3134 Soils in the Landscape (3)

GEOS 1004 Introduction to Earth Science (3)

GEOS 3034 Oceanography (3)

PHYS 2205 General Physics (Pre: MATH 1016 or MATH 1016H or MATH 1025 or MATH 2015 or MATH 1026 or MATH 1205 or MATH 1205H or MATH 1525 or MATH 1225 or MATH 1535 or MATH 1225H ) (3)

PHYS 2206 General Physics (Pre: 2205 or 2205) (3)

**Foreign Language<sup>1</sup>**

\_\_\_ 2 years of one language in high school – or – FL 1105 and 1106 \_\_\_\_\_

**Free electives – 1-3 credits    Degree Total 120 credits**

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**Notes:**

**1. University Requirements—Foreign Language Policy**

A sequence of two (2) foreign language courses is required for graduation unless two (2) high school units of the same foreign language or six (6) transfer credit hours of foreign language have been earned. These credits do not count toward graduation. See catalog section on “Graduation Requirements”.

**2. Major Requirements**

To earn a B.S. degree in Wildlife Conservation, a student must pass the following courses, or their equivalents, with a **grade of C - or better**: BIOL 1105, BIOL 1106, BIOL 1115, BIOL 1116; CHEM 1035, CHEM 1036, CHEM 1045, CHEM 1046; MATH 1026, FREC 2324 and FIW 2114.

There are no hidden prerequisites on this check sheet; however, course requirements may change over time, and students should always check for prerequisites for classes they select.

Students should consult [www.fishwild.vt.edu/experiential\\_learning.html](http://www.fishwild.vt.edu/experiential_learning.html) for more details on how to fulfill the experiential learning requirement. Note that you will not receive credit for your experiential learning until **ALL** the documents related to the experience are completed and submitted, in addition to being registered for the experience. Students enrolling in FIW 2974, 3964, or 4974 should use the P/F option; FIW 2994 and 4994 may be taken P/F or A/F, XXXX 3954 must be taken A/F.

To remain in good standing, a student must achieve and maintain an overall and in-major cumulative GPA of at least 2.0. Courses used for the in-major GPA computation include all those designated as FIW, FREC, GEOG, NR, and SBIO. To graduate, a student must achieve an overall and in-major cumulative GPA of at least 2.0.

If you plan to apply for The Wildlife Society Associate Wildlife Biologist certification, be aware that all courses used in the certification application must be passed with a C- or better beginning with applications submitted in 2023.

3. In accordance with university guidelines, courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree (e.g., Pathways).

**4. Satisfactory Progress**

By the end of the semester in which they have attempted 60 hours (including transfer, advanced placement, advanced standing, and credit by examination), students must pass the courses (or their equivalents) listed in item number 2 above.