

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 student date of entry under UG Catalog 2023-2024

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) (choose one):

- ALCE 3634 Communicating Ag and Life Sciences in Speaking (3)
- 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 or MATH 1225 Calculus of a Single Variable (3 or 4 credits)
- MATH 1026 Elementary Calculus (Pre: 1025) or MATH 1226 Calculus of a Single Variable (Pre:1225) (3 or 4 credits)

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

- STAT 3615 Biological Statistics (Pre: MATH 1025 or MATH 1205 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: 2114) (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; requires department approval):
 - ___ 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)
 - ___ FIW 2514 Fish and Wildlife Conservation Policy (3)
 - ___ FREC 4434 Natural Resource Policy (Pre: NR/FOR 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

- ___ Plant Taxonomy (3) (Choose One)
 - ___ BIOL 3204 Plant Taxonomy (Pre: (1005 or 1105 or 1205H or ISC 2105), (1006 or 1106 or 1206H)) (3)
 - ___ HORT 3324 Herbaceous Landscape Plants (Pre: 2244) (3)
 - ___ HORT 3326 Woody Landscape Plants (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 (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)

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)

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 FOR/FREC 3214) (3)

___ Geographic Information Systems Restricted Elective (3) (choose one):

FREC 4114 Information Technology for Natural Resources Management (Pre: FREC/FOR 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/FOR 2314), (FREC/FOR 2214) (3)

FREC 3364 Environmental Silviculture (Pre: FREC/FOR 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/ENSC 3114 Soils (Pre: CHEM 1036) (3) and CSES/ENSC 3124 Soils Lab (1)

ENSC 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)

Free electives – 1-3 credits Degree Total 120 credits

Foreign Language¹

___ 2 years of one language in high school – or – FL 1105 and 1106 _____

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 or MATH 1226; 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 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, 4994 and XXXX 3954 may be taken P/F or A/F.

FIW 2514 Fish and Wildlife Conservation Policy is one option for the Legal Foundation Restricted Elective, under Additional Degree Requirements, and it can also serve as an option for 3 credit hours under Pathways Concept 3 requirements.

FREC 3364 Environmental Silviculture is one option for the Ecology Restricted elective, under Additional Wildlife Conservation Requirements, and it can also serve as an option for 3 credit hours under Pathways Concept 6d requirement.

For the Plant Taxonomy Major Requirement, BIOL 3204 Plant Taxonomy has commonly been used to partially fulfill the Botany requirement for students seeking The Wildlife Society Associate Wildlife Biologist certification. HORT 3324 Herbaceous Landscape Plants and HORT 3326 Woody Landscape Plants will be opened to WLC students only during the Add/Drop registration period when seats are available.

To remain in good academic 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.

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)

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.