



University of Idaho

Department of Fish and Wildlife Sciences

# Conservation Biology

## Recommended 4-Year Plan | 2024/2025

### Conserve Biodiversity

The Bachelor of Science in Conservation Biology focuses on understanding threats to biodiversity-such as habitat loss, over-harvest, or invasive species-and providing managers and policy makers with a clear, defensible options for alleviating these threats. Students in this degree might assess the impact of declining genetic diversity in endangered mountain gorillas or evaluate strategies for minimizing conflict between humans and expanding grizzly bear populations in the American West. In all cases, the goal is to promote biodiversity conservation through a science-based, open and fair evaluation of ecological processes and our role within ecosystems as humans. Coursework is interdisciplinary with an interdisciplinary grounding in ecology, organismal biology, and social sciences. The degree is research-driven, culminating in a guided, hands-on senior thesis experience. Graduates in this degree are university professors, research specialists with organizations like the Nature Conservancy or government agencies, environmental lawyers, and consultants in the private sector.

#### FRESHMAN

##### FALL

##### SPRING

COURSE		CREDITS
BIOL 114 -Organisms & Environments	Science	4
ENGL 101* -Writing & Rhetoric I	Writ Comm	3
MATH 143 -College Algebra	Math	4
NR 101 -Exploring Natural Resources		2
Free Elective	Humanities	3

**TOTAL 15**

COURSE		CREDITS
CHEM 101/101L -Intro to Chemistry & Lab <b>OR</b> CHEM 111/111L -Principles of Chemistry & Lab <small>(CHEM 101, MATH 143, 160, or 170, sufficient test score)</small>	Science	4
COMM 101 -Fundamentals of Oral Communication		3
NR 200 -Seminar		1
ENGL 102* -Writing & Rhetoric II <small>(ENGL 101)</small>	Writ Comm	3
MATH 160 -Survey of Calculus <b>OR</b> MATH 170 -Calculus I	Math	4

**TOTAL 15**

#### SOPHOMORE

##### FALL

##### SPRING

COURSE		CREDITS
BIOL 115/115L -Cells & the Evolution of Life & Lab <small>(CHEM 101 or 111)</small>		4
WLF 220/FOR 221 -Principles of Ecology <b>OR</b> NR 321 -Ecology <small>(BIOL 102/102L, 114, 115 or PLSC 205) (Spring Only)</small>		3
<b>OR</b> BIOL 314 -Ecology & Population Biology		
FOR 235 -Society & Natural Resources		3
STAT 251* -Statistical Methods <small>(MATH 108, 143, 160, or 170, or sufficient score)</small>		3
Humanistic & Artistic Ways of Knowing		3

**TOTAL 16**

COURSE		CREDITS
BIOL 213 -Principles of Biological Structure & Function <small>(BIOL 114 or 115/115L)</small>		4
GENE 314 -General Genetics <small>(BIOL 115 or 154)</small> <b>OR</b> BIOL 310 -Genetics <small>(BIOL 115 or 250)</small>		3
FOR/NRS 375 -Intro to Spatial Analysis for NR Mgmt <small>(College algebra)</small>		3
ECON 202* -Principles of Microeconomics <b>OR</b> ECON272 -Foundations of Economic Analysis		3-4
NR 300 -Ecology and Conservation Biology Thesis Seminar		1

**TOTAL 14-15**

# CONSERVATION BIOLOGY

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## JUNIOR

### FALL

COURSE	CREDITS
WLF 370-Management and Communication of Scientific Data OR ENGL 317-Technical Writing (ENGL 102 or Soph standing) OR JAMM 328-Science Writing	3
WLF 440*-Conservation Biology (FOR/REM 221, REM 220 or BIOL 314)	3
FOR 220-Forest Biology & Dendrology (BIOL 114 or PLSC 205) OR REM 341-Systemic Botany (BIOL 115 & 213 or PLSC 205) (Spring Only)	3
PHIL 452-Environmental Philosophy	3
Restricted Elective- Quantitative Resource Analysis	3

**TOTAL 15**

### SPRING

COURSE	CREDITS
BIOL 421-Advanced Evolution/Population Dynamics (BIOL 310, 314, FOR/REM 221, or WLF 220)	3
NRS 383-NR & Ecosystem Service Economics (NRS 235, MATH 143, & ECON 202 or 272)	3
WLF 448-Fish and Wildlife Population Ecology (STAT 251 & MATH 160 or 170)	4
Restrictive Elective-Ecology	3
Restrictive Elective: Social/Political Science	3

**TOTAL 16**

## SENIOR

### FALL

COURSE	CREDITS
FISH/FOR/NR/REM/WLF 497-Senior Thesis OR FISH/FOR/NRS/REM/WLF 485-Senior Project	1-3
International Course	3
American Diversity Course	3
Restrictive Elective-Organismal Biology	3
Restrictive Elective-Resource Management	3

**TOTAL 15**

### SPRING

COURSE	CREDITS
FISH/FOR/NRS/REM/WLF 473-Senior Project Presentation	1
REM 429-Landscape Ecology (FOR/REM 221 or WLF 220)	3
Restrictive Elective-Social/Political Science	3
Restrictive Elective-Ecology	3
Free Elective	3
Humanistic & Artistic Ways of Knowing	3

**TOTAL 16**

## RESTRICTED ELECTIVES:

### QUANTITATIVE RESOURCE ANALYSIS - CHOOSE ONE COURSE:

ANTH 417-Social Data Analysis (3 cr)  
FOR/NRS 472-Remote Sensing of the Environment (4 cr)  
GEOG 385\*-GIS Primer (3 cr)  
NRS 310-Social Research Methods in Conservation (4 cr)  
REM 410\*-Principles of Vegetation Measurement and Assessment (2 cr) AND  
WLF 411+-Wildland Habitat Ecology and Assessment (2 cr)  
STAT 422-Sample Survey Methods (3 cr)  
STAT 431-Statistical Analysis (3 cr)

### ECOLOGY - CHOOSE SIX CREDITS WITH AT LEAST 2 CREDITS FROM FISH 315, 415, 430; REM 460; AND/OR WLF 315.

BIOL 478-Animal Behavior (3 cr)  
ENT 469-Introduction to Forest Insects (2 cr)  
FISH 314-Fish Ecology (3 cr)  
FISH 315-Fish Ecology Field Techniques and Methods (1 cr)  
FISH 415\*-Limnology (4 cr)  
FISH 430-Riparian Ecology and Management (3 cr)  
FISH 450-Ecology and Conservation of Freshwater Invertebrates (2 cr)  
FISH 451-Freshwater Invertebrate Field Methods (2 cr)  
FIRE 326\*-Fire Ecology and Management (3 cr)  
FOR 462-Watershed Science and Management (3 cr)  
FOR 330-Terrestrial Ecosystem Ecology (4 cr)  
GEOG 410-Biogeography (3 cr)  
GEOG 430-Climate Change Ecology (3 cr)  
PLSC 410-Invasive Plant Biology (3 cr)  
REM/NRS 440-Wildland Restoration Ecology (3 cr)  
REM 459\*-Rangeland Ecology (3 cr)  
REM 460-Integrating GIS and Field Studies in Rangelands (2 cr)  
WLF 314-Ecology of Terrestrial Vertebrates (3 cr)  
WLF 315-Wildlife Techniques Laboratory (2 cr)

### RESOURCE MANAGEMENT - CHOOSE ONE COURSE:

FISH 418-Fisheries Management (4 cr)  
FOR 410-Fire Effects and Management (3 cr)  
FOR 424-Silvicultural Principles and Practices (4 cr)  
FOR 462-Watershed Science and Management (3 cr)  
NRS/ENVS 386-Managing Complex Environmental Systems (3 cr)  
NRS 476-Environmental Project Management and Decision Making (4 cr)  
NRS 490-Wilderness and Protected Area Management (3 cr)  
PLSC 419-Plant Community Restoration Methods (2 cr)  
REM 456\*-Integrated Rangeland Management (3 cr)  
REM 480-Ecological Restoration (3 cr)  
WLF 492-Wildlife Management (4 cr)

### SOCIAL/POLITICAL SCIENCE - CHOOSE TWO COURSES:

AIST 445-Indigenous Ways of Knowing (3 cr)  
COMM 410\*-Conflict Management (3 cr)  
FOR 310-Indigenous Culture and Ecology (3 cr)  
ENVS 225-International Environmental Issues Seminar (3 cr)  
ENVS 436-Principles of Sustainability (3 cr)  
FOR 484\*-Forest Policy and Admin (2 cr)  
GEOG 420-Land, Resources, and Environment (3 cr)  
HIST 424-American Environmental History (3 cr)  
IS 322-International Environmental Governance (3 cr)  
NRS 311-Public Involvement in Natural Resource Management (3 cr)  
NRS/POLS 364-Politics of the Environment (3 cr)  
NRS/ENVS 386-Managing Complex Environmental Systems (3 cr)  
NRS 387-Environmental Communication Skills (3 cr)  
NRS/POLS 462-Nature Resource Policy (3 cr)  
SOC 465-Environmental Justice (3 cr)

### ORGANISMAL BIOLOGY - CHOOSE ONE COURSE:

BIOL 483-Mammalogy (3 cr)  
BIOL 489-Herpetology (4 cr)  
FISH 481-Ichthyology (3 cr)  
WLF 482-Ornithology (4 cr)

- This academic plan is intended as a guideline only and does not replace academic advising.
- 120 credits minimum are required for a B.S. Ecology & Conservation Biology.
- Minimum of 36 upper-division credits required to graduate.
- See course catalog and department website for complete degree requirements and additional information.

\*-Both Online & In-Person options are offered

+ -Offered Online Only

Students pursuing a B.S. Cons. Bio. must receive a grade of 'C' or better in each of the following 4 indicator courses to register in upper division NRS/FISH/FOR/REM/WLF: BIOL 114, BIOL 213, WLF 220 OR NR 321, OR FOR 221, & STAT 251.

Student must achieve a 'C' or better to graduate in the following core courses: BIOL 421, NR 200 PHIL 452, REM 429, WLF 440, and WLF 448.

**Ready to Get Started?**  
Email [cnradvising@uidaho.edu](mailto:cnradvising@uidaho.edu)

