



University of Idaho

Department of Fish and Wildlife Sciences

Ecology & Conservation Biology

Conservation Biology

Recommended 4-Year Plan | 2021/2022

Conserve Biodiversity

The Bachelor of Science in Ecology and Conservation Biology: Conservation Biology option 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

COURSE		FALL	CREDITS
CHEM 101/101L - Intro to Chemistry & Lab OR CHEM 111/111L - Principles of Chemistry & Lab <small>(CHEM 101, MATH 143, 160, or 170, sufficient test score)</small>	Science	FALL	4
ENGL 101* - Writing & Rhetoric I	Writ Comm	FALL	3
MATH 160 - Survey of Calculus <small>(MATH 143)</small> OR MATH 170 - Analytic Geometry & Calculus I <small>(MATH 143 & 144)</small>		FALL	4
NR 101 - Exploring Natural Resources		FALL	2
General Education Requirement	Humanities	FALL	3

TOTAL 16

SPRING

COURSE		SPRING	CREDITS
BIOL 114 - Organisms & Environments	Science	SPRING	4
COMM 101 - Fundamentals of Oral Communication		SPRING	2
NRS 235 - Society & Natural Resources	Social Sci	SPRING	3
ENGL 102* - Writing & Rhetoric II <small>(ENGL 101)</small>	Writ Comm	SPRING	3
STAT 251* - Statistical Methods <small>(MATH 108, 143, 160, or 170; or sufficient score)</small>		SPRING	3

TOTAL 15

SOPHOMORE

COURSE		FALL	CREDITS
BIOL 115/115L - Cells & the Evolution of Life & Lab <small>(CHEM 101 or 111)</small>		FALL	4
ECON 202* - Principles of Microeconomics OR ECON 272 - Foundations of Economic Analysis		FALL	3-4
NR 200 - ECB Seminar		FALL	1
PHIL 452 - Environmental Philosophy		FALL	3
FOR/REM 221 OR WLF 220 - Principles of Ecology <small>(BIOL 102/102L, 114, 115 or PLSC 205)</small> OR BIOL 314 - Ecology & Population Biology <small>(BIOL 114 or 115, STAT 251 or 301, and MATH 160 or 170)</small>		FALL	3-4

TOTAL 14-16

SPRING

COURSE		SPRING	CREDITS
BIOL 213 - Principles of Biological Structure & Function <small>(BIOL 114 or 115/115L)</small>		SPRING	4
GENE 314 - General Genetics <small>(BIOL 115 or 154)</small> OR BIOL 310 - Genetics <small>(BIOL 115 or 250)</small>		SPRING	3
FOR/NRS 375 - Intro to Spatial Analysis for NR Mgmt <small>(College algebra)</small>		SPRING	3
General Education Requirement		SPRING	3
Restrictive Elective		SPRING	3

TOTAL 16

ECB: CONSERVATION BIOLOGY

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JUNIOR

FALL

COURSE	CREDITS
ENGL 317 - Technical Writing (ENGL 102 or Soph standing) OR WLF 370 - Management & Communication of Scientific Data	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)	3
NR 300 - ECB Thesis Seminar	1
General Education Requirement International	3

TOTAL 13

SPRING

COURSE	CREDITS
FISH/FOR/NR/REM/WLF 497 - Senior Thesis OR FISH/FOR/NRS/REM/WLF 485 - Senior Project	1-3
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	3
Restrictive Elective	3

TOTAL 14-16

SENIOR

FALL

COURSE	CREDITS
FISH/FOR/NR/REM/WLF 497 - Senior Thesis OR FISH/FOR/NRS/REM/WLF 485 - Senior Project	1-3
Restrictive Elective	4
Restrictive Elective	3
Restrictive Elective	3
Restrictive Elective	3

TOTAL 15

SPRING

COURSE	CREDITS
BIOL 421 - Advanced Evolution/Population Dynamics (BIOL 310, 314, FOR/REM 221, or WLF 220)	3
FISH/FOR/NRS/REM/WLF 473 - Senior Project Presentation	1
REM 429 - Landscape Ecology (FOR/REM 221 or WLF 220)	3
Restrictive Elective	4
Free Elective	3

TOTAL 14

RESTRICTED ELECTIVES:

QUANTITATIVE RESOURCE ANALYSIS - CHOOSE ONE COURSE:

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)

RESOURCE MANAGEMENT - CHOOSE ONE COURSE:

FISH 418 - Fisheries Management (4 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 490 - Wilderness and Protected Area Management (3 cr)
 NRS 496 - Monitoring Impacts in Protected Areas and Wilderness (3 cr)
 REM 456* - Integrated Rangeland Management (3 cr)
 WLF 492 - Wildlife Management (4 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)
 FOR 326* - Fire Ecology and Management (3 cr)
 FOR 330 - Terrestrial Ecosystem Ecology (4 cr)
 FOR 468 - Forest and Plant Pathology (2 cr)
 GEOG 410 - Biogeography (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)

SOCIAL/POLITICAL SCIENCE - CHOOSE TWO COURSES:

COMM 410* - Conflict Management (3 cr)
 ENVS 225 - International Environmental Issues Seminar (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)
 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)

ORGANISMAL BIOLOGY - CHOOSE ONE COURSE:

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

Ready to Get Started?
 Email cnradvising@uidaho.edu

