



University of Idaho

Department of Fish and Wildlife Sciences

# Fisheries Sciences

Recommended 4-Year Plan | 2022/2023

## Training the Next Generation of Fisheries Professionals

The Bachelor of Science in Fisheries Sciences focuses on the ecology, conservation, and management of fish species and aquatic ecosystems. In this degree offered through the Department of Fish and Wildlife Sciences, our students learn to apply the principles of biology and ecology to understand how fish populations interact with each other and with their environment and how to address management challenges associated with a growing human population. Our degree emphasizes critical thinking through coursework and hands-on field and laboratory experiences, and our graduates are equipped to be successful natural resource managers, conservation officers and scientists in a rapidly changing world. Our graduates pursue careers with state, federal, tribal and private organizations involved with: managing recreationally and commercially important fish populations, conservation law enforcement, biological monitoring, environmental impact assessment, conservation of endangered fish and ecosystems, aquaculture and hatchery operation, control and prevention of fish diseases, and management of stream or lake ecosystems.

### FRESHMAN

COURSE		CREDITS
BIOL 114 - Organisms & Environments	Science	4
COMM 101 - Fundamentals of Oral Communication		3
ENGL 101* - Writing & Rhetoric I <small>(sufficient test score)</small>	Writ Comm	3
MATH 143 - Pre-Calculus Algebra <small>(MATH 108)</small>	Math	3
NR 101 - Exploring Natural Resources		2

**TOTAL 15**

#### FALL

#### SPRING

COURSE		CREDITS
FISH 102 - The Fish & Wildlife Professions		1
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
ENGL 102* - Writing & Rhetoric II <small>(ENGL 101)</small>	Writ Comm	3
ECON 202 <b>OR</b> ECON 272 - Principles of Micro/Macroecon		3
General Education Requirement		3

**TOTAL 14**

### SOPHOMORE

COURSE		CREDITS
WLF 201 - Fish & Wildlife Applications <small>(NR 101)</small>		2
WLF 220 <b>OR</b> FOR 221 - Principles of Ecology <small>(BIOL 102/102L, 114, 115, or PLSC 205)</small>		3
FOR 235 - Society & Natural Resources	Social Sci	3
BIOL 115/115L - Cells & the Evolution of Life & Lab <small>(CHEM 101 or 111)</small>		4
CHEM 275 - Carbon Compounds <b>OR</b> CHEM 277		3

**TOTAL 15**

#### FALL

#### SPRING

COURSE		CREDITS
WLF 370 - Management & Communication of Scientific Data		3
BIOL 213 - Principles of Biological Structure & Function <small>(BIOL 115)</small>		4
Emphasis Area Course		3
GEOG 100/100L - Physical Geography <b>OR</b> GEOL 101/101L - Physical Geology <b>OR</b> PHYS 100/100L - Fundamentals of Physics & Lab <b>OR</b> PHYS 111/111L - General Physics I <small>(MATH 143)</small> <b>OR</b> <small>(CHEM 101 or 111)</small>		4
STAT 251* - Statistical Methods <small>(MATH 108, 143, 160, or 170; or sufficient score)</small>		3

**TOTAL 17**

# FISHERIES SCIENCES

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### JUNIOR

#### FALL

#### SPRING

COURSE	CREDITS
FISH 314 - Fish Ecology (FOR/REM 221 or BIOL 314)	3
FISH 315 - Fish Ecology Field Techniques & Methods (FOR/REM 221, NR 321, or BIOL 314)	2
Emphasis Area Course	5
Emphasis Area Course	3
General Education Requirement American Diversity	3

**TOTAL 16**

COURSE	CREDITS
FISH 481 - Ichthyology (BIOL 114, 115 & 213)	4
NRS 383 - NR & Ecosystem Service Economics (NRS 235, MATH 143, & ECON 202 or 272)	3
Emphasis Area Course	4
Fisheries Science Elective	3

**TOTAL 14**

### REQUIRED INTERNSHIP

COURSE	CREDITS
FISH/WLF 398 - Renewable Natural Resources Internship (Fall, Spring, or Summer)	2

### SENIOR

#### FALL

#### SPRING

COURSE	CREDITS
FISH 415* - Limnology (STAT 251 & FOR/REM 221 or BIOL 314)	4
FISH 418 - Fisheries Management (FISH 314, 481, & STAT 251)	4
FOR/NRS 375 - Intro to Spatial Analysis for NR Mgmt (College algebra)	3
General Education Requirement	3

**TOTAL 14**

COURSE	CREDITS
Emphasis Area Course	3
WLF 448 - Fish and Wildlife Population Ecology (STAT 251 & MATH 160 or 170)	4
FISH 495 - Seminar (Sr Standing)	1
Fisheries Science Elective	3-4
General Education Requirement	3

**TOTAL 14-15**

### EMPHASIS AREAS:

#### A. CONSERVATION LAW ENFORCEMENT

- CRIM 101 - Introduction to Criminology (3cr)
- PHIL 103 - Introduction to Ethics (3cr)
- PSYC 101 - Introduction to Psychology (3cr)
- SOC 101 - Introduction to Sociology (3cr)
- WLF 205 - Wildlife Law Enforcement (3cr)

#### Fisheries and Wildlife Electives (6cr) Select two of the following:

- FISH 411 OR FISH 422 OR FISH 424 OR FISH 430 OR FISH 450 OR FISH 451 OR WLF 314 OR WLF 315 OR WLF 411 OR WLF 440

#### Select one of the following:

- BIO 250 OR BIOL 310 OR GENE 314

#### Select one of the following:

- COMM 233 OR COMM 335 OR COMM 410 OR NRS 387 OR NRS 311 OR NRS 364 OR NRS 462

#### Select one of the following:

- CRIM 301 OR CRIM 339 OR CRIM 334 OR CRIM 415 OR CRIM 439 OR PSYCH 319 OR PSYC 320 OR SOC 201 OR SOC 230 OR SOC 343 OR SOC 420.

#### B. FISHERIES SCIENCE AND MANAGEMENT

- BIO 310 - Genetics (3cr) OR GENE 314
- BIOL 250/255 - General Microbiology & Lab (5 cr) (CHEM 101 or 111)
- FISH 411 - Fish Physiology (2 cr)
- FISH 422 - Concepts in Aquaculture (4 cr) OR FISH 424
- MATH 160 - Survey of Calculus (4cr) OR MATH 170

#### Fisheries Science Electives (3 cr)

- FISH 430 OR FISH 450 OR FISH 451 OR FISH 497 OR FISH 499.

#### Select one of the following:

- COMM 410 OR FOR/NRS 484 OR NRS 386 OR NRS 387 OR NRS 311 OR NRS 364 OR NRS 462 OR NRS 488 OR WLF 205 OR WLF 440

Students pursuing a B.S. degree in Fisheries Science must have received a grade of 'C' or better in each of the following four indicator courses to register for FISH or WLF upper-division courses and to graduate with a B.S.: BIOL 114, BIOL 213, FOR 221, and STAT 251.

To graduate, students must achieve a grade of 'C' or better in each FISH or WLF upper-division course listed in the requirements for the B.S. Degree

### MINORS:

#### Requirements for Aquaculture Minor (23 credits):

- BIOL 250/255 - General Microbiology & Lab (5cr)
- FISH 422 - Concepts in Aquaculture (4cr)
- FISH 424 - Fish Health Management (4cr)
- FISH 481 - Ichthyology (4cr)

#### Plus select two of the following:

- ASM 107 - Beginning Welding (2cr)
- AVS 305 - Animal Nutrition (3cr)
- MKTG 321 - Marketing (3cr)
- ENTR 414 - Entrepreneurship (3cr)
- FISH 498 - Internship (2cr)

#### Requirements for Wildlife Resources Minor (18 credits):

- WLF 220 OR FOR 221 OR BIOL 314 - Principles of Ecology (3cr)
- WLF 314 - Ecology of Terrestrial Vertebrates (3cr)
- WLF 315 - Techniques Lab (2cr)

#### Plus select any 9-12 credit combination of the following:

- BIOL 483 - Mammalogy (3cr)
- BIOL 489 - Herpetology (4cr)
- WLF 371 - Physiological Ecology of Wildlife (2cr)
- WLF 411 - Wildland Habitat Ecology and Assessment (2cr)
- WLF 418 - Wildlife Monitoring (1-5cr)
- WLF 440 - Conservation Biology (3cr)
- WLF 448 - Fish & Wildlife Population Ecology (4cr)
- WLF 482 - Ornithology (4cr)
- WLF 492 - Wildlife Management (4cr)

### Ready to Get Started?

Email [cnradvising@uidaho.edu](mailto:cnradvising@uidaho.edu)

- This academic plan is intended as a guideline only and does not replace academic advising.
- 120 credits minimum are required for a B.S. in Fisheries Science.
- 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

