

FISHERIES SCIENCE (B.S.)

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 1140, BIOL 2130, WLF 2200 or FOR 2100 or NR 3210, and STAT 2510.

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.

Required course work includes the university requirements (see regulation J-3 (<https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/>)) and:

Code	Title	Hours
Fisheries Core		
<i>First and Second Years</i>		
BIOL 1140	Organisms and Environments	4
BIOL 1150	Cells and the Evolution of Life	3
BIOL 1150L	Cells and the Evolution of Life Laboratory	1
BIOL 2130	Structure and Function Across the Tree of Life	4
CHEM 2750	Carbon Compounds	3
or CHEM 2770	Organic Chemistry I	
COMM 1101	Fundamentals of Oral Communication	3
ENGL 1102	Writing and Rhetoric II	3
FISH 1020	The Fish and Wildlife Professions	1
WLF 2200	Principles of Ecology	3
or FOR 2100	Principles of Ecology	
or NR 3210	Ecology	
FOR 2350	Society and Natural Resources	3
FOR 3700	Fundamentals of Geomatics	3
or GEOG 3850	Foundations of GIS	
NR 1010	Exploring Natural Resources	2
STAT 2510	Statistical Methods	3
WLF 2010	Fish and Wildlife Applications	2
WLF 3700	Management and Communication of Scientific Data	3
Select one of the following:		4
CHEM 1101 & 1101L	Introduction to Chemistry and Introduction to Chemistry Laboratory	
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Laboratory	
Select one of the following:		4
GEOG 1000 & 1000L	Introduction to Planet Earth and Introduction to Planet Earth Lab	
GEOL 1101 & 1101L	Physical Geology and Physical Geology Lab	
PHYS 1000 & 1000L	Fundamentals of Physics and Fundamentals of Physics Lab	
PHYS 1111 & 1111L	General Physics I and General Physics I Lab	
SOIL 2050 & SOIL 2060	The Soil Ecosystem and The Soil Ecosystem Lab	

Third and Fourth Years

FISH 3140	Fish Ecology	3
FISH 3150	Fish Ecology Field Techniques and Methods	2
FISH 4150	Limnology	4
FISH 4180	Fisheries Management	4
FISH 4810	Ichthyology	4
FISH 4950	Fisheries Seminar	1
WLF 4480	Fish and Wildlife Population Ecology	4

Emphasis

Select one of the following emphases:	25-35
Conservation Law Enforcement (p. 1)	
Science and Management (p. 2)	
Aquaculture and Hatchery Management (p. 2)	

Total Hours **96-106**

A. Conservation Law Enforcement Emphasis

Code	Title	Hours
CRIM 1010	Introduction to Criminology	3
PHIL 1103	Introduction to Ethics	3
PSYC 1101	Introduction to Psychology	3
SOC 1101	Introduction to Sociology	3
WLF 2050	Wildlife Law Enforcement	2
Select one of the following:		3-4
MATH 1143	Precalculus I: Algebra	
MATH 1160	Survey of Calculus	
MATH 1170	Calculus I	
Select one of the following:		3
BIOL 2500	General Microbiology	
BIOL 3100	Genetics	
GENE 3140	General Genetics	
Internship:		2
FISH 3980	Renewable Natural Resources Internship	
WLF 3980	Renewable Natural Resources Internship	
FISH 4980	Internship	
Fisheries and Wildlife Science Electives (select a minimum of 6 credits):		6
FISH 4110	Fish Physiology	
FISH 4220	Concepts in Aquaculture	
FISH 4240	Fish Health Management	
FISH 4300	Riparian and River Ecology	
FISH 4500	Ecology & Conservation of Freshwater Invertebrates	
FISH 4510	Freshwater Invertebrate Field Methods	
WLF 3140	Ecology of Terrestrial Vertebrates	
WLF 3150	Techniques Laboratory	
WLF 4110	Wildland Habitat Ecology and Assessment	
WLF 4400	Conservation Biology	
Select one of the following:		3
COMM 2330	Interpersonal Communication	
COMM 3350	Intercultural Communication	
COMM 4100	Conflict Management	
NRS 3870	Environmental Communication Skills	

NRS 3110	Public Involvement in Natural Resource Management	
NRS 3640	Politics of the Environment	
NRS 3830	Natural Resource and Ecosystem Service Economics	
NRS 4620	Natural Resource Policy	
Select one of the following:		3
CRIM 3010	Criminological Theory	
CRIM 3340	Policing	
CRIM 3390	Crime and the Media	
CRIM 4150	Citizen's Police Academy	
CRIM 4390	Inequalities in the Justice System	
PSYC 3190	Environmental Psychology	
PSYC 3200	Introduction to Social Psychology	
SOC 2010	Introduction to Inequity and Justice	
SOC 4200	Sociology of Law	
SOC 4430	Power, Politics, and Society	

Total Hours **34-35**

Courses to total 120 credits for this degree

B. Science and Management Emphasis

Code	Title	Hours
BIOL 2500	General Microbiology	3
BIOL 2550	General Microbiology Lab	2
BIOL 3100	Genetics	3
or GENE 3140	General Genetics	
FISH 4110	Fish Physiology	2
FISH 4220	Concepts in Aquaculture	4
or FISH 4240	Fish Health Management	
MATH 1160	Survey of Calculus	4
or MATH 1170	Calculus I	
Internship		2
FISH 3980	Renewable Natural Resources Internship	
WLF 3980	Renewable Natural Resources Internship	
FISH 4980	Internship	
Fisheries Science Electives (pick a minimum of 3 credits):		3
FISH 4300	Riparian and River Ecology	
FISH 4500	Ecology & Conservation of Freshwater Invertebrates	
FISH 4510	Freshwater Invertebrate Field Methods	
FISH 4970	Senior Thesis	
FISH 4990	Directed Study	
Select one of the following electives:		2-3
COMM 4100	Conflict Management	
FOR 4310/ NRS 4840	Forest Policy and Administration	
NRS 3860	Managing Complex Environmental Systems	
NRS 3870	Environmental Communication Skills	
NRS 3110	Public Involvement in Natural Resource Management	
NRS 3640	Politics of the Environment	
NRS 4620	Natural Resource Policy	

NRS 3830	Natural Resource and Ecosystem Service Economics	
NRS 4880	NEPA in Policy and Practice	
WLF 2050	Wildlife Law Enforcement	
WLF 4400	Conservation Biology	
Total Hours		25-26

Courses to total 120 credits for this degree

C. Aquaculture and Hatchery Management Emphasis

Code	Title	Hours
FISH 4110	Fish Physiology	2
FISH 4220	Concepts in Aquaculture	4
FISH 4240	Fish Health Management	4
Select one of the following:		3
ECON 2201	Principles of Macroeconomics	
ECON 2202	Principles of Microeconomics	
ECON 2720	Foundations of Economic Analysis	
NRS 3830	Natural Resource and Ecosystem Service Economics	
Internship:		2
FISH 3980	Renewable Natural Resources Internship	
WLF 3980	Renewable Natural Resources Internship	
FISH 4980	Internship	
Science Electives (select a minimum of 6 credits):		6
BIOL 2500	General Microbiology	
BIOL 3100	Genetics	
or GENE 3140	General Genetics	
AVS 3050	Animal Nutrition	
FISH 4970	Senior Thesis	
FISH 4990	Directed Study	
Business, Skills, or Policy Electives (select a minimum of 6 credits):		6
AGEC 2780	Farm and Agribusiness Management	
ASM 1070	Beginning Welding	
BUS 1900	Integrated Business and Value Creation	
COMM 4100	Conflict Management	
ENTR 4140	Entrepreneurship	
MKTG 3210	Marketing	
NRS 3110	Public Involvement in Natural Resource Management	
NRS 3860	Managing Complex Environmental Systems	
NRS 3870	Environmental Communication Skills	
NRS 4620	Natural Resource Policy	
NRS 4880	NEPA in Policy and Practice	
Total Hours		27

Courses to total 120 credits for this degree

A. Conservation Law Enforcement Emphasis

Fall Term 1		Hours
BIOL 1140	Organisms and Environments	4
COMM 1101	Fundamentals of Oral Communication	3
ENGL 1101	Writing and Rhetoric I	3
MATH 1143 or MATH 1160 or MATH 1170	Precalculus I: Algebra or Survey of Calculus or Calculus I	3
NR 1010	Exploring Natural Resources	2
Hours		15
Spring Term 1		Hours
CRIM 1010	Introduction to Criminology	3
ENGL 1102	Writing and Rhetoric II	3
FISH 1020	The Fish and Wildlife Professions	1
PSYC 1101	Introduction to Psychology	3
(CHEM 1101 AND CHEM 1101L) OR (CHEM 1111 AND CHEM 1111L)		4
Hours		14
Fall Term 2		Hours
BIOL 1150	Cells and the Evolution of Life	3
BIOL 1150L	Cells and the Evolution of Life Laboratory	1
CHEM 2750 or CHEM 2770	Carbon Compounds or Organic Chemistry I	3
FOR 2350	Society and Natural Resources	3
WLF 2200 or FOR 2100 or NR 3210	Principles of Ecology or Principles of Ecology or Ecology	3
WLF 2010	Fish and Wildlife Applications	2
Hours		15
Spring Term 2		Hours
BIOL 2130	Structure and Function Across the Tree of Life	4
STAT 2510	Statistical Methods	3
WLF 2050	Wildlife Law Enforcement	2
WLF 3700	Management and Communication of Scientific Data	3
(GEOG 1000 AND GEOG 1000L) OR (GEOL 1101 AND GEOL 1101L) OR (PHYS 1000 AND PHYS 1000L) OR (PHYS 1111 AND PHYS 1111L) OR (SOIL 2050 AND SOIL 2060)		4
Hours		16
Fall Term 3		Hours
FISH 3140	Fish Ecology	3
FISH 3150	Fish Ecology Field Techniques and Methods	2
PHIL 1103	Introduction to Ethics	3
SOC 1101	Introduction to Sociology	3
BIOL 2500 OR BIOL 3100 OR GENE 3140		3
FISH 3980 OR WLF 3980 OR FISH 4980		1
Hours		15
Spring Term 3		Hours
FISH 4810	Ichthyology	4
FISH 4220 or FISH 4240	Concepts in Aquaculture (Suggested Fisheries & Wildlife Science Elective) or Fish Health Management	4
FISH 3980 OR WLF 3980 OR FISH 4980		1
International Course		3
Communication/Policy Course, Major Elective Course		3
Hours		15
Fall Term 4		Hours
FISH 3980	Renewable Natural Resources Internship (Suggested)	1
FISH 4150	Limnology	4
FISH 4180	Fisheries Management	4
FOR 3700 or GEOG 3850	Fundamentals of Geomatics or Foundations of GIS	3

Criminology/Sociology/Psychology, Major Elective Course		3
Hours		15
Spring Term 4		Hours
FISH 4950	Fisheries Seminar	1
WLF 4480	Fish and Wildlife Population Ecology	4
FISH 4240 or FISH 4220	Fish Health Management (Suggested Fisheries & Wildlife Science Elective) or Concepts in Aquaculture	4
Humanistic and Artistic Ways of Knowing Course		3
American Experience Course		3
Hours		15
Total Hours		120

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

B. Fisheries Science and Management Emphasis

Fall Term 1		Hours
BIOL 1140	Organisms and Environments	4
COMM 1101	Fundamentals of Oral Communication	3
ENGL 1101	Writing and Rhetoric I	3
MATH 1143	Precalculus I: Algebra	3
NR 1010	Exploring Natural Resources	2
Hours		15
Spring Term 1		Hours
ENGL 1102	Writing and Rhetoric II	3
FISH 1020	The Fish and Wildlife Professions	1
MATH 1160 or MATH 1170	Survey of Calculus or Calculus I	4
(CHEM 1101 AND CHEM 1101L) OR (CHEM 1111 OR CHEM 1111L)		4
(GEOG 1000 AND GEOG 1000L) OR (GEOL 1101 AND GEOL 1101L) OR (PHYS 1000 AND PHYS 1000L) OR (PHYS 1111 AND PHYS 1111L) OR (SOIL 2050 AND SOIL 2060)		4
Hours		16
Fall Term 2		Hours
BIOL 1150	Cells and the Evolution of Life	3
BIOL 1150L	Cells and the Evolution of Life Laboratory	1
WLF 2200 or FOR 2100 or NR 3210	Principles of Ecology or Principles of Ecology or Ecology	3
FOR 2350	Society and Natural Resources	3
WLF 2010	Fish and Wildlife Applications	2
American Experience Course		3
Hours		15
Spring Term 2		Hours
BIOL 2130	Structure and Function Across the Tree of Life	4
CHEM 2750 or CHEM 2770	Carbon Compounds (Suggested) or Organic Chemistry I	3
STAT 2510	Statistical Methods	3
WLF 3700	Management and Communication of Scientific Data	3
Social and Behavioral Ways of Knowing Course		3
Hours		16
Fall Term 3		Hours
BIOL 2500	General Microbiology	3
BIOL 2550	General Microbiology Lab	2
FISH 3140	Fish Ecology	3

FISH 3150	Fish Ecology Field Techniques and Methods	2
BIOL 3100	Genetics	3
or GENE 3140	or General Genetics	
Humanistic and Artistic Ways of Knowing Course		3
Hours		16
Spring Term 3		
FISH 4810	Ichthyology	4
FISH 3980 OR FISH 4980 OR WLF 3980		1
Fisheries Sciences Elective, Major Elective Course		4
International Course		3
Elective Course		1
Hours		13
Fall Term 4		
FISH 4150	Limnology	4
FISH 4180	Fisheries Management	4
FISH 3980 OR FISH 4980 OR WLF 3980		1
FOR 3700	Fundamentals of Geomatics	3
or GEOG 3850	or Foundations of GIS	
Humanistic and Artistic Ways of Knowing Course		3
Hours		15
Spring Term 4		
FISH 4110	Fish Physiology	2
FISH 4950	Fisheries Seminar	1
WLF 4480	Fish and Wildlife Population Ecology	4
FISH 4220	Concepts in Aquaculture	4
or FISH 4240	or Fish Health Management	
Policy/Communications, Major Elective Course		3
Hours		14
Total Hours		120

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C. Aquaculture and Hatchery Management Emphasis

Fall Term 1		Hours
BIOL 1140	Organisms and Environments	4
COMM 1101	Fundamentals of Oral Communication	3
ENGL 1101	Writing and Rhetoric I	3
MATH 1143	Precalculus I: Algebra	3
NR 1010	Exploring Natural Resources	2
Hours		15
Spring Term 1		
ENGL 1102	Writing and Rhetoric II	3
FISH 1020	The Fish and Wildlife Professions	1
(CHEM 1101 AND CHEM 1101L) OR (CHEM 1111 OR CHEM 1111L)		4
(GEOG 1000 AND GEOG 1000L) OR (GEOL 1101 AND GEOL 1101L) OR (PHYS 1000 AND PHYS 1000L) OR (PHYS 1111 AND PHYS 1111L) OR (SOIL 2050 AND SOIL 2060)		4
Business Skills, Major Elective Course		3
Hours		15
Fall Term 2		
BIOL 1150	Cells and the Evolution of Life	3
BIOL 1150L	Cells and the Evolution of Life Laboratory	1
WLF 2200	Principles of Ecology	3
or FOR 2100	or Principles of Ecology	
or NR 3210	or Ecology	

FOR 2350	Society and Natural Resources	3
WLF 2010	Fish and Wildlife Applications	2
American Experience Course		3
Hours		15
Spring Term 2		
BIOL 2130	Structure and Function Across the Tree of Life	4
STAT 2510	Statistical Methods	3
CHEM 2750	Carbon Compounds	3
or CHEM 2770	or Organic Chemistry I	
WLF 3700	Management and Communication of Scientific Data	3
Science Elective, Major Elective Course		3
Hours		16
Fall Term 3		
FISH 3140	Fish Ecology	3
FISH 3150	Fish Ecology Field Techniques and Methods	2
ECON 2201 OR ECON 2202 OR ECON 2720 OR NRS 3830		3
FISH 3980 OR WLF 3980 OR FISH 4980		1
Humanistic and Artistic Ways of Knowing Course		3
Elective Course		3
Hours		15
Spring Term 3		
FISH 4810	Ichthyology	4
FISH 4220	Concepts in Aquaculture	4
or FISH 4240	or Fish Health Management	
FISH 3980 OR WLF 3980 OR FISH 4980		1
International Course		3
Science Elective, Major Elective Course		4
Hours		16
Fall Term 4		
FISH 4150	Limnology	4
FISH 4180	Fisheries Management	4
FOR 3700	Fundamentals of Geomatics	3
or GEOG 3850	or Foundations of GIS	
Humanistic and Artistic Ways of Knowing Course		3
Hours		14
Spring Term 4		
FISH 4110	Fish Physiology	2
FISH 4950	Fisheries Seminar	1
WLF 4480	Fish and Wildlife Population Ecology	4
FISH 4220	Concepts in Aquaculture	4
or FISH 4240	or Fish Health Management	
Business Skills, Major Elective Course		3
Hours		14
Total Hours		120

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Shared Outcomes

- The student will be able to identify regional fish species and describe their biological characteristics and ecological requirements
- The student will be able to develop and test hypotheses and produce tabular and graphic summaries of quantitative data.
- The student will be able to effectively use diverse forms of communication (written and oral) to convey information to scientific audiences.

- The student will be able to explain and discuss diverse points of view about natural resource issues.
- The student will be able to work effectively in team settings.
- The student demonstrates an understanding of ethical professional behavior.

Science and Management Emphasis

- The student will be able to integrate biological, ecological and social information to make science-based recommendations for management.

Conservation Law Enforcement Emphasis

- Student can define basic legal terms and principles that apply to conservation law enforcement conservation.
- Student can demonstrate an understanding of the impact wildlife crime has on the resource.