AQUATIC WILDLIFE BIOLOGY

Chad Bishop, Wildlife Biology Director

The Wildlife Biology Program combines the best features of a liberal arts curriculum with scientific preparation in wildlife conservation. The Program provides students with an extensive knowledge in ecology, population biology, conservation biology, and critical thinking and quantitative skills. Our students receive a strong academic and scientific background with an emphasis on hands-on, experiential learning. The educational requirements for certification by The Wildlife Society can be met within the framework of the undergraduate program.

While some employment opportunities exist in wildlife conservation for students with the baccalaureate degree, we encourage students to continue their education through the master's degree to qualify for most state, federal, and private positions.

Two concentrations are offered in the Wildlife Biology Program: terrestrial and aquatic. They both follow the same schedule of courses for the freshman and most of the sophomore year and then pursue different curricula for the last two years. Each leads to a B.S. in Wildlife Biology. The University is well-suited for instruction in wildlife biology because of the excellent opportunities for field instruction and research at Lubrecht Experimental Forest, Flathead Lake Biological Station, and the Theodore Roosevelt Memorial and Bandy ranches. The Montana Forest and Conservation Experiment Station, the Division of Biological Sciences, and the Montana Cooperative Wildlife Research Unit facilitate research.

High School Preparation: In addition to general University admission requirements, the student should elect four years of mathematics and three years of science, including biology, chemistry and physics.

Wildlife Biology Honors Track

The honors curriculum is designed particularly for students with strong academic records who intend to do graduate work. Entrance into this emphasis is open only to students who, at the beginning of the junior year of the wildlife biology program, have a grade-point average of 3.5 or above and who petition the faculty for entrance.

Honors students must complete either WILD 370, WILD 470 and WILD 494 (terrestrial option) or BIOO 340, BIOE 428 and WILD 494 (aquatic option). Honors students are encouraged to enroll also in WILD 499. The balance of the coursework for the junior and senior years will be developed in consultation with the honors student's faculty advisor.

All students in the honors emphasis are required to meet with their faculty advisor prior to autumn semester registration of their junior and senior years to work out their course schedules.

Bachelor of Science - Wildlife Biology; Aquatic Concentration

W.A Franke College of Forestry & Conservation

Degree Specific Credits: 84

Required Cumulative GPA: 2.5

Catalog Year: 2017-2018

Note: Experiential Learning is required - Students have several options to fulfill this requirement - list is available from the Wildlife Advisor in Forestry 103C

General Education Requirements

Information regarding these requirements can be found in the General Education Section (http://catalog.umt.edu/academics/general-education-requirements) of the catalog.

Summary

Major Required Courses	20-21
Outside Major Required Courses	24-26
Major Required Courses	46
Writing Requirement	12-18
Mathematics Requirement	4
Symbolic Systems	8
Expressive Arts	3
Natural Sciences Requirement	12
Total Hours	129-138

Major Required Courses

Rule: Must take all courses

Note: Can take WRIT 325 (Honors) in place of NRSM 200

One out of the four is required: BIOE 406/BIOE 409, BIOM 427/BIOM 428, BIOO 462, WILD 485

Select one of the following:		3-4
BIOE 406 & BIOE 409	Behavior & Evolution and Behavior & Evolution Discussion	
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	
BIOO 462	Entomology	
WILD 485	Aquatic Invertebrate Ecology	
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
NRSM 200 or WRIT 325	Nat.Resource Professional Wrtg Science Writing	3
WILD 180	Careers in Wildlife Biology	2
Total Hours		20-21

Minimum Required Grade: C-

Outside Major Required Courses

Rule: Must take all courses

BIOE 406 & BIOE 409	Behavior & Evolution and Behavior & Evolution Discussion	4
BIOM 427 & BIOM 428	General Parasitology and General Parasitology Lab	4

BIOO 462	Entomology	4
WILD 485	Aquatic Invertebrate Ecology	3
CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3
CHMY 124	Introduction to Organic and Biochemistry Lab	2
COMX 111A	Intro to Public Speaking	3
M 162	Applied Calculus	4
NRSM 200	Nat.Resource Professional Wrtg	3
STAT 216	Introduction to Statistics	3-4
or WILD 240	Intro to Biostatistics	
WRIT 101	College Writing I	3
Total Hours		39-40

Minimum Required Grade: C-

Major Required Courses

Rule: Must take all courses

BIOE 370	General Ecology	3
BIOE 371	Gen Ecology Lab (equiv to 271)	2
BIOE 428	Freshwater Ecology	5
BIOM 427	General Parasitology	2
BIOM 428	General Parasitology Lab	2
BIOO 320	General Botany	5
BIOO 340	Biology and Mgmnt of Fishes	4
BIOO 462	Entomology	4
NRSM 385	Watershed Hydrology	3
WILD 346	Wildlife Physiological Ecology	3
WILD 408	Advanced Fisheries	3
WILD 410	Wildlife Policy & Biopolitics	3
or NRSM 422	Nat Res Policy/Administration	
WILD 480	The Upshot--Appld Wildlife Mgt	3
WILD 485	Aquatic Invertebrate Ecology	3
WILD 494	Senior Wildlife Seminar	1
Total Hours		46

Minimum Required Grade: C-

Writing Requirement

Rule: Must complete the following subcategories

12-18 Total Credits Required

Lower Division Writing

Rule: Complete all of the following courses

WRIT 101	College Writing I	3
Select one of the following:		3
NRSM 200	Nat.Resource Professional Wrtg	
WRIT 325	Science Writing (honors)	
WRIT 201	College Writing II	
Total Hours		6

Minimum Required Grade: C-

Upper Division Writing

BIOE 371	Gen Ecology Lab (equiv to 271)	2
Select two of the following:		4-10
BIOE 428	Freshwater Ecology	
BIOO 320	General Botany	
BIOO 470	Ornithology	
BIOO 475	Mammalogy	
WILD 408	Advanced Fisheries	
WILD 470	Conserv of Wildlife Populatns	
WILD 499	Thesis	
Total Hours		6-12

Minimum Required Grade: C-

Mathematics Requirement

Rule: must take the following course

M 162	Applied Calculus	4
Total Hours		4

Minimum Required Grade: C-

Exception to the Modern/Classical Languages Requirement

Rule: The Wildlife Biology major has been granted an exception to the Modern/Classical Language Requirement. Must take one of the following courses to will satisfy this requirement.

Must take one of the following:		3-4
M 162	Applied Calculus	
STAT 216	Introduction to Statistics	
WILD 240	Intro to Biostatistics	
Total Hours		3-4

Minimum Required Grade: C-

Expressive Arts

Rule: Must take the following course

COMX 111A	Intro to Public Speaking	3
Total Hours		3

Minimum Required Grade: C-

Natural Sciences Requirement

Rule: Must take all courses

BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3

CHMY 124	Introduction to Organic and Biochemistry Lab	2
Total Hours		12

Minimum Required Grade: C-