

Department of Wildlife, Fisheries and Aquaculture

Major Advisors: Andy Kouba, Department Head; Leslie Burger, Undergraduate Coordinator

Office: A205 Thompson Hall; 259 Thompson Hall

Sustainable management of wildlife and fisheries resources by private and public sectors requires knowledgeable and technically competent people. The Department of Wildlife, Fisheries and Aquaculture offers a major in Wildlife, Fisheries and Aquaculture (WFA) designed to provide students with a foundational curriculum grounded on biology, ecology, habitat and population management, social sciences, mathematics, and other contemporary educational needs for natural resources professionals. Five concentrations are available to students: wildlife, fisheries and aquaculture science, conservation law enforcement, wildlife veterinary medicine, wildlife agriculture conservation, and human-wildlife interactions. The curriculum will prepare students for employment in natural resource professions within private, federal, or state wildlife, fisheries, or aquaculture sectors. Additionally, the curriculum ensures students are academically prepared for post-graduate studies.

A student may use their curriculum coursework to fulfill the coursework requirements necessary to become a Certified Associate Wildlife Biologists by The Wildlife Society and/or an Associate Fisheries Scientist by the American Fisheries Society.

The Wildlife, Fisheries and Aquaculture Major is designed for completion within four years, but some students may not complete the program in that time because of course scheduling or other constraints. Transfer students are encouraged to contact the College of Forest Resources Student Support Services after completing their freshman year to get assistance in course planning that will enable graduation from MSU in four years. Transfer students should be aware that coursework taken elsewhere may not necessarily be accepted toward a degree in Wildlife, Fisheries and Aquaculture. Only coursework determined by the Wildlife, Fisheries and Aquaculture Department to be equivalent to required coursework will be accepted. Additionally, no coursework will be considered for acceptance unless a grade of C or better has been earned. Correspondence courses will not be accepted. Transfer students with a grade point average less than or equal to 2.0 may not be admitted automatically into the WFA major. In addition to University and College requirements, students must attain a minimum grade of C in WFA Major Core courses. Students interested in pursuing the Veterinary Medicine program must meet all admission requirements by the College of Veterinary Medicine.

Conservation Law Enforcement Concentration (CLE)

Advisor: Dr. Kevin M. Hunt

Room 1203 Sustainable Bioproducts Lab (Building 1)

This concentration is designed for undergraduate students who wish to seek employment immediately following receipt of a B.S. degree and wish to obtain positions related to natural resource law enforcement (e.g., conservation officers, park rangers) or wildlife managers (not biologists). Students may, upon graduation within this concentration, continue on to graduate school in the human dimensions, law enforcement or wildlife arenas.

Wildlife, Fisheries and Aquaculture Science Concentration (WLFS)

Advisor: Dr. Leslie Burger

Room 259 Thompson Hall

This concentration is designed for undergraduate students who wish to pursue one or more advanced degrees (M.S., Ph.D.), as it prepares students for graduate school. Employment following this B.S. program is possible, but competition for jobs may be keen. This concentration is intended for serious, academically strong students who maintain an A-B grade record (GPA 3.0), which is the minimum required for admittance into most graduate schools.

Wildlife Veterinary Medicine Concentration (WLVM)

Advisor: Dr. Peter Allen

Room 261 Thompson Hall

This integrated curriculum allows the students to pursue a four-year undergraduate degree program in Wildlife, Fisheries, and Aquaculture and then, if accepted, matriculate into the Veterinary Medicine program in College of Veterinary Medicine. This concentration is intended for serious, academically strong students who can maintain an A-B grade record, which will be required to meet veterinary medicine programs' entry standards. It also well-prepares students for advanced degrees (M.S., Ph.D.)

Wildlife Agriculture Conservation Concentration (WLAC)

Advisors: Dr. Kristine Evans

Room 265 Thompson Hall

This curriculum provides the educational background for students pursuing careers as wildlife biologists or conservationists in agricultural areas, which require a strong background in both wildlife biology and agricultural science. Successful graduates of this program will meet minimum educational requirements for NRCS conservationist positions. Students completing this concentration may seek employment immediately following graduation. Students will be equally prepared to pursue one or more graduate degrees (M.S., Ph.D.) in wildlife biology and related natural resource fields.

Human-Wildlife Interactions Concentration (HWI)

Advisor: Dr. Ray Iglay
Room 271 Thompson Hall

This curriculum provides the educational background for those students wishing to pursue a career as a wildlife biologist with a strong background in addressing human-wildlife interactions, including conflict resolution. Students completing this concentration may seek employment immediately following graduation; however, competition for positions may be intense. Students will be equally prepared to pursue one or more graduate degrees (M.S., Ph.D.).

General Education Requirements

English Composition

EN 1103	English Composition I	3
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	3
or EN 1173	Accelerated Composition II	

Mathematics and Statistics

see concentrations 6

Natural Science

BIO 1134	Biology I	4
BIO 1144	Biology II	4

Humanities

PHI 1123	Introduction to Ethics (required for CLE)	3
Any Gen Ed course; 1 for CLE, 2 for all other concentrations		3-6

Fine Arts

Any General Education course 3

Social/Behavioral Sciences

PSY 1013	General Psychology (required for CLE)	3
SO 1003	Introduction to Sociology (required for CLE)	3
WFA Social/Behavioral Sciences (all concentrations except CLE) ¹		3
Any Gen Ed course (all concentrations except CLE)		3

Major Core ²

WFA 1102	Wildlife and Fisheries Profession	2
WFA 3133	Applied Aquatic and Terrestrial Ecology	3
WFA 4123	Wild & Fish Biometrics	3
WFA 4153	Principles of Wildlife Conservation and Management	3
WFA 4223	Wildlife Plant Identification	3
WFA 4243	Wildlife Techniques	3
WFA 4353	Fish and Wildlife Policy and Law Enforcement	3
WFA 4473	Wildlife and Fisheries Practices	3
Plant Elective ¹		3
Aquatics Elective ¹		3
WFA 4173	Fish Physiology (required for WLVM concentration)	
Natural Resources Policy Elective ¹		3

Oral Communication Requirement

Choose One:

CO 1003	Fundamentals of Public Speaking	3
or CO 1013	Introduction to Communication	
or AELC 3333	Professional Presentations in Agriculture and Life Sciences	

Writing Requirement ¹ 3

Total 38

¹ All electives chosen from a list approved by the Department of Wildlife, Fisheries and Aquaculture.

² Note: Pre-requisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student's responsibility to be aware of pre-requisites and co-requisites identified in the Course Description section of the Bulletin.

Choose one of the following concentrations:

The Concentrations: The academic concentrations within the Wildlife, Fisheries, and Aquaculture Major are offered to enable students to develop an academic background that is suited to their professional career goals. Each concentration has been developed to supplement the core curriculum which provides the basis for the wildlife and fisheries science major, regardless of the area of expertise desired by the student.

Conservation Law Enforcement Concentration (CLE)

Advisor: Dr. Kevin M. Hunt, 1203 Sustainable Bioproducts Bldg. 1

Courses² to be taken in addition to those of the core curriculum include:

CH 1043 or CH 1213	Survey of Chemistry I ³ Chemistry I	3
CH 1053 or CH 1223	Survey of Chemistry II Chemistry II	3
CRM 1003	Crime and Justice in America	3
MA 1313 or MA 1613	College Algebra ³ Calculus for Business and Life Sciences I	3
ST 2113 or ST 3123	Introduction to Statistics ³ Introduction to Statistical Inference	3
PHI 1123	Introduction to Ethics ³	3
PSY 1013	General Psychology ³	3
SO 1003	Introduction to Sociology ³	3
SO 3313 or CRM 3313	Deviant Behavior Deviant Behavior.	3
Computer Applications Elective ¹		3
CLE Elective ¹		18
Natural Resources Mgt Elective ¹		17
Zoology requirement		4
BIO 3524	Biology of Vertebrates	
Total Hours		124

- ¹ All electives are chosen from a list approved by the Department of Wildlife, Fisheries and Aquaculture.
- ² It is the student's responsibility to be aware of pre-requisites and co-requisites identified in the Course Description section of the Bulletin.
- ³ Course meets MSU General Education requirements

Wildlife, Fisheries and Aquaculture Science Concentration (WLFS)

Advisor: Dr. Leslie Burger, 259 Thompson Hall

Courses² to be taken in addition to those of the core curriculum include:

BIO 3103	Genetics I	3
CH 1043 or CH 1213	Survey of Chemistry I ³ Chemistry I	3
CH 1053 or CH 1223	Survey of Chemistry II Chemistry II	3
MA 1613 or MA 1713	Calculus for Business and Life Sciences I ³ Calculus I	3
PSS 3301	Soils Laboratory	1
PSS 3303	Soils	3
ST 2113 or ST 3123	Introduction to Statistics ³ Introduction to Statistical Inference	3
WFA 4123	Wildl & Fish Biometrics	3
WFLS Professional Electives ¹		21
Wildlife Biology Electives ¹		6
Life Science elective ¹		4
Computer Application Elective ¹		3

Zoology elective	3
Free elective	1
Total Hours	124

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- ³ Course meets MSU General Education requirements

Wildlife Veterinary Medicine Concentration (WFVM)

Advisor: Dr. Peter Allen, 261 Thompson Hall

Courses² to be taken in addition to those of the core curriculum include:

BCH 4013	Principles of Biochemistry	3
BIO 3103	Genetics I	3
BIO 3304	General Microbiology	4
CH 1213	Chemistry I ³	3
CH 1211	Investigations in Chemistry I	1
CH 1223	Chemistry II	3
CH 1221	Investigations in Chemistry II	1
CH 4513	Organic Chemistry I	3
CH 4511	Organic Chemistry Laboratory I	1
CH 4523	Organic Chemistry II	3
CH 4521	Organic Chemistry Laboratory II	1
MA 1613 or MA 1713	Calculus for Business and Life Sciences I ³ Calculus I	3
ST 2113 or ST 3123	Introduction to Statistics ³ Introduction to Statistical Inference	3
PH 1113	General Physics I	3
PH 1123	General Physics II	3
Zoology requirement		
BIO 2103	Cell Biology	
WFA 4123	Wildl & Fish Biometrics ⁴	3
Free elective		1
Wildlife Biology Elective ¹		6
WLVM Professional Electives ¹		9
Total Hours		124

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- ³ Course meets MSU General Education requirements
- ⁴ Fulfills computer application requirement

Wildlife Agriculture Conservation Concentration (WLAC)

Advisors: Dr. Kristine Evans, 265 Thompson Hall

Courses² to be taken in addition to those of the core curriculum include:

BIO 3103	Genetics I	3
CH 1043 or CH 1213	Survey of Chemistry I ³ Chemistry I	3
CH 1053 or CH 1223	Survey of Chemistry II Chemistry II	3
MA 1613 or MA 1713	Calculus for Business and Life Sciences I ³ Calculus I	3
ST 2113	Introduction to Statistics ³	3

or MA 3123	Introduction to Statistical Inference	
PSS 3301	Soils Laboratory	1
PSS 3303	Soils	3
WFA 4123	Wildl & Fish Biometrics ⁴	3
WFA 4373	Principles and Practice of Conservation in Agriculture Landscapes	3
GIS Elective ¹		3
Crop Science elective ¹		6
Animal Science elective ¹		3
Zoology elective		3
Free elective		1
Wildlife Biology Elective ¹		6
WLAC Professional Electives ¹		9
Life Science elective ¹		4
Total Hours		124

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- ³ Course meets MSU General Education requirements
- ⁴ Fulfills computer application requirement

Human-Wildlife Interactions Concentration (HWI)

Advisor: Dr. Raymond Iglay, 271 Thompson Hall

Courses² to be taken in addition to those of the core curriculum include:

CH 1043	Survey of Chemistry I ³	3
or CH 1213	Chemistry I	
CH 1053	Survey of Chemistry II	3
or CH 1223	Chemistry II	
MA 1613	Calculus for Business and Life Sciences I ³	3
or MA 1713	Calculus I	
ST 2113	Introduction to Statistics ³	3
or ST 3123	Introduction to Statistical Inference	
PSS 3301	Soils Laboratory	1
PSS 3303	Soils	3
WFA 3013	Human-Wildlife Conflicts Internship	3
WFA 4123	Wildl & Fish Biometrics	3
WFA 4273	Ecology and Management of Human-Wildlife Conflicts	3
WFA 4283	Human-Wildlife Conflict Techniques	3
WFA 4512	Advanced Topics in Human-Wildlife Conflicts	2
WFA 4521	Advanced Topics in Human-Wildlife Conflicts II	1
Zoology elective ¹		3
HWI Professional Electives ¹		9
Life Science Electives ¹		7
Wildlife Biology Electives ¹		6
Computer Application Elective ¹		3
Free elective		1
Total Hours		124

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