

# FISH, WILDLIFE AND CONSERVATION ECOLOGY - MASTER OF SCIENCE

The Department of Fish, Wildlife and Conservation Ecology (FWCE) offers graduate work leading to the Master of Science degree with a major in Fish, Wildlife and Conservation Ecology. Faculty members in the department also may advise Ph.D. candidates through the graduate program in the Department of Biology, Department of Animal and Range Sciences, Department of Plant and Environmental Sciences, as well as other Ph.D. granting departments. For additional information, please see the graduate catalog entries for the respective departments.

For the Master of Science degree, a minimum of 30 semester credits of graduate work in the major and related subjects is required, together with a thesis for most students. Of these credits, at least 15 must be in courses numbered 500 or above, and at least 15 must be for courses with the FWCE prefix. Students electing a minor in FWCE are required to take at least 9 credits in the minor field. A nonthesis option is available to some students, depending on prior training and experience, and subject to approval by the advisor and department head.

All students in the program must complete the following requirements:

- A minimum of 6 credits of Quantitative Foundations (eligible courses listed below),
- A minimum of 3 courses (9-12 credits) from Ecological Concepts, Organismal Biology, Ecological Techniques (eligible courses listed below),
  - In addition, courses taught as special topics (FWCE 535 Special Topics) may apply to the Quantitative Foundations or Ecological Concepts, Organismal Biology, Ecological Techniques with approval from the supervisory committee and Department Head.
- 4 to 12 credits from the Independent Study category (eligible courses listed below).
  - Programs involving a thesis should include 4 to 6 credits of (FWCE 599 Master's Thesis). A maximum of 6 credits of (FWCE 599 Master's Thesis) will count towards the 30 credit hour requirement.

The lists below show typical courses that meet minimum Departmental and Graduate School course requirements for the Master's degree, as determined by the faculty and Department Head. Graduate-level courses other than those listed below may be used to fulfill course requirements with permission from the supervisory committee and Department Head.

Prefix	Title	Credits
<b>Quantitative Foundations: Eligible Courses</b> <sup>1</sup>		
Select minimum of 6 credits from the following:		6
A ST 503	SAS Basics	
A ST 505	Statistical Inference I (or equivalent)	
A ST 506	Statistical Inference II	
A ST 507	Advanced Regression	
A ST 509	Statistical Models for Complex Data Structures	
A ST 540	Predictive Analytics	
A ST 555	Applied Multivariate Analysis	
A ST 568	Applied Linear Models II	
A ST 550	Special Topics	

BIOL 455	Biometry	
FWCE 457	Ecological Biometry	
FWCE 509	Population Ecology	
GEOG 585	Spatial Analysis and Modeling	
**Other courses may be eligible to fulfill course requirements with consent of the advisory committee and department head		
<b>Ecological Concepts, Organismal Biology, Ecological Techniques: Eligible courses</b>		
Select a minimum of 3 courses (9-12 credits) from the following:		9
BIOL 467	Evolution	
BIOL 484	Animal Communication	
BIOL 488	Principles of Conservation Genetics	
BIOL 568	Communities and Ecosystems	
BIOL 587	Behavioral and Evolutionary Ecology	
FWCE 464	Fish and Wildlife Management, Law, and Policy	
FWCE 530	Large Mammal Ecology, Conservation and Management (Fall Odd years)	
FWCE 531	Mammalogy	
FWCE 535	Special Topics	
FWCE 537	Wildlife Damage Management	
FWCE 540	Wildlife Habitat Relationships (Fall even years)	
FWCE 559	Aquatic Ecology	
FWCE 567	Herpetology	
FWCE 571	GIS for Natural Resource Scientists	
FWCE 582	Ichthyology	
GEOG 557	Biogeography	
RGSC 452	Vegetation Measurements for Rangeland Assessment	
RGSC 585	Land Cover Analysis for Natural Resources	
RGSC 518	Watershed Methods and Management	
**Other courses may be eligible to fulfill course requirements with consent of the advisory committee and department head.		
<b>Independent Study: Eligible courses</b>		
Select 4-12 credits from the following:		4
FWCE 548	Graduate Problems	
FWCE 598	Special Research Programs	
FWCE 599	Master's Thesis	
**Other courses may be eligible to fulfill course requirements with consent of the advisory committee and department head		
To meet the 30 credit hour requirements of the MS program, completion of further course work in addition to the requirements described above will be necessary. The additional course(s) must be approved by the graduate student's supervisory committee.		11
<b>Total Credits</b>		<b>30</b>

<sup>1</sup> Other courses, particularly in Applied Statistics, may be eligible with consent of the advisory committee.

Graduate work in the department is intended to prepare students for careers in research, teaching, extension and management. Facilities available to graduate students include two ranches of approximately 90,000 acres, a large suite of shared laboratories, and a large fish-culture facility. We actively cooperate with state and federal natural resource management agencies, and graduate students have access to national forests and extensive public lands, as well as the Jornada Basin Long-Term Ecological Research site and associated databases. Additional research opportunities for graduate students are available in the New

Mexico Cooperative Fish and Wildlife Research Unit, located in the department since 1988.

Additional information on the graduate program and faculty is available at <https://aces-academics.nmsu.edu/>.