

# 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 programs 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. Those programs involving a thesis or research project include 4 to 6 credits of research (FWCE 598 Special Research Programs or FWCE 599 Master's Thesis). 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 ST 505 Statistical Inference I or equivalent
- A minimum of 3 additional credits from the Quantitative Methods category in addition to A ST 505 Statistical Inference I (eligible courses listed below)
- One course each from the Ecological Concepts, Organismal Biology and Ecological Techniques categories (eligible courses listed below)
- 4 to 9 credits from the Independent Study category (eligible courses listed below)

In addition, a student may petition to have up to 3 credits of special topics courses (FWCE 548 Graduate Problems) to apply to one of the three areas. Courses other than those listed may be acceptable, given permission by the student's supervisory committee.

Prefix	Title	Credits
<b>Degree Requirements</b>		
A ST 505	Statistical Inference I (or equivalent)	4
<b>Quantitative Methods: Eligible Courses</b> <sup>1</sup>		
Select minimum of 3 credits from the following:		3
A ST 503	SAS Basics	
A ST 506	Statistical Inference II	
A ST 507	Advanced Regression	
A ST 515	Statistical Analysis with R	
A ST 550	Special Topics	
FWCE 509	Population Ecology (s)	
FWCE 457	Ecological Biometry	
GEOG 585	Advanced Spatial Analysis	
<b>Ecological Concepts: Eligible Courses</b> <sup>2</sup>		
Select one from the following:		3-4
BIOL 467	Evolution	
BIOL 484	Animal Communication	

BIOL 489	Genetic Aspects of Population Biology	
BIOL 568	Communities and Ecosystems	
BIOL 587	Behavioral and Evolutionary Ecology	
BIOL 488	Principles of Conservation Genetics	
FWCE 459	Aquatic Ecology	
FWCE 540	Wildlife Habitat Relationships	
GEOG 557	Fundamentals of Biogeography	
<b>Organismal Biology: Eligible courses</b> <sup>2</sup>		
Select one from the following:		3-4
FWCE 530	Large Mammal Ecology, Conservation and Management	
FWCE 532	Environmental Biology of Fishes	
FWCE 567	Herpetology	
FWCE 582	Ichthyology	
<b>Ecological Techniques: Eligible courses</b> <sup>2</sup>		
Select one from the following:		3-4
FWCE 464	Management of Aquatic and Terrestrial Ecosystems	
FWCE 530	Large Mammal Ecology, Conservation and Management	
FWCE 537	Wildlife Damage Management	
FWCE 571	GIS for Natural Resource Scientists	
RGSC 452	Vegetation Measurements for Rangeland Assessment	
RGSC 518	Watershed Methods and Management	
<b>Independent Study: Eligible courses</b>		
Select one from the following:		4-9
FWCE 548	Graduate Problems	
FWCE 598	Special Research Programs	
FWCE 599	Master's Thesis	
To meet the 30 credit hour requirements of the MS program, completion of 1 to 2 courses in addition to the requirements described above will be necessary. The additional course(s) must be approved by the graduate student's supervisory committee.		1-9

**Total Credits** 29

1

Other courses, particularly in Applied Statistics, may be eligible with consent of the advisory committee.

2

Other courses may be eligible to fulfill course requirements with consent of the advisory committee.

Students may petition to have up to 3 credits of special topics courses (FWCE 548 Graduate Problems) to apply to one of the three areas.

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 (see <http://jornada-www.nmsu.edu> for details). 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 <http://aces.nmsu.edu/academics/fws>. (<http://aces.nmsu.edu/academics/fws/>)