

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 |
|--|---|---------|
| Degree Requirements | | |
| A ST 505 | Statistical Inference I (or equivalent) | 4 |
| Quantitative Methods: Eligible Courses ¹ | | |
| 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 | Spatial Analysis and Modelling | |
| Ecological Concepts: Eligible Courses ² | | |
| Select one from the following: | | 3-4 |
| BIOL 467 | Evolution | |
| BIOL 484 | Animal Communication | |

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| 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 | |
| Organismal Biology: Eligible courses ² | | |
| 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 | |
| Ecological Techniques: Eligible courses ² | | |
| 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 | |
| Independent Study: Eligible courses | | |
| Select one from the following: | | 4-9 |
| FWCE 548 | Graduate Problems ² | |
| 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. | | 2-10 |

Total Credits 30

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/>)