

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 |
|--|--|---------|
| Quantitative Foundations: Eligible Courses ¹ | | |
| 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 | |

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| BIOL 455 | Biometry |
| FWCE 457 | Ecological Biometry |
| FWCE 509 | Population Ecology (s) |
| GEOG 585 | Spatial Analysis and Modeling |

**Other courses may be eligible to fulfill course requirements with consent of the advisory committee and department head

Ecological Concepts, Organismal Biology, Ecological Techniques: Eligible courses

| | | |
|--|---|---|
| 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 | Management of Aquatic and Terrestrial Ecosystems | |
| FWCE 530 | Large Mammal Ecology, Conservation and Management | |
| FWCE 535 | Special Topics | |
| FWCE 537 | Wildlife Damage Management | |
| FWCE 540 | Wildlife Habitat Relationships | |
| 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.

Independent Study: Eligible courses

| | | |
|---|---------------------------|---|
| 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.

Total Credits 30

¹ 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 <http://aces.nmsu.edu/academics/fws>. (<http://aces.nmsu.edu/academics/fws/>)