

# Rangeland and Wildlife Management

The Master of Science in Rangeland and Wildlife Management prepares students with a bachelor's degree in resource management or related disciplines to pursue advanced study of rangelands and range management. Graduate study in range management serves as the basis for a professional career in rangeland livestock production systems; grassland, savanna, wetland and shrubland ecology and management; native plants; rangeland rehabilitation; conservation easements; wildlife habitat; water quality issues; working landscapes; and rangeland economics and policy.

The graduate program in range management is administered by an interdepartmental group of faculty members from the Department of Environmental Science, Policy, and Management (ESPM) and related departments at UC Berkeley.

Excellent laboratory and field facilities are available for student research. These include several experimental range properties as well as large wildland ranges easily accessible from Berkeley. The faculty is actively engaged in both theoretical and practical research.

Doctoral work in Rangeland and Wildlife Management may be pursued as part of the PhD program in ESPM.

## Admission to the University

### Applying for Graduate Admission

Thank you for considering UC Berkeley for graduate study! UC Berkeley offers more than 120 graduate programs representing the breadth and depth of interdisciplinary scholarship. A complete list of graduate academic departments, degrees offered, and application deadlines can be found on the Graduate Division website (<http://grad.berkeley.edu/programs/list/>).

Prospective students must submit an online application to be considered for admission, in addition to any supplemental materials specific to the program for which they are applying. The online application can be found on the Graduate Division website (<http://grad.berkeley.edu/admissions/>).

## Admission Requirements

The minimum graduate admission requirements are:

1. A bachelor's degree or recognized equivalent from an accredited institution;
2. A satisfactory scholastic average, usually a minimum grade-point average (GPA) of 3.0 (B) on a 4.0 scale; and
3. Enough undergraduate training to do graduate work in your chosen field.

For a list of requirements to complete your graduate application, please see the Graduate Division's Admissions Requirements page (<https://grad.berkeley.edu/admissions/steps-to-apply/requirements/>). It is also important to check with the program or department of interest, as they may have additional requirements specific to their program of study and degree. Department contact information can be found here (<http://guide.berkeley.edu/archive/2023-24/graduate/degree-programs/>).

## Where to apply?

Visit the Berkeley Graduate Division application page (<http://grad.berkeley.edu/admissions/apply/>).

Two types of program plans lead to the M.S. degree in Rangeland and Wildlife Management. Most rangeland and wildlife students participate in ongoing research during their studies, and generally follow Plan II (non-thesis/comprehensive exam), however Plan I (thesis) is also available with Head Faculty Advisor consent. Students work with their advisors to develop a program to meet career goals, including desired certifications and qualifications. Plan II students completing 3 or more of the upper division core courses as undergraduates may be able to finish their MS in one year with careful planning with their advisor. Students must be sure to meet the unit requirements for their choice of plan:

The minimum core courses required for completion of the M.S. in Rangeland and Wildlife Management include courses from each of Categories A, B, and C, as indicated in the above table, and listed below. With Head Faculty Advisor approval, the program of study may substitute courses for those on the 3 lists to help the student meet specific career goals. These can include courses in resource economics, hydrology, wildlife, plant ecology, fire ecology, remote sensing, GIS, biogeochemistry, policy, soils, and so forth depending on student interests and preparation and in compliance with the upper division and graduate course balance specified in Plans I or II. Course requirements must be completed with a GPA of at least 3.0. Students should meet with the HFA as soon as possible after arrival on campus to discuss their plans, and if they are doing a thesis, they need to have their 3 person committee approved by their guiding professor and the HFA before the end of the second semester.

### Each of the core courses below must be completed:

ESPM 116B	Grassland and Woodland Ecology	4
ESPM 186	Grassland and Woodland Management and Conservation	4
ESPM 173	Introduction to Ecological Data Analysis	3
INTEGBI 102LF	Introduction to California Plant Life with Laboratory	4

### 8 UNITS (PLAN I) OR 12 UNITS (PLAN II) OF 200 LEVEL COURSES FROM THE REMAINING TWO CATEGORIES, INCLUDING:

#### Your choice of two of the following range graduate courses:

ESPM 268	Seminar in Range Ecology	2
ESPM 278	Range Assessment	3
ESPM 279	Seminar on Pastoralism	3
ESPM 280	Seminar in Range Ecosystem Planning and Policy	3

#### Your choice of one course in western land use policy or applied social science, such as:

ESPM C252	Topics in Science and Technology Studies	3
ESPM 268	Seminar in Range Ecology	2
CY PLAN 252	Land Use Controls	3
ESPM 280	Seminar in Range Ecosystem Planning and Policy	3
ESPM 258	Race, Science, and Resource Policy	3
GEOG 203	Nature and Culture: Social Theory, Social Practice, and the Environment	4

## Curriculum

### Category A: Tools

ESPM 116B	Grassland and Woodland Ecology	4
ESPM 186	Grassland and Woodland Management and Conservation	4
INTEGBI 102LF	Introduction to California Plant Life with Laboratory	4
ESPM 181A	Fire Ecology	3
ESPM 173	Introduction to Ecological Data Analysis	3
or ESPM 174	Design and Analysis of Ecological Research	
ESPM 106	American Wildlife: Management and Policy in the 21st Century	3
ESPM 114	Wildlife Ecology	3
ESPM C115C	Fish Ecology	3
LD ARCH C188	Geographic Information Science	4
or GEOG C188	Geographic Information Science	
ESPM 164	GIS and Environmental Science	3
ESPM C172	Remote Sensing of the Environment	4
ESPM 111	Ecosystem Ecology	4
ESPM 134	Fire, Insects, and Diseases in Forest Ecosystems	3
EPS 101	Field Geology and Digital Mapping	4
INTEGBI 157LF	Ecosystems of California	4

### Category B: Depth

ESPM 268	Seminar in Range Ecology	2
ESPM 278	Range Assessment	3
ESPM 279	Seminar on Pastoralism	3
ESPM 280	Seminar in Range Ecosystem Planning and Policy	3
LD ARCH 221	Quantitative Methods in Environmental Planning	3
ESPM 265	Seminar on Fire as an Ecological Factor	2

### Category C: Breadth

ESPM C252	Topics in Science and Technology Studies	3
GEOG 203	Nature and Culture: Social Theory, Social Practice, and the Environment	4
ESPM 277	Advanced Topics in Conservation Biology	3
ESPM 280	Seminar in Range Ecosystem Planning and Policy	3
ESPM 258	Race, Science, and Resource Policy	3
GEOG C250	Seminar in Sociology of Forest and Wildland Resources	3
ESPM 298	Directed Group Study	1-6
INTEGBI C156	Principles of Conservation Biology	4
ESPM C170	Carbon Cycle Dynamics	3
CY PLAN 291	Special Projects Studio in Planning	4-6

The two MS plans at UC Berkeley are as follows:

#### Plan I : Coursework and Thesis

Plan I is used infrequently in our program. It requires a minimum of 24 semester units of upper division and graduate courses, and completion of a thesis. For the 24 unit minimum in our program, a minimum of 12 units must be graduate courses in the 200 series courses in the student's major subject, including 4 units of thesis research. A substantial part of the coursework will be designed to acquire in-depth knowledge relevant to the thesis. Before starting thesis research, the student must have a research plan approved by the guiding professor and the HFA. The

thesis may be on any subject selected by the student with the approval of the HFA and their guiding professor. Students must have a properly constituted thesis committee of three members, two of whom must be Academic Senate members from the student's major. It is preferred, but not required, that students following Plan I have on the thesis committee an outside member, an Academic Senate faculty member outside the student's major field. If a proposed committee member does not belong to the Academic Senate, a request for an exception must accompany the application for advancement to candidacy. Please see: <https://grad.berkeley.edu/policy/degrees-policy/#f14-unit-credit-for-the-...> (<https://grad.berkeley.edu/policy/degrees-policy/#f14-unit-credit-for-the-masters-degree>).

#### Plan II: Coursework and Exam

Plan II is the most frequently used plan in our program. It requires a minimum of 24 semester units of upper division and graduate courses. Of the 24 units, a minimum of 12 units must be in 200-level graduate courses in the student's major subject. This plan requires that students pass a comprehensive oral exam before the degree can be awarded. The examination will emphasize the student's program of graduate study, but the student must also demonstrate an understanding of other principles and issues related to the study of Rangeland and Wildlife Management.

#### Meeting required units:

Courses in the 300 series or higher do not count toward the unit requirements for either Plan I or Plan II Masters degrees. For either the 20-unit Plan I or 24-unit Plan II, a maximum of 6 units of 299 course work may be used toward fulfilling degree unit requirements. For degree programs requiring more than 24 units, up to 25% of the unit total may be units in 299 courses.