As of Fall 2022, the Ecological Management & Restoration major is no longer accepting new students. It has been absorbed into the Plant Sciences major (https://catalog.ucdavis.edu/departments-programs-degrees/plant-sciences/plant-science-bs/) as an area of specialization.

The Major Program
This major is designed for students who are interested in understanding how to manage and restore wildland and rangeland plant communities. Courses are selected to provide an interdisciplinary background that encompasses ecology, applied plant biology, and the social sciences. Students will acquire a core understanding of natural and managed ecosystems and how they function, interact with the natural environment, are connected with human society and social change, and are restored and managed.

The Program
The curriculum provides depth in the ecological and botanical sciences directed toward an integrated understanding of how communities and ecosystems function and how this knowledge can assist in their management and restoration. Courses in environmental policy and law expose the students to the social drivers and constraints of ecosystem management. All students gain practical experience through practical field courses and a required internship. Students may also pursue an Honors thesis in their senior year.

Major Advisor
Kenneth Tate

Advising Center for the major, including peer advising, is located in 1220 Plant & Environmental Sciences; 530-752-9770.

Career Alternatives
Graduates from this program are prepared to pursue a wide range of careers, including positions in ecological restoration and ecosystem management; rangeland and reserve management; environmental consulting; public, private, or non-profit agencies concerned with restoration and natural resource management; Cooperative Extension; teaching; information and communication services. Graduates are qualified to pursue advanced studies in fields such as ecology, agroecology, environmental studies, geography or weed science.
Choose four restoration/conservation courses: 11-16

- PLS 130: Rangelands: Ecology, Conservation & Restoration
- PLS 135: Ecology & Community Structure of Grassland & Savannah Herbivores
- PLS 150: Sustainability & Agroecosystem Management
- ESM 141: Role of Fire in Natural Ecosystems
- ESP 127: Plant Conservation Biology
- ESP 155L: Wetland Ecology Laboratory
- WFC 154: Conservation Biology
- WFC 155: Wildlife Habitat Ecology & Conservation
- WFC 155L: Habitat Conservation & Restoration Laboratory

Choose one: 3-4

- ESM 100: Principles of Hydrologic Science
- HYD 143: Ecohydrology
- HYD/EBS 147: Runoff, Erosion & Water Quality Management
- HYD 151: Field Methods in Hydrology
- or ENH 120: Management of Container Media
- PLS 100C: Environmental Interactions of Cultivated Plants
- or PLS 163: Ecosystem & Landscape Ecology
- PLB 111: Plant Physiology
- or PLS 100A: Metabolic Processes of Cultivated Plants

*Environmental Science & Policy*

Choose one: 4

- ESP 160: The Policy Process
- ESP 161: Environmental Law
- ESP 171: Urban & Regional Planning
- ESP 172: Public Lands Management
- ESP 179: Environmental Impact Assessment

*Internship*

Must be selected in consultation with master advisor.

- PLS 164: Practicum in Ecological Restoration
  (Discontinued Winter 2023)
- PLS 192: Internship

In addition to the required coursework listed above, students might consider taking some of the following courses:

- ENT 107: California Insect Diversity
- HYD 124: Plant-Water-Soil Relationships
- LDA/ABT 150: Introduction to Geographic Information Systems
- PLS 135: Ecology & Community Structure of Grassland & Savannah Herbivores
- PLS 141: Ethnobotany
- PLS 158: Mineral Nutrition of Plants
- PLS 162: Urban Ecology
- SAS 018: GIS & Society
- SSC 109: Sustainable Nutrient Management