Complete one ecology & management course:

- ESM 355: Principles of Ecological Restoration
- ESM 370: Energy Technology & Society
- ESM 420: Ecosystem Analysis
- ESM 430: Natural Resource Management in Protected Areas
- FOR 321: Fire Ecology
- FOR 374: Wilderness Area Management
- FISH 476+: Ecology of Running Waters
- WLD 460+: Conservation Biology

Complete one natural resource science fundamentals course:

- FOR 130: Dendrology
- GEOG 106: Physical Geography
- SOIL 260: Intro to Soil Science
- BOT 350+: Plant Taxonomy
- WSHD 310: Hydrology & Watershed Management

Complete two upper division policy and management courses, chosen from a list of approved courses provided by your advisor, from ENGR, FISH, FOR, GEOG, NAS, PHIL, PSCI, RRS, SOIL, WSHD, WLD. [Prerequisites may be required for some courses, depending on choice.]

NOTE: 24 units may double-count toward GE requirements.

Geospatial Science Concentration (39 units)

**Lower Division**

- GEP 106: Physical Geography
- GSP 216: Intro to Remote Sensing
- GSP 270: Geographic Information Science (GIS)

**Upper Division**

- GSP 316: Cartography
- GSP 318: Geospatial Programming I
- GSP 326: Intermediate Remote Sensing
- GSP 330: Mobile Mapping
- GSP 370: Intermediate GIS
- GSP 41B: Geospatial Programming II, or
- GSP 436: Advanced Remote Sensing, or
- GSP 470: Advanced Geospatial Analysis & Modeling
- ESM 410: Geospatial Capstone
- ESM 425: Environmental Impact Assessment
- ESM 435: Grant Proposal Writing

Complete one natural resources depth or course approved by advisor: minimum 3 units:

- ESM 360: Intro to Environmental Planning Methods
- ESM 430: Natural Resource Mgmt. in Protected Areas
- FISH 220: Water Resources & Conservation
- FISH 260: Fish Conservation & Mgmt.
- FISH 300: Intro to Fishery Biology
- FOR 302: Forest Ecosystems & People
- FOR 307: California’s Forests & Woodlands
- GEOL 301: Geology of California
- GEOL 303: Earth Resources & Global Environmental Change
- GEOL 306: GeneralGeomorphology
- GEOL 308: Natural Disasters
- OCN 301: Marine Ecosystems — Human Impact
- OCN 304: Resources of the Sea
- RRS 306: Wildland Resource Principles
- WSHD 310: Hydrology & Watershed Management
- WSHD 333: Wildland Water Quality
- WLD 301: Principles of Wildlife Management
- WLD 488: Spatial Wildlife Ecology

NOTE: 27 units may double-count toward GE requirements.

**Environmental Education & Interpretation Minor**

**Requirements for the Minors**

**Special Grade Requirement**

Complete all courses in the minor with a C- or better.

**Ecological Restoration Minor**

Total units required for the minor: 16

- BOT 105: General Botany
- SOIL 260: Intro to Soil Science
- ESM 355: Principles of Ecological Restoration

Complete either:

- FOR 315: Forest Management and
- FOR 431: Forest Restoration
- RRS 306: Rangeland Resource Principles and

**Environmental & Natural Resources Planning Minor**

Total units required for the minor: 18

- GEOG 106: Physical Geography
- ESM 105: Natural Resource Conservation
- ESM 210: Public Land Use Policies & Management
- ESM 360: Intro to Environmental Planning Methods

Plus two courses from the following:

- ESM 325: Environmental Law & Regulation
- ESM 365: Local Government Planning
- ESM 425: Environmental Impact Assessment

**Environmental Policy Minor**

Total units required for the minor: 18-19

- ESM 105: Natural Resources Conservation
- ESM 210: Public Land Use Policies & Management
- ESM 325: Environmental Law & Regulation
- ESM 425: Environmental Impact Assessment

Complete one course from the following:

- ECON 423: Environmental & Natural Resource Economics
- NAS 332: Environmental Justice
- PSCI 317: Public Policy Process
- PSCI 352: Water Politics
- PSCI 364: Technology & Development
- PSCI 373: Politics of Sustainability
- PSCI 412: Legal Research
- WSHD 430: Water Rights/Water Law
Natural Resources Minor

Total units required for the minor: 19

- BIOL 105 (4) Principles of Biology
- ESM 105 (3) Natural Resource Conservation
- SOIL 260 (3) Introduction to Soil Science

At least three courses from the following (at least 6 units must be 300 or above):
- ESM 210 (3) Public Land Use Policies & Management
- ESM 215 (3) Natural Resources & Recreation
- ESM 365 (3) Local Government Planning
- FISH 300 (3) Introduction to Fishery Biology
- FOR 315 (3) Forest Management
- FOR 374 (3) Wilderness Area Mgmt.
- OCN 301 (3) Marine Ecosystems — Human Impact
- OCN 304 (3) Resources of the Sea
- RRS 306 (3) Wildland Resource Principles
- WLDF 301 (3) Principles of Wildlife Management

Natural Resources Recreation Minor

Total units required for the minor: 17-18

- ESM 210 (3) Public Land Use Policies & Management
- ESM 215 (3) Natural Resources & Recreation
- ESM 305 (3) Environmental Conflict Resolution, or
- ESM 309B (3) Environmental Communication
- FOR 374 (3) Wilderness Area Mgmt.
- ESM 415 (3) Recreation & Park Planning, or
- ESM 440 (2) Managing Recreation Visitors
- ESM 430 (3) NR Management in Protected Areas