Environmental Science Major Requirements

All courses for the major must be taken for a grade (C- or better).

DO NOT take course for the major P/NP!

Up to 16 upper division credits (usually four courses) may be applied to a 2nd major.

You must meet with a student or faculty adviser at least two terms prior to graduation.

Check pre-requisites for all upper division courses.

AREA 1. Environmental Studies Core Requirements (2 courses)

ENVS 201 (Soc Sci) ________ ENVS 203 (Humanities) ________

AREA 2. Math and Statistics Requirements (4 courses)

Mathematics - take one of the following sequences:

_____ MATH 246 and 247 – Calculus for Biological Sciences I, II
_____ MATH 251 and 252 – Calculus I, II

Statistics - take one of the following:

_____ GEOG 495 Geographic Data Analysis
_____ GEOL 418 Data Analysis for Earth & Env Sciences
_____ MATH 425 Statistical Methods I
_____ SOC 312 Statistical Analysis in Sociology
_____ Other approved course listed on tip sheet.

Analytical Approaches - take one of the following:

_____ ENVS 427 Environmental & Ecological Monitoring
_____ GEOG 481 GIScience I
_____ LA 413 Analyzing Land Systems
_____ Other approved course listed on tip sheet

AREA 3A. Natural Science Requirements (17 courses)

Natural Science courses are divided into two major categories: a) life sciences courses and b) earth and physical science courses. Choose one as a focal area and complete two, three-course introductory sequences (six courses) and an additional six upper division (300 or 400 level) courses in that focal area. In the non-focal area, you must complete five courses, at least two of which must be upper division.

LIFE SCIENCES □ Focal Area or □ Non- Focal Area

Lower division introductory sequences:

_____ Biology: BI 211-213
_____ Chemistry: CHEM 221-223
_____(Accompanying lab courses, CHEM 227-229, are strongly recommended)
_____ CH 111, BI 211, BI 213 (if non-focal area)

Upper division electives:

_____ ANTH 341 Food Origins
_____ ANTH 361 Human Evolution
_____ ANTH 362 Human Biological Variation [IP]
_____ ANTH 375 Primates in Ecological Communities
_____ ANTH 446 Pracitical Archaeobotany
_____ ANTH 463 Primate Behavior
_____ ANTH 466 Primate Feeding and Nutrition
_____ ANTH 472 Primate Conservation Biology
_____ BI 306 Pollination Biology

EARTH & PHYSICAL SCIENCES □ Focal Area or □ Non- Focal Area

Lower division introductory sequences:

_____ Earth Sciences: GEOL 101-103 or 201-203
_____ Physical Sciences: PHYS 201-203
_____(Accompanying lab courses, PHYS 204-206, are strongly recommended)
_____ GEOG 141 (if non-focal area)

Upper division electives:

_____ ENVS 350 Ecological Footprint of Energy Generation
_____ ENVS 465 Wetland Ecology & Management
_____ ENVS 477 Soil Science
_____ GEOG 321 Climatology
_____ GEOG 322 Geomorphology
_____ GEOG 360 Watershed Science & Policy
_____ GEOG 361 Global Environmental Change
_____ GEOG 421 Advanced Climatology
_____ GEOG 425 Hydrology and Water Resources
_____ GEOG 427 Fluvial Geomorphology
_____ GEOG 430 Long-Term Environmental Change
_____ GEOG 461 Environmental Alteration
_____ GEOG 482 GIScience II
_____ GEOG 485 Remote Sensing I
_____ GEOG 486 Remote Sensing II
AREA 3A. Geoscience Courses (12 courses)
All ESCI majors must complete 12 courses from the following:

- GEOG 491 Advanced GIS
- GEOL 304, 305, 306, 307 OR 308 (no more than one course of GEOL 30X)
- GEOL 310 Earth Resources & Environment
- GEOL 311 Earth Materials (5 credits)
- GEOL 315 Earth Physics
- GEOL 316 Introduction to Hydrogeology
- GEOL 331 Mineralogy (5 credits)
- GEOL 332 Introduction to Petrology (5 credits)
- GEOL 334 Sedimentology and Stratigraphy
- GEOL 350 Structural Geology (3 credits)
- GEOL 353 Geological Hazards
- GEOL 425 Geology of Ore Deposits
- GEOL 431 Paleontology I: Paleozoic Marine Fossils
- GEOL 433 Paleobotany
- GEOL 434 Vertebrate Paleontology
- GEOL 435 Paleopedology
- GEOL 438 Geobiology
- GEOL 441 Hillslope Geomorphology
- GEOL 451 Hydrogeology
- GEOL 452 Neotectonics and Quaternary Geology
- GEOL 462 Environmental Geomechanics
- GEOL 468 Intro Seismology
- GEOL 472 Aqueous-Mineral-Gas Equilibria
- GEOL 473 Isotope Geochemistry
- Other approved course listed on tip sheet

AREA 3B. Social Science, Policy, Humanities and Sustainable Design and Practice Courses (3 courses)
All ESCI majors must complete 1 course from 3 of the 4 areas below:

Social Science - Core Courses:
- ENVS 435 Environmental Justice
- ENVS 450 Political Ecology
- ENVS 455 Sustainability
- SOC 416 Issues in Sociology of the Environment (contact instructor for approval)

Policy - Core Courses:
- ENVS 335 Allocating Scarce Environmental Resources [>2]
- PPPM 443 Natural Resource Policy
- PPPM 444 Environmental Policy
- PS 367 Science and Politics of Climate Change [>2]
- PS 477 International Environmental Politics

Humanities - Core Courses:
- ENG 469 Literature and the Environment
- ENVS 345 Environmental Ethics [>1]
- HIST 378 American Environmental History to 1890 [>2] (AC)
- HIST 379 American Environmental History, 1890-Present [>2] (AC)
- HIST 473 American Environmental History
- PHIL 340 Environmental Philosophy [>1]

Sustainable Design and Practice - Core Courses:
- ARCH 430 Architectural Contexts: Place & Culture
- ARCH 431 Community Design
- ARCH 435 Principles of Urban Design
- ENVS 467 Sustainable Agriculture
- LA 440 Introduction to Landscape Planning Analysis
- LA 441 Principles of Applied Ecology
- PPPM 442 Sustainable Urban Development
- PPPM 445 Green Cities

AREA 4. Environmental Issues course (1 course)
- ENVS 411 or 425 Issues course, or other approved course listed on tip sheet

AREA 5. Practical Learning Experience (1 course or 4 credits)
All ESCI majors must complete 4 upper division credits of practical learning (eg, ENVS 401, 404, 429 or other approved course), which can be satisfied in any of the following ways:
- Environmental Leadership Program (ENVS 429 – application required)
- Internship (ENVS 404 – approval by Internship Coordinator required)
- IE3 international internship (OINT 488)
- Pre-approved course taken abroad with substantial scientific research component
- One term of study at a field station such as OIMB
- One term of research with a UO faculty member in environmental science (ENVS 401)
- Honors Thesis with a substantial environmental science focus (ENVS 403 w/ adviser approval)
- Other science-oriented experiential learning opportunities as approved by adviser