Environmental Science Major Requirements

All courses for the major must be taken for a grade (C- or better).
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 413 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 Practical Archaeobotany
- ANTH 463 Primate Behavior
- ANTH 466 Primate Feeding and Nutrition
- ANTH 472 Primate Conservation Biology
- BI 306 Pollination Biology
- BI 307 Forest Biology
- BI 309 Tropical Diseases of Africa
- BI 330/331 Microbiology and Lab
- BI 357 Marine Biology
- BI 359 Plant Biology
- BI 370 Ecology
- BI 374 Conservation Biology
- BI 375 Biological Diversity
- BI 380 Evolution
- BI 390 Animal Behavior
- BI 432 Mycology
- BI 442 Systematic Botany
- BI 448 Field Botany
- BI 451 Invertebrate Zoology [OIMB] (if 8 credits, then counts as 2 courses)
- BI 452 Insect Biology
- BI 454 Estuarine Biology [OIMB] (5 credits)
- BI 455 Marine Birds and Mammals [OIMB] (6 credits)
- BI 457 Marine Biology [OIMB] (8 credits, counts as 2 courses)
- BI 458 Biological Oceanography [OIMB] (5 credits)
- BI 468 Amphibians & Reptiles of Oregon
- BI 471 Population Ecology
- BI 472 Community Ecology
- BI 474 Marine Ecology [OIMB] (8 credits, counts as 2 courses)
- BI 476 Terrestrial Ecosystem Ecology
- BI 478/479 Neotropical Ecology in Ecuador (8 credits, counts as 2 courses)
- CH 331 Organic Chemistry I
- CH 335 Organic Chemistry II
- CH 336 Organic Chemistry III
- 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

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 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
- GEOG 341 Population & Environment [>2] [IC]
- 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 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