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 Quantitative Methods in Sociology
______ Other approved course listed on tip sheet

**Analytical Approaches - take one of the following:**

______ BI 473 Quantitative Ecology
______ 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)
______ CHEM 111, BI 211, BI 213 (if non-focal area)

Upper division electives:

______ ANTH 330 Hunters and Gatherers [SSC] [IC]
______ 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 459 Field Ornithology
______ BI 468 Amphibians & Reptiles of Oregon
______ BI 471 Community Ecology
______ BI 474 Marine Ecology [OIMB] (8 credits, counts as 2 courses)
______ BI 475/477 Neotropical Ecology in Ecuador (8 credits, counts as 2 courses)
______ CHEM 331 Organic Chemistry I
______ CHEM 335 Organic Chemistry II
______ CHEM 336 Organic Chemistry III
______ GEOG 326 Biogeography
______ GEOG 423 Advanced Biogeography
______ GEOG 433 Fire and Natural Disturbances
______ LA 465 Landscape Ecology
______ Other approved course listed on tip sheet

**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 432 Climatological Aspects of Global Change
______ GEOG 461 Environmental Alteration

Last updated 3/07/2016
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 345 Environmental Justice
- ENVS 450 Political Ecology
- ENVS 455 Sustainability
- GEOG 341 Population & Environment [SSC] [IC]
- SOC 416 Issues in Sociology of the Environment (contact instructor for approval)

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

Humanities - Core Courses:
- ENG 469 Literature and the Environment
- ENVS 345 Environmental Ethics [A&L]
- HIST 379 American Environmental History, 1890-Present [A&L] (AC)
- HIST 473 American Environmental History
- PHIL 340 Environmental Philosophy [A&L]

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)
- 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