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 prerequisites 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
- ANTH 341 Food Origins
- ANTH 361 Human Evolution
- ANTH 362 Human Biological Variation
- 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 Diseases of Africa
- BI 330/331 Microbiology and Lab
- BI 357 Marine Biology
- BI 359 Plant Biology
- BI 370 Principles of Ecology
- BI 374 Conservation Biology
- BI 375 Biological Diversity
- BI 380 Evolution
- BI 390 Animal Behavior
- BI 412 Marine Field Studies [OIMB]
- 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]
- BI 455 Marine Birds and Mammals [OIMB]
- BI 457 Marine Biology [OIMB]
- BI 458 Biological Oceanography [OIMB]
- BI 459 Field Ornithology
- BI 468 Amphibians & Reptiles of Oregon
- BI 469 Ecological Restoration
- BI 471 Population Ecology
- BI 472 Community Ecology
- BI 474 Marine Ecology [OIMB]
- BI 476 Terrestrial Ecosystem Ecology
- BI 478/479 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 323 Biogeography
- GEOG 423 Advanced Biogeography
- GEOG 433 Fire and Natural Disturbance
- 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 201-203
- Physical Sciences: PHYS 201-203

(Accompanying lab courses, PHYS 204-206, are strongly recommended)

- GEOL 141 (if non-focal area)

Upper division electives:

- ENVS 350 Ecology 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
- GEOG 482 GIScience II
- GEOG 485 Remote Sensing I
- GEOG 486 Remote Sensing II
- 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)

Last updated 11/17/2015
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 [SSC] (IC)
- SOC 416 Issues in Sociology of the Environment (contact instructor for approval)

Policy - Core Courses:
- ENVS 335 Allocating Scarce Environmental Resources
- PPPM 331 Environmental Management
- 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]
- ENVS 440 Environmental Aesthetics
- 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)
- Pre-approved course taken abroad with substantial scientific research component
- One term of research experience 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