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
(An accompanying lab courses, CHEM 227-229, are strongly recommended)
----- CHEM 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 459 Field Ornithology
----- 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)
----- 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 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
(An 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
----- GEOG 482 GIScience 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 [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 378 American Environmental History to 1890 [SSC] [IC]
- HIST 379 American Environmental History, 1890-Present [SSC] [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)
- 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

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