Environmental Science Major Requirements (before Fall 2007)

All courses for the major must be taken for a grade. Up to 16 upper-division credits (usually four courses) may be applied to a 2nd major. You must meet with your adviser during the first term of your final year.

AREA 1. Lower Division Environmental Studies Core Requirements:

ENVS 201 (Soc Sci) _____, ENVS 202 (Sci) _____, ENVS 203 (Humanities) _____

AREA 2. Math and Lower Natural Science Requirements:

Mathematics (3 courses): MATH 246, 247 or 251, 252 (consult with adviser) and a statistics or data analysis course (e.g., ENVS 355; MATH 425; PSY 302) (Note: must be different course than the AREA 6 minimum) (Math) ___________ , (Math) ___________ , (Stat/Data Anal.) ___________

Natural Sciences: At least three introductory science sequences (9 class minimum) from the following list:

- a. Life Sciences: BI 211-213 or BI 251-253 or CHEM 111, BI 211, BI 213
- b. Chemistry: CHEM 221-222 or equivalent.
  NOTE: CHEM 227-229 (accompanying lab courses) are strongly recommended
- c. Earth Sciences: GEOL 201-203 or GEOG 141, 143 and GEOL 103 or equivalent
- d. Physical Sciences: PHYS 201-203 or equivalent. NOTE: PHYS 204-206 (lab courses) strongly recommended to accompany PHYS 201-203

AREA 3A. Upper Division Natural Science Requirements (32 credits):

Up to four upper-division courses may be applied to a second major, or two for a minor.

Part 1. Upper Division Natural Science Core "List" Courses (6 courses). Six Natural Science upper-division courses from the core areas listed below. Courses must be taken from at least four core areas, including at least one course from Human Dimensions and one course from Analytical Approaches.

1. Geosphere
   ___ GEOG 322 Geomorphology
   ___ GEOG 310 Earth Resources & Environment
   ___ GEOG 311 Earth Materials (5 credits)
   ___ GEOG 334 Sedimentology and Stratigraphy
   ___ GEOG 350 Structural Geology (3 credits)

2. Hydrosphere
   ___ BI 308 Freshwater Biology
   ___ BI 457 Marine Biology [OIMB]
   ___ BI 458 Biological Oceanography [OIMB]
   ___ ENVS 465 Wetland Ecology & Management
   ___ GEOG 304 Watershed Science and Policy
   ___ GEOG 425 Hydrology and Water Resources (prereq: GEOG 321 or 322)
   ___ GEOG 451 Hydrogeology
   ___ GEOG 472 Aqueous Geochemistry

3. Atmosphere
   ___ GEOG 321 Climatology
   ___ PHYS 311 Physics of the Atmosphere

4. Biosphere
   ___ BI 307 Forest Biology
   ___ BI 357 Marine Biology
   ___ BI 370 Principles of Ecology
   ___ BI 374 Conservation Biology
   ___ BI 476 Terrestrial Ecosystem Ecology
   ___ BI 478/479 Neotropical Ecology in Ecuador
   ___ BI 457 Marine Biology [OIMB]
   ___ BI 474 Marine Ecology [OIMB]
   ___ ENVS 465 Wetland Ecology & Management
   ___ GEOG 323 Biogeography
   ___ LA 441 Principles of Applied Ecology

5. Human Dimensions (1 course minimum)
   ___ ANTH 360 Human Ecology
   ___ GEOG 341 Population and Environment [SSC][IC]
   ___ GEOG 432 Climatological Aspects of Global Change (prereq: GEOG 321)
   ___ GEOG 461 Environmental Alteration
   ___ GEOG 353 Geological Hazards

6. Analytical Approaches (1 course minimum)
   ___ BI 471 Population Ecology (prereq: BI 370)
   ___ BI 473 Quantitative Ecology (prereq: BI 370)
   ___ CIS 445 Modeling and Simulation (extensive CIS prereqs)
   ___ CIS 455 Computational Science (extensive CIS prereqs)
   ___ ENVS 355 Environmental Data Analysis & Modeling
   ___ ENVS 411 Intro to Monitoring Tools & Techniques
   ___ GEOG 414 Advanced Geographic Data Analysis
   ___ GEOG 416 Introductory Geographic Information Systems (prereq: GEOG 311)
   ___ GEOG 418 Fundamentals of Remote Sensing

Part 2. Additional Upper-Division Natural Science Electives (2 courses). Two upper-division natural science courses from those listed below). NOTE: GEOG 304-308 do not count. The 8 credit Honors Thesis may substitute for ONE elective. The 12 credit SIP may be substituted for BOTH electives.

Anthropology
___ ANTH 360 Human Ecology
___ ANTH 361 Human Evolution
___ ANTH 365 Food and Culture
___ ANTH 367 Human Adaptation
___ ANTH 375 Primates in Ecological Communities
___ ANTH 460 Nutritional Anthropology
___ ANTH 466 Primate Feeding and Nutrition
___ ANTH 468 Primate Conservation Biology
___ Other ANTH Course:

Biology
___ BI 306 Pollination Biology (prereq: BI 213 or 253)
___ BI 307 Forest Biology [SC]
___ BI 308 Freshwater Biology [SC]

<table>
<thead>
<tr>
<th>Adviser</th>
<th>Date</th>
</tr>
</thead>
</table>
AREA 3B. Upper-Division Social Science, Humanities, and Policy Electives (2 courses). Two courses selected from the ENV Major 3B list. _______________, _______________.

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

AREA 5. Practical Learning Experience (PLE):
All ESCI majors must complete 4 upper division credits of practical learning, which can be satisfied in any of the following ways:

A. One term of study at a field station such as OIMB or Malheur Field Station
B. Two terms of research experience with a UO faculty member in environ. sciences
C. An internship with a substantial component in environmental science (w/adviser approval)
D. A Science-oriented Student Initiated Project (or SIP) (w/adviser approval)
E. Other science-oriented experiential learning opportunities as approved by adviser
F. Participation in the Environmental Leadership Program (ELP) (w/adviser approval)