Environmental Science Major Requirements (ESCI)

Note: ENVS is the abbreviation for the Environmental Studies Major, which is separate & distinct from the Environmental Science Major.

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; MATH 243; 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 221-223 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
   __________ GEOL 310 Earth Resources & Environment
   __________ GEOL 311 Earth Materials (5 credits)
   __________ GEOL 334 Sedimentology and Stratigraphy
   __________ GEOG 350 Structural Geology (3 credits)

2. Hydrosphere
   __________ BI 308 Freshwater Biology
   __________ BI 457 Marine Biology (topics vary - assignment to category will vary with topic)
   __________ BI 458 Biological Oceanography (offered at OIMB)
   __________ ENVS 465 Wetland Ecology & Management
   __________ GEOG 369 Watershed Science and Policy
   __________ GEOG 425 Hydrology and Water Resources (prereq: GEOG 321 or 322)
   __________ GEO 451 Hydrogeology
   __________ GEO 472 Aqueous Geochemistry

NOTE: ALL COURSES FOR THE MAJOR MUST BE GRADED.

Student Name: ____________________ ID#: ______________________

3. Atmosphere
   __________ PHYS 311 Physics of the Atmosphere

4. Biosphere
   __________ BI 307 Forest Biology
   __________ BI 370 Principles of Ecology
   __________ BI 399 Conservation Biology
   __________ BI 476 Terrestrial Ecosystem Ecology
   __________ BI 478/479 Neotropical Ecology in Ecuador
   __________ BI 457 Marine Biology (topics vary - assignment to category will vary with topic)
   __________ BI 474 Marine Ecology
   __________ 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
   __________ GEOL 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
   __________ 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: GEOL 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 307 Forest Biology [SC]
   __________ BI 308 Freshwater Biology [SC]
   __________ BI 330/331 Microbiology and Lab
Also Note: You MUST see your faculty adviser at least once during the first term of the year you plan to graduate.