

Environmental and Ocean Sciences Major: Marine Ecology Pathway
Advisement Checklist

Preparation for the major (35 units):

- _____ EOSC 123 (4) – Organisms and Ecosystems (ESTI)
- _____ EOSC 110 or EOSC 104/104L/105 (4) – Introduction to Geosciences or Natural Disasters (CQUR, ESTI)
- _____ EOSC 220 (4) – Introduction to Atmospheric and Ocean Sciences
- _____ EOSC 222 (3) – Environmental Data Analysis
- _____ CHEM 151/151L (4) – General Chemistry with Lab (ESTI, CQUR)
- _____ CHEM 152/152L (4) – General Chemistry with Lab
- _____ MATH 150 (4) – Calculus I (CMRP)
- _____ PHYS 136/136L (4) – General Physics I with Lab
- _____ CHEM 301/301L (4) – Organic Chemistry I with Lab

Upper-Division Requirements (24-26 units)

- _____ EOSC 303 or EOSC 300 (3) – Environmental Issues Abroad (FDG1) or Environmental Issues
- _____ EOSC 301 (4) – Research Applications in Environmental and Ocean Sciences (CADW)

Capstone Experience

- _____ EOSC 496 or 498 or 499 (2) – Research, Internship, or Independent Study
- _____ EOSC 495 (1) – Senior Seminar (CORL)

Electives: Choose 4 courses: 3 courses from the biological group (at least one must be an ecology course) and one from the geo-physical course. At least 2 of the electives must include labs. One of the biological electives can be interdisciplinary between biological and geo/physical or non-science topics.

- _____ Biological Elective, ecology course (See list on back): _____
- _____ Biological Elective, ecology or non-ecology (See list on back): _____
- _____ Biological Elective, ecology or non-ecology (See list on back): _____
- _____ Geo/physical Elective (See list on back): _____

Biology Minor (18 units)

A biology minor is required for the Marine Ecology Pathway

- _____ BIOL 240/240L (4) – Bioenergetics and Systems with Lab (ESTI)
- _____ BIOL 242/242L (4) – Genomes and Evolution with Lab (ESTI)
- _____ BIOL 300 (3) - Genetics
- _____ Upper-division elective in Biology with Lab (4)
- _____ Upper-division elective in Biology without Lab (3)

Note that courses in blue are common to all three pathways.

Elective Course Options for Marine Ecology Pathway

Biological courses:

- (4) EOSC 350 – Invertebrate Zoology
 - (3-4) EOSC 400 – Topics in Ecology*
 - (3-4) EOSC 401 – Topics in Environmental Biology
 - (4) EOSC 431 – Human Impacts on the Coastal Environment*
 - (4) EOSC 432 – Marine Community Ecology*
 - (4) EOSC 433 – Plankton Ecology*
 - (3-4) EOSC 434/EOSC 435 – Wetlands Ecology with or without Lab*
 - (3-4) EOSC 438/EOSC 439 – Animal Behavioral Ecology with or without Lab*
 - (4) EOSC 451 – Biological Oceanography*
 - (4) EOSC 462 – Biology of Fishes
 - (3) EOSC 465 – Marine Mammals
- * ecology courses

Geo/physical courses:

- (3-4) EOSC 402 – Topics in Marine Geo/Physical/Chemical Science
- (4) EOSC 450 – Geological Oceanography
- (4) EOSC 452 – Marine Geochemistry
- (4) EOSC 473 – Climatology

Interdisciplinary Courses with Biological Component:

- (3-4) EOSC 405 – Topics in Interdisciplinary Environmental Science and Studies
- (3-4) EOSC 406 – Topics in Interdisciplinary Environmental Science

Or approved study abroad courses (talk to your advisor early if you are planning on studying abroad!)

Environmental and Ocean Sciences Major: Environmental Science Pathway
Advisement Checklist

Preparation for the major (31 units):

- _____ EOSC 123 (4) – Organisms and Ecosystems (ESTI)
- _____ EOSC 110 or EOSC 104/104L/105 (4) – Introduction to Geosciences or Natural Disasters (CQUR, ESTI)
- _____ EOSC 220 (4) – Introduction to Atmospheric and Ocean Sciences
- _____ EOSC 222 (3) – Environmental Data Analysis
- _____ CHEM 151/151L (4) – General Chemistry with Lab (ESTI, CQUR)
- _____ CHEM 152/152L (4) – General Chemistry with Lab
- _____ MATH 150 (4) – Calculus I (CMRP)
- _____ PHYS 136/136L (4) – General Physics I with Lab

Upper-Division Requirements (25-26 units)

- _____ EOSC 303 or EOSC 300 (3) – Environmental Issues Abroad (FDG1) or Environmental Issues
- _____ EOSC 301 (4) – Research Applications in Environmental and Ocean Sciences (CADW)
- _____ EOSC 314 (4) – Introduction to Maps and Spatial Data Analysis

Capstone Experience

- _____ EOSC 496 or 498 or 499 (2) – Research, Internship, or Independent Study
- _____ EOSC 495 (1) – Senior Seminar (CORL)

Electives: Choose 3 courses: 2 courses from the geo/physical group and one from the ecological group. At least 2 of the electives must include labs. One of the geo/physical electives can be interdisciplinary between geo/physical and biological or non-science topics.

- _____ Geo/physical Elective (See list below): _____
- _____ Geo/physical Elective (See list below): _____
- _____ Ecological Elective (See list below): _____

Note that courses in blue are common to all three pathways.

Elective Course Options for Environmental Science Pathway

Geo/physical courses:

- (3-4) EOSC 402 – Topics in Marine Geo/Physical/Chemical Science
- (3-4) EOSC 403 – Topics in Geo/Physical/Chemical Science
- (4) EOSC 415 – Geographic Information Systems
- (4) EOSC 420 – Introduction to Remote Sensing
- (4) EOSC 450 – Geological Oceanography
- (4) EOSC 452 – Marine Geochemistry
- (4) EOSC 473 – Climatology
- (3) EOSC 474 – History of the Earth and Climate, with the option of taking EOSC 474L (1) concurrently
- (4) EOSC 485 – Environmental Geology
- (4) EOSC 487 – Surface Water Hydrology
- (4) EOSC 488 – Geomorphology

Ecological courses:

- (3-4) EOSC 400 – Topics in Ecology
- (4) EOSC 431 – Human Impacts on the Coastal Environment
- (4) EOSC 432 – Marine Community Ecology
- (4) EOSC 433 – Plankton Ecology
- (3-4) EOSC 434/EOSC 435 – Wetlands Ecology with or without Lab
- (3-4) EOSC 438/EOSC 439 – Animal Behavioral Ecology with or without Lab
- (4) EOSC 451 – Biological Oceanography

Interdisciplinary Courses with Geo/physical Component:

- (3-4) EOSC 406 – Topics in Interdisciplinary Environmental Science

Or approved study abroad courses (talk to your advisor early if you are planning on studying abroad!)

Environmental and Ocean Sciences Major: Environmental Studies Pathway
Advisement Checklist

Preparation for the major (31 units):

- _____ EOSC 123 (4) – Organisms and Ecosystems (ESTI)
- _____ EOSC 110 or EOSC 104/104L/105 (4) – Introduction to Geosciences or Natural Disasters (CQUR, ESTI)
- _____ EOSC 220 (4) – Introduction to Atmospheric and Ocean Sciences
- _____ EOSC 222 (3) – Environmental Data Analysis
- _____ CHEM 151/151L (4) – General Chemistry with Lab (ESTI, CQUR)
- _____ ECON 101 (3) – Principles of Microeconomics (ESBI)
- _____ ECON 102 (3) – Principles of Macroeconomics (ESBI)
- _____ POLS 120 or POLS 170 (3) – American Politics or International Relations (ESBI)
- _____ MATH 115 (3) – College Algebra (CMRP)

Upper-Division Requirements (30-31 units)

- _____ EOSC 303 or EOSC 300 (3) – Environmental Issues Abroad (FDG1) or Environmental Issues
- _____ EOSC 301 (4) – Research Applications in Environmental and Ocean Sciences (CADW)
- _____ EOSC 305 (3) – Environmental Assessment Practices
- _____ EOSC 314 (4) – Introduction to Maps and Spatial Data Analysis
- _____ PHIL 338 or 344 (3) – Environmental Ethics or Environmental Justice (FETI)

Capstone Experience

- _____ EOSC 496 or 498 or 499 (2) – Research, Internship, or Independent Study
- _____ EOSC 495 (1) – Senior Seminar (CORL)

Electives: Choose 3 courses: one science with lab, one non-science, and one from either list. An interdisciplinary EOSC course can also be used as the open elective.

- _____ Science elective with lab (See list on back): _____
- _____ Non-science elective (See list on back): _____
- _____ Open elective (See list on back): _____

Note that courses in blue are common to all three pathways.

Elective Course Options for Environmental Studies Pathway

Science courses (4-unit courses include a lab):

- (4) EOSC 350 – Invertebrate Zoology
- (3) EOSC 355 – Environmental Chemistry
- (3-4) EOSC 400 – Topics in Ecology
- (3-4) EOSC 401 – Topics in Environmental Biology
- (3-4) EOSC 402 – Topics in Marine Geo/Physical/Chemical Science
- (3-4) EOSC 403 – Topics in Geo/Physical/Chemical Science
- (3-4) EOSC 405 – Topics in Interdisciplinary Environmental Science
- (4) EOSC 415 – Geographic Information Systems
- (4) EOSC 420 – Introduction to Remote Sensing
- (4) EOSC 431 – Human Impacts on the Coastal Environment
- (4) EOSC 432 – Marine Community Ecology
- (4) EOSC 433 – Plankton Ecology
- (3-4) EOSC 434/EOSC 435 – Wetlands Ecology with or without Lab
- (3-4) EOSC 438/EOSC 439 – Animal Behavioral Ecology with or without Lab
- (4) EOSC 451 – Biological Oceanography
- (4) EOSC 450 – Geological Oceanography
- (4) EOSC 452 – Marine Geochemistry
- (4) EOSC 462 – Biology of Fishes
- (3) EOSC 465 – Marine Mammals
- (4) EOSC 473 – Climatology
- (3) EOSC 474 – History of the Earth and Climate, with the option of taking EOSC 474L (1) concurrently
- (4) EOSC 485 – Environmental Geology
- (4) EOSC 487 – Surface Water Hydrology
- (4) EOSC 488 – Geomorphology

Non-science courses:

- (3) ECON 308 – Environmental and Natural Resource Economics
 - (3-4) EOSC 404 – Topics in Environmental Studies
 - (3) HIST 370 – American Environmental History
 - (3) POLS 329 – Law of the Sea
 - (3) POLS 348 – Indigenous Peoples and the Environment (FDG2)
 - (3) POLS 349 – Politics and the Environment
 - (3) SOCI 315 – Health and Society
 - (3) SOCI 471 – Environmental Inequality and Justice (CADW, FDG2)
 - (3) THRS 338 – Faith and Environmental Justice (CADW, FDD1, FTRI)
- Other upper-division courses by approval in ECON, ETHN, HIST, PHIL, POLS, SOCI, and THRS

Interdisciplinary EOSC Courses:

- (3-4) EOSC 405 – Topics in Interdisciplinary Environmental Science and Studies

Or approved study abroad courses (talk to your advisor early if you are planning on studying abroad!)

Environmental Studies and Policy Minor
Advisement Checklist

Environmental Studies and Policy Minor (20-21 units):

- _____ EOSC 123 (4) – Organisms and Ecosystems (ESTI)
_____ EOSC 110 or EOSC 104/104L/105 (4) – Introduction to Geosciences or Natural Disasters
(CQUR, ESTI)
_____ EOSC 303 or EOSC 300 (3) – Environmental Issues Abroad (FDG1) or Environmental Issues

^Note: Environmental and Ocean Science Majors (Marine Ecology and Environmental Science pathways only) can minor in Environmental Studies and Policy, and should take EOSC 305 in place of EOSC 300 within the minor.

Electives: Choose 3 upper-division courses from the following lists: at least two must be non-science courses

- _____ Non-science Elective (See list below): _____
_____ Non-science Elective (See list below): _____
_____ Open Elective (See lists below): _____

Elective Course Options for Environmental Studies and Policy Minor

Non-science courses:

- (3) ECON 308 – Environmental and Natural Resource Economics
- (3) EOSC 305 – Environmental Assessment Practices
- (3-4) EOSC 404 – Topics in Environmental Studies
- (3) HIST 370 – American Environmental History
- (3) PHIL 338 or 344 – Environmental Ethics or Environmental Justice (FETI)
- (3) POLS 329 – Law of the Sea
- (3) POLS 348 – Indigenous Peoples and the Environment (FDG2)
- (3) POLS 349 – Politics and the Environment
- (3) SOCI 315 – Health and Society
- (3) SOCI 471 – Environmental Inequality and Justice (FDG2)
- (3) THRS 338 – Faith and Environmental Justice (FDD1, FTRI, CADW)

Other upper-division courses by approval in ECON, ETHN, HIST, PHIL, POLS, SOCI, and THRS and approved study abroad courses

Interdisciplinary EOSC Courses:

- (3-4) EOSC 405 – Topics in Interdisciplinary Environmental Science and Studies

See Environmental and Ocean Sciences minor checklist for science electives (can be used for open elective)