EARTH AND ENVIRONMENTAL SCIENCE MAJOR (B.S.)

A minimum of 120 credits of coursework is required for the baccalaureate degree with a minimum 2.0 overall GPA, and a minimum 2.0 major GPA. However, more than 120 credits may be required depending upon the major field of study.

Program Requirements

Students must complete 42 credits of General Education requirements (http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/general-ed-ba-bs) and 3-9 credits of World Languages and Cultures Requirements (http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/world-languages-cultures-requirement).

Major Requirements

EAES 105  Physical Geology  4
EAES 220  Mineralogy  4
EAES 240  Historical Geology  4
EAES 302  Structural Geology  3
EAES 320  Igneous Metamorphic Petrology  4
EAES 342  Invertebrate Paleobiology  4
EAES 441  Stratigraphy  4
EAES 404  Field Geology  6

Math Collateral

Select one of the following sequences:  7-8
Math Sequence A
MATH 111  Applied Precalculus  4
or MATH 112 Precalculus Mathematics
MATH 116  Calculus A  3
Math Sequence B
MATH 122  Calculus I  4
& MATH 221 and Calculus II  3

Physics Collateral

Select one of the following sequences:  8
PHYS 191  University Physics I  4
& PHYS 192 and University Physics II  4
PHYS 193  College Physics I  4
& PHYS 194 and College Physics II  4

Major Electives

Select 11 credits from the list (see below)  11

Chemistry Collateral

CHEM 120  General Chemistry I  4
CHEM 121  General Chemistry II  4

Total Credits  67

Earth and Environmental Science Major Electives

EAES 200  Geomorphology  3
EAES 201  Understanding Weather and Climate  4
EAES 204  Geology Field Trip  1
EAES 210  Introduction to GIS and Remote Sensing  3
EAES 211  Aerial Photograph Interpretation  3
EAES 212  Map Reading and Cartography  4
EAES 230  Hydrology  3
EAES 250  Introduction to Marine Sciences  4
EAES 301  Climatology  3
EAES 310  Geographic Information Systems (GIS)  3
EAES 311  Fundamentals of Remote Sensing of Environment  3
EAES 321  Economic Geology  3
EAES 322  Environmental Geochemistry  3
EAES 330  Fluvial Geography  3
EAES 331  Geohydrology  3
EAES 332  Hydroclimatology  3
EAES 340  Sedimentology  4
EAES 341  Principles of Soil Science  3
EAES 350  Oceanography  3
EAES 361  Environmental Policy  3
EAES 403  Meteorology  4
EAES 443  Geology of the Vertebrates  4
EAES 451  Coastal Marine Geology  4
EAES 452  Dynamic Beach Processes  2
EAES 453  Tidal Marsh Sedimentations  2
EAES 454  Human Impact on the Coastal Zone  4
EAES 455  Field Methods in Oceanography  2
EAES 456  Physical Oceanography  4
EAES 459  Independent Study in the Marine Sciences  1-4
EAES 460  Environmental Law  3
EAES 470  The Geology of New Jersey  3
EAES 494  Independent Study in Geoscience  1-4
EAES 498  Seminar in Geoscience  2
EAES 499  Sel Topics in Earth Environmental Studies: Glacial Deposits, Climate Archive Resource Potential  1-4
PHMS 490  Field Methods in the Marine Sciences  4
PHYS 280  Astronomy  4