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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAES 105</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>EAES 220</td>
<td>Mineralogy</td>
<td>4</td>
</tr>
<tr>
<td>EAES 240</td>
<td>Historical Geology</td>
<td>4</td>
</tr>
<tr>
<td>EAES 302</td>
<td>Structural Geology</td>
<td>3</td>
</tr>
<tr>
<td>EAES 320</td>
<td>Igneous Metamorphic Petrology</td>
<td>4</td>
</tr>
<tr>
<td>EAES 342</td>
<td>Invertebrate Paleobiology</td>
<td>4</td>
</tr>
<tr>
<td>EAES 441</td>
<td>Stratigraphy</td>
<td>4</td>
</tr>
<tr>
<td>EAES 404</td>
<td>Field Geology</td>
<td>6</td>
</tr>
</tbody>
</table>

Math Collateral

Select one of the following sequences: 7-8

Math Sequence A
- MATH 111 Applied Precalculus
- or MATH 112 Precalculus Mathematics
- MATH 116 Calculus A

Math Sequence B
- MATH 122 Calculus I
- & MATH 221 and Calculus II

Physics Collateral

Select one of the following sequences: 8

- PHYS 191 University Physics I
- & PHYS 192 and University Physics II
- PHYS 193 College Physics I
- & PHYS 194 and College Physics II

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 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