## SUSTAINABILITY SCIENCE MAJOR (B.S.)

### 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).

### Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EAES 101</td>
<td>Planet Earth</td>
<td>4</td>
</tr>
<tr>
<td>EAES 160</td>
<td>The Human Environment</td>
<td>3</td>
</tr>
<tr>
<td>EAES 202</td>
<td>Introduction to Sustainability Science</td>
<td>3</td>
</tr>
<tr>
<td>EAES 370</td>
<td>World Resources and Industries</td>
<td>3</td>
</tr>
<tr>
<td>EAES 402</td>
<td>Sustainability Science Seminar</td>
<td>3</td>
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### Collateral Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 113</td>
<td>Principles of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 213</td>
<td>Introduction to Ecology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 120</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 121</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>ECON 101</td>
<td>Applied Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 102</td>
<td>Applied Microeconomics</td>
<td>3</td>
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Select one of the following sequences: 7-8

#### Math Sequence A

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MATH 111</td>
<td>Applied Precalculus</td>
<td></td>
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<tr>
<td>or MATH 111</td>
<td>Precalculus Mathematics</td>
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<tr>
<td>MATH 116</td>
<td>Calculus A</td>
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</table>

#### Math Sequence B

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 122</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>&amp; MATH 221</td>
<td>and Calculus II</td>
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</table>

### Major Electives

#### Global Systems

Select one of the following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 360</td>
<td>Environmental Anthropology</td>
<td></td>
</tr>
<tr>
<td>ANTH 423</td>
<td>Community and Health</td>
<td></td>
</tr>
<tr>
<td>ANTH 429</td>
<td>Building Sustainable Communities</td>
<td></td>
</tr>
<tr>
<td>EAES 261</td>
<td>Conservation of Natural Resources</td>
<td></td>
</tr>
<tr>
<td>EAES 262</td>
<td>Our Finite Earth: Population and Resources</td>
<td></td>
</tr>
<tr>
<td>EAES 300</td>
<td>Energy Transitions: A Global Dependence</td>
<td></td>
</tr>
<tr>
<td>EAES 360</td>
<td>Contemporary Problems in Conservation of Natural Resources</td>
<td></td>
</tr>
<tr>
<td>EAES 475</td>
<td>Environmental Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 215</td>
<td>The Economics of Social Problems</td>
<td></td>
</tr>
<tr>
<td>ECON 414</td>
<td>Economics of Natural Resources and Global Warming</td>
<td></td>
</tr>
<tr>
<td>ECON 419</td>
<td>Economics Of Energy And Environmental Policy</td>
<td></td>
</tr>
<tr>
<td>PSYC 230</td>
<td>Environmental Psychology</td>
<td></td>
</tr>
<tr>
<td>SOCI 220</td>
<td>Sociology of Rich and Poor Nations</td>
<td></td>
</tr>
<tr>
<td>SOCI 312</td>
<td>Environmental Sociology</td>
<td></td>
</tr>
<tr>
<td>SOCI 314</td>
<td>Environmental Justice</td>
<td></td>
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</tbody>
</table>

#### Urban Systems

Select one of the following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 155</td>
<td>Urban Anthropology</td>
<td></td>
</tr>
<tr>
<td>ANTH 422</td>
<td>Environment and Community</td>
<td></td>
</tr>
<tr>
<td>EAES 281</td>
<td>Introduction to American Urban Studies</td>
<td></td>
</tr>
<tr>
<td>EAES 283</td>
<td>Urban Geography</td>
<td></td>
</tr>
<tr>
<td>EAES 380</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>EAES 385</td>
<td>Urbanization and Environment</td>
<td></td>
</tr>
<tr>
<td>EAES 391</td>
<td>Quantitative Methods in Geography and Urban Studies</td>
<td></td>
</tr>
<tr>
<td>EAES 484</td>
<td>Urban Planning</td>
<td></td>
</tr>
<tr>
<td>POLS 315</td>
<td>Urban Administration</td>
<td></td>
</tr>
<tr>
<td>SOCI 311</td>
<td>Urban Sociology</td>
<td></td>
</tr>
</tbody>
</table>

#### Decision-Making Systems

Select one of the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAES 361</td>
<td>Environmental Policy</td>
<td></td>
</tr>
<tr>
<td>EAES 363</td>
<td>Geopolitics</td>
<td></td>
</tr>
<tr>
<td>EAES 460</td>
<td>Environmental Law</td>
<td></td>
</tr>
<tr>
<td>INBS 250</td>
<td>Introduction to International Business</td>
<td></td>
</tr>
<tr>
<td>INBS 370</td>
<td>World Trade and Investment</td>
<td></td>
</tr>
<tr>
<td>LAWS 220</td>
<td>Conflict and Its Resolution</td>
<td></td>
</tr>
<tr>
<td>MGMT 231</td>
<td>Management Processes</td>
<td></td>
</tr>
<tr>
<td>MGMT 315</td>
<td>Organizational Behavior</td>
<td></td>
</tr>
<tr>
<td>MGMT 363</td>
<td>Business and Society</td>
<td></td>
</tr>
<tr>
<td>MGMT 436</td>
<td>Strategic Project Management</td>
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</table>

#### Surface Processes

Select one of the following: 2-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EAES 200</td>
<td>Geomorphology</td>
<td></td>
</tr>
<tr>
<td>EAES 210</td>
<td>Introduction to GIS and Remote Sensing</td>
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</tr>
<tr>
<td>EAES 310</td>
<td>Geographic Information Systems (GIS)</td>
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</tr>
<tr>
<td>EAES 311</td>
<td>Fundamentals of Remote Sensing of Environment</td>
<td></td>
</tr>
<tr>
<td>EAES 321</td>
<td>Economic Geology</td>
<td></td>
</tr>
<tr>
<td>EAES 340</td>
<td>Sedimentology</td>
<td></td>
</tr>
<tr>
<td>EAES 341</td>
<td>Principles of Soil Science</td>
<td></td>
</tr>
<tr>
<td>EAES 410</td>
<td>Advanced Topics in GIScience</td>
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</tr>
<tr>
<td>EAES 451</td>
<td>Coastal Marine Geology</td>
<td></td>
</tr>
<tr>
<td>EAES 452</td>
<td>Dynamic Beach Processes</td>
<td></td>
</tr>
<tr>
<td>EAES 453</td>
<td>Tidal Marsh Sedimentations</td>
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</tr>
</tbody>
</table>

#### Climate and Hydrologic Processes

Select one of the following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EAES 201</td>
<td>Understanding Weather and Climate</td>
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</tr>
<tr>
<td>EAES 230</td>
<td>Hydrology</td>
<td></td>
</tr>
<tr>
<td>EAES 250</td>
<td>Introduction to Marine Sciences</td>
<td></td>
</tr>
<tr>
<td>EAES 330</td>
<td>Fluvial Geography</td>
<td></td>
</tr>
<tr>
<td>EAES 331</td>
<td>Geohydrology</td>
<td></td>
</tr>
<tr>
<td>EAES 332</td>
<td>Hydroclimatolology</td>
<td></td>
</tr>
<tr>
<td>EAES 350</td>
<td>Oceanography</td>
<td></td>
</tr>
<tr>
<td>EAES 403</td>
<td>Meteorology</td>
<td></td>
</tr>
<tr>
<td>EAES 454</td>
<td>Human Impact on the Coastal Zone</td>
<td></td>
</tr>
</tbody>
</table>

#### Biological and Chemical Processes

Select one of the following: 2-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQUA 351</td>
<td>Aquatic Biological Processes</td>
<td></td>
</tr>
</tbody>
</table>
Sustainability Science Major (B.S.)

BIOL 254  Applied Microbiology
BIOL 256  Applied Environmental Microbiology
BIOL 300  Environmental Biology and Related Controversial Issues
BIOL 370  Principles of Ecology
BIOL 460  Biological Oceanography
BIOL 461  Aquatic Ecology
CHEM 230  Organic Chemistry I
CHEM 231  Organic Chemistry II
CHEM 232  Experimental Organic Chemistry I
CHEM 233  Experimental Organic Chemistry II
CHEM 320  Environmental Chemical Analysis
CHEM 325  Atmospheric Chemistry
CHEM 330  Green Chemistry
EAES 322  Environmental Geochemistry
EAES 427  Organic Geochemistry

Additional Electives
Select 9-15 credits from the list (see below) for a total of 30 credits of major electives

Total Credits 76

Additional Electives
Select 9-15 credits

ANTH 155  Urban Anthropology 3
ANTH 360  Environmental Anthropology 3
ANTH 422  Environment and Community 3-4
ANTH 423  Community and Health 3-4
ANTH 429  Building Sustainable Communities 3-4
AQUA 351  Aquatic Biological Processes 4
BIOL 254  Applied Microbiology 3
BIOL 256  Applied Environmental Microbiology 3
BIOL 300  Environmental Biology and Related Controversial Issues 3
BIOL 370  Principles of Ecology 3
BIOL 460  Biological Oceanography 3
BIOL 461  Aquatic Ecology 3
CHEM 230  Organic Chemistry I 3
CHEM 231  Organic Chemistry II 3
CHEM 232  Experimental Organic Chemistry I 2
CHEM 233  Experimental Organic Chemistry II 2
CHEM 320  Environmental Chemical Analysis 3
CHEM 325  Atmospheric Chemistry 3
EAES 200  Geomorphology 3
EAES 201  Understanding Weather and Climate 4
EAES 210  Introduction to GIS and Remote Sensing 3
EAES 230  Hydrology 3
EAES 250  Introduction to Marine Sciences 4
EAES 261  Conservation of Natural Resources 3
EAES 262  Our Finite Earth: Population and Resources 3
EAES 280  Principles of Land Use 3
EAES 281  Introduction to American Urban Studies 3
EAES 283  Urban Geography 3
EAES 300  Energy Transitions: A Global Dependence 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 360  Contemporary Problems in Conservation of Natural Resources 3
EAES 361  Environmental Policy 3
EAES 363  Geopolitics 3
EAES 380  Transportation 3
EAES 385  Urbanization and Environment 3
EAES 391  Quantitative Methods in Geography and Urban Studies 3
EAES 403  Meteorology 4
EAES 410  Advanced Topics in GIScience 3
EAES 427  Organic Geochemistry 3
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 460  Environmental Law 3
EAES 484  Urban Planning 3
ECON 215  The Economics of Social Problems 3
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SOCI 311  Urban Sociology 3
SOCI 312  Environmental Sociology 3
SOCI 314  Environmental Justice 3