The Bachelor of Science degree in Environmental Engineering is intended to address the demands of society for classically trained engineers with focus on environmental, municipal and industrial processes and strengths in water chemistry, fluid mechanics and hydraulics.

### Freshman Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHMY 141</td>
<td>College Chemistry I</td>
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<tr>
<td>CHMY 142*</td>
<td>College Chemistry I Lab</td>
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<tr>
<td>M 171Q</td>
<td>Calculus I</td>
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<tr>
<td>or M 181Q</td>
<td>Honors Calculus I</td>
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<tr>
<td>EENV 102</td>
<td>Introduction to Environmental</td>
<td>3</td>
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<tr>
<td>Engineering Design and Sustainability</td>
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<tr>
<td>ECV 101</td>
<td>Intro To Civil Engineering</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>US 101US</td>
<td>First Year Seminar</td>
<td>3</td>
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<tr>
<td>or CLS 101US</td>
<td>Knowledge and Community</td>
<td></td>
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<tr>
<td>or BGEN 104US</td>
<td>Business &amp; Entrepreneurship</td>
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<tr>
<td>Fundamentals Seminar</td>
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<tr>
<td>or LS 101US</td>
<td>Interdisciplinary Ways of Knowing</td>
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<tr>
<td>or COMX 111US</td>
<td>Introduction to Public Speaking</td>
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<tr>
<td>or HLD 121US</td>
<td>Leadership Foundations</td>
<td></td>
</tr>
<tr>
<td>or HONR 201US</td>
<td>Texts and Critic: Knowledge &amp;</td>
<td></td>
</tr>
<tr>
<td>Imagitation I</td>
<td></td>
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<tr>
<td>or CLS 201US</td>
<td>Knowledge and Community</td>
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* Take CLS 201US if > 30 earned credits.

** University Core (IA/RA, IH, IS, or D) **

** Year Total: **

<table>
<thead>
<tr>
<th>Fall</th>
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### Sophomore Year

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<tr>
<td>ECV 231</td>
<td>Introduction to Engineering Hydrology</td>
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<tr>
<td>ECHM 201</td>
<td>Material and Energy Balances for</td>
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<tr>
<td>Chemical &amp; Biological Processes</td>
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<tr>
<td>EGEN 201*</td>
<td>Engineering Mechanics-Statics</td>
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<tr>
<td>M 273</td>
<td>Multivariable Calculus</td>
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<tr>
<td>ENSC 245IN</td>
<td>Soils</td>
<td>3</td>
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<tr>
<td>or ECV 320</td>
<td>Geotechnical Engineering</td>
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<tr>
<td>EENV 202</td>
<td>Sustainable Waste Management</td>
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<td>EENV 240</td>
<td>Chemistry for Environmental</td>
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<tr>
<td>Engineers</td>
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<tr>
<td>ECV 202</td>
<td>Applied Analysis</td>
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<tr>
<td>DDSN 131</td>
<td>Introduction to Drafting and Design</td>
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<tr>
<td>M 274</td>
<td>Introduction to Differential Equation</td>
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<td>University Core (IA/RA, IH, IS, or D)</td>
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** Year Total: **

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<tbody>
<tr>
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### Junior Year

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<tbody>
<tr>
<td>BIOB 160</td>
<td>Principles of Living Systems</td>
<td>4</td>
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<tr>
<td>or BIOB 170IN</td>
<td>Principles of Biological Diversity</td>
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** Year Total: **

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### Senior Year

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<tbody>
<tr>
<td>EENV 341</td>
<td>Physical and Chemical Treatment</td>
<td>4</td>
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<tr>
<td>Processes*</td>
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<td>ECIV 337</td>
<td>Civil Engineering Fluid Mechanics**</td>
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<tr>
<td>EGEN 350</td>
<td>Applied Engineering Data Analysis</td>
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<tr>
<td>or STAT 332</td>
<td>Statistics for Scientists and Engineers</td>
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<tr>
<td>University Core (IA/RA, IH, IS, or D)</td>
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<tr>
<td>EENV 387</td>
<td>Environmental Laws and Regulations**</td>
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<tr>
<td>EENV 342</td>
<td>Biological Treatment Processes**</td>
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<tr>
<td>ECV 333</td>
<td>Water Resources Engineering**</td>
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<td>ECV 308</td>
<td>Construction Practice</td>
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<td>EGEN 310R</td>
<td>Multidisciplinary Engineering Design**</td>
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** Year Total: **

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<th>Fall</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>16</td>
<td>17</td>
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</tbody>
</table>

** Total Program Credits: **

128

* Key Courses

** Advanced Courses

Additional Requirements: A maximum of 4 credits total from Individual Problems, Internships, and Undergraduate Research may be counted toward professional electives. Students must successfully complete all key courses (*) prior to taking any advanced courses (**) which includes professional electives. A maximum of 3 credit-hours may be included from a completed MSU minor, a prior or concurrent BS/BA degree in another major, or courses in a completed MSU Honors program, or Internship (max. 3 credits). A student may petition to include other senior- or graduate-level courses consistent with the degree program but not listed here (requires Academic Advisor and Department Head approval).

### Professional Electives

** Water Resources Electives

Take at least one of the following:

- ECV 431 | Open Channel Hydraulics
- ECV 435 | Closed-Conduit Hydraulics
- EENV 432 | Advanced Engineering Hydrology

### Environmental Engineering Electives

Take at least one of the following:

- EENV 436 | Stormwater Management & Engineering
- EENV 441 | Natural Treatment Systems
- EENV 445 | Hazardous Waste Treatment
### Engineering Tools Electives
Take at least one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>DDSN 245</td>
<td>Civil Drafting</td>
</tr>
<tr>
<td>GPHY 284</td>
<td>Intro to GIS Science &amp; Cartog</td>
</tr>
<tr>
<td>EENV 498</td>
<td>Internship</td>
</tr>
<tr>
<td>SRVY 230</td>
<td>Intro to Surveying for Engineers</td>
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### Professional Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIOE 370</td>
<td>General Ecology</td>
</tr>
<tr>
<td>BIOE 428</td>
<td>Freshwater Ecology</td>
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<tr>
<td>BIOM 430</td>
<td>Applied and Environmental Microbiology</td>
</tr>
<tr>
<td>BIOM 452</td>
<td>Soil &amp; Environmnt Microbiology</td>
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<tr>
<td>ECHM 405</td>
<td>Sustainable Energy</td>
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<tr>
<td>ECIV 492</td>
<td>Independent Study</td>
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<tr>
<td>EENV 490R</td>
<td>Undergraduate Research</td>
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<td>EGEN 325</td>
<td>Engineering Economic Analysis</td>
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<td>EIND 425</td>
<td>Technology Entrepreneurship</td>
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<td>EIND 477</td>
<td>Quality Management Systems</td>
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<td>EIND 434</td>
<td>Project Management for Engineers</td>
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<td>ENSC 353</td>
<td>Environmental Biogeochemistry</td>
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<td>ENSC 407</td>
<td>Environmental Risk Assessment</td>
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<td>ENSC 448</td>
<td>Stream Restoration Ecology</td>
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<td>ENSC 460</td>
<td>Soil Remediation</td>
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<tr>
<td>ENSC 461</td>
<td>Restoration Ecology</td>
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<tr>
<td>GPHY 384</td>
<td>Adv GIS and Spatial Analysis</td>
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