North Carolina State University

ENVIRONMENTAL ENGINEERING CURRICULUM
Degree Earned: B.S. in Environmental Engineering (14ENEBS)
Department of Civil, Construction, and Environmental Engineering
For students entering CCEE after July 2018 (F’18)

**FRESHMAN YEAR**

<table>
<thead>
<tr>
<th>FALL SEMESTER</th>
<th>CREDITS</th>
<th>SPRING SEMESTER</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 101 Chemistry - A Molecular Science</td>
<td>3</td>
<td>CH 201 Chemistry – A Quantitative Science</td>
<td>3</td>
</tr>
<tr>
<td>CH 102 General Chemistry Laboratory</td>
<td>1</td>
<td>EC 205 Fundamentals of Economics (GEP Req)</td>
<td>3</td>
</tr>
<tr>
<td>E 101 Introduction to Engr &amp; Prob. Solving</td>
<td>1</td>
<td>MA 241 Calculus II</td>
<td>4</td>
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<tr>
<td>E 115 Intro to Computing Environments</td>
<td>1</td>
<td>PY 205 Physics for Engineers &amp; Scientists I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101 Academic Writing and Research</td>
<td>4</td>
<td>PY 206 Physics for Engineers &amp; Scientists I Lab</td>
<td>1</td>
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<tr>
<td>MA 141 Calculus I</td>
<td>4</td>
<td>E 102 Engineering in the 21st Century (GEP Req)</td>
<td>2</td>
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<tr>
<td>HESF 1XX Fitness &amp; Wellness Course</td>
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<tr>
<td><strong>Total:</strong></td>
<td>15</td>
<td><strong>Total:</strong></td>
<td>16</td>
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**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th>FALL SEMESTER</th>
<th>CREDITS</th>
<th>SPRING SEMESTER</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 214 Engineering Mechanics – Statics</td>
<td>3 (CP)</td>
<td>CE 282 Hydraulics</td>
<td>3 (CP)</td>
</tr>
<tr>
<td>CE 250 Intro. to Sustainable Infrastructure</td>
<td>3 (CP)</td>
<td>CE 373 Fundamentals of Environmental Eng.</td>
<td>3 (CP)</td>
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<tr>
<td>MA 242 Chemical III</td>
<td>4</td>
<td>Earth Systems Chemistry Elective¹</td>
<td>3</td>
</tr>
<tr>
<td>CSC 111 Intro to Computing: PYTHON</td>
<td>3</td>
<td>MA 341 Applied Differential Equations I</td>
<td>3</td>
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<td><strong>Total:</strong></td>
<td>17</td>
<td><strong>Total:</strong></td>
<td>16</td>
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**JUNIOR YEAR**

<table>
<thead>
<tr>
<th>FALL SEMESTER</th>
<th>CREDITS</th>
<th>SPRING SEMESTER</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 378 Environmental Chem. &amp; Microbiology</td>
<td>4</td>
<td>CE 381 Hydraulics Sys Meas. Lab</td>
<td>1</td>
</tr>
<tr>
<td>TDE 220 Civil Engineering Graphics OR</td>
<td></td>
<td>CE 383 Hydrology &amp; Urban Water Sys</td>
<td>3</td>
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<tr>
<td>GIS 280 Intro to Geo. Info Systems</td>
<td>3</td>
<td>CE 339 Civil Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>PY 208 Physics for Engineers &amp; Scientists II</td>
<td>3</td>
<td>MA 201 Engr Thermodynamics I</td>
<td>3</td>
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<tr>
<td>ST 370 Probability &amp; Statistics for Engr</td>
<td>3</td>
<td>PS 320 US Environ Law and Politics OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 110 Public Speaking (GEP Req)</td>
<td>3</td>
<td>PS 336 Global Envir Pol (GEP Req)</td>
<td>3</td>
</tr>
<tr>
<td>HES XXX Phys Ed/Healthy Living Course</td>
<td>1</td>
<td>GEP Requirement (GEP Humanities)</td>
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<td><strong>Total:</strong></td>
<td>17</td>
<td><strong>Total:</strong></td>
<td>16</td>
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**SENIOR YEAR**

<table>
<thead>
<tr>
<th>FALL SEMESTER</th>
<th>CREDITS</th>
<th>SPRING SEMESTER</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 488 Water Resource Engineering</td>
<td>3</td>
<td>CE 477 Solid Waste Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CE 484 Water Supply &amp; Waste Water Sys.</td>
<td>3</td>
<td>CE 481 Environmental Engineering Project</td>
<td>3</td>
</tr>
<tr>
<td>CE 476 Air Pollution Control OR</td>
<td></td>
<td>ENE Elective II²</td>
<td>3</td>
</tr>
<tr>
<td>CE 479 Air Quality</td>
<td>3</td>
<td>ENE Elective III²</td>
<td>3</td>
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<tr>
<td>ENE Elective I²</td>
<td>3</td>
<td>GEP Requirement (GEP Interdisciplinary Persp.)</td>
<td>3</td>
</tr>
<tr>
<td>GEP Requirement (GEP Humanities)</td>
<td>3</td>
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<td><strong>Total:</strong></td>
<td>15</td>
<td><strong>Total:</strong></td>
<td>15</td>
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Minimum Credit Hours Required for Graduation¹: 127

**Major/Program Footnotes:**

¹ Select from MEA 323 or SSC 442
² ENE Elective – three electives in senior year
   I. Select one: CE 435, CE 476, CE 478, CE 487, CE 479, or advised elective from CE course list.
   II. Select another one course from (I.), or CE 499.
   III. Select another one course from (I.), or one Environmental General Elective from approved list

* Foreign Language Proficiency at the FL_102 level is required for graduation.

(CP) – Critical Path major specific course predictive of student success.
ENVIRONMENTAL ENGINEERING CURRICULUM
COURSE LISTING WITH PRE- AND CO-REQUISITES IN PARENTHESES
For students entering CCEE after July 2018 (F'18)

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
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<tbody>
<tr>
<td><strong>FRESHMAN YEAR</strong></td>
<td><strong>SOPHOMORE YEAR</strong></td>
</tr>
<tr>
<td>CH 101¹</td>
<td>CH 201 (C- or better in CH 101)</td>
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<tr>
<td>CH 102¹ (CoReq CH 101)</td>
<td>EC 205 (GEP Soc Sci Req.)¹</td>
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<tr>
<td>E 101¹</td>
<td>MA 241 (C or better in MA 141)¹</td>
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<tr>
<td>E 115²</td>
<td>PY 205 (C or better in MA 141)¹</td>
</tr>
<tr>
<td>ENG 101¹</td>
<td>PY 206 (C or better in MA 141; Co: PY 205)¹</td>
</tr>
<tr>
<td>MA 141¹</td>
<td>E 102’ (GEP Int. Persp. Req.)¹</td>
</tr>
<tr>
<td>HESF 1XX’ Fitness &amp; Wellness Course</td>
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Matriculation Requirements (CODA): 1. C or better in: CH 101, CH 102, E 101, ENG 101, MA 141, MA 241, PY 205 & PY 206 (admission is competitive) 2. Completion of E 115 (S)

**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th>SOPHOMORE YEAR</th>
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<tbody>
<tr>
<td>CE 214 (C or better in PY 205 &amp; MA 241; CoReq MA 242)</td>
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<tr>
<td>CE 250 (CoReq CSC 111 &amp; CE 214)</td>
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<tr>
<td>CHE 205 (C or better in MA 241 &amp; PY 205, and CH 201 or CH 221)</td>
</tr>
<tr>
<td>MA 242 (C or better in MA 241)</td>
</tr>
<tr>
<td>CSC 111 (CoReq E 115 &amp; MA 141)</td>
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<tr>
<td>CE 282 (C- or better in CE 214; CoReq MA 341 or ST 370)</td>
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<tr>
<td>CE 373 (CoReq CE 250 and (CHE 205 or CE 282))</td>
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<tr>
<td>BIO 183 (CH 101 or BIO 181)</td>
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<td>MA 341 (MA 242)</td>
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**JUNIOR YEAR**

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<tr>
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<tbody>
<tr>
<td>CE 378 ((MEA 323 or SSC 442), C- or better in CE 250 &amp; CE 373; CoReq ST 370)</td>
</tr>
<tr>
<td>TDE 220 or GIS 280</td>
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<tr>
<td>PY 208 (C- or better in PY 205 and in MA 241)</td>
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<tr>
<td>ST 370 (MA 141)</td>
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<tr>
<td>COM 110 (GEP Add. Breadth Req.)¹</td>
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<tr>
<td>HES___ XXX Phys. Ed/Healthy Living Elective¹</td>
</tr>
<tr>
<td>CE 381 (CoReq CE 282)</td>
</tr>
<tr>
<td>CE 383 (C- or better in CE 282; CoReq ST 370)</td>
</tr>
<tr>
<td>CE 339 (CSC 111 &amp; (MA 341 or MA 305), Junior standing)</td>
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<tr>
<td>MAE 201 (MA 242 &amp; (PY 208 or PY 202))</td>
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<tr>
<td>PS 320 or PS 336 (GEP Soc Sci Req.)¹</td>
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<tr>
<td>GEP Requirement¹ (Humanities)</td>
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**SENIOR YEAR**

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<tbody>
<tr>
<td>CE 488 (CE 339 &amp; CE 383)</td>
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<tr>
<td>CE 484 (CE 282 &amp; CE 373)</td>
</tr>
<tr>
<td>CE 476 (MAE 201 &amp; CE 373; CoReq ST 370) or CE 479 (CE 282 &amp; CE 373; CoReq ST 370)</td>
</tr>
<tr>
<td>Environmental Engineering Elective II¹</td>
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<tr>
<td>ENE Elective I¹</td>
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<tr>
<td>GEP Requirement* (Humanities)</td>
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<tr>
<td>CE 477 (CE 250, CE 282 &amp; CE 373)</td>
</tr>
<tr>
<td>CE 481 (CE 378, CE 383; CoReq CE 484, +2 of 476, 477, 479, 488)</td>
</tr>
<tr>
<td>Environmental Engineering Elective III¹</td>
</tr>
<tr>
<td>Environmental Engineering Elective II¹</td>
</tr>
<tr>
<td>GEP Requirement* (Interdisciplinary Perspectives)</td>
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</tbody>
</table>

Major/Program Footnotes:

¹Courses required for CODA: CH101, CH102; E101, ENG101; MA141, MA241; PY205, PY206 must be completed with C or higher.
²E115 requires satisfactory completion (S).
³Select from MEA323 or SSC442
⁴ENE Elective – three electives in senior year
   I. Select one: CE435, CE476, CE478, CE487, CE479, or advised elective from CE Course List.
   II. Select another one course from (I.), or CE499.
   III. Select another one from (I.), or one Environmental General Elective from approved list

*GEP REQUIREMENTS to be selected from the approved list in consultation with advisor.

Foreign Language Proficiency at the FL_102 level is required for graduation.