## 2019-2020 Pathway for Bachelor of Science in Biological Engineering (Natural Resources Engineering Track)

*Please see your academic advisor to develop your individual plan. This is only meant to be a guide.*

A maximum of 64 hours is transferable from a North Carolina Community College.

### Freshman/First Year

<table>
<thead>
<tr>
<th>First Semester - Fall</th>
<th>Second Semester - Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CC Course</strong></td>
<td><strong>N.C. A&amp;T Equivalent</strong></td>
</tr>
<tr>
<td>EGR 111</td>
<td>GEEN 111</td>
</tr>
<tr>
<td>ENG 111</td>
<td>ENGL 100</td>
</tr>
<tr>
<td>CHM 151</td>
<td>CHEM 116</td>
</tr>
<tr>
<td>MAT 271</td>
<td>MATH 131</td>
</tr>
<tr>
<td>EGR 150</td>
<td>GEEN 100</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td>14</td>
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</table>

### Sophomore/Second Year

<table>
<thead>
<tr>
<th>Third Semester - Fall</th>
<th>Fourth Semester - Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CC Course</strong></td>
<td><strong>N.C. A&amp;T Equivalent</strong></td>
</tr>
<tr>
<td>CSC 134</td>
<td>GEEN 161</td>
</tr>
<tr>
<td>MEEN 230</td>
<td></td>
</tr>
<tr>
<td>PHY 252</td>
<td>PHYS 242</td>
</tr>
<tr>
<td>MAT 273</td>
<td>MATH 231</td>
</tr>
<tr>
<td>BIOE 200</td>
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</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td>17</td>
</tr>
</tbody>
</table>

See notes below¹

²AA Studies Elective

¹See notes below
<table>
<thead>
<tr>
<th>CC Course</th>
<th>N.C. A&amp;T Equivalent</th>
<th>Credit Hours</th>
<th>Required/Notes</th>
<th>CC Course</th>
<th>N.C. A&amp;T Equivalent</th>
<th>Credit Hours</th>
<th>Required/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOE 204</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>BIOE 216</td>
<td>3</td>
<td></td>
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<tr>
<td>ISEN 260</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>BIOE 230</td>
<td>3</td>
<td></td>
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<tr>
<td>MEEN 241</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>BIOE 350</td>
<td>3</td>
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<tr>
<td>SBS Elective$^d$</td>
<td>Soc/Behav Sci Elective</td>
<td>3</td>
<td></td>
<td></td>
<td>BIOE 380</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BIOE 340</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>Global Studies Elective$^i$</td>
<td>3</td>
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<tr>
<td>BIOE 360/CAEE 364</td>
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<td>3</td>
<td></td>
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</tbody>
</table>

**Total Credit Hours**: 17

<table>
<thead>
<tr>
<th>CC Course</th>
<th>N.C. A&amp;T Equivalent</th>
<th>Credit Hours</th>
<th>Required/Notes</th>
<th>CC Course</th>
<th>N.C. A&amp;T Equivalent</th>
<th>Credit Hours</th>
<th>Required/Notes</th>
</tr>
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<tbody>
<tr>
<td>BIOE 424</td>
<td></td>
<td>3</td>
<td>UGETC: Math</td>
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<td>BIOE 423</td>
<td>3</td>
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<tr>
<td>BIOE 496</td>
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<td>2</td>
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<td></td>
<td>BIOE 425</td>
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<tr>
<td>BIOE 434</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>BIOE Elective</td>
<td>2</td>
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<tr>
<td>ECEN 340</td>
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<td>3</td>
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<tr>
<td>BIOE 495</td>
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</tbody>
</table>

**Total Credit Hours**: 13

**Total Required Hours**: 120
MAJOR PROGRAM REQUIREMENTS
Students must earn a C or better in the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOE 330</td>
<td>ISEN 370</td>
</tr>
<tr>
<td>BIOE 400</td>
<td>INEN 370</td>
</tr>
<tr>
<td>BIOE 423</td>
<td>MATH 131</td>
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<tr>
<td>BIOE 495</td>
<td>MATH 132</td>
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<tr>
<td>BIOE 496</td>
<td>MATH 224</td>
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<tr>
<td>CAEE 334</td>
<td>MATH 231</td>
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<tr>
<td>CHEM 106</td>
<td>MATH 341</td>
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<tr>
<td>CHEM 107</td>
<td>MEEN 441</td>
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<tr>
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<td>PHYS 241</td>
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<tr>
<td>ECON 305</td>
<td>PHYS 242</td>
</tr>
<tr>
<td>GEEN 100</td>
<td>CAEE 362</td>
</tr>
</tbody>
</table>

BIOE Electives:
- BIOE 404, BIOE 422, BIOE 425, BIOE 426, BIOE 485, BIOE 490, CIEN 310, or other junior or senior level engineering courses approved by the faculty advisor.

Statistics Elective:
- MATH 224, ECON 305, ISEN 370, and CAEE 304.

Humanities/Fine Arts:
- ENGL 200, ENGL 201, ENGL 230, ENGL 231, MUS 216, PHIL 260, PHIL 266, PHIL 267, PHIL 268, SPCH 250, LIBS 202, MUSI 220, PHIL 265 or PHIL 315 or courses approved by the faculty advisor.

Social/Behavioral Sciences:

\(^1\)HFA Elective- Select one of the following: HUM 110, HUM 130, HUM 211, HUM 212, ENG 261, ENG 262, ENG 273, MUS 110, PHI 210, REL 110, PHI 240, COM 110, or COM 111

\(^2\)African/American Studies Elective- Select one of the following: ENG 273, HIS 221, HIS 222, or HIS 223.

\(^3\)Global Studies Elective- Select one of the following: HIS 111, HIS 112, HIS 121, HIS 122, BUS 240, or REL 110.

\(^4\)Social/Behavioral Science Elective- Select one of the following: BUS 125, ECO 251, ECO 252, HIS 131, HIS 132, HIS 221, HIS 222, HIS 223, HIS 112, HIS 122, POL 120, PSY 150, SOC 210, ANT 210, or HEA 110.

**NOTE:** Courses may only satisfy ONE general education requirement (e.g. ENG 273/ENGL 333 can satisfy HFA or AA, but not both).
Global Awareness:
BUED 279, ECON 200, ECON 201, FCS 134, FCS 181, FCS 260, HIST 103, HIST 104, HIST 105, HIST 106, HIST 107, HIST 130, HIST 206, HIST 207, HIST 216, HIST 231, JOMC 240, POLI 110, PSYC 101, SOCI 100, SOCI 200, SSFM 226 or courses approved by the faculty advisor.

Knowledge of African American Culture and History:
ENGL 333, ENGL 334, HIST 103, HIST 106, HIST 107, HIST 201, HIST 202, LIBS 202, MUSI 220 or courses approved by the faculty advisor.

Global Awareness:
HIST 130, HIST 207, HIST 216, HIST 231, MGMT 221, PHIL 103, PHIL 201, or courses approved by the faculty advisor.

All of your GEN ED and UGETC requirements are satisfied, if you have earned an Associate in Arts or Associate in Science Degree from a North Carolina Community College.