The program of courses listed below satisfies the ABET accreditation criteria of 32 credits of mathematics and basic sciences, 48 credits of engineering sciences and engineering design. Any deviations must be approved by the student's advisor, department chair and dean. The University General Education Core & graduation requirements for Engineering are included. All lower division CEE courses must be completed before taking upper division CEE courses, except CEE 370 and 370L. CEE 211 may be taken concurrently with the first semester junior courses. All CEE courses must be passed within 2 attempts.

**ALL COURSES MUST BE TAKEN FOR LETTER (A-F) GRADES**

### Lower Division

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Code</th>
<th>Credits</th>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng 100 (FW)</td>
<td>3</td>
<td>Math 242</td>
<td>4</td>
<td>CEE 270</td>
<td>3</td>
</tr>
<tr>
<td>Math 241 (FS)</td>
<td>4</td>
<td>Phys 170 (DP)</td>
<td>4</td>
<td>Math 243</td>
<td>3</td>
</tr>
<tr>
<td>Chem 161 (DP)</td>
<td>3</td>
<td>Phys 170L (DY)</td>
<td>1</td>
<td>Phys 272 (DP)</td>
<td>3</td>
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<tr>
<td>Chem 161L (DY)</td>
<td>1</td>
<td>Chem 162 (DP)</td>
<td>3</td>
<td>Phys 272L (DY)</td>
<td>1</td>
</tr>
<tr>
<td>CEE 123</td>
<td>1</td>
<td>EE 160 or ICS 111</td>
<td>4</td>
<td>FG</td>
<td>3</td>
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<tr>
<td>FG</td>
<td>3</td>
<td>DH or DL</td>
<td>3</td>
<td>Sp 251 (DA)</td>
<td>3</td>
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</tbody>
</table>

- **H Focus (1)**
- **E Focus (1)**
- **O Focus (1)**
- **W Focus (5)**

### Upper Division

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Code</th>
<th>Credits</th>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 305</td>
<td>3</td>
<td>CEE 330</td>
<td>4</td>
<td>CEE 461, 462 or 464</td>
<td>3</td>
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<tr>
<td>CEE 320 (W)</td>
<td>4</td>
<td>CEE 355</td>
<td>4</td>
<td>CEE 472, 473 or 474</td>
<td>3</td>
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<tr>
<td>CEE 361</td>
<td>3</td>
<td>CEE 375</td>
<td>3</td>
<td>TE</td>
<td>3</td>
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<tr>
<td>Econ 120, 130 or 131 (DS)</td>
<td>3</td>
<td>CEE 381</td>
<td>3</td>
<td>TE</td>
<td>3</td>
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<tr>
<td>ME 403, GS312, Math 302 or 307</td>
<td>3</td>
<td>DS</td>
<td>3</td>
<td>BSE (DB)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Alternative Senior Year Tracks

**Structures**

- CEE 472, 473 or 474
- CEE 482
- CEE 485
- SME
- BSE (DB)

**Environmental**

- CEE 421 or 431
- CEE 432 or 434
- CEE 482
- CEE 485
- SME
- BSE (DB)

* Students who want to pursue the structures or the environmental track should ask the department office to assign them an advisor from the appropriate area.

### Electives

- **BSE**: Biological Science Elective
  - Micr 130; Biol 101, 123, Zool 101
  - The associated laboratories are not required.

- **TE**: Technical Elective
  - Any 400 or 600 level CEE course.
  - May include a maximum of one course from EE 211; GG 454; ME 311; 374; ORE 411

- **BEE**: Bioengineering Elective
  - Any 400 or 600 level BE course approved by advisor

- **SME**: Structural Math Elective
  - ME 360, Phys 305, Math 311 (if Math 307 not taken)

### Notes

1. Please refer to General Education Core Requirements in UH Manoa Catalog for Diversification (DH, DL, DS) and FG Foundation Courses.
2. Math 251/252/242L/253 may be substituted for Math 241-244 above.
3. Chem 181/181L may be substituted for Chem 161/161L and Chem 162 above.
4. Writing Intensive (W) required - 5 courses (minimum of 2 in upper division).
5. One course each required for Hawaiian, Asian & Pacific Issues (H), Oral Communication (O), and Contemporary Ethical Issues (E).
6. 'C' or better required for passing Phys 170 and CEE 270.