## Civil: Structural Engineering (Option A)

### September 2017 (students who entered first year prior to September 2016)

### Year 2:

#### Term A
- AM 2270a/b  Applied Math for Engineering II
- CEE 2224  Engineering Fluid Mechanics
- CEE 2202a  Mechanics of Materials
- CEE 2217a  Introduction to Environmental Engineering
- CEE 2220a  Introduction to Structural Engineering
- SS 2141a  Applied Probability and Statistics for Engineers

#### Term B
- AM 2277a/b  Applied Math for Chemical and Civil Engineering II
- CEE 2224  Engineering Fluid Mechanics
- CEE 2219b  Computation Tools for Civil Engineers
- CEE 2221b  Structural Theory and Design
- Earth Sc. 2281b  Geology for Engineers
- ES 2211G  Engineering Communications

*Note: CEE 3324a (Surveying). This course is available each summer (15 days) and must be completed before a student may graduate from the Civil Engineering program.*

### Year 3:

#### Term A
- CEE 3321a  Soil Mechanics and Hydrogeologic Engineering
- CEE 3340a  Analysis of Indeterminate Structures
- CEE 3344a  Structural Dynamics I
- CEE 3347a  Reinforced Concrete Design
- CEE 3348a  Project Management and Engineering Cases
- 0.5 non-technical elective taken from the approved list

#### Term B
- CEE 3322b  Introduction to Geotechnical Engineering
- CEE 3343b  Finite Element Methods and Application to Lateral Analysis of Buildings
- CEE 3346b  Steel Design
- CEE 3358b  Reinforced and Prestressed Concrete Design
- CEE 3369b  Materials for Civil Engineering

### Year 4:

#### Term A
- CEE 4441  Civil Engineering Design Project
- CEE 4426a  Geotechnical Engineering Design
- CEE 4491a  Structural Dynamics II
- Bus 2299E  Business for Engineers
- One 0.5 technical elective

#### Term B
- CEE 4441  Civil Engineering Design Project
- CEE 4478b  Case Studies in Civil Engineering
- Bus 2299E  Business for Engineers
- ES 4498G  Engineering Ethics, Sustainable Development and the Law
- Two 0.5 technical electives

### Technical Elective List:

Some technical electives may not be offered in a given academic year. Consult the department for accurate listing.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CEE 3355a/b</td>
<td>Municipal Engineering Design</td>
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<tr>
<td>CEE 4401 a/b</td>
<td>Principles of Transportation Engineering</td>
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<tr>
<td>CEE 4418a/b</td>
<td>Systems Approach for Civil and Environmental Engineering</td>
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<tr>
<td>CEE 4428a/b</td>
<td>Selected Topics in Civil Engineering I</td>
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<tr>
<td>CEE 4429a/b</td>
<td>Selected Topics in Civil Engineering II</td>
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<tr>
<td>CEE 4458a/b</td>
<td>Risk Analysis and Decision Making in Engineering</td>
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<tr>
<td>CEE 4465a/b</td>
<td>Environmental Design for Waste Disposal</td>
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<tr>
<td>CEE 4476a/b</td>
<td>Environmental Hydraulics Design</td>
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<tr>
<td>CEE 4477a/b</td>
<td>Environmental Applications of Nanotechnology</td>
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<tr>
<td>CEE 4480a/b</td>
<td>Wind Engineering: Modelling, Assessment and Mitigation</td>
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<tr>
<td>CEE 4440</td>
<td>Civil Engineering Thesis (full year course - counts as two technical electives)</td>
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<tr>
<td>Earth Sc. 3340a/b</td>
<td>Watershed Hydrology</td>
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<tr>
<td>Earth Sci 4440a/b</td>
<td>Hydrogeology</td>
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