CIVIL ENGINEERING

FIRST YEAR

FALL SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 151L (GE E)</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>WRIT 150</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>MATH 126 (GE F)</td>
<td>Calculus II</td>
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</tr>
<tr>
<td>CE 106</td>
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<td>2</td>
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<tr>
<td>ENGR 102</td>
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<tr>
<td>OPTIONAL ELECTIVE</td>
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SPRING SEMESTER

<table>
<thead>
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<tbody>
<tr>
<td>GE B</td>
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<tr>
<td>CHEM 105aL (GE E)</td>
<td>Chemistry I</td>
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</tr>
<tr>
<td>MATH 226 or MATH 229</td>
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<td>4</td>
</tr>
<tr>
<td>PHYS 152L</td>
<td>Physics II</td>
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<td>CE 108</td>
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SECOND YEAR

FALL SEMESTER

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<td>GE C</td>
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<td>GE D</td>
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<td>MATH 245</td>
<td>Calculus III</td>
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<td>CE 215</td>
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<td>CE 119</td>
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SPRING SEMESTER

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<tbody>
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<td>GEOL 305L</td>
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<td>CE 107</td>
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<td>GE A</td>
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<td>CE 225</td>
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<td>CE 309</td>
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THIRD YEAR

FALL SEMESTER

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<tbody>
<tr>
<td>CE 408</td>
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<tr>
<td>CE 334L</td>
<td>Mechanics I</td>
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<td>CE 358</td>
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<td>CE 456</td>
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SPRING SEMESTER

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<tbody>
<tr>
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<tr>
<td>CE 451</td>
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<tr>
<td>CE 467L</td>
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FOURTH YEAR

FALL SEMESTER

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<td>DESIGN ELECTIVE</td>
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<tr>
<td>CE 471</td>
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SPRING SEMESTER

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
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<tr>
<td>GE C</td>
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<td>CE 480</td>
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<tr>
<td>CE ELECTIVE</td>
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MATHEMATICS (12 UNITS)

- MATH 126 or MATH 129: Calculus II
- MATH 226 OR MATH 229: Calculus III
- MATH 245: Mathematics of Phys. and Engr.

PHYSICS (8 UNITS)

- PHYS 151L: Mechanics and Thermodynamics
- PHYS 152L: Electricity and Magnetism

OTHER SCIENCE (8 UNITS)

- CHEM 105AL: General Chemistry
- GEOL 305L: Intro. to Engineering Geology

GENERAL EDUCATION (32 UNITS)

- GE A: The Arts (1 Course)
- GE B: Humanistic Inquiry (2 Courses)
- GE C: Social Analysis (2 Courses)
- GE D: Life Sciences (1 Course)
- GE E: Physical Sciences (1 Course)
- GE F: Quantitative Reasoning (1 Course)
- GE G, H: Global Perspectives (2 Courses)
- GESM: General Education Seminar (1 Course)

WRITING (7 UNITS)

- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

ENGINEERING (72-75 UNITS)

- CE 106: Introduction to Civil Engineering
- CE 107: Intro. to Civil Engineering Graphics
- CE 108: Intro. to CE Computer Methods
- CE 119: Probability Concepts and Civil Engineering
- CE 215: Statics & Dynamics
- CE 225: Mechanics of Deformable Bodies
- CE 253: Structural Analysis I
- CE 255: Structural Analysis II
- CE 306: Fluid Mechanics
- CE 334L: Mechanical Behavior of Materials
- CE 358: Elementary Theory of Structures
- CE 408: Risk & Decision Analysis in Civil Engr.
- CE 451: Water Resources Engineering
- CE 453: Water Quality Science & Engineering
- CE 456: Structural Design I
- CE 467L: Geotechnical Engineering
- CE 471: Principles of Transportation Engr.
- CE 480: Civil & Environmental Engr. Capstone Design

SPECIAL NOTES

Courses with the AP/IB symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.

GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 21 for more information and consult your advisor for detailed assistance.

OPTIONAL ELECTIVES: Consult with your academic advisor to explore optional elective courses. These courses are not required.

CE 215, 225, AND 309: Minimum grade of “C” is required.

CE ELECTIVE: Choose at least two units of upper-division CE coursework that is not already required.

DESIGN ELECTIVES: Choose at least two units of upper-division CE coursework that is not already required.

ENGINEERING ELECTIVES: Choose at least two units of upper-division CE coursework that is not already required.
# Civil (Construction)

## First Year

### Fall Semester
- **PHYS 151L (GE E)**
- **WRIT 150**
- **MATH 126 (GE F)**
- **CE 106**
- **ENGR 102**

### Spring Semester
- **GE B**
- **CHEM 105aL (GE E)**
- **MATH 226 or MATH 229**
- **PHYS 152L**
- **CE 108**

## Second Year

### Fall Semester
- **GE C**
- **GE D**
- **MATH 245**
- **CE 215**
- **CE 119**

### Spring Semester
- **GEOL 305L**
- **CE 107**
- **GE A**
- **CE 225**
- **CE 309**

## Third Year

### Fall Semester
- **CE 408**
- **CE 334L**
- **CE 358**
- **CE 456**
- **ENGINEERING ELECTIVE**

### Spring Semester
- **DESIGN ELECTIVE**
- **ENGINEERING ELECTIVE**
- **CE 451**
- **CE 467L**
- **OPTIONAL ELECTIVE**

## Fourth Year

### Fall Semester
- **GE C**
- **CE 482**
- **CE 471**
- **CE 460**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **WRIT 340**
- **GE B**
- **CE 480**
- **CE ELECTIVE**
- **OPTIONAL ELECTIVE**

### Mathematics (12 Units)
- MATH 126 or MATH 129: Calculus II
- MATH 226 or MATH 229: Calculus III
- MATH 245: Mathematics of Phys. and Engr.

### Physics (8 Units)
- PHYS 151L: Mechanics and Thermodynamics
- PHYS 152L: Electricity and Magnetism

### Other Science (8 Units)
- CHEM 105AL: General Chemistry
- GEOL 305L: Intro. to Engineering Geology

### General Education (32 Units)
- GE A: The Arts (1 Course)
- GE B: Humanistic Inquiry (2 Courses)
- GE C: Social Analysis (2 Courses)
- GE D: Life Sciences (1 Course)
- GE E: Physical Sciences (1 Course)
- GE F: Quantitative Reasoning (1 Course)
- GE G,H: Global Perspectives (2 Courses)
- GESM: General Education Seminar (1 Course)

### Writing (7 Units)
- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

### Engineering (72-75 Units)
- CE 106: Introduction to Civil Engineering
- CE 107: Intro. to Civil Engineering Graphics
- CE 108: Intro. to CE Computer Methods
- CE 119: Probability Concepts and Civil Engineering
- CE 215: Statics & Dynamics
- CE 225: Mechanics of Deformable Bodies
- CE 334L: Mechanical Behavior of Materials
- CE 358: Elementary Theory of Structures
- CE 456: Structural Design
- CE 460: Construction Engineering
- CE 467L: Geotechnical Engineering
- CE 471: Principles of Transportation Engr.
- CE 480: Civil & Environmental Engr. Capstone Design
- ENGR 102: Engineering Freshman Academy
- CE ELECTIVE
- DESIGN ELECTIVES
- ENGINEERING ELECTIVES

### Special Notes
- Courses with the AP/IB symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.
- GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 21 for more information and consult your advisor for detailed assistance.
- OPTIONAL ELECTIVES: Consult with your academic advisor to explore optional elective courses. These courses are not required.
- CE 215, 225, AND 309: Minimum grade of “C” is required.
- CE ELECTIVE: Choose one from CE 462, CE 469, CE 470, or ARCH 419.
- DESIGN ELECTIVES: Choose one from CE 457, 465, 476, or 485.
- ENGINEERING ELECTIVES: Choose one course from each block: [ISE 460] and [AME 310 or EE 202L or EE 324L].
# CIVIL (WATER RESOURCES)

## First Year
### Fall Semester
- **PHYS 151L (GE E)**
- **WRIT 150**
- **MATH 126 (GE F)**
- **CE 106**
- **ENGR 102**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **CHEM 105aL (GE E)**
- **MATH 226 or MATH 229**
- **PHYS 152L**
- **MATH 125 or 126 or 226**
- **CE 108**
- **OPTIONAL ELECTIVE**

## Second Year
### Fall Semester
- **GE C**
- **GE D**
- **MATH 245**
- **CE 215**
- **CE 119**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **GEOL 305L**
- **CE 107**
- **GE A**
- **CE 225**
- **CE 309**
- **OPTIONAL ELECTIVE**

## Third Year
### Fall Semester
- **CE 408**
- **CE 334L**
- **CE 358**
- **CE 456**
- **CE 453**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **CE 465**
- **ENGINEERING ELECTIVE**
- **CE 451**
- **CE 467L**
- **OPTIONAL ELECTIVE**
- **OPTIONAL ELECTIVE**

## Fourth Year
### Fall Semester
- **CE ELECTIVE**
- **CE 476**
- **ENGINEERING ELECTIVE**
- **CE 471**
- **ENGINEERING ELECTIVE**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **GE B**
- **GE C**
- **CE 480**
- **WRIT 340**
- **OPTIONAL ELECTIVE**
- **OPTIONAL ELECTIVE**

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### Mathematics (12 Units)
- **MATH 126 OR MATH 129**: Calculus II
- **MATH 226 OR MATH 229**: Calculus III
- **MATH 245**: Mathematics of Phys. and Engr.

### Physics (8 Units)
- **PHYS 151L**: Mechanics and Thermodynamics
- **PHYS 152L**: Electricity and Magnetism

### Other Science (8 Units)
- **CHEM 105AL**: General Chemistry
- **GEOL 305L**: Intro. to Engineering Geology

### General Education (32 Units)
- **GE A**: The Arts (1 Course)
- **GE B**: Humanistic Inquiry (2 Courses)
- **GE C**: Social Analysis (2 Courses)
- **GE D**: Life Sciences (1 Course)
- **GE E**: Physical Sciences (1 Course)
- **GE F**: Quantitative Reasoning (1 Course)
- **GE G,H**: Global Perspectives (2 Courses)
- **GESM**: General Education Seminar (1 Course)

### Writing (7 Units)
- **WRIT 150**: Writing and Critical Reasoning
- **WRIT 340**: Advanced Writing

### Engineering (70-71 Units)
- **CE 106**: Introduction to Civil Engineering
- **CE 107**: Intro. to Civil Engineering Graphics
- **CE 108**: Intro. to CE Computer Methods
- **CE 119**: Probability Concepts and Civil Engineering
- **CE 215**: Statics & Dynamics
- **CE 225**: Mechanics of Deformable Bodies
- **CE 309**: Fluid Mechanics
- **CE 334L**: Mechanical Behavior of Materials
- **CE 358**: Elementary Theory of Structures
- **CE 408**: Risk & Decision Analysis in Civil Engr.
- **CE 451**: Water Resources Engineering
- **CE 453**: Water Quality Science & Engineering
- **CE 465**: Water Supply & Sewerage System Design
- **CE 467L**: Geotechnical Engineering
- **CE 471**: Principles of Transportation Engr.
- **CE 476**: Design of Hydraulic Systems
- **CE 480**: Civil & Environmental Engr. Capstone Design
- **ENGR 102**: Engineering Freshman Academy
- **CE ELECTIVE**
- **ENGINEERING ELECTIVES**

### Special Notes
- Courses within the AP/IB symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.
- **GE**: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 21 for more information and consult your advisor for detailed assistance.
- **OPTIONAL ELECTIVES**: Consult with your academic advisor to explore optional elective courses. These courses are not required.
- **CE 215, 225, AND 309**: Minimum grade of “C” is required.
- **ENGINEERING ELECTIVES**: Choose one course from each block: [ISE 460] and [AME 310 or EE 202L or EE 326L].
- **CE ELECTIVES**: Choose four units of upper-division CE coursework that is not already required.