# B.S. in Civil Engineering

(120 credits minimum)

## First Year

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<tr>
<th>1st Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CS 101</td>
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<tr>
<td>CHEM 125</td>
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<tr>
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<tr>
<td><strong>Term Credits</strong></td>
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## 2nd Semester

| CHEM 126 | General Chemistry II | 3 |
| ENGL 102 | English Composition: Introduction to Writing for Research | 3 |
| MATH 112 | Calculus II | 4 |
| PHYS 111 | Physics I | 3 |
| PHYS 111A | Physics I Lab | 1 |
| CE 101 | CE Computer Aided Design | 1 |
| **Term Credits** | **15** |

## Second Year

<table>
<thead>
<tr>
<th>1st Semester</th>
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<tbody>
<tr>
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<td>Calculus III A</td>
</tr>
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<td>Statistics and Probability for Engineers</td>
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<tr>
<td>MECH 235</td>
<td>Statics</td>
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<tr>
<td>PHYS 121</td>
<td>Physics II</td>
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<td>PHYS 121A</td>
<td>Physics II Lab</td>
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## 2nd Semester

| CE 210 | Construction Materials and Procedures | 3 |
| CE 260 | Civil Engineering Methods | 2 |
| MATH 322 | Differential Equations for Applications | 3 |
| MECH 237 | Strength Of Materials | 3 |
| ENE 262 | Introduction to Environmental Engineering | 3 |
| **Term Credits** | **14** |

## Third Year

<table>
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<tr>
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<tr>
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<td>CE 321</td>
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<td>MECH 236</td>
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## 2nd Semester

| CE 333 | Reinforced Concrete Design | 2 |
| CE 341 | Soil Mechanics | 3 |
CE 341A  Soil Mechanics Laboratory  1
CE 350  Transportation Engineering  3
CE 360  Sustainable Civil Engr Mat  3

History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)  3

| Term Credits | 15 |

Fourth Year
1st Semester
CE 431  Construction Materials Lab  1
CE 432  Steel Design  2
CE 443  Foundation Design  3
CE 494  Civil Engineering Design I  3
CE Elective 1  3

300-level GER: Select one of the following:  3
COM 339  Practical Journalism
COM 312  Oral Presentations
COM 319  Technical, Professional and Scientific Writing for Publication
COM 337  Photojournalism
COM 316  Creative Writing

| Term Credits | 15 |

2nd Semester
CE 495  Civil Engineering Design II  3
CE Designated Elective 1  3
Science Elective 2  3
IE 492  Engineering Management  3

Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)  3

| Term Credits | 15 |

Total Credits  120

Co-op Option A Track
(145 credits minimum)

First Year
1st Semester
CS 101  Computer Programming and Problem Solving  3
CHEM 125A  General Chemistry Lab I  1
CHEM 125  General Chemistry I  3
FED 101  Fundamentals of Engineering Design  2
ENGL 101  English Composition: Introduction to Academic Writing  3
MATH 111  Calculus I  4
FYS SEM  First-Year Student Seminar  0

| Term Credits | 16 |

2nd Semester
CHEM 126  General Chemistry II  3
ENGL 102  English Composition: Introduction to Writing for Research  3
MATH 112  Calculus II  4
PHYS 111  Physics I  3
PHYS 111A  Physics I Lab  1
CE 101  CE Computer Aided Design  1

| Term Credits | 15 |
### Second Year

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**History and Humanities GER 200 level** ([http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/](http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/))

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#### 2nd Semester

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**History and Humanities GER 300+ level** ([http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/](http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/))

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#### Term Credits

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Fifth Year

1st Semester

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<tr>
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<td>Oral Presentations</td>
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<td>COM 319</td>
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Term Credits: 15

2nd Semester

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Term Credits: 15

Total Credits: 145

Co-op Option B Track

(145 credits minimum)

First Year

1st Semester

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Term Credits: 16

2nd Semester

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Term Credits: 14

Second Year

1st Semester

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**Term Credits**  

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**2nd Semester**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>CE 495</td>
<td>Civil Engineering Design II</td>
<td>3</td>
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<td>CE Designated Elective</td>
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<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>IE 492</td>
<td>Engineering Management</td>
<td>3</td>
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<tr>
<td>Humanities and Social Science Senior Seminar GER (<a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/</a>)</td>
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**Term Credits**  

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**Total Credits**  

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1. Student must choose one of the following: CE 307, CE 351, CE 410, CE 414, CE 450, EnE 360, EnE 361
2. Biology, Geology, Geomorphology only

**GER Electives**

Refer to the **General Education Requirement** section of this catalog for further information on GER electives.

*This curriculum represents the maximum number of credits per semester for which a student is advised to register. A full-time credit load is 12 credits. First-year students are placed in a curriculum that positions them for success which may result in additional time needed to complete curriculum requirements. Continuing students should consult with their academic advisor to determine the appropriate credit load.*