# Program Map: Civil Engineering Technology

**Engineering Technology Department, College of Science and Technology**

**Name:**

**Start Date:**

**Catalog Date:**

**Advisor:**

**Expected Graduation Date:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1101*</td>
<td>Composition I</td>
<td>3</td>
<td>ENGL 1102*</td>
<td>Composition II</td>
<td>3</td>
<td>*A grade of C or better must be earned for this course</td>
</tr>
<tr>
<td>MATH 1113*</td>
<td>Pre-Calculus</td>
<td>3</td>
<td>MATH 2101*</td>
<td>Calculus I</td>
<td>4</td>
<td>Accumulate minimum of 30 semester hours in your Freshmen Year.</td>
</tr>
<tr>
<td>CHEM 1211*</td>
<td>Principles of Chemistry I**</td>
<td>3</td>
<td>ENV 1115**</td>
<td>Introductory Physics I</td>
<td>4</td>
<td></td>
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<tr>
<td>CHEM 1111*</td>
<td>Principles of Chemistry I Lab**</td>
<td>1</td>
<td>ENGT 2101K*</td>
<td>Computer Graphics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMN 1201</td>
<td>Critical Thinking &amp; Communication</td>
<td>3</td>
<td>CSCE 1130</td>
<td>Computer &amp; its Applications*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COST 1103</td>
<td>First Year Experience</td>
<td>2</td>
<td></td>
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</tbody>
</table>

**Fall Milestones**

Students must take MATH 1113 to prevent delay in graduation: 15

Students must take ENGT 2101K to prevent delay in graduation: 17

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
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<th>Name</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2111*</td>
<td>Calculus II</td>
<td>4</td>
<td>CIVT 3301K*</td>
<td>Major</td>
<td>3</td>
<td></td>
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<tr>
<td>PHYS 1112K*</td>
<td>Introductory Physics II</td>
<td>4</td>
<td>CIVT 3301K*</td>
<td>Major</td>
<td>2</td>
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<tr>
<td>CIVT 3101K*</td>
<td>Surveying</td>
<td>4</td>
<td>ENGT 3501*</td>
<td>Dynamics</td>
<td>2</td>
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</tr>
<tr>
<td>ENGT 3101 or ENGR 2201</td>
<td>Statistics</td>
<td>3</td>
<td>ENGT 3601*</td>
<td>Strength of Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIVT 3301K</td>
<td>Major</td>
<td>3</td>
<td>AFRS 1501</td>
<td>Survey African American History</td>
<td>2</td>
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</tr>
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**Sophomore Year.**

Students must take MATH 3111 and ENGT 3101 to prevent delay in graduation: 15

Students must take CIVT 3301K to prevent delay in graduation: 14

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
</table>
| CIVT 3111* | Engineering Hydrology | 3 | CIVT 3211* | Major | 3 | *
| CIVT 3401K* | Highway & Transportation Engineering | 4 | CIVT 4100K* | Major | 4 | Accumulate minimum of 90 semester hours in your Junior Year. |
| CIVT 3701K* | Structural Analysis | 3 | CIVT 4201K* | Major | 4 | Apply for graduation. |
| ENGT 3701* | Engineering Economy | 3 | POLS 1101 | American Government | 3 | |

**Junior Year.**

Student must take CIVT 3701K, CIVT 3401K, and CIVT 3311 to prevent delay in graduation: 16

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
<th>Course</th>
<th>Name</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
</table>
| ELET 3101K* | Electrical Circuit I | 4 | CIVT 3601K* | Major | 4 | *
| CIVT 4211* | Environmental Engineering II | 3 | ENGT 4401* | Major | 3 | Student must take the exit exam and interview. |
| Major* | Technical Elective | 3 | Major* | Technical Elective | 3 | Does this Degree Program Require a Minor? No |
| Area E Social Sci. Option | Pre-requisite: None | 3 | HIST 2111 or 2112 | U.S. History | 3 | Total Hours Required for this Degree Program: 123 |
| Core Area C Option | Pre-requisite: Varies | 3 | Area E Social Sci. Option | Pre-requisite: Varies | 3 | |

**Senior Year.**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</tbody>
</table>

**Notes:**

1. *A grade of C or better must be earned for this course.
2. Students must take the exit exam and interview.
3. Does this Degree Program Require a Minor? No.
## Program Map: Civil Engineering Technology

**Engineering Technology Department, College of Science and Technology**

### Core Curriculum (Programmed Preferred Options in Bold)

**Area B – Institutional Options 5 hrs**
1. AFRS 1501 Survey of African-American Experience 2 hrs
2. HUMN 1201 Critical Thinking & Communication 3 hrs

**Area C – Humanities/Fine Arts, and Ethics 6 hrs,**

1. Select one of the following:
   - ENGL 2111 World Literature I 3 hrs
   - ENGL 2112 World Literature II 3 hrs
   - ENGL 2121 British Literature I 3 hrs
   - ENGL 2122 British Literature II 3 hrs
   - ENGL 2131 American Literature I 3 hrs
   - ENGL 2132 American Literature II 3 hrs
   - ENGL 2222 African American Literature 3 hrs
   - PHIL 2010 Introduction to Philosophy 3 hrs
   - PHIL 2030 Introduction to Ethics 3 hrs

2. Select one of the following:
   - ARTS 1101 Introduction to Visual Art 3 hrs
   - DANCE 2010 Dance Appreciation 3 hrs
   - ENGL 2521 Introduction to Film 3 hrs
   - HUMN 2011 Humanities 3 hrs
   - MUSC 1101 Introduction to Music 3 hrs
   - THEA 2101 Introduction to Theatre 3 hrs

**Area D – Natural Sciences, Math & Technology 10 hrs**

1. Select one of the following:
   - BIOL 1107 Principles of Biology I 3 hrs
   - BIOL 1108 Principles of Biology II 3 hrs
   - CHEM 1211 Principles of Chemistry I 3 hrs
   - CHEM 1212 Principles of Chemistry II 3 hrs
   - CISM 1130 Computer Applications 3 hrs
   - ENVS 1140 Environmental Issues 3 hrs

2. Select two of the following lab sciences in sequence:
   - BIOL 1107/1107L Principles of Biology I 4 hrs
   - BIOL 1108/1108L Principles of Biology II 4 hrs
   - CHEM 1211/1211L Principles of Chemistry I 4 hrs
   - CHEM 1212/1212L Principles of Chemistry II 4 hrs
   - PHYS 1111/1111L Introductory Physics I 4 hrs
   - PHYS 1112/1112L Introductory Physics II 4 hrs
   - PHYS 2111/2111L Principles of Physics I 4 hrs
   - PHYS 2112/2112L Principles of Physics II 4 hrs

**Area E – Social Science 12 hrs**

1. POLS 1101 American Government 3 hrs
2. Select one of the following:
   - HIST 2111 U.S. History to the Post-Civil War Period 3 hrs
   - HIST 2112 U.S. History from the Post-Civil War to Pres 3 hrs
3. Select two of the following:
   - AFRS 2000 Introduction to Africana Studies 3 hrs
   - ANTH 1101 Introduction to Anthropology 3 hrs
   - ECON 2105 Principles of Macroeconomics 3 hrs
   - GEOG 1101 Introduction to Human Geography 3 hrs
   - HIST 1111 World History to Early Modern Times 3 hrs
   - HIST 1112 World History Early Modern Times to Pres 3 hrs
   - MATH 2132 Calculus I 3 hrs
   - POLS 2401 Global Issues 3 hrs
   - PSYC 2101 Intro to General Psychology 3 hrs
   - PSYC 2105 Human Growth & Development 3 hrs
   - SOCI 1101 Introduction to Sociology 3 hrs
   - SOCI 2160 Social Problems 3 hrs

### Civil Engineering Technology Major Technical Electives (6HRS)

Select from the following:

- CIVT 3501 Civil Engineering Computing Practices 3 credits
- CIVT 4350 Civil & Environmental Systems Engineering 3 credits
- CSCI 1301 Computer Science I 3 credits
- CSCI 1371 Computer Structures 3 credits
- ELET 3701K Data Acquisition Systems 4 credits
- ENGT 4901 Engineering Technology Internship 3 credits
- ENGT 4903 Special Topics 1-4 credits
- MATH 3301 Differential Equations 4 credits
- MECT 3411 Thermodynamics 3 credits
- MSCI 3702 Intro to Geo Info Systems 3 credits

### Distinctive Courses/Descriptions

#### Civil Engineering Technology

The curriculum in civil engineering technology (CET) is designed to provide ample instruction in those areas of knowledge required for successful performance in the following capacities as well as in other construction related positions:

- **Architectural and Structural Draftsman and Designer** - plans, designs and supervises construction of frame, steel and concrete structures; makes architectural inspections and appraisals for architects and builders.

- **Highway Engineering Technologist** - collects and tests soil samples, concrete and other materials to ascertain physical characteristics for use in highway construction; establishes the location and measurements of points, elevations, lines, areas and contours of land needed for highway construction and prepares hard copy, draft or computer generated drawings of same.

- **Estimator** - determines quantities and costs of materials and labor required to erect structures.

- **Materials Tester** - determines mechanical properties of materials used in the erection of structures and highways.

- **Surveyor** - supervises, directs and is responsible for the accuracy of the work of an engineering survey party engaged in determining the location and measurements of points, elevations, lines, areas and contours on the Earth's surface for purposes of securing data for building and highway construction, map-making, land-valuation, mining or other purposes.

- **Environmental Technologist** - Plans, designs and monitors water, wastewater and other environmental pollution control systems.