

**Program Map: Civil Engineering Technology**  
**Engineering Technology Department, College of Science and Technology**

Name:

SID:

Advisor:

Start Date:

Catalog Date:

Expected Graduation Date:

Freshman	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	ENGL 1101 Area C	Composition I Pre-requisite: None	3	ENGL 1102* Area C	Composition II Pre-requisite: ENGL 1101	3	
MATH 1113* Area M	Pre-Calculus Pre-requisite: MATH 1111	3	MATH 2101* Field of Study Area	Calculus I Pre-requisite: MATH 1113	4		
CHEM 1211* Field of Study Area	Principles of Chemistry I Pre-requisite: CHEM 1115 OR 30 in Chemistry Assessment Test	3	PHYS 1111K Area T Lab	Introductory Physics I Pre-requisite: MATH 1113	4		
CHEM 1211L* Field of Study Area	Principles of Chemistry I Lab Pre-requisite: None	1	ENGT 2101K* Field of Study Area	Computer Graphics Pre-requisite: MATH 1113	3		
HUMN 1201 Area I	Critical Thinking & Communication Pre-requisite: None	3	CSCI 1130* Area T	Computer & its Applications Pre-requisite: None	3		
COST 1103 Field of Study Area	COST First Year Experience Pre-requisite: None	2					
<b>Fall Milestones</b>		<b>Total</b>	<b>Spring Milestones</b>		<b>Total</b>		
Students must take MATH 1113 and ENGT 2101K to prevent delay in graduation		15			17		

Sophomore	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	MATH 2111* Field of Study Area	Calculus II Pre-requisite: MATH 2101	4	CIVT 3201K* Major	Civil Engineering Materials Pre-requisite: MATH 1113	3	
PHYS 1112K Area T Lab	Introductory Physics II Pre-requisite: PHYS 1111K	4	ENGT 3331K* Major	Fluid Mechanics Pre-requisite: ENGT 3101 or ENGR 2201 & MATH 2111	4		
CIVT 3101K* Major	Surveying Pre-requisite: MATH 1113	4	ENGT 3501* Major	Dynamics Pre-requisite: ENGT 3101 or ENGR 2201	2		
ENGT 3101* or ENGR 2201* Major	Statics Pre-requisite: MATH 1113/PHYS 1111K OR PHYS 2211K Pre-requisite: math 2111; PHYS 2211K	3	ENGT 3601* Major	Strength of Materials Pre-requisite: ENGT 3101 or ENGR 2201	3		
			AFRS 1501 Area I	Survey African American History Pre-requisite: None	2		
<b>Fall Milestones</b>		<b>Total</b>	<b>Spring Milestones</b>		<b>Total</b>		
Students must take MATH 2111 and ENGT 3101 to prevent delay in graduation		15			14		

Junior	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	CIVT 3311* Major	Engineering Hydrology Pre-requisite: ENGT 3301K	3	CIVT 3211* Major	Construction Estimating & Management Pre-requisite: CIVT 3201K	3	
CIVT 3401K* Major	Highway & Transportation Engineering Pre-requisite: ENGT 2101K OR ENGR 2770; CIVT 3101K; CIVT 3201K; MATH 2111	4	CIVT 4100K* Major	Structure Design Pre-requisite: ENGT 2101K OR ENGR 2770; CIVT 3701K	4		
CIVT 3701K* Major	Structural Analysis Pre-requisite: ENGT 3601	3	CIVT 3001K* Major	Introduction to Environmental Eng Pre-requisite: CHEM 1211; MATH 1113	4		
ENGT 3701* Major	Engineering Economy Pre-requisite: MATH 1113	3	POLS 1101 Area P	American Government Pre-requisite: None	3		
Area A Option	Pre-requisite: Varies	3					
<b>Fall Milestones</b>		<b>Total</b>	<b>Spring Milestones</b>		<b>Total</b>		
Student must take CIVT 3701K, CIVT 3401K and CIVT 3311 to prevent delay in graduation.		16			14		

Senior	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
	ELET 3101K* Major	Electric Circuit I Pre-requisite: MATH 1113	4	CIVT 3601K* Major	Soil Mechanics & Foundations Pre-requisite: CIVT 3201K & ENGT 3601	4	
CIVT 4211* Major	Environmental Engineering Design Pre-requisite: CIVT 3001K & ENGT 3331K	3	ENGT 4401* Major	Senior Project Pre-requisite: CIVT 4211K; CIVT 4111K; CIVT 4101K; CIVT 3601K; or CIVT 3401K	3		
Major	Technical Elective Pre-requisite: Varies	3	Major	Technical Elective Pre-requisite: Varies	3		
POLS 2401 Area S	Global Issues Pre-requisite: None	3	HIST 2111 or 2112 Area P	U.S. History Pre-requisite: None	3		
Area A Option	Pre-requisite: Varies	3	Area S Elective	Pre-requisite: Varies	3		
<b>Fall Milestones</b>		<b>Total</b>	<b>Spring Milestones</b>		<b>Total</b>		
		16			16		

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

**Area I – Institutional Options 5 hrs.**

- i. AFRS 1501 Survey of African American Experience 2 hrs.  
Select one of the following:
  - i. HUMN 1201 Critical Thinking & Communication 3 hrs.
  - ii. DATA 1501 Introduction to Data Science 3 hrs.
  - iii. POLS 2401 Global Issues 3 hrs.
  - iv. AFRS 2000 Introduction to Africana Studies 3 hrs.

**Area M – Mathematics and Quantitative Skills 3 hrs.**

- Select one of the following:
- i. MATH 1001 - Quantitative Reasoning 3hrs.
  - ii. MATH 1111 - College Algebra 3hrs.
  - iii. MATH 1401 - Elementary Statistics 3hrs.
  - iv. MATH 1113 - Pre-Calculus 3hrs.

**Area P – Social Science and U.S. History 6 hrs.**

- i. POLS 1101 American Government 3 hrs.  
Select one of the following:
  - i. HIST 2111 U.S. History to the Post-Civil War Period 3 hrs
  - ii. HIST 2112 U.S. History from the Post-Civil War to Pre 3 hrs.

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

- Select two of the following:
- i. ENGL 2111 World Literature I 3 hrs.
  - ii. ENGL 2112 World Literature II 3 hrs.
  - iii. ENGL 2121 British Literature I 3 hrs.
  - iv. ENGL 2122 British Literature II 3 hrs.
  - v. ENGL 2131 American Literature I 3 hrs.
  - vi. ENGL 2132 American Literature II 3 hrs.
  - vii. ENGL 2140 - Introduction to African American Literature 3hrs.
  - viii. ENGL 2521 Introduction to Film 3hrs.
  - ix. PHIL 2010 Introduction to Philosophy 3 hrs.
  - x. PHIL 2030 Introduction to Ethics 3 hrs.
  - xi. ARTS 1101 Introduction to Visual Art 3 hrs.
  - xii. DNCE 2010 Dance Appreciation 3 hrs.
  - xiii. ENGL 2521 Introduction to Film 3 hrs.
  - xiv. HUMN 2011 Humanities 3 hrs.
  - xv. MUSC 1101 Introduction to Music 3 hrs.
  - xvi. THEA 2101 Introduction to Theatre 3 hrs.

**Area C – Communications in Writing 6 hrs.**

- i. ENGL 1101 English Composition I 3 hrs.
- ii. ENGL 1102 English Composition II 3hrs.

**Area T – Natural Sciences, Math & Technology 10 hrs.**

1. Select one of the following:
  - i. CSCI 1130 Computer Applications 3 hrs.**
  - ii. CSCI 1301 Computer Science I 3 hrs.**
  - iii. CILS 1130 - Introduction to Computer Applications 3hrs.
  - iv. ASTR 1000 - Introduction to the Universe 3 hrs.
  - v. ISCI 1101 - Integrated Science I 3 hrs.
  - vi. BIOL 1103 - General Biology 3 hrs.
  - vii. BIOL 1104 - Human Biology 3 hrs.
  - viii. DATA 1501 Introduction to Data Science 3 hrs.
  - ix. ENVS 1140 Environmental Issues 3 hrs.
  - x. FSCI 1101 - Introduction to Molecular Forensic Science 3hrs.
  - xi. MATH 1111 - College Algebra 3hrs.
  - xii. MATH 1401 - Elementary Statistics 3 hrs.
  - xiii. MATH 1113 - Pre-Calculus 3 hrs.
2. Select two of the following lab sciences:
  - i. BIOL 1103/1103L General Biology 4 hrs.
  - ii. BIOL 1104/1104L Human Biology 4 hrs.
  - iii. CHEM 1101K - Introductory Chemistry 4hrs.
  - iv. ISCI 1111K - Integrated Science II 4 hrs.
  - v. MSCI 1501K - Introduction to Marine Biology 4hrs.
  - vi. PHSC 1011K - Physical Science I 4 hrs.
  - vii. PHSC 1012K - Physical Science II 4 hrs.
  - viii. PHYS 1111K Introductory Physics I 4 hrs.**
  - ix. BIOL 1107/1107L Principles of Biology I 4 hrs.
  - x. BIOL 1108/1108L Principles of Biology II 4 hrs.
  - xi. CHEM 1211/1211L Principles of Chemistry I 4 hrs.
  - xii. CHEM 1212/1212L Principles of Chemistry II 4 hrs.
  - xiii. CISM 1130 Computer Applications 3 hrs.
  - xiv. ENVS 1140 Environmental Issues 3 hrs.

- xv. BIOL 1107/1107L Principles of Biology I 4 hrs.
- xvi. BIOL 1108/1108L Principles of Biology II 4 hrs.
- xvii. CHEM 1211/1211L Principles of Chemistry 4 hrs.
- xviii. CHEM 1212/1212L Principles of Chemistry 4 hrs.
- xix. PHYS 1112K Introductory Physics II 4 hrs.**
- xx. PHYS 2211K Principles of Physics I 4 hrs.**
- xxi. PHYS 2212K Principles of Physics II 4 hrs.**

**Area S – Social Science 6 hrs.**

- Select two of the following:
- i. AFRS 2000 Introduction to Africana Studies 3 hrs.
  - ii. ANTH 1101 Introduction to Anthropology 3 hrs.
  - iii. ECON 2105 Principles of Macro-Economics 3 hrs.
  - iv. GEOG 1101 Introduction to Human Geography 3 hrs.
  - v. HIST 1111 World Hist to Early Modern Times 3 hrs.
  - vi. HIST 1112 World History Early Modern Times to Pres 3 hrs.
  - vii. POLS 2401 Global Issues 3 hrs.
  - viii. PSYC 1101 Intro to General Psychology 3 hrs.
  - ix. PSYC 2103 Human Growth & Development 3 hrs.
  - x. SOCI 1101 Introduction to Sociology 3 hrs.
  - xi. SOCI 1160 Social Problems 3 hrs.

**Civil Engineering Technology Major Technical Electives (6 hrs.)**

Select from the following:

CIVT 3501	Civil Engineering Computing Practices	3 credits
CIVT 4350	Civil & Environmental Systems Engineering	3 credits
CIVT 2113	Introduction to Data Analytics in Transportation	3 credits
CIVT 3113	Advanced Data Analytics in Transportation	3 credits
CSCI 1301	Computer Science I	3 credits
CSCI 1371	Computing for Engineers & Scientists	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.