

# CIVIL ENGINEERING (B.S.)

Degree: Bachelor of Science

Major: Civil Engineering

Total Hours: 123

All STEM courses require a grade of "C" or better to satisfy degree plan/ prerequisite requirements.

Code	Title	Hours
<b>General Education Core Curriculum</b>		
<i>Communication</i>		
ENGL 1301	Composition I	3
Select one of the following:		3
COMM 1315	Public Speaking I	
COMM 1321	Business and Professional Speech	
DSDE 1371	ASL I	
ENGL 1302	Composition II	
FREN 1311	Beginning French I	
SPAN 1311	Beginning Spanish I	
<i>Mathematics</i>		
MATH 2413	Calculus and Analytical Geometry I	4
<i>Life and Physical Sciences</i>		
PHYS 2425	University Physics I	4
PHYS 2426	University Physics II	4
<i>Language, Philosophy and Culture</i>		
PHIL 1370	Philosophy of Knowledge	3
	or PHIL 2306 Ethics	
<i>Creative Arts</i>		
Select one of the following:		3
ARTS 1301	Art Appreciation	
ARTS 1303	Art History I	
DANC 2304	Dance Appreciation	
MUSI 1306	Music Appreciation	
COMM 1375	Film Appreciation	
COSC 1324	The Art of Computer Game Development	
MUSI 1306	Music Appreciation	
MUSI 1309	Jazz History and Appreciation	
MUSI 1310	History of Rock and Roll	
PHIL 1330	Arts and Ideas	
THEA 1310	Theatre Appreciation	
<i>American History</i>		
Select two of the following:		6
HIST 1301	U S History I 1763-1877	
HIST 1302	U S History II Since 1877	
HIST 2301	Texas History	
<i>Government/Political Science</i>		
POLS 2301	Intro to American Government I	3
POLS 2302	Intro/American Government II	3
<i>Social and Behavioral Sciences</i>		
INEN 2373	Engineering Economics	3
<i>Component Area Option</i>		

MATH 2414	Calculus and Analytical Geometry II	4
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The additional hours from Life and Physical Sciences are applied here

## Required Major Courses

### Engineering Courses

CHEM 1111	General Chemistry I Laboratory	1
CHEM 1311	General Chemistry I	3
CVEN 1201	Introduction to Civil Engineering	2
CVEN 2301	Statics	3
CVEN 2370	Intro to CAD and Surveying	3
CVEN 2372	Mechanics of Solids	3
CVEN 3300	Engineering Materials Systems	3
CVEN 3311	Introduction to Environmental Engineering	3
CVEN 3340	Structural Analysis	3
CVEN 3351	Fluid Mechanics	3
CVEN 3360	Engineering Hydrology	3
CVEN 3370	Water & Wastewater Treatment	3
CVEN 3390	Geo-technical Engineering	3
CVEN 4110	Seminar	1
CVEN 4212	Civil Engineering Systems Design Project	2
CVEN 4313	Civil Engineering System Design Project (II)	3
CVEN 4340	Foundation Engineering	3
CVEN 4350	Hydraulic Engineering	3
CVEN 4365	Introduction to Transportation Engineering	3
CVEN 4380	Reinforced Concrete Design	3
CVEN 4390	Structural Steel Design	3
MATH 2415	Calculus III	4
MATH 3370	Introduction to the Theory of Statistical Inference	3
	or INEN 3320 Probability and Statistics for Engineering	
MEEN 2302	Dynamics	3
MATH 3301	Ordinary Differential Equations	3
	or CVEN 2320 Diff Equations for Civil Eng	

### Elective Courses

#### Science Elective

One from:		4
GEOL 1403	Geology I: Physical Geology	
BIOL 1406	General Biology I (Majors)	

<i>CVEN Elective 3000-4000</i>		6
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**Total Hours** **123**

<sup>1</sup> The additional hours from PHYS 2425 University Physics I & PHYS 2426 University Physics II are applied to the Component Area Option.

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
ENGL 1301	Composition I <sup>1</sup>	3
MATH 2413	Calculus and Analytical Geometry I <sup>1</sup>	4
CVEN 1201	Introduction to Civil Engineering	2
HIST 1301	U S History I 1763-1877 <sup>1</sup>	3
Communication Core		3
<b>Hours</b>		<b>15</b>

## 2 Civil Engineering (B.S.)

<b>Spring</b>		
PHIL 2306 or PHIL 1370	Ethics <sup>1</sup> or Philosophy of Knowledge	3
MATH 2414	Calculus and Analytical Geometry II	4
PHYS 2425	University Physics I	4
CHEM 1311	General Chemistry I	3
CHEM 1111	General Chemistry I Laboratory	1
CVEN 2370	Intro to CAD and Surveying	3
<b>Hours</b>		<b>18</b>
<b>Second Year</b>		
<b>Fall</b>		
PHYS 2426	University Physics II	4
CVEN 2301	Statics	3
MATH 3370 or INEN 3320	Introduction to the Theory of Statistical Inference or Probability and Statistics for Engineering	3
CVEN 3311	Introduction to Environmental Engineering	3
MATH 2415	Calculus III	4
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
INEN 2373	Engineering Economics	3
MEEN 2302	Dynamics	3
CVEN 2372	Mechanics of Solids	3
MATH 3301 or CVEN 2320	Ordinary Differential Equations or Diff Equations for Civil Eng	3
Creative Art Core		3
<b>Hours</b>		<b>15</b>
<b>Third Year</b>		
<b>Fall</b>		
CVEN 3340	Structural Analysis	3
CVEN 3351	Fluid Mechanics	3
CVEN 4365	Introduction to Transportation Engineering	3
POLS 2301	Intro to American Government I <sup>1</sup>	3
HIST 1302	U S History II Since 1877 <sup>1</sup>	3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CVEN 3300	Engineering Materials Systems	3
CVEN 3360	Engineering Hydrology	3
CVEN 3370	Water & Wastewater Treatment	3
CVEN 3390	Geo-technical Engineering	3
Select one Science Elective from the following:		4
GEOL 1403	Geology I: Physical Geology	
BIOL 1406	General Biology I (Majors)	
<b>Hours</b>		<b>16</b>
<b>Fourth Year</b>		
<b>Fall</b>		
CVEN Elective 3000-4000		3
CVEN 4340	Foundation Engineering	3
CVEN 4380	Reinforced Concrete Design	3
CVEN 4212	Civil Engineering Systems Design Project	2
CVEN 4110	Seminar	1
POLS 2302	Intro/American Government II	3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CVEN Elective 3000-4000		3
CVEN 4350	Hydraulic Engineering	3
CVEN 4390	Structural Steel Design	3
CVEN 4313	Civil Engineering System Design Project (II)	3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>123</b>

Students should meet with their academic advisor to verify their plan and track their progress.

<sup>1</sup> Core Curriculum Course