



# Bachelor Of Science in Civil Engineering

## Four Year Curriculum

### 2017-2018 Catalog

The University of Texas at Tyler

### Freshman Year

Fall Semester			Spring Semester		
Course	Title	SCH	Course	Title	SCH
ENGL 1301	College Composition I	3	SPCM 1315	Fundamentals of Speech Communication	3
MATH 2413	Calculus I	4	PHYS 2325	University Physics I	3
CHEM 1311	General Chemistry I	3	PHYS 2125	University Physics I Lab	1
CHEM 1111	General Chemistry I Lab	1	MATH 2414	Calculus II	4
ENGR 1201	Introduction to Engineering	2	ENGR 1204	Engineering Graphics	2
POLS 2306	Introductory Texas Politics	3	ENGL 1302	College Composition II /or ENGL 2311	3
<b>Semester Credit Hours</b>		<b>16</b>	<b>Semester Credit Hours</b>		<b>16</b>

### Sophomore Year

Fall Semester			Spring Semester		
Course	Title	SCH	Course	Title	SCH
PHYS 2326	University Physics II / or CHEM 1312	3	PHIL 2306	Intro to Ethics	3
PHYS 2126	University Physics II Lab/or CHEM 1112	1	HIST 1303	History of Tech and Innovation in US Soc	3
HIST 1301	United States History I	3	ECON 2301	Principles of Macroeconomics, OR	3
MATH 3404	Multivariate Calculus	4	ECON 2302	Principles of Microeconomics	3
ENGR 2301	Mechanics - Statics	3	MATH 3305	Differential Equations	3
POLS 2305	Introductory American Government	3	ENGR 2302	Mechanics - Dynamics	3
			CENG 3306	Mechanics of Materials	3
<b>Semester Credit Hours</b>		<b>17</b>	<b>Semester Credit Hours</b>		<b>18</b>

### Junior Year

Fall Semester			Spring Semester		
Course	Title	SCH	Course	Title	SCH
CENG 3434	CE Materials, Codes & Specifications	4	CENG 3361	Applied Engineering Hydrology	3
CENG 3310	Fluid Mechanics	3	CENG 3371	Intro to Environmental Engineering	3
MATH 3351	Probability & Statistics for Engineers	3	CENG 3336	Soil Mechanics	3
CENG 4339	CE Construction Management	3	CENG 3325	Structural Analysis	3
	Additional Science Elective	3	CENG 3351	Transportation Engineering Systems	3
<b>Semester Credit Hours</b>		<b>16</b>	<b>Semester Credit Hours</b>		<b>15</b>

### Senior Year

Fall Semester			Spring Semester		
Course	Title	SCH	Course	Title	SCH
CENG 4412	Concrete & Steel Design	4	CENG 4315	Senior Design II	3
	2 Design Electives and Technical Elective		CENG 4341	Leadership, Public Policy & Asset Mgmt	3
	or 3 Design electives from *	9		CE Technical Elective	3
CENG 4351	Traffic Design *		CENG 2336	Geomatics or CE Tech Elective	3
CENG 4381	Foundation Design *			Creative Arts	3
CENG 4371	Environmental Engineering Design *				
CENG XXXX	Technical Elective *				
ENGR 4009	FE Exam Preparation	0			
ENGR 4109	Senior Seminar	1			
CENG 4115	Senior Design I	1			
<b>Semester Credit Hours</b>		<b>15</b>	<b>Semester Credit Hours</b>		<b>15</b>

**Total Credit Hours 128**

## CIVIL ENGINEERING UNDERGRAD COURSE PRE-REQUISITES

Course Number	Course Title	Pre-Requisites
ENGR 2301	Statics	PHYS 2325, PHYS 2125, MATH 2414
ENGR 2302	Dynamics	ENGR 2301
CENG 2336	Geomatics	ENGR 1204 & ENGL 1316
CENG 3306	Mechanics of Materials	ENGR 2301
CENG 3310	Fluid Mechanics	Pre-Req: ENGR 2302 & MATH 3305 Co-Req: MATH 3404
CENG 3325	Structural Analysis	CENG 3306
CENG 3336	Soil Mechanics	CENG 3306
CENG 3351	Transportation Engineering	MATH 3351
CENG 3361	Engineering Hydrology	CENG 3310
CENG 3371	Intro to Environmental Engineering	CHEM 1311/CHEM 1111
CENG 3434	CE Mats, Codes & Specs	CENG 3306
CENG 4115	Senior Design I	SPCM 1315 & Department chair approval
CENG 4199	Independent Study	Department chair approval
CENG 4299	Independent Study	Department chair approval
CENG 4314	Advanced Structural Design	CENG 3325
CENG 4315	Senior Design II	CENG 4115
CENG 4330	Water Resources Plan & Mgmt	CENG 3361, Co-listed with CENG 5330
CENG 4339	CE Construction Management	ECON 2301 or ECON 2302
CENG 4341	Leadership, Business, and Assessts	Department chair approval
CENG 4350	Topics in Civil Engineering	Department chair approval
CENG 4351	Traffic Design	CENG 2336, CENG 3306, CENG 3351
CENG 4355	Trasporation Management	CENG 4351,Co-listed with CENG 5355
CENG 4370	Undergraduate Internship	Department chair approval
CENG 4371	Environmental Engineering Design	CENG 3371
CENG 4381	Foundation Design	CENG 3336
CENG 4395	Undergraduate Research	Department chair approval
CENG 4399	Independent Study	Department chair approval
CENG 4412	Concrete & Steel Design	CENG 3325

### Electives Approved for Civil Engineering Majors

Course Number	Course Title	Dual Listed	Semester offered
MATH 3315	Linear Algebra and Matrix Theory	No	Fall
EENG 3306	Electronic Circuit Analysis I	No	Fall
COSC 1336	Programing Fundamentals	No	Fall/Spring/Sum.
CMGT 3311	Construction Estimating	No	Fall
CMGT 3312	Advanced Estimating	No	Spring
CMGT 3365	Mechanical, Electical and Plumbing Syst.	No	Spring
CMGT 4331	Construction Scheduling	No	Fall
CENG 4314	Advanced Structural Analysis	Yes	Odd Fall
CENG 4316	Advanced Steel Design	Yes	Odd Spring
CENG 4330	Water Resources and Planning Mngt.	Yes	As needed
CENG 4350	Special Topics in Civil Engineering	No	Fall/Spring
CENG 4353	Introduction to Pavement Engineering	Yes	Spring
CENG 4370	Undergraduate Internship	Yes	Fall/Spring
CENG 4395	Undergraduate Research	No	As needed
CENG 4399	Independent Study (if approved)	No	As needed
MENG 3301	Thermodynamics I	No	Fall/Spring
MENG 3319	Materials Science and Manufacturing	No	
MENG 4317	Vibrations	No	Spring