

**West Texas A&M University**  
**Advising Services**  
**Degree Checklist**  
**2023-2024**

(For assistance completing this form, contact Advising Services at 806-651-5300)

**NAME:** \_\_\_\_\_ **WT ID:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**Civil Engineering (see ⚡ note below)**  
**College of Engineering**  
**ECS Building, Room 119 651-5257**

CORE CURRICULUM COURSES: 42 HOURS		HRS
<b>Communication (Code 10)</b>		
ENGL 1301 Intro. To Academic Writing & Argumentation OR ENGL 1311 Writing About Ideas	3	
COMM 1315, 1318, or 1321	3	
<b>Mathematics (Code 20)</b>		
See University Core Requirements below	(3)	
<b>Life and Physical Sciences (Code 30)</b>		
See University Core Requirements below	(6)	
<b>Language, Philosophy and Culture (Code 40)</b>		
ANTH 2351, ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311, 2323, 2372; MCOM 1307; PHIL 1301, 2374; SPAN 2311*, 2312**/**, 2313*, 2315*, or 2371 Choose 1	3	
<b>Creative Arts (Code 50)</b>		
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310 Choose 1	3	
<b>American History (Code 60)</b>		
HIST 1301, 1302, 2381, 2382, 2301 Choose 2	6	
<b>Government/Political Science (Code 70)</b>		
POSC 2305 and 2306	6	
<b>Social and Behavioral Sciences (Code 80)</b>		
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; GEOG 1302; PSYC 2301; SOCI 1301 Choose 1	3	
<b>Component Area Option (Code 90)</b>		
See University Core Requirements below	(6)	
<b>CIVIL ENGINEERING MAJOR REQUIREMENTS: 99 HOURS</b>		
• A grade of "C" or better must be earned in all courses required for major. • A grade of "C" or better is mandatory for all prerequisites listed for ECSM courses required for Civil Engineering majors.		
<b>UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦</b>		
<b>CORE 20</b> MATH 2413*[3] Calculus I PCE	3	
<b>CORE 30</b> CHEM 1411*, 1411L Chemistry I PCE CHEM 1412*, 1412L Chemistry II PCE	6	
<b>CORE 90</b> ENGL 1302* Academic Writing and Research OR ENGL 1312* Writing About Ideas II OR ENGL 2311* Introduction to Professional and Technical Communication	3	
<b>CORE 90</b> MATH 2413[1], CHEM 1411L[1], CHEM 1412L[1] PCE	3	
<b>CIVIL ENGINEERING REQUIREMENTS: 63 HOURS</b>		
ENGR 1171* Engineering Ethics	1	
ENGR 1301*, 1301L Fundamentals of Engineering PCE	3	
ENGR 1304, 1304L Engineering Graphics PCE	3	
ENGR 2301* Engineering Statics PCE	3	
ENGR 2302* Engineering Dynamics PCE	3	
ENGR 2332* Mechanics of Materials I	3	
ENGR 3202* Fundamentals of Engineering Economics	2	
CENG/EVEG 2331* Introduction to Environmental Engineering	3	
CENG/EVEG 3304* Fluid Mechanics for Civil and Environmental Engineers	4	
CENG 2361* Surveying	3	

**Bachelor of Science Degree**  
**BS.CIVIL.ENGR (130)**  
**PRE.ENGR (128)**

CENG/EVEG 3411* Water Resources Engineering	3	
CENG 3321* Civil Construction Materials	3	
CENG 3341* Geotechnical Engineering	3	
CENG 3351* Structural Analysis I	3	
CENG 3362* Transportation Engineering	3	
CENG 4380* Civil Engineering Design	3	
PHYS 2425*, 2425L Calculus Physics I	4	
CS 1315* Programming Fundamentals OR CS 1337, 1337L Programming Principles I	3	
<b>MATH 2414* Calculus II</b> PCE	4	
MATH 3340* Calculus III	3	
MATH 3342* Differential Equations I	3	
<b>ELECTIVES: 21-23 HOURS</b>		
CENG structural design elective	3	
CENG general elective	3	
CENG design elective	3	
<b>Take one upper-level elective selected from:</b>		
MATH 3311* Linear Algebra	3	
MATH 3343* Differential Equations II		
MATH 4340* Complex Variables I		
MATH 4341* Advanced Calculus		
MATH 4361* Statistics for the Sciences		
MATH 4362* Introduction to Numerical Analysis		
PHYS 3310* Modern Physics I		
PHYS 4310* Modern Physics II		
PHYS 4330* Optics		
PHYS 4340* Mathematical Methods		
PHYS 4397* Advanced Physics Elective III		
One elective in ENGR, CENG, EENG, EVEG or MENG	3	
<b>Take two natural science electives from:</b>		
PHYS 2426; BIOL 1406, 1407*, 1411, 1413, 2420 or 2572, 4425, 4310; GEOL 1403, 1404, 3471, 3475, 3411, 3312, 3350	6-8	
<b>MINIMUM HOURS REQUIRED TO COMPLETE DEGREE</b>	<b>126</b>	

⚡ **Civil Engineering Program admission requirements (PCE):** overall GPA of at least 2.25; completion of the pre-engineering sequence (MATH 2413, 2414, CHEM 1411, 1412, ENGR 1301, 1304, 2301, and 2302) with a GPA of at least 2.75; and successful completion of entrance interview with a department adviser.  
 \* Indicates prerequisites—see catalog for more information.  
 \*\* Or an equivalent course (second year, second semester) in a foreign language.

**NOTE:** This is NOT a degree plan. All undergraduate students must request an official degree plan from their academic dean's office by the time they have completed 30 credit hours.

**WTAMU ADVISING SERVICES – 2023-2024 Curriculum Guide**

**Major: Civil Engineering, B.S.**

**Major Code: 130**

<b>Year 1: Fall</b>	
CORE 10 (Communication) – ENGL 1301 or 1311	3
CORE – See checklist for options <sup>1</sup>	3
CORE 20 (Mathematics) – MATH 2413 Calculus I (PCE <sup>2</sup> )	4
CORE 30 (Life & Phys. Sci.) – CHEM 1411/1411L Chemistry I (PCE <sup>2</sup> ) (4 <sup>th</sup> hour counts towards Core 90)	4
ENGR 1301/1301L Fundamentals of Engineering (PCE <sup>2</sup> )	3
<b>Total:</b>	<b>17</b>

<b>Year 1: Spring</b>	
CORE 90 (Component Area Option) – ENGL 1302, 1312, or 2311	3
ENGR 1304/1304L Engineering Graphics (PCE <sup>2</sup> )	3
CORE 30 (Life & Phys. Sci.) – CHEM 1412/1412L Chemistry II (PCE <sup>2</sup> )	4
MATH 2414 Calculus II (PCE <sup>2</sup> )	4
CORE – See checklist for options <sup>1</sup>	3
<b>Total:</b>	<b>16</b>

<b>Year 2: Fall</b>	
ENGR 1171 Engineering Ethics	1
ENGR 2301 Engineering Statics (PCE <sup>2</sup> )	3
MATH 3340 Calculus III	3
PHYS 2425/2425L Calculus Physics I (PCE <sup>2</sup> )	4
CS 1315 Programming Fundamentals <b>or</b> CS 1337/1337L Intro. to Object-Oriented Programming	3
CENG 2361/2361L Surveying	3
<b>Total:</b>	<b>17</b>

<b>Year 2: Spring</b>	
ENGR 2302 Engineering Dynamics (PCE <sup>2</sup> )	3
ENGR 2332 Mechanics of Materials I	3
MATH 3342 Differential Equations I	3
CENG 2331/2331L Intro. to Environmental Engineering	3
CORE – See checklist for options <sup>1</sup>	3
<b>Total:</b>	<b>15</b>

<b>Year 3: Fall</b>	
CENG 3321/3321L Civil Construction Materials	3
CENG 3351 Structural Analysis I	3
CENG 3304/3304L Fluid Mechanics for Civil & Environmental Engineers	3
ENGR 3202 Fundamentals of Engineering Economics	2
Natural Science Elective (1) <sup>3</sup>	3-5
<b>Total:</b>	<b>14-16</b>

<b>Year 3: Spring</b>	
CENG 3411 Water Resources Engineering	3
CENG 3341/3341L Geotechnical Engineering	3
CENG 3362 Transportation Engineering	3
CENG Structural Design Elective	3
Natural Science Elective (2) <sup>3</sup>	3
<b>Total:</b>	<b>15</b>

<b>Year 4: Fall</b>	
CENG Design Elective	3
CENG Elective	3
MATH/PHYS Elective <sup>4</sup>	3
CORE – See checklist for options <sup>1</sup>	3
CORE – See checklist for options <sup>1</sup>	3
<b>Total:</b>	<b>15</b>

<b>Year 4: Spring</b>	
CENG 4380* Civil Engineering Senior Design	3
ENGR, EVEC, EENG or MENG Elective	3
CORE – See checklist for options <sup>1</sup>	3
CORE – See checklist for options <sup>1</sup>	3
CORE – See checklist for options <sup>1</sup>	3
<b>Total:</b>	<b>15</b>

<sup>1</sup> **CORE:** Civil Engineering majors are required to take specific courses for Core 20, Core 30, and Core 90. For all other categories, they may select from any available options (see degree checklist). Apart from the major-specific core requirements, there is no set order in which core courses must be taken.

<sup>2</sup> **(PCE): Civil Engineering Program admission requirements:** overall GPA of at least 2.25; completion of the pre-civil engineering sequence (MATH 2413, 2414, CHEM 1411, 1412, ENGR 1301, 1304, 2301, and 2302) with a GPA of at least 2.75; and successful completion of entrance interview with a department adviser.

<sup>3</sup> **Natural Science Electives:** Take two natural science electives from PHYS 2426, BIOL 1406, 1407, 1411, 1413, 2420, 2572, 4425, 4510, GEOL 1403, 1404, 3471, 3475, 3311, 3312, 3350.

<sup>4</sup> **MATH/PHYS Elective:** Take one upper-level elective selected from MATH. 3311, 3343, 4340, 4341, 4361, 4362; PHYS 3310, 4310, 4330, 4340, 4397.

<b>Identified Marketable Skills</b>	<b>Top Three Local Employers or Industries/Professional Programs/Possible Career Opportunities</b>
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**Additional notes:**

- The core curriculum must total exactly 42 hours; excess hours must be moved to the major as an elective or a major requirement and stay within the 120-hour requirement or approved total submitted to the Coordinating Board for degree requirements. Some majors specify particular courses to meet core curriculum requirements when options are available.
- At least 36 hours of advanced work (3000- or 4000-level courses) for which tuition is paid must be earned at WTAMU. A maximum of six semester hours in religion (RELI) and six semester hours in physical education (PHED) courses can count toward a baccalaureate degree.

DISCLAIMER: This curriculum guide should be used in conjunction with the corresponding degree checklist for general planning purposes only. The degree checklist (later a student's official degree plan) should be referred to as the comprehensive list of all courses required for the degree. An official degree plan is required after completing 30 hours. Students should always seek the advice of their academic adviser before scheduling classes.