

West Texas A&M University
Advising Services
Degree Checklist
2021-2022

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

NAME: _____ **WT ID:** _____ **DATE:** _____

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

CORE CURRICULUM COURSES: 42 HOURS ♦		HRS	AC
Communication (Code 10)			
ENGL 1301 Introduction to Academic Writing and Argumentation		3	
COMM 1315, 1318, or 1321		3	
Mathematics (Code 20)			
See University Core Requirements below		(3)	
Life and Physical Sciences (Code 30)			
See University Core Requirements below		(6)	
Language, Philosophy and Culture (Code 40)			
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	
Creative Arts (Code 50)			
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310	Choose 1	3	
American History (Code 60)			
HIST 1301, 1302, 2301, 2381	Choose 2	6	
Government/Political Science (Code 70)			
POSC 2305 and 2306		6	
Social and Behavioral Sciences (Code 80)			
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; PSYC 2301; SOCI 1301	Choose 1	3	
Component Area Option (Code 90)			
See University Core Requirements below		(6)	
CIVIL ENGINEERING MAJOR REQUIREMENTS: 99 HOURS			
<ul style="list-style-type: none"> • 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. 			
UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦			
CORE 20 MATH 2413*[3] Calculus I	AC PCE	3	
CORE 30 CHEM 1411*, 1411L Chemistry I CHEM 1412*, 1412L Chemistry II	AC PCE PCE	6	
CORE 90 ENGL 2311* Introduction to Professional and Technical Communication	AC	3	
CORE 90 MATH 2413*[1], CHEM 1411L[1], CHEM 1412L[1]	AC PCE	3	
CIVIL ENGINEERING REQUIREMENTS: 63 HOURS			
ENGR 1171* Engineering Ethics		1	
ENGR 1301*, 1301L Fundamentals of Engineering	AC PCE	3	
ENGR 1304, 1304L Engineering Graphics	AC PCE	3	
ENGR 2301* Engineering Statics	AC PCE	3	
ENGR 2302* Engineering Dynamics	AC PCE	3	
ENGR 2332* Mechanics of Materials I	AC	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	
CENG/EVEG 3411* Water Resources Engineering		3	
CENG 3321* Civil Construction Materials		3	

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

CENG 3341* Geotechnical Engineering		3	
CENG 3351* Structural Analysis I		3	
CENG 3362* Transportation Engineering		3	
CENG 4380* Civil Engineering Senior Design		3	
PHYS 2425*, 2425L Calculus Physics I	AC	4	
CS 1315* Programming Fundamentals OR CS 1337, 1337L Intro. to Object-Oriented Programming	AC	3	
MATH 2414* Calculus II	AC PCE	4	
MATH 3340* Calculus III	AC	3	
MATH 3342* Differential Equations I	AC	3	
ELECTIVES: 21-23 HOURS			
CENG structural design elective		3	
CENG general elective		3	
CENG design elective		3	
Take one upper-level elective selected from:			
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			
One elective in ENGR, CENG, EENG, EVEG or MENG		3	
Take two natural science electives from:			
PHYS 2426; BIOL 1406, 1407*, 1411, 1413, 2420 or 2572, 4425, 4510; GEOL 1403, 1404, 2471, 2475, 3311, 3312, 3350	AC	6-8	
MINIMUM HOURS REQUIRED TO COMPLETE DEGREE		126	

ac **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.

♦ 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.

* Indicates prerequisites—see catalog for more information.

** Or an equivalent course (second year, second semester) in a foreign language.

NOTE: 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.

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

2021-2022 Curriculum Guide

Major: Civil Engineering, B.S.

Major Code: 130

First Year Boldface type indicates major requirements.																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Fall</td></tr> <tr><td>CORE 10(1) - ENGL 1301</td><td style="text-align: right;">3</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td>MATH 2413 (PCE - see Note 2)</td><td style="text-align: right;">4</td></tr> <tr><td colspan="2" style="font-size: x-small;">4th hour counts towards Core 90.</td></tr> <tr><td>CHEM 1411/1411L (PCE - see Note 2)</td><td style="text-align: right;">4</td></tr> <tr><td colspan="2" style="font-size: x-small;">4th hour counts towards Core 90.</td></tr> <tr><td>ENGR 1301/1301L (PCE - see Note 2)</td><td style="text-align: right;">3</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">17</td></tr> </table>	Fall		CORE 10(1) - ENGL 1301	3	CORE - See checklist for options	3	(see also Note 1 below)		MATH 2413 (PCE - see Note 2)	4	4th hour counts towards Core 90.		CHEM 1411/1411L (PCE - see Note 2)	4	4th hour counts towards Core 90.		ENGR 1301/1301L (PCE - see Note 2)	3			Semester Hours	17	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Spring</td></tr> <tr><td>CORE 90 - ENGL 2311</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(required for major)</td></tr> <tr><td>ENGR 1304/1304L (PCE - see Note 2)</td><td style="text-align: right;">3</td></tr> <tr><td>CHEM 1412/1412L (PCE - see Note 2)</td><td style="text-align: right;">4</td></tr> <tr><td colspan="2" style="font-size: x-small;">4th hour counts towards Core 90.</td></tr> <tr><td>MATH 2414 (PCE - see Note 2)</td><td style="text-align: right;">4</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">17</td></tr> </table>	Spring		CORE 90 - ENGL 2311	3	(required for major)		ENGR 1304/1304L (PCE - see Note 2)	3	CHEM 1412/1412L (PCE - see Note 2)	4	4th hour counts towards Core 90.		MATH 2414 (PCE - see Note 2)	4	CORE - See checklist for options	3	(see also Note 1 below)				Semester Hours	17
Fall																																													
CORE 10(1) - ENGL 1301	3																																												
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
MATH 2413 (PCE - see Note 2)	4																																												
4th hour counts towards Core 90.																																													
CHEM 1411/1411L (PCE - see Note 2)	4																																												
4th hour counts towards Core 90.																																													
ENGR 1301/1301L (PCE - see Note 2)	3																																												
Semester Hours	17																																												
Spring																																													
CORE 90 - ENGL 2311	3																																												
(required for major)																																													
ENGR 1304/1304L (PCE - see Note 2)	3																																												
CHEM 1412/1412L (PCE - see Note 2)	4																																												
4th hour counts towards Core 90.																																													
MATH 2414 (PCE - see Note 2)	4																																												
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
Semester Hours	17																																												

Second Year																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Fall</td></tr> <tr><td>ENGR 1171</td><td style="text-align: right;">1</td></tr> <tr><td>ENGR 2301 (PCE - see Note 2)</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 3340</td><td style="text-align: right;">3</td></tr> <tr><td>PHYS 2425/2425L</td><td style="text-align: right;">4</td></tr> <tr><td>CS 1315</td><td style="text-align: right;">3</td></tr> <tr><td>CENG 2361/2361L</td><td style="text-align: right;">3</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">17</td></tr> </table>	Fall		ENGR 1171	1	ENGR 2301 (PCE - see Note 2)	3	MATH 3340	3	PHYS 2425/2425L	4	CS 1315	3	CENG 2361/2361L	3			Semester Hours	17	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Spring</td></tr> <tr><td>ENGR 2302 (PCE - see Note 2)</td><td style="text-align: right;">3</td></tr> <tr><td>ENGR 2332</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 3342</td><td style="text-align: right;">3</td></tr> <tr><td>CENG 2331/2331L</td><td style="text-align: right;">3</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">15</td></tr> </table>	Spring		ENGR 2302 (PCE - see Note 2)	3	ENGR 2332	3	MATH 3342	3	CENG 2331/2331L	3	CORE - See checklist for options	3	(see also Note 1 below)				Semester Hours	15
Fall																																					
ENGR 1171	1																																				
ENGR 2301 (PCE - see Note 2)	3																																				
MATH 3340	3																																				
PHYS 2425/2425L	4																																				
CS 1315	3																																				
CENG 2361/2361L	3																																				
Semester Hours	17																																				
Spring																																					
ENGR 2302 (PCE - see Note 2)	3																																				
ENGR 2332	3																																				
MATH 3342	3																																				
CENG 2331/2331L	3																																				
CORE - See checklist for options	3																																				
(see also Note 1 below)																																					
Semester Hours	15																																				

Third Year																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Fall</td></tr> <tr><td>CENG 3321/3321L</td><td style="text-align: right;">3</td></tr> <tr><td>CENG 3351</td><td style="text-align: right;">3</td></tr> <tr><td>CENG 3304/3304L</td><td style="text-align: right;">3</td></tr> <tr><td>ENGR 3202</td><td style="text-align: right;">2</td></tr> <tr><td>Natural Science Elective(1)</td><td style="text-align: right;">3-5</td></tr> <tr><td colspan="2" style="font-size: x-small;">See Note 3 below or checklist for options.</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">14-16</td></tr> </table>	Fall		CENG 3321/3321L	3	CENG 3351	3	CENG 3304/3304L	3	ENGR 3202	2	Natural Science Elective(1)	3-5	See Note 3 below or checklist for options.				Semester Hours	14-16	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Spring</td></tr> <tr><td>CENG 3411</td><td style="text-align: right;">4</td></tr> <tr><td>CENG 3341/3341L</td><td style="text-align: right;">3</td></tr> <tr><td>CENG 3362</td><td style="text-align: right;">3</td></tr> <tr><td>CENG Structural Design Elective</td><td style="text-align: right;">3</td></tr> <tr><td>Natural Science Elective(2)</td><td style="text-align: right;">3-5</td></tr> <tr><td colspan="2" style="font-size: x-small;">See Note 3 below or checklist for options.</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">16-18</td></tr> </table>	Spring		CENG 3411	4	CENG 3341/3341L	3	CENG 3362	3	CENG Structural Design Elective	3	Natural Science Elective(2)	3-5	See Note 3 below or checklist for options.				Semester Hours	16-18
Fall																																					
CENG 3321/3321L	3																																				
CENG 3351	3																																				
CENG 3304/3304L	3																																				
ENGR 3202	2																																				
Natural Science Elective(1)	3-5																																				
See Note 3 below or checklist for options.																																					
Semester Hours	14-16																																				
Spring																																					
CENG 3411	4																																				
CENG 3341/3341L	3																																				
CENG 3362	3																																				
CENG Structural Design Elective	3																																				
Natural Science Elective(2)	3-5																																				
See Note 3 below or checklist for options.																																					
Semester Hours	16-18																																				

Fourth Year																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Fall</td></tr> <tr><td>CENG Design Elective</td><td style="text-align: right;">3</td></tr> <tr><td>CENG Elective</td><td style="text-align: right;">3</td></tr> <tr><td>MATH/PHYS Elective</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">Take 1 course from Note 4 list below or checklist</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">15</td></tr> </table>	Fall		CENG Design Elective	3	CENG Elective	3	MATH/PHYS Elective	3	Take 1 course from Note 4 list below or checklist		CORE - See checklist for options	3	(see also Note 1 below)		CORE - See checklist for options	3	(see also Note 1 below)				Semester Hours	15	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center; background-color: #f2f2f2;">Spring</td></tr> <tr><td>CENG 4380</td><td style="text-align: right;">3</td></tr> <tr><td>ENGR, EVEG, EENG or MENG Elective</td><td style="text-align: right;">3</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td>CORE - See checklist for options</td><td style="text-align: right;">3</td></tr> <tr><td colspan="2" style="font-size: x-small;">(see also Note 1 below)</td></tr> <tr><td> </td><td> </td></tr> <tr><td>Semester Hours</td><td style="text-align: right;">15</td></tr> </table>	Spring		CENG 4380	3	ENGR, EVEG, EENG or MENG Elective	3	CORE - See checklist for options	3	(see also Note 1 below)		CORE - See checklist for options	3	(see also Note 1 below)		CORE - See checklist for options	3	(see also Note 1 below)				Semester Hours	15
Fall																																													
CENG Design Elective	3																																												
CENG Elective	3																																												
MATH/PHYS Elective	3																																												
Take 1 course from Note 4 list below or checklist																																													
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
Semester Hours	15																																												
Spring																																													
CENG 4380	3																																												
ENGR, EVEG, EENG or MENG Elective	3																																												
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
CORE - See checklist for options	3																																												
(see also Note 1 below)																																													
Semester Hours	15																																												

Degree Total Hours 126

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.

Identified Marketable Skills:

Top 3 Local Employers or Industries/Professional Programs/Possible Career Opportunities

Prerequisites/Important Sequences/Other degree Notes:

- Note 1 - 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.
- Note 2 - (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.
- Note 3 - Natural Science Electives:** Take two natural science electives from PHYS 2426; BIOL 1406, 1407, 1411, 1413, 2420, 2572, 4425, 4510; GEOL 1403, 1404, 2471, 2475, 3311, 3312, 3350.
- Note 4 - MATH/PHYS Elective:** Take one upper-level elective selected from MATH 3311, 3343, 4340, 4341, 4361, 4362; PHYS 3310, 4310, 4330, 4340, 4397.