

A.S. Civil Engineering to B.S. in Civil Engineering

Degree Offered at the Tarleton-Waco Location

2024-2025 MCC-Tarleton State Advising Guide (w/ TCCNS Equivalents)

First two years is the MCC to Tarleton Course Mapping.

First two years course sequence is at the discretion of MCC in coordination with MCC advisors and faculty.



YEAR	TYPICAL FIRST SEMESTER					
F I R S T	MCC Course	Core Category	TCCNS Equivalent	MCC SCH	MCC Prereq or Coreq	Tarleton Course
	ENGR 1201-Intro to Engineering	-	ENGR 1201	2	MATH 1314	ENGR 1211-Engineering Fundamentals 1
	ENGR 1304-Engineering Graphics	-	ENGR 1304	3	MATH 1314	CVEN 2235-Civil Engr Graphics
	MATH 2413-Calculus 1	020+090	MATH 2413	4	MATH 1316 or MATH 2412	MATH 2413-Calculus 1
	GEOL 1403 (preferred) or BIOL 1406	030+090	GEOL 1403 or BIOL 1406	4	None	GEOL 1403 (preferred) or BIOL 1406
	ENGL 1301-Composition I	010	ENGL 1301	3	None	ENGL 1301-Composition I
	Total Hours			16		
	TYPICAL SECOND SEMESTER					
	MCC Course	Core Category	TCCNS Equivalent	MCC SCH	MCC Prereq or Coreq	Tarleton Course
	ENGR 1307-Plane Surveying	-	ENGR 1307	3	ENGR 1304 or MATH 1316	CVEN 2200 - Surveying
MATH 2414-Calculus 2	-	MATH 2414	4	MATH 2413	MATH 2414-Calculus 2	
PHYS 2425-University Physics 1	030+090	PHYS 2425 or 2325/2125	4	MATH 2413	PHYS 2425-University Physics 1	
CHEM 1409-General Chemistry for Engr Majors	-	CHEM 1409	4	MATH 1314	CHEM 1409-Chemistry for Engineers	
Texas Core Curriculum Elective (other than Math or Science)	010	See Options	3	See Options	Texas Core Curriculum Elective	
Total Hours			18			
YEAR	TYPICAL FIRST SEMESTER					
S P R I N G	MCC Course	Core Category	TCCNS Equivalent	MCC SCH	MCC Prereq or Coreq	Tarleton Course
	ENGR 2301-Engineering Mechanics: Statics	-	ENGR 2301	3	PHYS 2425	ENGR 2321-Engineering Mechanics: Statics
	ENGR 2308-Engineering Economics	080	ENGR 2308	3	MATH 2413	Social/Behavioral Core
	MATH 2415-Calculus 3	-	MATH 2415	4	MATH 2414	MATH 3433-Calculus 3
	PHYS 2426-University Physics 2	-	PHYS 2426 or 2326/2126	4	MATH 2414, PHYS 2425	PHYS 2426-University Physics 2
	Tarleton pre-req course	-	-	3	ENGR 1201	CVEN 2312-Intro to Civil Engr
	Total Hours			17		
	TYPICAL SECOND SEMESTER					
	MCC Course	Core Category	TCCNS Equivalent	MCC SCH	MCC Prereq or Coreq	Tarleton Course
	ENGR 2302-Engineering Mechanics: Dynamics	-	ENGR 2302	3	ENGR 2301	ENGR 2324-Engineering Mechanics: Dynamics
ENGR 2304-Programming for Engineers	-	ENGR 2304	3	MATH 2413	ENVE 2251-Intro to GIS	
ENGR 2332-Mechanics of Materials	-	ENGR 2322	3	ENGR 2301	CVEN 3323-Strength of Materials	
MATH 2320-Differential Equations	-	MATH 2320	3	MATH 2414	MATH 3306-Differential Equations	
Tarleton pre-req course	-	-	3	ENGR 1201, MATH 2413	ENGR 3311-Math Methods	
Total Hours			15			
	Total MCC Hours:			66		

WI: Writing Intensive Courses

Semester Offered: F = Fall, SP = Spring, SU = Summer

Mayfield College of Engineering

B.S. in Civil Engineering

Second two years at Tarleton-Waco in coordination with Tarleton advisors and faculty.



YEAR	FIRST SEMESTER						
T H I R D	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered	
	ENVE 3300 – Fluid Mechanics	-	-	3	Prereq: PHYS 2425 and MATH 2414	F	
	CVEN 4450 - Transportation Engineering (WI)	-	-	4	Prereq: CVEN 2312 or concurrent enrollment	F	
	ENVE 2311 - Soil Mechanics	-	-	3	Prereq: MATH 2413; PHYS 2425 or concurrent enrollment	F	
	CVEN 3346 - Civil Engineering Lab II	-	-	3	Prereq: CVEN 2312	F	
	HIST 1301 - United States History I	060	HIST 1301	3	None	F, SP, SU	
	GOVT 2305 - Federal Government	070	GOVT 2305	3	None	F, SP, SU	
	Total Hours			19			
	SECOND SEMESTER						
	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered	
F O U R T H	CVEN 3123 - Strength of Materials Lab	-	-	1	Prereq: ENGR 2321; CVEN 3323 or concurrent enrollment (or ENGR 2332)	SP	
	CVEN 4360 – Highway Planning and Design	-	-	3	Prereq: ENGR 3311	SP	
	CVEN 3301 – Structural Analysis	-	-	3	Prereq: ENGR 2321 (ENGR 2301)	SP	
	GOVT 2306 - Texas Government	070	GOVT 2306	3	None	F, SP, SU	
	TSU Core: Creative Arts ¹	050	See Options	3	See Options	Varies	
	Texas Core Curriculum Elective (other than Math or Science)	090		3		Texas Core Curriculum Elective	
	Total Hours			16			
	YEAR	FIRST SEMESTER					
	F O U R T H	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered
CVEN 4305 – Reinforced Concrete Design		-	-	3	Prereq: CVEN 3323	F	
CVEN 4325 - Foundation Engineering		-	-	3	Prereq: CVEN 2312 and ENVE 2311	F	
ENVE 4310 – Water Resources Engineering		-	-	3	Prereq: ENVE 3300	F	
HIST 1302 - United States History II		060	HIST 1302	3	None	F, SP, SU	
ENGR 4258 – Engineering Professionalism		-	-	2	Prereq: Within one year of graduation as per departmental capstone policy	F	
Total Hours			14				
SECOND SEMESTER							
TSU Requirement		Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered	
T H		CVEN 3245 - Civil Engineering Lab I	-	-	2	Pre/coreq: CVEN 2312	SP (Even)
	ENVE 3310 - Engineering Hydrology (WI)	-	-	3	Prereq: ENVE 3300	SP	
	CVEN 4306 – Steel Design	-	-	3	Prereq: CVEN 3323 (or ENGR 2332)	SP	
	ENGR 4380 – Engineering Capstone (WI)	-	-	3	Prereq: Within one year of graduation and subject to instructor approval as per departmental capstone policy	SP	
	CVEN 3320 – Construction Planning & Management	-	-	3	Prereq: CVEN 2312	SP	
	TSU Core: Language, Philosophy, & Culture ¹	040	See Options	3	See Options	Varies	
	Total Hours			17			
	Total MCC-Tarleton Program Hours:				132		

Footnotes:

1 - See Tarleton Website for options for this core category: <https://www.tarleton.edu/generaleducation/core-categories/>

Advanced Math Placement- <https://www.tarleton.edu/engineering/aleks/>