

A.S. Mechanical Engineering to B.S. in Mechanical Engineering

Degree Offered at the Tarleton-Waco Location

2025-2026 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	090	ENGR 1201	2	MATH 1314	ENGR 1211-Engineering Fundamentals 1
	ENGR 1304-Engineering Graphics	-	ENGR 1304	3	MATH 1314	MEEN 2210-Engineering CAD
	MATH 2413-Calculus 1	020+090	MATH 2413	4	MATH 1316 or MATH 2412	MATH 2413-Calculus 1
	HIST 1301 - US History I	060	HIST 1301	3	None	HIST 1301 - US History I
	ENGL 1301-Composition I	010	ENGL 1301	3	None	ENGL 1301-Composition I
	Total Hours			15		
	TYPICAL SECOND SEMESTER					
	MCC Course	Core Category	TCCNS Equivalent	MCC SCH	MCC Prereq or Coreq	Tarleton Course
	ENGR 2304-Programming for Engineers	-	ENGR 2304	3	MATH 2413	MEEN 2212-Programming for Engineers
	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
	HIST 1302 - US History II	060	HIST 1302	3	None	HIST 1302 - US History II
Total Hours			18			
YEAR	TYPICAL FIRST SEMESTER					
S E C O N D	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
	Texas Core Curriculum Elective (other than Math or Science)	090	See Options	3	See Options	Texas Core Curriculum Elective
	ENGR 2334-Chemical Engr Thermodynamics	-	ENGR 2334	3	MATH 2415	ENGR 2322-Engineering Thermodynamics 1
	MATH 2415-Calculus 3	-	MATH 2415	4	MATH 2414	MATH 3433-Calculus 3
	PHYS 2426-University Physics 2	030+090	PHYS 2426 or 2326/2126	4	MATH 2414, PHYS 2425	PHYS 2426-University Physics 2
	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 2305/2105-Electrical Circuits 1 (lecture and lab)	-	ENGR 2305/2105	4	PHYS 2426, MATH 2320	ELEN 2425-Electrical Circuit Theory
	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
	GOVT 2305 - Federal Government	070	GOVT 2305	3	None	GOVT 2305 - Federal Government
Total Hours			16			
	Total MCC Hours:			66		

WI: Writing Intensive Courses

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

Mayfield College of Engineering
B.S. in Mechanical Engineering



YEAR	FIRST SEMESTER					
T H I R D	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered
	GOVT 2306 - Texas Government	070	GOVT 2306	3	None	F, SP, SU
	MEEN 3335 - Mechanical Vibration	-	-	3	Prereq: ENGR 2324, MATH 3306, CVEN 3323	F
	MEEN 3310 - Materials and Manufacturing Processes in Design	-	-	3	Pre/coreq: MEEN 2210, ENGR 2324, CVEN 3323	F
	MEEN 3305 - Fluid Mechanics	-	-	3	Prereq: PHYS 2425, MATH 2414, ENGR 2322	F
	TSU Core: Language, Philosophy, & Culture ¹	040	See Options	3	See Options	Varies
	Total Hours			15		
	SECOND SEMESTER					
	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered
	ENGR 3311 - Engineering Math Methods	-	-	3	Prereq: ENGR 1211 and MATH 2413	SP
CVEN 3123 - Strength and Materials Lab	-	-	1	Prereq: ENGR 2321 and CVEN 3323 concurrently	SP	
MEEN 3345 - Heat Transfer	-	-	3	Prereq: ENGR 2322, MEEN 3305, MATH 3306	SP	
MEEN 3325- Engineering Thermodynamics II	-	-	3	Prereq: ENGR 2322, CHEM 1409, and MATH 3306 concurrently	SP	
MEEN/ELEN 4443 - Linear Control System Design	-	-	4	Prereq: ELEN 2425 and ELEN 3320 or COSC 3344 or MEEN 2212 and MATH 3306	SP	
TSU Core: Creative Arts ¹	050	See Options	3	See options	Varies	
Total Hours			17			
YEAR	FIRST SEMESTER					
F O U R T H	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered
	TSU Core: Communications ¹	010	See Options	3	None	F, SP, SU
	MEEN 4310 - Mechanical Engineering Design I	-	-	3	MEEN 3310	F
	MEEN 4300 - Renewable Energy Systems and Applications (WI)	-	-	3	Prereq: MEEN 3325, MEEN 3305 and MEEN 3345	F
	MEEN 4330 - Thermal Fluid System Design	-	-	3	Prereq: MEEN 3345	F
	MEEN 4205 - Experimental Lab	-	-	2	Prereq: MEEN 3305 and MEEN 3345	F
	ENGR 4259 - Engineering Capstone	-	-	2	Within 1 yr of graduating	F
	Total Hours			16		
	SECOND SEMESTER					
	TSU Requirement	Core Category	TCCNS Equivalent	Credit Hours	Pre-Req or Co-Req	Semester offered
MEEN 4320 - Mechanical Engineering Design II	-	-	3	Prereq: MEEN 4310 and MEEN 3305	SP	
MEEN 4340 - Heating Ventilation, A/C (HVAC) Systems Design	-	-	3	Prereq: MEEN 3325 and MEEN 3345	SP	
MEEN 4325 - Mechatronics	-	-	3	Prereq: ELEN 2425, MEEN 4310; MEEN 4443	SP	
ENGR 4360 - Capstone II (WI)	-	-	3	ENGR 4259	SP	
TSU Core - Social & Behavioral Sciences ¹	080	See Options	3	See Options	Varies	
Total Hours			15			
Total MCC-Tarleton Program Hours:			129			

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/>