West Texas A&M University
Advising Services
Degree Checklist
2022-2023
(For assistance completing this form, contact Advising Services at 806-651-5300)

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

Mechanical Engineering (see ✍ note below)
College of Engineering
ECS Building, Room 119 651-5257

Bachelor of Science Degree
BS.MECH.ENGR (129)
PRE.ENGR (128)

CORE CURRICULUM COURSES: 42 HOURS ♦	HRS	CC
Communication (10)		
ENGL 1301 Intro. To Academic Writing & Argumentation **OR** ENGL 1311 Writing About Ideas	3	
COMM 1315, 1318, or 1321	3	
Mathematics (20)		
See **University Core Requirements** below	(3)	
Life and Physical Sciences (30)		
See **University Core Requirements** below	(6)	
Language, Philosophy and Culture (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 (50)		
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310 **Choose 1**	3	
American History (60)		
HIST 1301 **or** 2381, 1302 **or** 2382, 2301 **Choose 2**	6	
Government/Political Science (70)		
POSC 2305 and 2306	6	
Social and Behavioral Sciences (80)		
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; PSYC 2301; SOCI 1301 **Choose 1**	3	
Component Area Option (90)		
See **University Core Requirements** below	(6)	
MECHANICAL ENGINEERING MAJOR REQUIREMENTS: 95 HOURS • **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 MENG majors.**		
UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦		
CORE 20 **MATH 2413*[3] Calculus I** CC PME	3	
CORE 30 **PHYS 2425*[3] Calculus Physics I AND** **PHYS 2426*[3] Calculus Physics II** CC PME	6	
CORE 90 ENGL 1302* Academic Writing and Research **OR** ENGL 2311* Introduction to Professional and Technical Communication CC	3	
CORE 90 **MATH 2413[1]; PHYS 2425L[1], PHYS 2426L[1]** PME	3	
MECHANICAL ENGINEERING REQUIREMENTS: 80 HOURS		
ENGR 1171* Engineering Ethics	1	
ENGR 1301*,1301L Fundamentals of Engineering PME	3	
ENGR 1304 *(125),* 1304L Engineering Graphics	3	
ENGR 1375*, 1375L Principles of DC and AC Circuits	3	
ENGR 2301* Engineering Statics PME	3	
ENGR 2302* Engineering Dynamics PME	3	
ENGR 2332* Mechanics of Materials I	3	
ENGR 3202* Fundamentals of Engineering Economics	2	
ENGR 3305*, 3305L Modern Engineering Tools	3	

MENG 3320* Engineering Thermodynamics	3	
MENG 4304* Fundamentals of Fluid Mechanics	3	
MENG 4330* Mechanical Vibration & Control Theory	3	
MENG 4350* Advanced Mechanics and Design	3	
MENG 4352* Thermal-Fluid System Design	3	
MENG 4360* Heat Transfer	3	
MENG 4380* Mechanical Engineering Design	3	
CHEM 1411*, 1411L Chemistry I CC	4	
CS 1315* Programming Fundamentals OR **CS 1337, 1337L Programming Principles I** PME	3	
ET 2371* 2371L Materials and Fabrication/Metals and Ceramics	3	
MATH 2414* Calculus II CC PME	4	
MATH 3340* Calculus III CC	3	
MATH 3342* Differential Equations I CC	3	
MENG ELECTIVE	3	
MENG ELECTIVE	3	
Take two courses from: MATH 3311* Linear Algebra CC 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	6	
CS, ENGR, ET, CENG, EVEG OR MENG ELECTIVE***	3	
MINIMUM HOURS REQUIRED TO COMPLETE DEGREE	**122**	

✍ **Mechanical Engineering Program admission requirements (PME):** overall GPA of at least 2.25; completion of the pre-engineering sequence (MATH 2413, 2414, PHYS 2425, 2426, ENGR 1301, 2301, 2302 and CS 1315 or 1337) with a GPA of at least 2.75; and successful completion of the 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.

*** Cannot repeat course content required elsewhere.

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 a maximum of 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
2022-2023 Curriculum Guide

Major: Mechanical Engineering, B.S. **Major Code:** 129

First Year — Boldface type indicates major requirements.

Fall		Spring	
CORE 10(1) - ENGL 1301 or 1311	3	**ENGR 2301** (PME - see Note 2)	3
CORE - See checklist for options (see also **Note 1** below)	3	**ENGR 1304/1304L**	3
CORE 20-MATH 2413 (PME - see Note 2) **4th hour counts towards Core 90.**	4	**CORE 30-PHYS 2426/L** (PME-see Note 2) **4th hour counts towards Core 90.**	4
CORE 30-PHYS 2425/L (PME-see Note 2) **4th hour counts towards Core 90.**	4	**MATH 2414** (PME - see Note 2)	4
ENGR 1301/1301L (PME - see Note 2)	3	CORE-See checklist (Creative Arts suggested) (see also Note 1 below)	3
Semester Hours	17	Semester Hours	17

Second Year

Fall		Spring	
ENGR 2302 (PME - see Note 2)	3	**ENGR 2332**	3
CORE 90 - ENGL 2311 or 1302 **(required for major)**	3	**CS 1315 or 1337** (PME - see Note 2)	3
MATH 3342	3	**ET 2371/2371L**	3
CHEM 1411/1411L	4	CORE - See checklist for options (see also Note 1 below)	3
CORE - See checklist for options (see also Note 1 below)	3	CORE - See checklist for options (see also Note 1 below)	3
Semester Hours	16	Semester Hours	15

Third Year

Fall		Spring	
MENG 4304	3	**ENGR 1171**	1
MENG 3320	3	**MENG 4360**	3
ENGR 3305	3	**MENG 4350**	3
MATH 3340	3	**ENGR 3202**	2
ENGR 1375	3	CORE - See checklist for options (see also Note 1 below)	3
Semester Hours	15	Semester Hours	12

Fourth Year

Fall		Spring	
MENG 4352	3	**MENG 4380**	3
MENG Elective **(see checklist for options)**	3	**MENG 4330**	3
Specified Elective **(see checklist for options)**	3	**MENG Elective** **(see checklist for options)**	3
MATH/PHYS Elective **(see checklist for options)**	3	**MATH/PHYS Elective** **(see checklist for options)**	3
CORE - See checklist for options (see also Note 1 below)	3	CORE - See checklist for options (see also Note 1 below)	3
Semester Hours	15	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: Mechanical 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 - (PME): Mechanical Engineering Program admission requirements: overall GPA of at least 2.25; completion of the pre-mechanical engineering sequence (**MATH** 2413, 2414, **PHYS** 2425, 2426, **ENGR** 1301, 2301, 2302 and **CS** 1315 or 1337) with a GPA of at least 2.75; and successful completion of entrance interview with a department adviser.