

West Texas A&M University
Advising Services
Degree Checklist
2020-2021

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

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

Computer Science—Mechanical Engineering Track
Engineering and Computer Science
ECS Building, Room 119 651-5257

CORE CURRICULUM COURSES: 42 HOURS ♦		HRS
Communication (Code 10)		
ENGL 1301 Introduction to Academic Writing and Argumentation	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, 1302, 2301, 2381 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)	
COMPUTER SCIENCE—MECHANICAL ENGINEERING TRACK MAJOR REQUIREMENTS: 94 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 ECS courses required for Computer Science majors. 		
UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦		
CORE 20 MATH 2413*[3] Calculus I	3	
CORE 30 PHYS 2425*[3] and 2426*[3]	6	
CORE 90 MATH 2413[1], PHYS 2425L[1], and 2426L[1]	3	
CORE 90 ENGL 2311* Introduction to Professional and Technical Communication	3	
MAJOR REQUIREMENTS: 45 HOURS		
CS 1301 Introduction to Computer Science	3	
CS 1337, 1337L Introduction to Object-Oriented Programming	3	
CS 2325*, 2325L Computer Organization and Assembly Language	3	
CS 2336*, 2336L Objects and Data Abstraction	3	
CS 3305* Data Structures and Algorithms	3	
CS 3307* Algorithm Design and Analysis	3	
CS 3310* Programming Languages	3	
CS 3315* Scripting Languages	3	
CS 3352* Operating Systems and Networking	3	

Bachelor of Science Degree
BS.CS.MENG (307)

CS 3372* Net-Centric Computing	3	
CS 4325* Computer Architecture	3	
CS 4340* Database Systems Use, Design and Implementation	3	
CS 4385* Concurrency and Distributed Systems	3	
CS 4390* Software Development & Systems Prog.	3	
CS 4391* Software Development & Prof. Practice	3	
REQUIRED MATH COURSES: 16 HOURS		
MATH 2321* Discrete Structures I	3	
MATH 2322* Discrete Structures II	3	
MATH 2414* Calculus II	4	
MATH 3340* Calculus III	3	
MATH 3342* Differential Equations I	3	
ADDITIONAL REQUIREMENTS FOR MECHANICAL ENGINEERING TRACK: 18 HOURS		
ENGR 1304* Engineering Graphics OR ENGR 2332* Mechanics of Materials I <i>Choice depends upon choice of advanced MENG courses.</i>	3	
ENGR 2301* Engineering Statics	3	
ENGR 2302* Engineering Dynamics	3	
ADVANCED MENG COURSE	3	
ADVANCED MENG COURSE	3	
ADVANCED MENG COURSES	3	
TOTAL HOURS REQUIRED TO COMPLETE DEGREE	121	

♦ 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.

** Recommended.

*** Or an equivalent course (second year, second semester) in a foreign language.
 NOTE: At least 39 hours of advanced work (3000- or 4000-level courses) for which tuition is paid must be earned at WTAMU, and 30 of the final 36 hours counted toward the degree 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. After completing 30 hours, students must request an official degree plan (using the online [Degree Plan Request](#) form) in order to progress. Students who have questions about their degree plan should contact the office of the dean of the College of Engineering, located in the Engineering and Computer Science Building, Room 119 (or call 806-651-5257).

WTAMU ADVISING SERVICES 2020-2021 Curriculum Guide

Major: Computer Science - Mech. Engr. Track, B.S.

Major Code: 307

First Year	
Fall	Spring
CS 1301 3	CS 1337 3
CORE 10(1) - ENGL 1301 3	CORE 90 - ENGL 2311 3
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE - See checklist for options 3 <small>(required for major)</small> <small>(see also Note 1 below)</small>
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE - See checklist for options 3 <small>(see also Note 1 below)</small>
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE 20 - MATH 2413 4
	4th hour counts towards Core 90.
Semester Hours 15	Semester Hours 16

Second Year	
Fall	Spring
CS 2336 3	CS 2325 3
MATH 2321 3	CORE 30(2) - PHYS 2426 3
CORE 30(1) - PHYS 2425 3	4th hour counts towards Core 90.
4th hour counts towards Core 90.	CORE 90 - PHYS 2426L 1
CORE 90 - PHYS 2425L 1	CS 3305 3
ENGR 1304 or 2332 3	MATH 3340 3
Depends on choice of Advanced MENG electives.	MATH 2322 3
MATH 2414 4	
Semester Hours 17	Semester Hours 16

Third Year	
Fall	Spring
CS 3307 3	ENGR 2302 3
ENGR 2301 3	CS 3310 3
CS 3352 3	CS 3315 3
CS 4325 3	CS 3372 3
MATH 3342 3	CORE - See checklist for options 3
	<small>(see also Note 1 below)</small>
Semester Hours 15	Semester Hours 15

Fourth Year	
Fall	Spring
Advanced MENG Elective 3	CORE - See checklist for options 3
CS 4340 3	<small>(see also Note 1 below)</small>
CORE - See checklist for options 3	CS 4391 3
<small>(see also Note 1 below)</small>	CS 4385 3
CS 4390 3	Advanced MENG Elective 3
Advanced MENG Elective 3	
Semester Hours 15	Semester Hours 12

Degree Total Hours 121

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: Computer Science majors are required to take specific course Core 20, Core 30, and Core 90. For all other core 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.