

West Texas A&M University
Advising Services
Degree Checklist
2023-2024

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

NAME: _____ WT ID: _____ DATE: _____

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

CORE CURRICULUM COURSES: 42 HOURS	HRS		
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	3	Choose 1	
Creative Arts (50)			
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310	3	Choose 1	
American History (60)			
HIST 1301, 1302, 2381, 2382, 2301	6	Choose 2	
Government/Political Science (70)			
POSC 2305 and 2306	6		
Social and Behavioral Sciences (80)			
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; GEOG 1302; PSYC 2301; SOCI 1301	3	Choose 1	
Component Area Option (90)			
See University Core Requirements below	(6)		
ELECTRICAL ENGINEERING MAJOR REQUIREMENTS: 92 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 required for all prerequisites listed for ECMSM courses required for EENG majors. 			
UNIVERSITY CORE REQUIREMENTS: 15 HOURS ⬇			
CORE 20 MATH 2413*[3] Calculus I	3	PEEN	
CORE 30 CHEM 1411*, 1411L Chemistry I	3		
CORE 30 PHYS 2425*[3] Calculus Physics I	3	PEEN	
CORE 90 ENGL 1302* Academic Writing and Research OR ENGL 1312* Writing About Ideas II OR ENGL 2311* Introduction to Professional and Technical Communication	3		
CORE 90 MATH 2413[1]; CHEM 1411L[1], PHYS 2425L[1]	3	PEEN	
ENGINEERING CORE CURRICULUM: 15 HOURS			
ENGR 1171* Engineering Ethics	1		
ENGR 1301*, 1301L Fundamentals of Engineering	3	PEEN	
ENGR 1375*, 1375L Principles of DC & AC Circuits	3	PEEN	
ENGR 2350* Intro. of Electronic Devices & Circuits	3	PEEN	
ENGR 3202* Fundamentals of Engineering Economics	2		
CS 1315* Programming Fundamentals	3	PEEN	
MAJOR REQUIREMENTS: 39 HOURS			
EENG 2341* Linear Integrated Circuits and Applications	3		
EENG 2375* Signals and Systems I	3		

Bachelor of Science Degree
BS.ELEC.ENGR (840)

Pre-Engineering: PRE.ENGR (128) (see ⚡ below)

EENG 3305* Digital Design Fundamentals	3		
EENG 3334* Circuits II	3		
EENG 3340* Measurement and Instrumentation	3		
EENG 3355* Control Systems	3		
EENG 3360* Electric Machines	3		
EENG 4370* Power System Analysis	3		
EENG 4371* Electric Power Devices	3		
EENG 4372* Power Electronics and Power Management	3		
EENG 4373* Electric Drives	3		
EENG 4374* Electrical and Electronics Circuits Design	3		
EENG 4380* Senior Design	3		
MATH AND SCIENCE REQUIREMENTS: 20 HOURS			
PHYS 2426*, PHYS 2426L Calculus Physics II	4	PEEN	
MATH 2414* Calculus II	4	PEEN	
MATH 3340* Calculus III	3		
MATH 3342* Differential Equations I	3		
MATH 3311* Linear Algebra	3		
PHYS 3340* Electricity and Magnetism I	3		
ELECTRICAL ENGINEERING ELECTIVES: 6 HOURS			
Take six hours from:			
EENG 3341* Electromagnetic Fields and Waves	6		
EENG 3352* Properties of Electronic Materials			
EENG 3354* VLSI Design			
EENG 3375* Signals and Systems II			
EENG 4363* Electrical Power Plants			
GENERAL ELECTIVE: 3 HOURS			
Take one elective in CS, ENGR, ET, CENG, EENG, EVEG or MENG.	3		
MINIMUM HOURS REQUIRED TO COMPLETE DEGREE			125

⚡ **Electrical Engineering Program admission requirements (PEEN):** overall GPA of at least 2.25; completion of the pre-engineering sequence (MATH 2413, 2414, PHYS 2425, 2426, ENGR 1301, CS 1315, ENGR 1375, ENGR 2350) with a GPA of at least 2.75; and successful completion of the entrance interview with a department adviser.
 * 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: 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 – 2023-2024 Curriculum Guide

Major: Electrical Engineering, B.S.

Major Code: 840

Year 1: Fall		Year 1: Spring	
CORE 10 (Communication) – ENGL 1301 or 1311	3	ENGR 1375/1375L Principles of DC & AC Circuits (PEEN ²)	3
CORE – See checklist for options ¹	3	CS 1315 Programming Fundamentals	3
CORE 30 (Life & Phys. Sci.) – PHYS 2425 Calculus Physics I (PEEN ²)	3	PHYS 2426/2426L Calculus Physics II (PEEN ²)	4
CORE 90 (Component Area Option) – PHYS 2425L (PEEN ²)	1	MATH 2414 Calculus II	4
ENGR 1301/1301L Fundamentals of Engineering (PEEN ²)	3	CORE – See checklist for options ¹	3
CORE 20 (Mathematics) – MATH 2413 Calculus I (PEEN ²)	4	Total:	17
Total:	17		
Year 2: Fall		Year 2: Spring	
MATH 3311 Linear Algebra	3	EENG 2375 Signals and Systems I	3
MATH 3340 Calculus III	3	EENG 3305 Digital Design Fundamentals	3
CORE 30 (Life & Phys. Sci.) – CHEM 1411 Chemistry I	3	EENG 3334 Circuits II	3
CORE 90 (Component Area Option) – CHEM 1411L	1	MATH 3342 Differential Equations I	3
CORE 90 (Component Area Option) – ENGL 1302, 1312, or 2311	3	CORE – See checklist for options ¹	3
ENGR 2350 Introduction of Electronic Devices & Circuits (PEEN ²)	3	Total:	15
Total:	17		
Year 3: Fall		Year 3: Spring	
EENG 3360 Electric Machines	3	EENG 4371 Electric Power Devices	3
EENG 3340 Measurement and Instrumentation	3	ENGR 3202 Fundamentals of Engineering Economics	2
EENG 3355 Control Systems	3	ENGR 1171 Engineering Ethics	1
EENG 2341 Linear Integrated Circuits & Applications	3	EENG 4372 Power Electronics & Power Management	3
CORE – See checklist for options ¹	3	Electrical Engineering Elective – Take 1 st of 2 courses from: EENG 3341, 3352, 3354, 3375, 4363	3
Total:	15	CORE – See checklist for options ¹	3
		Total:	15
Year 4: Fall		Year 4: Spring	
EENG 4370 Power System Analysis	3	EENG 4373 Electric Drives	3
EENG 4374 Electrical and Electronics Circuits Design	3	ENGR 4380 Senior Design	3
PHYS 3340 Electricity and Magnetism I	3	Electrical Engineering Elective – Take 2 nd of 2 courses from: EENG 3341, 3352, 3354, 3375, 4363	3
General Elective – Take one elective from CS, ENGR, ET, CENT, EENG, EVEG, or MENG	3	CORE – See checklist for options ¹	3
CORE – See checklist for options ¹	3	CORE – See checklist for options ¹	3
Total:	15	Total:	15

¹ **CORE:** Electrical 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.

² **(PEEN): Electrical Engineering Program admission requirements:** overall GPA of at least 2.25; completion of the pre-civil engineering sequence (MATH 2413, 2414, PHYS 2425, 2426, ENGR 1301, CS 1315, ENGR 1375, ENGR 2350) with a GPA of at least 2.75; and successful completion of entrance interview with a department adviser.

Identified Marketable Skills	Top Three Local Employers or Industries/Professional Programs/Possible Career Opportunities
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Additional notes:

- 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.
- 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.

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.