

**West Texas A&M University  
Advising Services  
Degree Checklist  
2021-2022**

(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	AC
<b>Communication (10)</b>			
ENGL 1301 Introduction to Academic Writing and Argumentation		3	
COMM 1315, 1318, or 1321		3	
<b>Mathematics (20)</b>			
See University Core Requirements below		(3)	
<b>Life and Physical Sciences (30)</b>			
See University Core Requirements below		(6)	
<b>Language, Philosophy and Culture (40)</b>			
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	
<b>Creative Arts (50)</b>			
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310	Choose 1	3	
<b>American History (60)</b>			
HIST 1301, 1302, 2301, 2381, 2382	Choose 2	6	
<b>Government/Political Science (70)</b>			
POSC 2305 and 2306		6	
<b>Social and Behavioral Sciences (80)</b>			
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; PSYC 2301; SOCI 1301	Choose 1	3	
<b>Component Area Option (90)</b>			
See University Core Requirements below		(6)	
<b>ELECTRICAL ENGINEERING MAJOR REQUIREMENTS: 92 HOURS</b>			
<ul style="list-style-type: none"> <li>• A grade of "C" or better must be earned in all courses required for major.</li> <li>• A grade of "C" or better is required for all prerequisites listed for ECMS courses required for EENG majors.</li> </ul>			
<b>UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦</b>			
<b>CORE 20</b> MATH 2413*[3] Calculus I	AC PEEN	3	
<b>CORE 30</b> CHEM 1411*, 1411L Chemistry I	AC	3	
<b>CORE 30</b> PHYS 2425*[3] Calculus Physics I	AC PEEN	3	
<b>CORE 90</b> ENGL 2311* Introduction to Professional and Technical Communication	AC	3	
<b>CORE 90</b> MATH 2413[1]; CHEM 1411L[1], PHYS 2425L[1]	PEEN	3	
<b>ENGINEERING CORE CURRICULUM: 15 HOURS</b>			
ENGR 1171* Engineering Ethics		1	
ENGR 1301*, 1301L Fundamentals of Engineering	PEEN	3	AC
ENGR 1375*, 1375L Principles of DC & AC Circuits	PEEN	3	AC
ENGR 2350* Intro. of Electronic Devices & Circuits	PEEN	3	
ENGR 3202* Fundamentals of Engineering Economics		2	
CS 1315* Programming Fundamentals	PEEN	3	AC
<b>MAJOR REQUIREMENTS: 39 HOURS</b>			
EENG 2341* Linear Integrated Circuits and Applications		3	
EENG 2375* Signals and Systems I		3	
EENG 3305* Digital Design Fundamentals		3	

**Bachelor of Science Degree  
BS.EENG (840)  
Pre-Engineering: PRE.ENGR (128) (see ⚡ below)**

EENG 3334* Circuits II		3	
EENG 3340* Measurement and Instrumentation		3	
EENG 3355* Control Systems		3	
EENG 3360* Electric Machine		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	
<b>MATH AND SCIENCE REQUIREMENTS: 20 HOURS</b>			
PHYS 2426*, PHYS 2426L Calculus Physics II	AC PEEN	4	
MATH 2414* Calculus II	AC PEEN	4	
MATH 3340* Calculus III	AC	3	
MATH 3342* Differential Equations I	AC	3	
MATH 3311* Linear Algebra		3	
PHYS 3340* Electricity and Magnetism I		3	
<b>ELECTRICAL ENGINEERING ELECTIVES: 6 HOURS</b>			
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			
<b>GENERAL ELECTIVE: 3 HOURS</b>			
Take one elective in CS, ENGR, ET, CENG, EENG, EVEG or MENG.		3	
<b>MINIMUM HOURS REQUIRED TO COMPLETE DEGREE</b>		<b>125</b>	

⚡ **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.

♦ 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 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

## 2021-2022 Curriculum Guide

**Major:** Electrical Engineering, B.S.

**Major Code:** 840

First Year <b>Boldface type indicates major requirements.</b>																													
<b>Fall</b> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid gray; padding: 2px;">CORE 10(1) - ENGL 1301</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;">CORE - See checklist for options <small>(see also Note 1 below)</small></td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>CORE 30-PHYS 2425</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>CORE 90-PHYS 2425L</b>(PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">1</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>ENGR 1301</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>CORE 20-MATH 2413</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">4</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>Semester Hours</b></td><td style="border: 1px solid gray; text-align: right; padding: 2px;">17</td></tr> </table>	CORE 10(1) - ENGL 1301	3	CORE - See checklist for options <small>(see also Note 1 below)</small>	3	<b>CORE 30-PHYS 2425</b> (PEEN - see Note 2)	3	<b>CORE 90-PHYS 2425L</b> (PEEN - see Note 2)	1	<b>ENGR 1301</b> (PEEN - see Note 2)	3	<b>CORE 20-MATH 2413</b> (PEEN - see Note 2)	4	<b>Semester Hours</b>	17	<b>Spring</b> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid gray; padding: 2px;"><b>ENGR 1375</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>CS 1315</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>CORE 30-PHYS 2426</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>CORE 90-PHYS 2426L</b> (PEEN-see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">1</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;">CORE - See checklist for options <small>(see also Note 1 below)</small></td><td style="border: 1px solid gray; text-align: right; padding: 2px;">3</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>MATH 2414</b> (PEEN - see Note 2)</td><td style="border: 1px solid gray; text-align: right; padding: 2px;">4</td></tr> <tr><td style="border: 1px solid gray; padding: 2px;"><b>Semester Hours</b></td><td style="border: 1px solid gray; text-align: right; padding: 2px;">17</td></tr> </table>	<b>ENGR 1375</b> (PEEN - see Note 2)	3	<b>CS 1315</b> (PEEN - see Note 2)	3	<b>CORE 30-PHYS 2426</b> (PEEN - see Note 2)	3	<b>CORE 90-PHYS 2426L</b> (PEEN-see Note 2)	1	CORE - See checklist for options <small>(see also Note 1 below)</small>	3	<b>MATH 2414</b> (PEEN - see Note 2)	4	<b>Semester Hours</b>	17
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### Degree Total Hours 120

**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:** 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 checklist). Apart from the major-specific core requirements, there is no set order in which core courses must be taken.
- Note 2 - (PEEN): Electrical Engineering Program admission requirements:** overall GPA of at least 2.25; completion of the pre-electrical 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.
- Note 3 - Electrical Engineering Electives:** Take six hours from EENG 3341, 3352, 3354, 3375, and 4363.