WTAMU ADVISING SERVICES – 2024-2025 Curriculum Guide

Major: Electrical Engineering, B.S. **Major Code: 840**

Year 1: Fall	
CORE 10 (Communication) – ENGL 1301 or 1311	3
CORE 10 – See checklist for options[1]	3
CORE 30 (Component Area Option) – PHYS 2425/PHYS 2425L (PEEN[2])	4
ENGR 1301/1301L Fundamentals of Engineering (PEEN[2])	3
CORE 20 (Mathematics) – MATH 2413 Calculus I (PEEN[2])	4
Total:	17

Year 1: Spring	
ENGR 1375/1375L Principles of DC & AC Circuits (PEEN[2])	3
CS 1315 Programming Fundamentals or CS 1337 Programming Principles I	3
PHYS 2426 Calculus Physics II (PEEN[2])	4
MATH 2414 Calculus II (PEEN[2])	4
CORE 40 – See checklist for options[1]	3
Total:	17

Year 2: Fall	
MATH 3311 Linear Algebra	3
EENG 2341 Linear Integrated Circuits & Applications	3
CORE 30 (Life & Phys. Sci.) – CHEM 1411/1411L Chemistry I	4
CORE 90 (Component Area Option) – ENGL 1302, 1312, or 2311	3
ENGR 2350 Introduction of Electronic Devices & Circuits (PEEN[2])	3
Total:	17

Year 2: Spring	
EENG 2375 Signals and Systems I	3
MATH 3340 Calculus III	3
EENG 3340 Measurement and Instrumentation	3
EENG 3360 Electric Machines	3
CORE 60 – See checklist for options[1]	3
Total:	15

Year 3: Fall	
MATH 3342 Differential Equations I	3
EENG 3334 Circuits II	3
EENG 3355 Control Systems	3
EENG 3305 Digital Design Fundamentals	3
CORE 50 – See checklist for options[1]	3
Total:	15

Year 3: Spring	
EENG 4371 Electric Power Devices	3
ENGR 3202 Fundamentals of Engineering Economics	2
ENGR 1171 Engineering Ethics	1
General Elective – Take one elective from CS, ENGR, ET, CENT, EENG, EVEG, or MENG	3
Electrical Engineering Elective – Take 1st of 2 courses from: CS 3372 Net-Centric Computing 3 CIDM 3385 Network Security and Data Communications 3 EENG 4000 level course 3	3
CORE 70 – See checklist for options[1]	3
Total:	15

Year 4: Fall	
EENG 4370 Power System Analysis	3
EENG 4374 Electrical and Electronics Circuits Design	3
PHYS 3340 Electricity and Magnetism I or MATH 4361 Statistics for the Sciences or MATH or 4362 Introduction to Numerical Analysis 3	3
EENG 4372 Power Electronics & Power Management	3
CORE 60 – See checklist for options[1]	3
Total:	15

Year 4: Spring	
EENG 4373 Electric Drives	3
ENGR 4380 Senior Design	3
Electrical Engineering Elective – Take 2nd of 2 courses from: CS 3372 Net-Centric Computing 3 CIDM 3385 Network Security and Data Communications 3 EENG 4000 level course 3	3
CORE 70 – See checklist for options[1]	3
CORE 80 – See checklist for options[1]	3
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 leastt 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

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.