

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:** _____

**Engineering Technology Option I—Renewable Energy
 Technology, Manufacturing/Industrial
 College of Engineering
 ECS Building, Room 119 651-5257**

CORE CURRICULUM COURSES: 42 HOURS		HRS
Communication (Core 10)		
ENGL 1301 Intro. to Academic Writing & Argumentation OR ENGL 1311 Writing About Ideas	3	
COMM 1315, 1318, or 1321	3	
Mathematics (Core 20)		
See University Core Requirements below	(3)	
Life and Physical Sciences (Core 30)		
See University Core Requirements below	(6)	
Language, Philosophy and Culture (Core 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 (Core 50)		
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310	3	Choose 1
American History (Core 60)		
HIST 1301, 1302, 2381, 2382, 2301	6	Choose 2
Government/Political Science (Core 70)		
POSC 2305 and 2306	6	
Social and Behavioral Sciences (Core 80)		
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; GEOG 1302; PSYC 2301; SOCI 1301	3	Choose 1
Institutionally Designated Option (Core 90)		
See University Core Requirements below	(6)	
ENGINEERING TECHNOLOGY OPTION I--INDUSTRIAL/ MANUFACTURING MAJOR REQUIREMENTS: 91 HOURS		
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A grade of "C" or better must be earned in all courses required for major.		
UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦		
CORE 20		
MATH 1316* Plane Trigonometry OR MATH 2412*[3] Pre-Calculus	3	
CORE 30		
PHYS 1401*[3] General Physics I AND PHYS 1402*[3] General Physics II	6	
OR		
PHYS 2425*[3] Calculus Physics I AND PHYS 2426*[3] Calculus Physics II		
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		
PHYS 1401L[1] and 1402L[1] OR PHYS 1425L[1] and 1426L[1]; MATH 2412[1] (or CHEM 1411L[1], 1412L[1] or MATH 2413[1] if MATH 1316 is taken for Core 20)	3	
RENEWABLE ENERGY TECHNOLOGY MANUFACTURING/INDUSTRIAL REQUIREMENTS: 64 HOURS		
ENGR 1171* Engineering Ethics	1	
ENGR 1301*, 1301L Fundamentals of Engineering	3	
ENGR 1304, 1304L Engineering Graphics	3	
ENGR 1375*, 1375L Principles of DC and AC Circuits	3	
ENGR 2301* Engineering Statics	3	
ENGR 2302* Engineering Dynamics	3	

**Bachelor of Science Degree
 BS.ENGR.TECH (112)**

ET 2371*, 2371L Materials and Fabrications/Metals and Ceramics	3	
ET 2372*, 2372L Materials and Fabrications/Plastics and Composites	3	
ET 2375*, 2375L Electronic Devices and Circuits	3	
ET 3301* Fundamentals of Manufacturing Technology	3	
ET 3360* Plant Design and Layout	3	
ET 4314 Industrial Quality Assurance	3	
ET 4370 Industrial Safety and Accident Prevention	3	
ET 4380* Design Implementation	3	
CHEM 1411*, 1411L (101) Chemistry I AND CHEM 1412*, 1412 (102) Chemistry II	8	
MATH 2413* Calculus I	4	
Take four courses from:		
ET/PHYS 3302 Wind Energy & Wind Turbines		12
ET/PHYS 3303 Solar Energy: Residence and Rural Systems		
ET 3315*, 3315L Digital Electronics		
ET 3330*, 3330L Fluid Power/Power Transmission		
ET 4301*, 4301L Machining Fundamentals		
ET 4311* Industrial Design and Ergonomics		
ET 4325*, 4325L Computer-Aided Drafting and Design		
ET 4330*, 4330L Numerical Control and Computer-Aided Manufacturing		
ET 4350 Renewable Energy		
ET 4351 Bioenergy		
ET 4352 Geothermal Energy		
ADVANCED ELECTIVES: 12 HOURS		
Select four upper-level ET courses (or CS, MGT, ENGR, MENG, CENG, EVEG or other courses after consulting with an adviser).		
ADVANCED ET COURSE (or other after advisor consultation)	3	
ADVANCED ET COURSE (or other after advisor consultation)	3	
ADVANCED ET COURSE (or other after advisor consultation)	3	
ADVANCED ET COURSE (or other after advisor consultation)	3	
ELECTIVE: 2 HOURS (if needed to total 120 overall)		
ELECTIVE	2-3	
- Three hours if MATH 1316 is taken for University core (Core 20).		
MINIMUM HOURS REQUIRED TO COMPLETE DEGREE		120

* Indicates prerequisites—see catalog for more information.
 ** Or an equivalent course (second year, second semester) in a foreign language.

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: Engineering Technology – Option I – Renewable Energy Technology, Manufacturing/Industrial, B.S. Major Code: 112

Year 1: Fall		Year 1: Spring	
CORE 10 (Communication) – ENGL 1301 or 1311	3	CORE 90 (Component Area Option) – ENGL 1302, 1312, or 2311	3
CORE 20 (Mathematics) – MATH 1316 or 2412 ¹	3	MATH 2413 Calculus I	4
ENGR 1375/1375L Principles of DC & AC Circuits	3	ENGR 1301/1301L Fundamentals of Engineering	3
ENGR 1304/1304L Engineering Graphics	3	CHEM 1411/1411L Chemistry I	4
CORE – See checklist for options ¹	3	CORE – See checklist for options ¹	3
Total:	15	Total:	17
Year 2: Fall		Year 2: Spring	
ENGR 2301 Engineering Statics	3	ET 2375/2375L Electronic Devices and Circuits	3
ET 2371/2371L Materials & Fabrication/Metals & Ceramics	3	ET 2372/2372L Materials & Fabrication/Plastics & Composites	3
CHEM 1412/1412L Chemistry II	4	CORE 30 (Life & Phys. Sci.) – PHYS 1401 or 2425	3
CORE – See checklist for options ¹	3	CORE 90 (Component Area Option) – PHYS 1401L or 2425L	1
CORE – See checklist for options ¹	3	ENGR 2302 Engineering Dynamics	3
		CORE – See checklist for options ¹	3
Total:	16	Total:	16
Year 3: Fall		Year 3: Spring	
ENGR 1171 Engineering Ethics	1	ET 4314 Industrial Quality Assurance	3
ET 3360 Plant Design and Layout	3	Take 1 st of 4 courses from: ET/PHYS 3302, ET/PHYS 3303, ET 3315, 3330, 4301, 4311, 4325, 4330, 4350, 4351, 4352	3
ET 4370 Industrial Safety & Accident Prevention	3	Take 2 nd of 4 courses from: ET/PHYS 3302, ET/PHYS 3303, ET 3315, 3330, 4301, 4311, 4325, 4330, 4350, 4351, 4352	3
ET 3301 Fundamentals of Manufacturing Technology	3	CORE 30 (Life & Phys. Sci.) – PHYS 1402 or PHYS 2426	3
CORE – See checklist for options ¹	3	CORE 90 (Component Area Option) – PHYS 1402L or PHYS 2426L	1
		CORE – See checklist for options ¹	3
Total:	13	Total:	16
Year 4: Fall		Year 4: Spring	
ET 4380 Design Implementation	3	ET Advanced Elective	3
Take 3 rd of 4 courses from: ET/PHYS 3302, ET/PHYS 3303, ET 3315, 3330, 4301, 4311, 4325, 4330, 4350, 4351, 4352	3	ET Advanced Elective	3
Take 4 th of 4 courses from: ET/PHYS 3302, ET/PHYS 3303, ET 3315, 3330, 4301, 4311, 4325, 4330, 4350, 4351, 4352	3	ET Advanced Elective	3
CORE – See checklist for options ¹	3	ET Advanced Elective	3
Elective	3		
Total:	15	Total:	12

¹ **CORE:** Engineering Technology 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.

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.