

WTAMU ADVISING SERVICES – 2024-2025 Curriculum Guide

Major: Mathematics, B.A.

Major Code: 115

Year 1: Fall		Year 1: Spring	
CORE 10 – ENGL 1301	3	CORE 90 – ENGL 2311 Intro. To Professional & Technical Writing	3
CORE – See checklist for options ¹	3	ENGR 1304/1304L Engineering Graphics (PCE ²)	3
MATH 2413 Calculus I (PCE ²)	4	CHEM 1412/1412L Chemistry II (PCE ²)	4
CHEM 1411/1411L Chemistry I (PCE ²) (4 th hour counts towards Core 90)	4	MATH 2414 Calculus II (PCE ²)	4
ENGR 1301/1301L Fundamentals of Engineering (PCE ²)	3	CORE – See checklist for options ¹	4
Total:	17	Total:	16
Year 2: Fall		Year 2: Spring	
ENGR 2301 Engineering Statics (PCE ²)	3	ENGR 2302 Engineering Dynamics (PCE ²)	3
MATH 3340 Calculus III	3	ENGR 2332 Mechanics of Materials I	3
PHYS 2425/2425L Calculus Physics I (PCE ²)	4	MATH 3342 Differential Equations I	3
CS 1315 Programming Fundamentals or CS 1337/1337L Intro. to Object-Oriented Programming	3	CENG 2331/2331L Intro. to Environmental Engineering	3
CENG 2361/2361L Surveying	3	CORE – See checklist for options ¹	3
Total:	16	ENGR 1171 Engineering Ethics	1
		Total:	16
Year 3: Fall		Year 3: Spring	
CENG 3321/3321L Civil Construction Materials	3	CENG 3411 Water Resources Engineering	3
CENG 3351 Structural Analysis I	3	CENG 3341/3341L Geotechnical Engineering	3
CENG 3304/3304L Fluid Mechanics for Civil & Environmental Engineers	3	CENG 3362 Transportation Engineering	3
ENGR 3202 Fundamentals of Engineering Economics	2	CENG Structural Design Elective	3
Natural Science Elective (1) ³	3-5	Natural Science Elective (2) ³	3
Total:	14-16	Total:	15
Year 4: Fall		Year 4: Spring	
CENG Design Elective	3	CENG 4380* Civil Engineering Senior Design	3
CENG Elective	3	ENGR, EVEC, EENG or MENG Elective	3
MATH/PHYS Elective ⁴	3	CORE – See checklist for options ¹	3
CORE – See checklist for options ¹	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:** Civil 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 **(PCE): Civil Engineering Program admission requirements:** overall GPA of at least 2.25; completion of the pre-civil engineering sequence (MATH 2413, 2414, CHEM 1411, 1412, ENGR 1301, 1304, 2301, and 2302) with a GPA of at least 2.75; and successful completion of entrance interview with a department adviser.

³ **Natural Science Electives:** Take two natural science electives from PHYS 2426, BIOL 1406, 1407, 1411, 1413, 2420, 2572, 4425, 4510, GEOL 1403, 1404, 3471, 3475, 3311, 3312, 3350.

⁴ **MATH/PHYS Elective:** Take one upper-level elective selected from MATH. 3311, 3343, 4340, 4341, 4361, 4362; PHYS 3310, 4310, 4330, 4340, 4397.

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.

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.