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:**_____

Mathematics
College of Engineering
Classroom Center, Room 420 (806)651-2540

Bachelor of Arts Degree
BA.MATH (115)

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 **Choose 1**	3		
Creative Arts (Core 50)			
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310 **Choose 1**	3		
American History (Core 60)			
HIST 1301, 1302, 2381, 2382, 2301 **Choose 2**	6		
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 **Choose 1**	3		
Component Area Option (Core 90)			
See **University Core Requirements** below	(6)		
MATHEMATICS MAJOR REQUIREMENTS: 59-63 HOURS **A grade of "C" or better must be earned in all courses required for major.**			
UNIVERSITY CORE REQUIREMENTS: 15 HOURS ♦			
CORE 20 MATH 1314*,1316*, 1324*, 2412*[3], or 2413*[3]	3		
CORE 30 PHYS 1401*[3] and PHYS 1402*[3] **OR** PHYS 2425*[3] and 2426*[3]	6		
CORE 90 ENGL 1302*, 1312* or 2311*	3		
CORE 90 PHYS 1401L[1] and 1402L[1] **or** 2425L[1] and 2426L[1] **AND** IDS 1071[1], MATH 2412[1], or 2413[1]	3		
MATHEMATICS REQUIREMENTS: 44-48 HOURS			
MATH 1316* Plane Trigonometry **OR** MATH 2412* Pre-Calculus **(if not taken to satisfy Core 20)**	0-4		
MATH 2413* Calculus I	4		
MATH 2414* Calculus II	4		
MATH 3311 Linear Algebra	3		
MATH 3325* Introduction to Proofs	3		
MATH 4341* Advanced Calculus	3		
Take 18 semester hours from: MATH 3321* Probability MATH 3340* Calculus III MATH 3342* Differential Equations I MATH 3343* Differential Equations II **cont. ⇨**	18		
MATH 4310* Modern Algebra with Cryptography MATH 4340* Complex Variables I MATH 4361* Statistics for the Sciences MATH 4362* Introduction to Numerical Analysis			
CS 1315* Programming Fundamentals **OR** CIDM 1315 Programming Fundamentals	3		
CS 1337/1337L Programming Principles I **OR** CIDM 2315 Programming Business Applications	3		
MATH 4370* *(MPS 4370)* Senior Investigations OR MPS 4373* Math/Physical Science/Engineering Honors	3		
BACHELOR OF ARTS REQUIREMENTS: 12 HOURS	**OPTION**		
Six hours of foreign language.	(6-8)		
Six hours chosen from art, English, history, modern languages, music, philosophy and theatre.	6		
ELECTIVES: 16-22 HOURS BY ADVISEMENT ♦			
ADVANCED ELECTIVES Additional hours to provide a minimum of 36 advanced (3000- or 4000-level) hours.	6		
ELECTIVES (ANY LEVEL)	10-16		
MINIMUM HOURS REQUIRED FOR 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.

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Major: Mathematics, B.A. **Major Code: 115**

Year 1: Fall	
CORE 10 – ENGL 1301	3
CORE – See checklist for options[1]	3
MATH 2413 Calculus I **(PCE[2])**	4
CHEM 1411/1411L Chemistry I **(PCE[2])** (4th hour counts towards Core 90)	4
ENGR 1301/1301L Fundamentals of Engineering **(PCE[2])**	3
Total:	17

Year 1: Spring	
CORE 90 – ENGL 2311 Intro. To Professional & Technical Writing	3
ENGR 1304/1304L Engineering Graphics **(PCE[2])**	3
CHEM 1412/1412L Chemistry II **(PCE[2])**	4
MATH 2414 Calculus II **(PCE[2])**	4
CORE – See checklist for options[1]	4
Total:	16

Year 2: Fall	
ENGR 1171 Engineering Ethics	1
ENGR 2301 Engineering Statics **(PCE[2])**	3
MATH 3340 Calculus III	3
PHYS 2425/2425L Calculus Physics I **(PCE[2])**	4
CS 1315 Programming Fundamentals **or** CS 1337/1337L Intro. to Object-Oriented Programming	3
CENG 2361/2361L Surveying	3
Total:	17

Year 2: Spring	
ENGR 2302 Engineering Dynamics **(PCE[2])**	3
ENGR 2332 Mechanics of Materials I	3
MATH 3342 Differential Equations I	3
CENG 2331/2331L Intro. to Environmental Engineering	3
CORE – See checklist for options[1]	3
Total:	15

Year 3: Fall	
CENG 3321/3321L Civil Construction Materials	3
CENG 3351 Structural Analysis I	3
CENG 3304/3304L Fluid Mechanics for Civil & Environmental Engineers	3
ENGR 3202 Fundamentals of Engineering Economics	2
Natural Science Elective (1)[3]	3-5
Total:	14-16

Year 3: Spring	
CENG 3411 Water Resources Engineering	3
CENG 3341/3341L Geotechnical Engineering	3
CENG 3362 Transportation Engineering	3
CENG Structural Design Elective	3
Natural Science Elective (2)[3]	3
Total:	15

Year 4: Fall	
CENG Design Elective	3
CENG Elective	3
MATH/PHYS Elective[4]	3
CORE – See checklist for options[1]	3
CORE – See checklist for options[1]	3
Total:	15

Year 4: Spring	
CENG 4380* Civil Engineering Senior Design	3
ENGR, EVEG, EENG or MENG Elective	3
CORE – See checklist for options[1]	3
CORE – See checklist for options[1]	3
CORE – See checklist for options[1]	3
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 leastt 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.