

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

NAME: _____ WT ID: _____ DATE: _____

Physics

Chemistry and Physics

Chemistry and Physics Bldg. (301 26th St.) (806)651-2940

CORE CURRICULUM COURSES: 42 HOURS ♦		HRS	FPC
Communication (Code 10)			
ENGL 1301 Introduction to Academic Writing and Argumentation		3	
COMM 1315, 1318, or 1321		3	
Mathematics (Code 20)			
See University Core Requirements below		(3)	
Life and Physical Sciences (Code 30)			
See University Core Requirements below		(6)	
Language, Philosophy and Culture (Code 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 (Code 50)			
ARTS 1301, 1303, 1304; DANC 2303; MUSI 1306, 1307 (for music majors), 1310; or THRE 1310 Choose 1		3	
American History (Code 60)			
HIST 1301, 1302, 2301, 2381, 2382 Choose 2		6	
Government/Political Science (Code 70)			
POSC 2305 and 2306		6	
Social and Behavioral Sciences (Code 80)			
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302; PSYC 2301; SOCI 1301 Choose 1		3	
Component Area Option (Code 90)			
See University Core Requirements below		(6)	
PHYSICS MAJOR REQUIREMENTS: 64-68 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]	FPC	3	
CORE 30 PHYS 2425*[3] Calculus Physics I	FPC	3	
CORE 30 PHYS 2426*[3] Calculus Physics II	FPC	3	
CORE 90 ENGL 1302* Research and Rhetoric OR ENGL 2311* Introduction to Professional and Technical Communication	FPC	3	
CORE 90 PHYS 2425L[1], 2426L[1] AND IDS 1071[1], MATH 2412[1], or 2413[1]		3	
PHYSICS REQUIREMENTS: 49-53 HOURS			
PHYS 3310* Modern Physics I		3	
PHYS 3320* Thermodynamics		3	
PHYS 3330* Mechanics I		3	
PHYS 3340* Electricity and Magnetism I		3	
PHYS 3350* Advanced Physics Laboratory		3	
PHYS 4320* Quantum Mechanics I		3	
PHYS 4360* Nuclear Physics		3	
PHYS 4340* Mathematical Methods		3	

Bachelor of Science Degree

BS.PHYSICS.TPC (138)

PHYS 4197* Research in Physics		1	
PHYS 4103* Seminar in Physics		1	
MATH 1316* Plane Trigonometry OR MATH 2412* Pre-Calculus (if not taken to satisfy Core 20)	FPC	0-4	
MATH 2413* Calculus I	FPC	4	
MATH 2414* Calculus II	FPC	4	
MATH 3340* Calculus III	FPC	3	
MATH 3342* Differential Equations I		3	
CS 1315* Programming Fundamentals OR CS 1337 Introduction to Object-Oriented Programming		3	
Take six hours from: PHYS 3323* Medical Imaging Physics PHYS 3380* Astrophysics PHYS 4310* Modern Physics II PHYS 4350* Computational Physics PHYS 4330* Optics PHYS 4390* Solid State Physics		6	
BACHELOR OF SCIENCE REQUIREMENTS Covered by requirements for major.		OPTION	
ELECTIVES At least one hour must be advanced.			
18 HOURS BY ADVISEMENT		18	
GENERAL ELECTIVES ELECTIVES should be in a support field. MATH 3311 and 3321, CHEM 1411, 1412 are recommended.		7-12	FPC
MINIMUM HRS REQUIRED TO COMPLETE DEGREE		120	

♦ NOTE: 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.

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 (REL) 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: Physics, B.S.

Major Code: 138

First Year	
Fall	Spring
CORE 10 - ENGL 1301 3	CORE 90 - ENGL 1302 or 2311 3 <small>(required for major)</small>
CORE 20 - MATH 1314 3	MATH 1316 or 2412 3 <small>-2412 recommended</small>
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE - See checklist for options 3 <small>(see also Note 1 below)</small>
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE - See checklist for options 3 <small>(see also Note 1 below)</small>
CORE 90 - See checklist or Note 2 1	CORE - See checklist for options 3 <small>(see also Note 1 below)</small>
Semester Hours 13	Semester Hours 15

Second Year	
Fall	Spring
MATH 2413 4	MATH 2414 4
PHYS 2425/2425L 4	PHYS 2426/2426L 4
Elective (by advisement) 4	CS 1315 or 1337 3
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE 90 - PHYS 2425L
CORE - See checklist for options 3 <small>(see also Note 1 below)</small>	CORE - See checklist for options 3 <small>(see also Note 1 below)</small>
	Elective (by advisement) 4
Semester Hours 18	Semester Hours 18

Third Year	
Fall	Spring
MATH 3340 3	MATH 3342 3
PHYS 3330 3	PHYS 3310 3
PHYS 3320 3	PHYS 3350 3
Elective (by advisement) 3	Elective (by advisement) 3
Elective (by advisement) 3	Elective (by advisement) 3
Semester Hours 15	Semester Hours 15

Fourth Year	
Fall	Spring
PHYS 3340 3	PHYS 4340 3
PHYS 4320 3	PHYS 4360 3
PHYS 4197 3	PHYS 4103 1
Physics Elective(1) 3 <small>-See checklist or Note 3 for options.</small>	Physics Elective(2) 3 <small>-See checklist or Note 3 for options.</small>
Elective (by advisement) 3	Elective (by advisement) 3
Semester Hours 15	Semester Hours 13

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: Physics 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).

Note 2 - CORE 90: One of the six hours required for Core 90 may be satisfied by IDS 1071 (if taken) or the fourth hour from MATH 2412 or 2413.

Note 3 - Physics Electives: Take six hours from PHYS 3323, 3380, 4310, 4350, 4330, 4390.