



Bachelor of Science (BS)
Physics
Teacher Certification

2024-2026

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FIRST YEAR FALL	3	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details Options: ENGL 1301
	4	MATH 2413	Calculus I	C	020	MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.	
	3	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1301 or HIST 2327
	3	PHYS 1311	Learning to be a Physicist				Physics core requirement.
	3	Choose 1	Social and Behavioral Sciences		080		See General Education Core for course options.
	1	UTCH 1101	Inquiry Approaches to Teaching	C		Must be in a College of Sciences major.	A criminal background check will be required and a tuberculosis test may be required before the first field experience. Special permission from a UTeach co-director is required to enroll in UTCH 1101 and UTCH 1102 concurrently.
			UNIV				1301 Learning Framework 1101 Academic and Career Success 1001 Living and Working by Design As required, based on credit hours earned, TSI status, High school rank, major declaration
17 Semester Total Hours							
SECOND YEAR SPRING	3	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details Options: ENGL 1302 or ENGL 1305
	4	MATH 2414	Calculus II	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.	
	4	PHYS 2425	Physics for Scientists and Engineers I		030/ 090	MATH 2413.	
	3	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1302 or HIST 2328
	1	UTCH 1102	Inquiry-Based Lesson Design	C		UTCH 1101 with a grade of 'C' or better.	Students will begin developing their UTeach Portfolio. May be taken concurrently with UTCH 3301.
	3	CSCI 1380	Introduction to Programming in Python		090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	
18 Semester Total Hours							
SECOND YEAR FALL	4	MATH 2415	Calculus III			MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
	3	Choose 1	Creative Arts		050		See General Education Core for course options.
	4	PHYS 2426	Physics for Scientists and Engineers II		030/ 090	PHYS 2425 and MATH 2414.	
	3	POLS 2305	U.S. Federal Government & Politics		070		See General Education Core for more details
	3	PHYS 2327	Physics for Scientists and Engineers III			PHYS 2425 (or PHYS 2411). Students may take this course concurrently with PHYS 2426.	
	17 Semester Total Hours						
SECOND YEAR SPRING	3	MATH 3341	Differential Equations			MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
	3	Choose 1	Free Elective				
	4	PHYS 3402	Modern Physics			PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).	Physics core requirement. Only offered in the Spring Semester.
	3	POLS 2306	Texas Government & Politics		070		See General Education Core for more details
	3	UTCH 3301	Knowing and Learning in Mathematics and Science	C		UTCH 1101 and UTCH 1102 with a grade of 'C' or better or concurrent enrollment with UTCH 1102.	UTeach requirement
1	Choose 1	Integrative/Experiential Learning Option		090		See General Education Core for course options.	
17 Semester Total Hours							
Student must apply to Teacher Education Program.							

The 2024-2026 list of core courses can be found in the 2024-2026 Undergraduate Catalog: www.utrgv.edu/catalog > See 'Bachelors Degree Program Regulations'

Symbols Key

Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.
Bolded Course #: Program Admission Requirement

General Education Core (GEC) Sections: 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 - Government/Political Science; 080 - Social and Behavioral Sciences; 090 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary; 090 - Technologies; 090 - Language Diversity & Writing.

		H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
THIRD YEAR	FALL	3	PHYS 3303	Thermodynamics			MATH 2415 and PHYS 2426 and PHYS 2327.	Physics core requirement.
		3	BIOL 4392	Research Methods in the Science and Mathematics Classroom (UTEACH)			Grade of 'C' or better in the following: BIOL 1406, BIOL 1407; or CHEM 1111, CHEM 1112, CHEM 1311, CHEM 1312; or MATH 1314 or MATH 1414; or PHYS 1401, PHYS 1402 or PHYS 2425, PHYS 2426 or PHYS 2411, PHYS 2412; and UTCH 1101, UTCH 1102 or consent of instructor.	UTeach requirement
		3	Choose 1	Language, Philosophy & Culture		040		See General Education Core for course options.
		4	PHYS 3411	Math Methods in Physics I			MATH 3341.	Physics core requirement.
		3	PHYS 3305	Classical Mechanics			PHYS 2426 and MATH 2415.	Physics core requirement.
16 Semester Total Hours								
THIRD YEAR	SPRING	3	UTCH 3302	Classroom Interactions	C		(a) An institutional grade point average of at least 2.75, (b) UTCH 1102 with a grade of 'C' or better, (c) UTCH 3301 with a grade of 'C' or better, and (d) admission to the Teacher Education Program.	UTeach requirement
		3	PHYS 4305	Statistical Mechanics			PHYS 3303 and [PHYS 3411 or PHYS 3311].	Physics core requirement.
		1	PHYS 4101	Laboratory Research			Consent of instructor.	Physics core requirement.
		3	PHYS 3304	Optics			MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).	Physics core requirement. Only offered in the Spring Semester.
		3	READ 4305	Disciplinary Literacy in the Classrooms				
13 Semester Total Hours								
		H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FOURTH YEAR	FALL	3	PHYS 4303	Quantum Mechanics I			PHYS 3305 and [PHYS 3411 or PHYS 3311].	Physics core requirement.
		3	PHIL 3317	Perspective in Science and Mathematics			Credit of "C" or better or registration in UTCH 3302.	UTeach requirement
		3	UTCH 3303	Project-Based Instruction	C		UTCH 3302 with a grade of 'C' or better. Must be officially admitted to the Educator Preparation Program.	UTeach requirement
		3	PHYS 4300	Undergraduate Research Project			Senior standing in the Physics Degree Program and consent of a supervising faculty member.	
		3	PHYS 3301	Electromagnetic Theory I			MATH 2415 and either PHYS 2426 or PHYS 2412.	Physics core requirement.
15 Semester Total Hours								
FOURTH YEAR	SPRING	1	UTCH 4101	Apprentice Teaching Seminar	C		UTCH 3303 with a grade of 'C' or better.	UTeach requirement
		6	UTCH 4601	Apprentice Teaching	C		UTCH 3303 with a grade of 'C' or better.	UTeach requirement
7 Semester Total Hours								
120 TOTAL HOURS								
(42) Advanced minimum credit hours								

Revised: Wednesday, October 10th, 2024