



**Bachelor of Science (BS)**  
**Physics**  
*Teacher Certification*

**2025-2026**

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FIRST YEAR FALL	3	<b>Choose 1</b>	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	<b>UTCH 1101</b>	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 1001/1300 Living and Working by Design			As required, based on a number of factors such as credit hours earned, TSI status, high school rank, major declaration, etc.
<b>17 Semester Total Hours</b>							
SECOND YEAR SPRING	3	<b>Choose 1</b>	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	<b>UTCH 1102</b>	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.	
<b>18 Semester Total Hours</b>							
	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
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.	
<b>17 Semester Total Hours</b>							
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	<b>UTCH 3301</b>	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.	
<b>17 Semester Total Hours</b>							
<b>Student must apply to Teacher Education Program.</b>							

The 2024-2026 list of core courses can be found in the 2024-2026 Undergraduate Catalog: [www.utrgv.edu/catalog](http://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.
<b>16 Semester Total Hours</b>								
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				
<b>13 Semester Total Hours</b>								
		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.
<b>15 Semester Total Hours</b>								
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
<b>7 Semester Total Hours</b>								
<b>120 TOTAL HOURS</b>								
<b>(42) Advanced minimum credit hours</b>								

Revised: Tuesday, February 18th, 2025