

Bachelor of Science (BS)
Physics

Teacher Certification

The 2026-2027 list of core courses can be found in the 2026-2027 Undergraduate Catalog: www.utrgv.edu/catalog > See 'Bachelors Degree Program Regulations'

Symbols Key										
Campus: B - Offered in Brownsville; E - Offered in Edinburg; O - Offered Online; T - Travel Required										
Bolded Course Number*: Program Admission Requirement										
Min Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.										
Core: 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;										
Core: 090 - Applied Communication and Literacies; Humanities; Leadership; Science Labs; Interdisciplinary; Technologies; Language Diversity & Writing										
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
1	Fall	3	B/E/O	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	
	Fall	4	B/E/O	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.		
	Fall	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1301 or HIST 2327	
	Fall	3	B/E/O	PHYS 2380	Special Topics in Physics			Consent of the instructor.	In lieu of PHYS 2380, students may take a 3-credit hour STEM course with the following prefix: ASTR, BIOL, CSCI, CHEM, EECE, ENGR, ENGT, ENST, ENVR, GEOG, GEOL, MARS, MATH, MECE, PHYS or PSCI. PHYS 1401, PHYS 1402, PSCI 1421 and PSCI 1422 cannot be used to satisfy this requirement.	
	Fall	3	B/E/O	Choose 1	Social and Behavioral Sciences		080		See General Education Core for course options.	
	Fall	1	B/E	UTCH 1101	Inquiry Approaches to Teaching	C		Must be in a College of Sciences or BS Integrated Health Sciences majors.	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.	
	Fall			B/E/O	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.	
1	Fall	17	Semester Total Hours							
1	Spring	3	B/E/O	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	
	Spring	4	B/E/O	MATH 2414	Calculus II	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.		
	Spring	4	B/E/O	PHYS 2425	Physics for Scientists and Engineers I		030/ 090	MATH 2413.		
	Spring	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1302 or HIST 2328	
	Spring	1	B/E	UTCH 1102	Inquiry-Based Lesson Design	C		UTCH 1101 with a grade of "C" or better or concurrent enrollment with UTCH 3301 and College of Sciences major.	Students will begin developing their UTeach Portfolio. May be taken concurrently with UTCH 3301.	
	Spring	3	B/E	CSCI 1380	Introduction to Programming in Python		090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.		
	1	Spring	18	Semester Total Hours						
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
2	Fall	4	B/E/O	MATH 2415	Calculus III			MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
	Fall	3	B/E/O	Choose 1	Creative Arts		050		See General Education Core for course options.	
	Fall	4	B/E/O	PHYS 2426	Physics for Scientists and Engineers II		030/ 090	PHYS 2425 and MATH 2414.		
	Fall	3	B/E/O	POLS 2305	U.S. Federal Government & Politics		070		See General Education Core for more details	
	Fall	3	O	PHYS 2327	Physics for Scientists and Engineers III			PHYS 2425 (or PHYS 2411). Students may take this course concurrently with PHYS 2426.		
	Fall	17	Semester Total Hours							
	Spring	3	B/E/O	MATH 3341	Differential Equations			MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
Spring	1	B/E/O	Choose 1	Free Elective						
Spring	4	B/E	PHYS 3402	Modern Physics			PHYS 2426 (or the former PHYS 2412) and PHYS 2327 (or the former PHYS 2313).	Physics core requirement. Only offered in the Spring Semester.		
Spring	3	B/E/O	POLS 2306	Texas Government & Politics		070		See General Education Core for more details		
Spring	3	O	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		
Spring	1	B/E/O	Choose 1	Integrative/Experiential Learning Option		090		See General Education Core for course options.		
2	Spring	15	Semester Total Hours							
2	Summer	3	O	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	
	Summer	3	Semester Total Hours							

Student must apply to Teacher Education Program.

Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
3	Fall	3	B/E	PHYS 3303	Thermodynamics			MATH 2415 and PHYS 2426 (or the former PHYS 2412) and PHYS 2327 (or the former PHYS 2313).	Physics core requirement.	
3	Fall	4	B/E	PHYS 3411	Math Methods in Physics I			MATH 3341.	Physics core requirement.	
3	Fall	3	B/E	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	Fall	3	B/E	PHYS 3305	Classical Mechanics			PHYS 2426 and MATH 2415.	Physics core requirement.	
3	Fall	13	Semester Total Hours							
3	Spring	3	B/E/O	Choose 1	Language, Philosophy & Culture		040		See General Education Core for course options.	
3	Spring	3	B/E	PHYS 4305	Statistical Mechanics			PHYS 3303 and [PHYS 3411 or PHYS 3311].	Physics core requirement.	
3	Spring	1	B/E/O	PHYS 4101	Laboratory Research			Consent of instructor.	Physics core requirement.	
3	Spring	3	B/E	PHYS 3304	Optics			MATH 2415 and PHYS 2426 (or the former PHYS 2412) and PHYS 2327 (or the former PHYS 2313).	Physics core requirement. Only offered in the Spring Semester.	
3	Spring	3	B/E/O	READ 4305	Disciplinary Literacy in the Classrooms					
3	Spring	13	Semester Total Hours							
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
4	Fall	3	B/E	PHYS 4303	Quantum Mechanics I			PHYS 3305 and [PHYS 3411 or PHYS 3311].	Physics core requirement.	
4	Fall	3	B/E	PHIL 3317	Perspective in Science and Mathematics			Credit of "C" or better or registration in UTCH 3302.	UTeach requirement	
4	Fall	3	B/E	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	
4	Fall	3	B/E/O	PHYS 4300	Undergraduate Research Project			Senior standing in the Physics Degree Program and consent of a supervising faculty member.		
4	Fall	3	B/E	PHYS 3301	Electromagnetic Theory I			MATH 2415 and either PHYS 2426 or PHYS 2412.	Physics core requirement.	
4	Fall	15	Semester Total Hours							
4	Spring	3	TBD	UTCH 4301	Apprentice Teaching Seminar	C		UTCH 3303 with a grade of 'C' or better and admission to clinical teaching.	UTeach requirement	
4	Spring	6	B/E	UTCH 4601	Apprentice Teaching	C		UTCH 3303 with a grade of 'C' or better.	UTeach requirement	
4	Spring	9	Semester Total Hours							

120 **TOTAL HOURS**
(42) **Advanced minimum credit hours**