



Bachelor of Science (BS)
Physics
Pure and Applied Physics

2025-2026

		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.
			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.
	13 Semester Total Hours							
	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
		3	CSCI 1380	Introduction to Programming in Python		090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	
	17 Semester Total Hours							
		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.	
		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	Choose 1	Advanced Science Elective				See Degree Plan for course options.
		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							
	SPRING	3	MATH 3341	Differential Equations			MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
		3	Choose 1	Advanced Science Elective				See Degree Plan for course options.
		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	Choose 1	Creative Arts		050		See General Education Core for course options.
	16 Semester Total Hours							

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	PHYS 4306 or 4101	Advanced Physics Lab or Laboratory Research			PHYS 3402.	Choose either PHYS 4306 or 4101. PHYS 4101 to be taken three times with consent of an instructor.
		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.
		3	Choose 1	Advanced Science Elective				See Degree Plan for course options.
	16 Semester Total Hours							
	SPRING	4	PHYS 3412	Math Methods in Physics II			PHYS 3411 or PHYS 3311	Physics core requirement.
		3	Choose 1	Social and Behavioral Sciences		080		See General Education Core for course options.
		3	PHYS 4305	Statistical Mechanics			PHYS 3303 and [PHYS 3411 or PHYS 3311].	Physics core requirement.
		3	Choose 1	Language, Philosophy & Culture		040		See General Education Core for course options.
		3	PHYS 33XX-43XX	Advanced Physics Elective				See degree plan for course options.
	16 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	PHYS 33XX-43XX	Advanced Physics Elective				See Degree Plan for course options.
		3	PHYS 33XX-43XX	Advanced Physics Elective				See Degree Plan for course options.
		3	PHYS 3301	Electromagnetic Theory I			MATH 2415 and either PHYS 2426 or PHYS 2412.	Physics core requirement.
	12 Semester Total Hours							
	SPRING	3	PHYS 3302	Electromagnetic Theory II			PHYS 3301.	Physics core requirement.
		1	Choose 1	Integrative/Experiential Learning Option		090		See General Education Core for course options.
		3	PHYS 4304	Quantum Mechanics II			PHYS 4303.	Physics core requirement.
		3	PHYS 4300	Undergraduate Research Project			Senior standing in the Physics Degree Program and consent of a supervising faculty member.	Capstone.
		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.
	13 Semester Total Hours							

120 TOTAL HOURS

(42) Advanced minimum credit hours

Revised: Tuesday, February 18th, 2025