

## Bachelor of Science (BS) Phyics

2024-2026

Minor Required

	Н	Course #	Course Title	Min. GEC Grade	Prerequisite	Additional Notes		
	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		
FA	3	PHYS 1311	Learning to be a Physicist			Physics core requirement.		
EAR		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		
STYE	13 Se	emester Total Hours						
FIR	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	С	MATH 2413 (or MATH 2487) with a grade of 'C' or better.			
SPRING	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							
	17 Se	emester Total Hours						
_	17 Se	emester Total Hours  Course #	Course Title	Min. GEC Grade	Prerequisite	Additional Notes		
			Course Title  Calculus III	Grade	Prerequisite  MATH 2414 (or MATH 2488) with a grade of 'C' or better.	Additional Notes		
Ī	Н	Course #		Min. GEC 030/ 090		Additional Notes		
Ī	H 4	Course # MATH 2415	Calculus III	Grade GEC	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.	Additional Notes  See General Education Core for more details		
FALL	4 4	Course #  MATH 2415  PHYS 2426	Calculus III  Physics for Scientists and Engineers II	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.			
FALL	4 4 3	Course #  MATH 2415  PHYS 2426  POLS 2305	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.	See General Education Core for more details		
AR FALL	H 4 4 3 3 3 3	MATH 2415 PHYS 2426 POLS 2305 Minor Course	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics  Minor Course	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better. PHYS 2425 and MATH 2414.	See General Education Core for more details		
COND YEAR FALL	H 4 4 3 3 3 3	Course #  MATH 2415  PHYS 2426  POLS 2305  Minor Course  PHYS 2327	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics  Minor Course	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better. PHYS 2425 and MATH 2414.	See General Education Core for more details		
SECOND YEAR FALL	4 4 3 3 3 3 17 Se	MATH 2415 PHYS 2426 POLS 2305 Minor Course PHYS 2327 emester Total Hours	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics  Minor Course  Physics for Scientists and Engineers III	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.  PHYS 2425 (or PHYS 2411). Students may take this course concurrently with PHYS 2426.	See General Education Core for more details		
SECOND YEAR FALL	4 4 3 3 3 3 17 See 3	MATH 2415 PHYS 2426 POLS 2305 Minor Course PHYS 2327 emester Total Hours MATH 3341	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics  Minor Course  Physics for Scientists and Engineers III  Differential Equations	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.  PHYS 2425 (or PHYS 2411). Students may take this course concurrently with PHYS 2426.	See General Education Core for more details  See Minor for course options.		
SECOND YEAR FALL	H 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	MATH 2415 PHYS 2426 POLS 2305 Minor Course PHYS 2327 emester Total Hours MATH 3341 Minor Course	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics  Minor Course  Physics for Scientists and Engineers III  Differential Equations  Minor Course	Grade 030/ 090	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.  PHYS 2425 (or PHYS 2411). Students may take this course concurrently with PHYS 2426.  MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).	See General Education Core for more details  See Minor for course options.  See Minor for course options.		
SECOND YEAR SPRING FALL	H 4 4 4 3 3 3 3 3 3 3 3 4 4	MATH 2415 PHYS 2426 POLS 2305 Minor Course PHYS 2327 emester Total Hours MATH 3341 Minor Course PHYS 3402	Calculus III  Physics for Scientists and Engineers II  U.S. Federal Government & Politics  Minor Course  Physics for Scientists and Engineers III  Differential Equations  Minor Course  Modern Physics	030/ 090 070	MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2425 and MATH 2414.  PHYS 2425 (or PHYS 2411). Students may take this course concurrently with PHYS 2426.  MATH 2414 (or MATH 2488) with a grade of 'C' or better.  PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).	See General Education Core for more details  See Minor for course options.  See Minor for course options.  Physics core requirement. Only offered in the Spring Semester.		

Symbols Key

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'

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 Sciences; 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.

н	Course #	Course Title Min. Grade	GEC Prerequisite	Additional Notes					
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.					
J 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	Minor Course	Minor Course		See Minor for course options.					
16	16 Semester Total Hours								
<b>養</b> 4	PHYS 3412	Math Methods in Physics II	PHYS 3411 or PHYS 3311	Physics core requirement.					
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.					
g 3	Choose 1	Social and Behavioral Sciences	080	See General Education Core for course options.					
3	Minor Course	Minor Course		See Minor for course options.					
16	Semester Total Hours								
Н	Course #	Course Title Min. Grade	GEC Prerequisite	Additional Notes					
Н 3	Course # PHYS 4303	Course Title Min. Grade  Quantum Mechanics I	PHYS 3305 and [PHYS 3411 or PHYS 3311].	Additional Notes  Physics core requirement.					
		Course line Grade							
3	PHYS 4303	Quantum Mechanics I	PHYS 3305 and [PHYS 3411 or PHYS 3311].	Physics core requirement.					
3	PHYS 4303 PHYS 3304	Quantum Mechanics I  Optics	PHYS 3305 and [PHYS 3411 or PHYS 3311].	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.					
3 3 3 3 3	PHYS 4303 PHYS 3304 Minor Course	Quantum Mechanics I Optics Minor Course	PHYS 3305 and [PHYS 3411 or PHYS 3311].  MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.  See Minor for course options.					
3 3 3 3 3	PHYS 4303 PHYS 3304 Minor Course PHYS 3301	Quantum Mechanics I Optics Minor Course	PHYS 3305 and [PHYS 3411 or PHYS 3311].  MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.  See Minor for course options.					
3 3 3 3 12	PHYS 4303 PHYS 3304 Minor Course PHYS 3301  Semester Total Hours	Quantum Mechanics I  Optics  Minor Course  Electromagnetic Theory I	PHYS 3305 and [PHYS 3411 or PHYS 3311].  MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).  MATH 2415 and either PHYS 2426 or PHYS 2412.	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.  See Minor for course options.  Physics core requirement.					
3 3 3 3 12 12 4 12 4 12 4 12 4 12 4 12 4	PHYS 4303 PHYS 3304 Minor Course PHYS 3301  Semester Total Hours PHYS 3302	Quantum Mechanics I  Optics  Minor Course  Electromagnetic Theory I	PHYS 3305 and [PHYS 3411 or PHYS 3311].  MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).  MATH 2415 and either PHYS 2426 or PHYS 2412.  PHYS 3301.	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.  See Minor for course options.  Physics core requirement.  Physics core requirement.					
3 3 12 14 EAR 14 15 15 15 15 15 15 15 15 15 15 15 15 15	PHYS 4303 PHYS 3304 Minor Course PHYS 3301  Semester Total Hours PHYS 3302 Choose 1	Quantum Mechanics I  Optics  Minor Course  Electromagnetic Theory I  Electromagnetic Theory II  Integrative/Experiential Learning Option	PHYS 3305 and [PHYS 3411 or PHYS 3311].  MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).  MATH 2415 and either PHYS 2426 or PHYS 2412.  PHYS 3301.	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.  See Minor for course options.  Physics core requirement.  Physics core requirement.  See General Education Core for course options.					
3 3 3 3 12 EALL 3 3 1 1 3 3 1 1 3 3 1 1 3 3 1 1 1 3 3 1	PHYS 4303 PHYS 3304 Minor Course PHYS 3301  Semester Total Hours PHYS 3302 Choose 1 PHYS 4304	Quantum Mechanics I  Optics  Minor Course  Electromagnetic Theory I  Electromagnetic Theory II  Integrative/Experiential Learning Option  Quantum Mechanics II	PHYS 3305 and [PHYS 3411 or PHYS 3311].  MATH 2415 and PHYS 2426 (or PHYS 2412) and PHYS 2327 (or PHYS 2313).  MATH 2415 and either PHYS 2426 or PHYS 2412.  PHYS 3301.  PHYS 4303.  Senior standing in the Physics Degree Program and consent of a supervising faculty	Physics core requirement.  Physics core requirement. Only offered in the Spring Semester.  See Minor for course options.  Physics core requirement.  Physics core requirement.  See General Education Core for course options.  Physics core requirement.					

(42) Advanced minimum credit hours

Revised: Wednesday, October 10th, 2024

120 TOTAL HOURS