

Bachelor of Science (BS)

Physics

Minor Required

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 | |
| 1 | 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. | | |
| 1 | Fall | 3 | B/E/O | Choose 1 | American History | | 060 | | See General Education Core for more details. Options: HIST 1301 or HIST 2327 | |
| 1 | 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. | |
| 1 | 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 | 13 | 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 | |
| 1 | Spring | 4 | B/E/O | MATH 2414 | Calculus II | C | | MATH 2413 (or MATH 2487) with a grade of 'C' or better. | | |
| 1 | Spring | 4 | B/E/O | PHYS 2425 | Physics for Scientists and Engineers I | | 030/ 090 | MATH 2413. | | |
| 1 | Spring | 3 | B/E/O | Choose 1 | American History | | 060 | | See General Education Core for more details. Options: HIST 1302 or HIST 2328 | |
| 1 | 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 | 17 | 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. | | |
| 2 | Fall | 4 | B/E/O | PHYS 2426 | Physics for Scientists and Engineers II | | 030/ 090 | PHYS 2425 and MATH 2414. | | |
| 2 | Fall | 3 | B/E/O | POLS 2305 | U.S. Federal Government & Politics | | 070 | | See General Education Core for more details | |
| 2 | Fall | 3 | B/E/O | Minor Course | Minor Course | | | | See Minor for course options. | |
| 2 | 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. | | |
| 2 | Fall | 17 | Semester Total Hours | | | | | | | |
| 2 | Spring | 3 | B/E/O | MATH 3341 | Differential Equations | | | MATH 2414 (or MATH 2488) with a grade of 'C' or better. | | |
| 2 | Spring | 3 | B/E/O | Minor Course | Minor Course | | | | See Minor for course options. | |
| 2 | 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. | |
| 2 | Spring | 3 | B/E/O | POLS 2306 | Texas Government & Politics | | 070 | | See General Education Core for more details | |
| 2 | Spring | 3 | B/E/O | Choose 1 | Creative Arts | | 050 | | See General Education Core for course options. | |
| 2 | Spring | 16 | Semester Total Hours | | | | | | | |

| 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 | 3 | B/E/O | 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. | |
| 3 | Fall | 4 | B/E | PHYS 3411 | Math Methods in Physics I | | | MATH 3341. | Physics core requirement. | |
| 3 | Fall | 3 | B/E | PHYS 3305 | Classical Mechanics | | | PHYS 2426 and MATH 2415. | Physics core requirement. | |
| 3 | Fall | 3 | B/E/O | Minor Course | Minor Course | | | | See Minor for course options. | |
| 3 | Fall | 16 | Semester Total Hours | | | | | | | |
| 3 | Spring | 4 | B/E | PHYS 3412 | Math Methods in Physics II | | | PHYS 3411 or PHYS 3311 | Physics core requirement. | |
| 3 | Spring | 3 | B/E | PHYS 4305 | Statistical Mechanics | | | PHYS 3303 and [PHYS 3411 or PHYS 3311]. | Physics core requirement. | |
| 3 | Spring | 3 | B/E/O | Choose 1 | Language, Philosophy & Culture | | 040 | | See General Education Core for course options. | |
| 3 | Spring | 3 | B/E/O | Choose 1 | Social and Behavioral Sciences | | 080 | | See General Education Core for course options. | |
| 3 | Spring | 3 | B/E/O | Minor Course | Minor Course | | | | See Minor for course options. | |
| 3 | Spring | 16 | 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 | 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. | |
| 4 | Fall | 3 | B/E/O | Minor Course | Minor Course | | | | See Minor for course options. | |
| 4 | Fall | 3 | B/E | PHYS 3301 | Electromagnetic Theory I | | | MATH 2415 and either PHYS 2426 or PHYS 2412. | Physics core requirement. | |
| 4 | Fall | 12 | Semester Total Hours | | | | | | | |
| 4 | Spring | 3 | B/E | PHYS 3302 | Electromagnetic Theory II | | | PHYS 3301. | Physics core requirement. | |
| 4 | Spring | 1 | B/E/O | Choose 1 | Integrative/Experiential Learning Option | | 090 | | See General Education Core for course options. | |
| 4 | Spring | 3 | B/E | PHYS 4304 | Quantum Mechanics II | | | PHYS 4303. | Physics core requirement. | |
| 4 | Spring | 3 | B/E/O | PHYS 4300 | Undergraduate Research Project | | | Senior standing in the Physics Degree Program and consent of a supervising faculty member. | Capstone. | |
| 4 | Spring | 3 | B/E/O | Minor Course | Minor Course | | | | See Minor for course options. | |
| 4 | Spring | 13 | Semester Total Hours | | | | | | | |
| | | 120 | TOTAL HOURS | | | | | | | |
| | | (42) | Advanced minimum credit hours | | | | | | | |