

|             | I                              | H | Course #  | Course Title                            | Min.<br>Grade | GEC     | Prerequisite  | Additional Notes  |
|-------------|--------------------------------|---|-----------|---|---------------|---------|---|---|
|             |                                |   |           |   |               |         |   |   |
| FIRST YEAR  | FALL                           | 3 | Choose 1  | Communication (Core)                    | C             | 010     | For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302/1388, a grade of "C" or better in ENGL 1301/1387. | See General Education Core for more details<br>Options: ENGL 1301 or ENGL 1387 (H)                |
|             |                                | 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 (Core)                 |               | 060     |   | See General Education Core for more details.<br>Options: HIST 1301 or HIST 1387 or HIST/MASC 2327 |
|             |                                | 3 | Choose 1  | Creative Arts (Core)                    |               | 050     |   | See General Education Core for course options.  |
|             |                                |   | UNIV 1301 | Learning Framework                      |               |         |   | Only if required, based on ACT/SAT and high school rank.  |
|             | <b>13 Semester Total Hours</b> |   |           |   |               |         |   |   |
|             | SPRING                         | 3 | Choose 1  | Communication (Core)                    |               | 010     | For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302/1388, a grade of "C" or better in ENGL 1301/1387. | See General Education Core for more details<br>Options: ENGL 1302 or ENGL 1388 (H) 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  | C             | 030/090 | MATH 2413 (or MATH 2487) and concurrent enrollment in MATH 2414 (or MATH 2488).   |   |
|             |                                | 3 | Choose 1  | American History (Core)                 |               | 060     |   | See General Education Core for more details.<br>Options: HIST 1302 or HIST 1388 or HIST/MASC 2328 |
|             |                                | 3 | CSCI 1380 | Computer Science I                      |               | 090     | Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.   |   |
|             | <b>17 Semester Total Hours</b> |   |           |   |               |         |   |   |
| SECOND YEAR | FALL                           | 4 | MATH 2415 | Calculus III                            | C             |         | 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.  |   |
|             |                                | 3 | Choose 1  | Government/Political Science (Core)     |               | 070     |   | See General Education Core for more details<br>Options: POLS 2305 or POLS 2385 (H)                |
|             |                                | 3 | XXXX X3XX | Science Elective                        |               |         |   | See Degree Plan for course options.   |
|             |                                | 3 | XXXX X3XX | Free Elective                           |               |         |   | Language Proficiency Requirement (as needed)  |
|             | <b>17 Semester Total Hours</b> |   |           |   |               |         |   |   |
|             | SPRING                         | 3 | MATH 3341 | Differential Equations                  |               |         | MATH 2414 (or MATH 2488) and MATH 2318 with a grade of 'C' or better.   |   |
|             |                                | 3 | XXXX X3XX | Science Elective                        |               |         |   | See Degree Plan for course options.   |
|             |                                | 4 | PHYS 3402 | Modern Physics                          |               |         | PHYS 2426   | Physics core requirement.   |
|             |                                | 3 | Choose 1  | Government/Political Science (Core)     |               | 070     |   | See General Education Core for more details<br>Options: POLS 2306 or POLS 2386 (H)                |
|             |                                | 3 | XXXX X3XX | Free Elective                           |               |         |   | Language Proficiency Requirement (as needed)  |
|             | <b>16 Semester Total Hours</b> |   |           |   |               |         |   |   |

**CORE:** The 2018-2019 list of core courses can be found at: [www.utrgv.edu](http://www.utrgv.edu) > Academics > Undergraduate > General Education Core  
[www.utrgv.edu/core](http://www.utrgv.edu/core)

**Symbols Key**

**Critical (!):** sequence sensitive course.

**Minimum Grade:** A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.

**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.

**Language Proficiency Requirement:** Student is required to demonstrate language proficiency in a language other than English at the undergraduate level equivalent to a minimum of six credits.

|             |                         | I | H | Course #                  | Course Title  | Min.<br>Grade | GEC | Prerequisite  | Additional Notes   |
|-------------|-------------------------|---|---|---------------------------|---|---------------|-----|---|--|
| THIRD YEAR  | FALL                    |   | 3 | PHYS 3303                 | Thermodynamics  |               |     | MATH 2415 and either PHYS 2412 or PHYS 2426.  | Physics core requirement.  |
|             |                         |   | 4 | PHYS 3411                 | Math Methods in Physics I                             |               |     | MATH 3341   | Physics core requirement.  |
|             |                         |   | 3 | XXXX X3XX                 | Science Elective                                      |               |     |   | See Degree Plan for course options.                              |
|             |                         |   | 3 | Choose 1                  | Social and Behavioral Sciences (Core)                 |               | 080 |   | See General Education Core for course options.                   |
|             |                         |   | 3 | PHYS 3305                 | Classical Mechanics                                   |               |     | PHYS 2426 and MATH 2415.  | Physics core requirement.  |
|             | 16 Semester Total Hours |   |   |                           |   |               |     |   |  |
|             | SPRING                  |   | 4 | PHYS 3412                 | Math Methods in Physics II                            |               |     | PHYS 3411   | Physics core requirement.  |
|             |                         |   | 3 | PHYS 4305                 | Statistical Mechanics                                 |               |     | PHYS 3303 and PHYS 3311.  |  |
|             |                         |   | 2 | PHYS 4201 or<br>PHYS 4101 | Advanced Physics Lab or Senior Laboratory<br>Research |               |     |   | Choose either PHYS 4101 or 4201. PHYS 4101 to be taken<br>twice. |
|             |                         |   | 3 | Choose 1                  | Language, Philosophy & Culture (Core)                 |               | 040 |   | See General Education Core for course options.                   |
|             |                         |   | 3 | PHYS X3XX                 | Advanced Physics Elective                             |               |     |   | See degree plan for course options.                              |
|             | 15 Semester Total Hours |   |   |                           |   |               |     |   |  |
| FOURTH YEAR | FALL                    |   |   |                           |   |               |     |   |  |
|             |                         |   | 3 | PHYS 4303                 | Quantum Mechanics I                                   |               |     | PHYS 3305 and PHYS 3311.  | Physics core requirement.  |
|             |                         |   | 1 | PHYS 4101                 | Laboratory Research                                   |               |     | Consent of instructor.  | Not needed if PHYS 4201 taken.                                   |
|             |                         |   | 3 | PHYS 3304                 | Optics  |               |     | MATH 2415 and PHYS 2426   | Physics core requirement.  |
|             |                         |   | 3 | PHYS 3301                 | Electromagnetic Theory I                              |               |     | MATH 2415 and either PHYS 2426 or PHYS 2412.  | Physics core requirement.  |
|             |                         |   | 1 | PHYS 4108                 | Seminar in Physics                                    |               |     | One year of physics and consent of instructor.  | Physics core requirement.  |
|             |                         |   | 3 | PHYS X3XX                 | Advanced Physics Elective                             |               |     |   | See degree plan for course options.                              |
|             | 14 Semester Total Hours |   |   |                           |   |               |     |   |  |
|             | SPRING                  |   | 3 | PHYS 3302                 | Electromagnetic Theory II                             |               |     | PHYS 3301.  |  |
|             |                         |   | 1 | Choose 1                  | Integrative/Experiential Learning Option (Core)       |               | 090 |   | See General Education Core for course options.                   |
|             |                         |   | 3 | PHYS 4304                 | Quantum Mechanics II                                  |               |     | PHYS 4303.  |  |
|             |                         |   | 3 | PHYS X3XX                 | Advanced Physics Elective                             |               |     |   | See Degree Plan for course options.                              |
|             |                         |   | 3 | PHYS 4300                 | Undergraduate Research                                |               |     | Senior standing in the Physics Degree Program and consent of a<br>supervising faculty member. | Capstone.  |
|             | 13 Semester Total Hours |   |   |                           |   |               |     |   |  |

#### Graduation Requirements

In addition to the graduation requirements listed in the UTRGV 2018-2019 Undergraduate Catalog, demonstration of proficiency in a language other than English is required at the undergraduate level equivalent to a minimum of six credit hours. Proficiency can be demonstrated by a college credit exam, a placement test approved through the UTRGV department of Writing and Language Studies, and/or to six credit hours of college-level language coursework.

**121 TOTAL HOURS**  
**(54) TOTAL ADVANCED HOURS**

Approved: Thursday, March 29, 2018  
Revised: Friday, March 30, 2018