# BS in Physics - Computational Science Track 2025 - 2026 Catalog

## Freshman Year

**This plan is unofficial and should be used for reference only.**

| First Semester* | (Th-Pr) | Cr | | Second Semester | (Th-Pr) | Cr |
|---|---|---|---|---|---|---|
| | | | | | | |
| PHYS 101 Topics in Cont. Physics[1] | (1-0) | 1 | | ASTR 102 Observational Astronomy[1] | (0-3) | 1 |
| MATH 171 Calculus I[1] | (4-0) | 4 | | PHYS 206 Newtonian Mech. for Engr. and Sci.[1] | (3-0) | 3 |
| PHYS 150 Intro to Programming for Physics[1] | (3-0) | 3 | | PHYS 226 Physics of Motion Lab for Sci.[1] | (0-2) | 1 |
| ENGL 103/104 Comp. and Rhetoric | (3-0) | 3 | | MATH 172 Calculus II[1] | (4-0) | 4 |
| HIST 105 History of the U.S.[2] | (3-0) | 3 | | Language, Philosophy and Culture elective[2] | (3-0) | 3 |
| | | | | HIST 106 History of the U.S.[2] | (3-0) | 3 |
| | | 14 | | | | 15 |

## Sophomore Year

| First Semester | (Th-Pr) | Cr | | Second Semester | (Th-Pr) | Cr |
|---|---|---|---|---|---|---|
| | | | | | | |
| PHYS 207 Elect. & Mag. for Engr. and Sci.[1] | (3-0) | 3 | | PHYS 225 Electronic Circuits | (1-4) | 3 |
| PHYS 227 Elect. & Mag. Lab for Sci.[1] | (0-3) | 1 | | PHYS 309 Modern Physics[1] | (3-0) | 3 |
| PHYS 221 Optics and Thermal Physics[1] | (3-0) | 3 | | PHYS 331 Theoretical Methods I[1] | (3-0) | 3 |
| MATH 221 Several Variable Calculus[1] | (4-0) | 4 | | CSCE 120 Intro Program Design Concepts | (3-0) | 3 |
| MATH 308 Differential Equations[1] | (3-0) | 3 | | Communication elective[3] | | 3 |
| | | | | | | |
| | | 14 | | | | 15 |

## Junior Year

| First Semester | (Th-Pr) | Cr | | Second Semester | (Th-Pr) | Cr |
|---|---|---|---|---|---|---|
| | | | | | | |
| PHYS 302 Adv. Mechanics I | (3-0) | 3 | | PHYS 303/305 Adv. Mech. II/Adv. E&M II | (3-0) | 3 |
| PHYS 304 Adv. Elect. and Magn. I | (3-0) | 3 | | PHYS 327 Experimental Physics[3] | (1-2) | 2 |
| PHYS 332 Theoretical Methods II | (3-0) | 3 | | PHYS 328 Experimental Physics II[3] | (1-1) | 1 |
| CSCE 222 Discrete Structures for Comp | (3-0) | 3 | | PHYS 412 Quantum Mechanics I | (3-0) | 3 |
| POLS 206 American Nat'l. Govt. | (3-0) | 3 | | CSCE 221 Data Struct. and Algorithms | (3-2) | 4 |
| | | | | POLS 207 State & Local Govt. | | 3 |
| | | 15 | | | | 16 |

## Senior Year

| First Semester | (Th-Pr) | Cr | | Second Semester | (Th-Pr) | Cr |
|---|---|---|---|---|---|---|
| | | | | | | |
| PHYS 408 Thermodynamics/Stat. Mech. | (3-0) | 3 | | PHYS 401 Computational Physics | (3-0) | 3 |
| CSCE 312 Computer Organization | (3-2) | 4 | | Science or Technical elective[6] | (3-0) | 3 |
| Social and Behavioral Sciences elective[2] | (3-0) | 3 | | Creative Arts elective[2] | (3-0) | 3 |
| Electives[5] | | 5 | | Electives[5] | | 7 |
| | | | | | | |
| | | 15 | | | | 16 |

NOTES:
1. A physics major must complete the foundation courses (ASTR 102, PHYS 101, 150, 206/226, 207/227, 221, 309, 331, MATH 171, 172, 221, 308) with a grade of 'C' or better and have a 2.0 cumulative GPR before taking non-foundation upper-level physics courses.
2. Any course in this category from the approved University Core Curriculum list of courses.
3. PHYS 327 is an approved Univ. Writing course. PHYS 328 is an approved Univ. Communication course.
4. Any upper-division course in geo/life/physical sciences, mathematics/statistics, or engineering (except 485/491).
5. Electives should be chosen in consultation with the student's advisor. Three hours must be in the area of International and Cultural Diversity, and three hours must be in the area of Cultural Discourse. These may be in addition to other University Core Curriculum courses, or, if a course in this category satisfies another area of the Core, it can be used to meet both requirements.

* ARSC 101 or an equivalent is required for all freshmen students in their first semester. This is a 0-credit hour course graded S/U.

***Beginning in the Sophomore Year – Second Semester: PHYS courses are only offered once a year in the semester shown on this plan. ***