

BACHELOR OF SCIENCE, MAJOR IN PHYSICS

Bachelor of Science, Major in Physics

Core Curriculum (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum)

| | |
|--|------------|
| Component Area I (Communication) | 6 |
| Component Area II (Mathematics) | 3 |
| Component Area III (Life and Physical Science) | 8 |
| Component Area IV (Language, Philosophy, and Culture) | 3 |
| Component Area V (Creative Arts) | 3 |
| Component Area VI (U.S. History) | 6 |
| Component Area VII (Political Science/Government) | 6 |
| Component Area VIII (Social and Behavioral Sciences) | 3 |
| Component Area IX (Component Area Option) | 4 |
| Degree Specific Requirements | |
| CHEM 1411 General Chemistry I ¹ | 4 |
| CHEM 1412 General Chemistry II ¹ | 4 |
| COSC 1436 Programming Fundamentals I | 4 |
| BIOL 1411 General Botany | 4 |
| or GEOL 1403 Physical Geology | |
| or PHYS 1404 Solar System Astronomy | |
| BIOL 1413 General Zoology | 4 |
| or GEOL 1404 Historical Geology | |
| or PHYS 1403 Stars & Galaxies | |
| Advanced General elective | 8 |
| MATH (Advanced) or Science (Advanced) | 6 |
| Major Core | |
| PHYS 1401 Physics Boot Camp | 4 |
| PHYS 1411 Introduction To Physics I | 4 |
| PHYS 1422 Introduction To Physics II | 4 |
| PHYS 3391 Modern Physics I | 4 |
| & PHYS 3111 and Modern Physics Laboratory I | |
| PHYS 3370 Intro To Theoretical Physics | 3 |
| PHYS 4371 Thermodynamcs & Statistcl Mech | 3 |
| PHYS 4366 Intro Quantum Mechanics | 3 |
| PHYS 4368 Electricity And Magnetism | 3 |
| PHYS 4370 Classical Mechanics | 3 |
| PHYS 4395 Undergraduate Research | 3 |
| Major | |
| Advanced PHYS elective | 3 |
| General Elective | 1 |
| Minor (if required) | |
| MATH 1420 Calculus I ¹ | 4 |
| MATH 1430 Calculus II | 4 |
| MATH 2440 Calculus III | 4 |
| MATH 3376 Differential Equations | 3 |
| MATH 4376 Topics In Applied Mathematics I | 3 |
| Total Hours | 120 |

¹ CHEM 1411, CHEM 1412 satisfies the requirement for Component Area III. MATH 1420 satisfies the requirement for Component Area II, one hour of Component Area IX, and the degree specific requirement.

A student may need preparatory work in mathematics or might be eligible for advanced placement, either of which necessitates adjustment of the schedule. Such a student should consult a member of the physics or mathematics faculty concerning his/her schedule.

First Year

| Fall | Hours Spring | Hours |
|------------------------|--------------------------|--------------|
| PHYS 1401 | 4 PHYS 1411 | 4 |
| ENGL 1301 ¹ | 3 MATH 1430 | 4 |
| MATH 1420 ² | 4 CHEM 1412 ³ | 4 |
| CHEM 1411 | 4 ENGL 1302 ¹ | 3 |
| General Elective | 1 | |
| | 16 | 15 |

Second Year

| Fall | Hours Spring | Hours |
|--|--------------------------|--------------|
| PHYS 1422 | 4 PHYS 3370 | 3 |
| MATH 2440 | 4 HIST 1302 ⁴ | 3 |
| HIST 1301 | 3 COSC 1436 | 4 |
| POLS 2305 | 3 POLS 2306 ⁵ | 3 |
| Component Area IV (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiv) | 3 | |
| | 17 | 13 |

Third Year

| Fall | Hours Spring | Hours |
|--|--|--------------|
| PHYS 3391 | 3 PHYS 4370 | 3 |
| PHYS 3111 | 1 MATH 4376 | 3 |
| MATH 3376 | 3 BIOL 1413, GEOL 1404, or PHYS 1403 | 4 |
| BIOL 1411, GEOL 1403, or PHYS 1404 | 4 Component Area V (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav) | 3 |
| Component Area VIII (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii) | 3 | |
| Component Area IX (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix) | 3 | |
| | 17 | 13 |

Fourth Year

| Fall | Hours Spring | Hours |
|----------------------------|------------------------------|--------------|
| PHYS 4371 | 3 PHYS 4366 | 3 |
| PHYS 4368 | 3 Advanced General Elective | 4 |
| PHYS 4395 | 3 Advanced PHYS elective | 3 |
| Advanced General Elective | 4 Math or Science (Advanced) | 3 |
| Math or Science (Advanced) | 3 | |
| | 16 | 13 |

Total Hours: 120

¹ Satisfies Component Area I.

² Satisfies Component Area II and one hour of Component Area IX.

³ Satisfies Component Area III.

⁴ Satisfies Component Area VI.

⁵ Satisfies Component Area VII.