BACHELOR OF SCIENCE, MAJOR IN PHYSICS

Code	Title	Hours
Bachelor of Science, Major in Physics		
Core Curriculum (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/)		
Component Area I (Communication)		6
Component Area II (Mathematics) [1]		3
Component Area III (Life and Physical Science) [2]		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		
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	
CHEM 1411	General Chemistry I [2]	4
CHEM 1412	General Chemistry II [2]	4
COSC 1436	Programming Fundamentals I	4
Advanced General elective		7
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 & PHYS 3111	Modern Physics I and Modern Physics Laboratory I	4
PHYS 3370 & PHYS 4110	Intro To Theoretical Physics and Adv Undergrad Laboratory I	4
PHYS 4366	Intro Quantum Mechanics	3
PHYS 4368	Electricity And Magnetism	3
PHYS 4370	Classical Mechanics	3
PHYS 4371	Thermodynamcs & Statistcl Mech	3
PHYS 4395	Undergraduate Research	3
Major		
Advanced PHYS elective		3
General Elective		1
Minor (required)		
MATH 1420	Calculus I [1]	4
MATH 1430	Calculus II	4
MATH 2440	Calculus III	4
MATH 3376	Differential Equations	3
MATH 3377	Intro to Linear Alg & Matrics	3
Total Hours		**120**

1 MATH 1420 satisfies the Core Curriculum requirement for Component Area II (Mathematics), one semester credit hour of Component Area IX (Component Area Option), and the Degree Specific requirement.

2 CHEM 1411, CHEM 1412 satisfies the Core Curriculum requirement for Component Area III (Life and Physical Science).

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
CHEM 1411[1]	4	CHEM 1412[1]	4
ENGL 1301[2]	3	ENGL 1302[2]	3
General Elective	1	MATH 1430	4
MATH 1420[3]	4	PHYS 1411	4
PHYS 1401	4		
	16		**15**

Second Year

Fall	Hours	Spring	Hours
Component Area IV (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiv)	3	COSC 1436	4
HIST 1301[4]	3	HIST 1302[4]	3
MATH 2440	4	PHYS 3370 & PHYS 4110	4
PHYS 1422	4	POLS 2306[5]	3
POLS 2305[5]	3		
	17		**14**

Third Year

Fall	Hours	Spring	Hours
Component Area VIII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii)	3	Component Area V (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav)	3
Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix)	3	BIOL 1413, GEOL 1404, or PHYS 1403	4
BIOL 1411, GEOL 1403, or PHYS 1404	4	MATH 3377	3
MATH 3376	3	PHYS 4370	3
PHYS 3111	1		
PHYS 3391	3		
	17		**13**

Fourth Year

Fall	Hours	Spring	Hours
Advanced General Elective	3	Advanced General Elective	4
Math or Science (Advanced)	3	Math or Science (Advanced)	3
PHYS 4368	3	PHYS 4366	3
PHYS 4371	3	PHYS Advanced Elective	3
PHYS 4395	3		
	15		**13**

Total Hours: 120

1 Satisfies Core Curriculum requirement for Component Area III (Life and Physical Science).

2 Satisfies Core Curriculum requirement for Component Area I (Communications).

[3] Satisfies Core Curriculum requirement for Component Area II (Mathematics) and one semester credit hour of the Core Curriculum requirement for Component Area IX (Component Area Option).

[4] Satisfies Core Curriculum requirement for Component Area VI (U.S. History).

[5] Satisfies Core Curriculum requirement for Component Area VII (Political Science).

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The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The BS in Physics is designed to provide graduates with the following marketable skills:

- Ability to creatively solve real-world problems.
- Sophisticated understanding of applied mathematics.
- Capacity to analyze and interpret complex data.
- Quantitative understanding of mechanical, electrical, and thermal systems.
- Model complex interactions with computer programming and technology.