

# BACHELOR OF SCIENCE, MAJOR IN MATHEMATICS

## Bachelor of Science, Major in Mathematics

**Core Curriculum** ([catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/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) satisfied by major	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

PHYS 1411 & PHYS 1422 or PHYS 2426	Introduction To Physics I and Introduction To Physics II Heat, Waves & Modern Physics	8
ENGL 2332	Wrld Lit I: Before 17 Century <sup>1</sup>	3
Science Courses for Science Majors - Select 8 hours from the following: <sup>2</sup>		8
BIOL 1411 & BIOL 1413	General Botany and General Zoology	
CHEM 1411 & CHEM 1412	General Chemistry I and General Chemistry II	
8 hours from GEOL 1403, GEOL 1404, GEOL 1405, GEOG 1401		
COSC 1436	Programming Fundamentals I	4

## Major Core

MATH 1420	Calculus I <sup>3</sup>	4
MATH 1430	Calculus II	4
MATH 2440	Calculus III	4
MATH 3300	Introduction To Math Thought	3
MATH 3376	Differential Equations	3
MATH 3377	Intro To Linear Alg & Matrics	3
MATH 4361	Introductory Analysis	3
MATH 4366	Elementary Analysis	3
MATH 4371	Thry & Appl Of Prob & Stat I	3
MATH 4377	Algebraic Structures	3

## Major

Advanced MATH Electives	18
Elective	1
Minor	18
<b>Total Hours</b>	<b>120</b>

<sup>1</sup> ENGL 2332 satisfies Component Area IV.

<sup>2</sup> Satisfies Component Area III.

<sup>3</sup> MATH 1420 satisfies Component Area II and one hour of Component Area IX.

The following courses can only be used as required advanced electives by students who are seeking elementary/middle school teacher certification:

MATH 3380	Historical Perspec of Math	3
MATH 3381	Intro - Foundation Of Math III	3
MATH 3383	Geometric Meas./Transformation	3
MATH 3384	Foundations Of Mathematics	3
MATH 3386	Fundmtls Probability/Stats	3

MATH 3387	Problem Solving-Middle Sch Mth	3
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The following courses can only be used as required advanced electives by students who are seeking secondary teacher certification:

MATH 4384	Survey Of Mathematical Ideas	3
MATH 4385	Mathematical Problem Solving	3

Students should use the minor and electives to complete the 42-advanced hour requirement for graduation.

In order to satisfy Component Area 3 (Natural Science, Not in Department of Physics), the student must take 8 hours of classes from the following:

BIOL 1411 & BIOL 1413 or CHEM 1411 & CHEM 1412	General Botany and General Zoology General Chemistry I and General Chemistry II	8
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Any two lab courses from Geology or Geography

### First Year

Fall	Hours Spring	Hours
MATH 1420	4 MATH 1430	4
Component Area III - Science Course for Science Majors	4 Component Area III - Science Course for Science Majors	4
ENGL 1301	3 HIST 1302	3
HIST 1301	3 ENGL 1302	3
	14	14

### Second Year

Fall	Hours Spring	Hours
MATH 2440	4 MATH 3377	3
MATH 3300	3 MATH 3376	3
PHYS 1411	4 PHYS 1422 or 2426	4
POLS 2305 <sup>5</sup>	3 Class for Minor	3
Component Area IX (catalog.shsu.edu/undergraduate/ academic-policies-procedures/degree-requirements- academic-guidelines/core-curriculum/#componentareaix)	3 POLS 2306 <sup>5</sup>	3
	17	16

### Third Year

Fall	Hours Spring	Hours
MATH 4361	3 MATH 4366	3
MATH 4371	3 Advanced MATH elective	3
Class for Minor	3 Class for Minor	3
COSC 1436	4 Component Area V (catalog.shsu.edu/undergraduate/ academic-policies-procedures/degree-requirements- academic-guidelines/core-curriculum/#componentareav)	3
Elective	1 ENGL 2332 <sup>6</sup>	3
	14	15

### Fourth Year

Fall	Hours Spring	Hours
MATH 4377	3 Advanced MATH Elective	3
Advanced MATH Elective	3 Class for Minor	3
Class for Minor	3 Class for Minor	3
Component Area VIII (catalog.shsu.edu/undergraduate/ academic-policies-procedures/degree-requirements- academic-guidelines/core-curriculum/#componentareaviii)	3 Advanced MATH elective	3
Advanced MATH elective	3 Advanced MATH elective	3
	15	15

Total Hours: 120

- 1 Satisfies Component Area II and one hour of Component Area IX.
- 2 Satisfies Component Area III.
- 3 Satisfies Component Area I.
- 4 Satisfies Component Area VI.
- 5 Satisfies Component Area VII.
- 6 Satisfies Component Area IV.