BACHELOR OF ARTS, MAJOR IN MATHEMATICS

Bachelor of Arts, Major in Mathematics

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1436</td>
<td>Programming Fundamentals I</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 2332</td>
<td>World Lit: Before 17 Century 3</td>
<td>3</td>
</tr>
<tr>
<td>FOLG 1411</td>
<td>Beginning Foreign Language I</td>
<td></td>
</tr>
<tr>
<td>&amp; FOLG 1412</td>
<td>Beginning Foreign Language II</td>
<td></td>
</tr>
<tr>
<td>&amp; FOLG 2311</td>
<td>Intermediate Foreign Language</td>
<td></td>
</tr>
<tr>
<td>&amp; FOLG 2312</td>
<td>Intermediate Foreign Language 1</td>
<td></td>
</tr>
<tr>
<td>PHIL 2303</td>
<td>Critical Thinking 2</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1411</td>
<td>Introduction To Physics I</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1422</td>
<td>Introduction To Physics II</td>
<td></td>
</tr>
</tbody>
</table>

Science Courses for Science Majors from Component Area III list 8

Major Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1420</td>
<td>Calculus I 3</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1430</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2440</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 3300</td>
<td>Introduction To Math Thought</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3377</td>
<td>Intro To Linear Alg &amp; Matrics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4361</td>
<td>Introductory Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4366</td>
<td>Elementary Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4371</td>
<td>Thry &amp; Appl Of Prob &amp; Stat I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4377</td>
<td>Algebraic Structures</td>
<td>3</td>
</tr>
</tbody>
</table>

Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH electives</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

Minor 18

Electives (To bring to 120 total hrs) 6

Total Hours 120

1. FOLG 2311 satisfies Core Curriculum requirement for Component Area IV (Language, Philosophy, and Culture).
2. PHIL 2303 satisfies Core Curriculum requirement for Component Area VIII (Social and Behavioral Sciences).
3. ENGL 2332 satisfies three semester credit hours of the Core Curriculum requirement for Component Area IX (Component Area Option).
4. MATH 1420 satisfies Core Curriculum requirement for Component Area II (Mathematics) and one semester credit hour of Component Area IX (Component Area Option).

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

Required Advanced Electives: Elementary/Middle School Teacher Certification

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 3380</td>
<td>Historical Perspec of Math</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3381</td>
<td>Intro - Foundation Of Math III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3383</td>
<td>Geometric Meas./Transformation</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3384</td>
<td>Foundations Of Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>
The following courses can only be used as required advanced electives by students who are seeking secondary teacher certification:

**Required Advanced Electives: Secondary Teacher Certification**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4384</td>
<td>Survey Of Mathematical Ideas</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4385</td>
<td>Mathematical Problem Solving</td>
<td>3</td>
</tr>
</tbody>
</table>

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

In order to satisfy the Core Curriculum requirement for Component Area II (Life and Physical Science), except for the Department of Physics, the student must take classes from the following:

**Courses for Science Majors**

**Course Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1411</td>
<td>General Botany</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1413</td>
<td>General Zoology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2401</td>
<td>Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1411</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1412</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
</tbody>
</table>

Any lab course from Geology or Geography

**First Year**

<table>
<thead>
<tr>
<th>Component Area III (Science Course for Science Major)</th>
<th>Hours</th>
<th>Spring Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1430</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 1420</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOLG 1411</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 2440</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 3300</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 1411 or 1422</td>
<td>4</td>
<td>PHIL 2303</td>
</tr>
<tr>
<td>POLS 2305</td>
<td>3</td>
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</tbody>
</table>

**Third Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 2332</td>
<td>3</td>
<td>COSC 1436</td>
</tr>
<tr>
<td>FOLG 2311</td>
<td>3</td>
<td>FOLG 2312</td>
</tr>
<tr>
<td>MATH 4361</td>
<td>3</td>
<td>MATH 4366</td>
</tr>
<tr>
<td>MATH 4371</td>
<td>3</td>
<td>MATH Advanced Elective</td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
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</table>

**Fourth Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component Area V</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>MATH Advanced Elective</td>
</tr>
<tr>
<td>MATH 4377</td>
<td>3</td>
<td>Minor Course</td>
</tr>
<tr>
<td>MATH Advanced Elective</td>
<td>3</td>
<td>Minor Course</td>
</tr>
</tbody>
</table>
Minor Course | 3  
---|---
--- | 15  
--- | 12  
Total Hours: 120

1. Satisfies Core Curriculum requirement for Component Area I (Communications).
2. Satisfies Core Curriculum requirement for Component Area VI (U.S. History).
3. Satisfies Core Curriculum requirement for Component Area II (Mathematics) and one semester credit hour of Core Curriculum requirement for Component Area IX (Component Area Option).
5. Satisfies Core Curriculum requirement for Component Area VIII (Social and Behavioral Sciences).
6. Satisfies Core Curriculum requirement for Component Area IX (Component Area Option).
7. Satisfies Core Curriculum requirement for Component Area IV (Language, Philosophy, and Culture).