**Bachelor of Science (BS)**  
**Degree Code 260**  
**Concentration Code 260E**  
**Program of Study for Mathematical Sciences Majors**  
**COMPUTATION**

**Student Name:** __________________________________________  
**Date:** _______________

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### I. GENERAL EDUCATION CURRICULUM

Math 1110 will meet the Quantitative Literacy general education requirement.

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### II. MAJOR REQUIREMENTS (not including 4 s.h. counted in Area I, above)

- **Math 1110** (4) Calculus with Analytic Geometry I  
  (Pre: MAT 1025 w/min grade C-)
- **Math 1120** (4) Calculus with Analytic Geometry II  
  (Pre: MAT 1110 w/min grade C-)
- **Math 2240** (3) Introduction to Linear Algebra  
  (Pre: MAT 1120)

Choose one:
- **Math 2110** (3) Techniques of Proof  
  (Pre: MAT 1120)
- **Math 2510** (4) Sophomore Honors Seminar  
  (Pre: MAT 1120)

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#### A. Mathematics Common Core (14-15 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1110</td>
<td>(4)</td>
<td>Calculus with Analytic Geometry I</td>
<td>MAT 1025 w/min grade C-</td>
</tr>
<tr>
<td>MAT 1120</td>
<td>(4)</td>
<td>Calculus with Analytic Geometry II</td>
<td>MAT 1110 w/min grade C-</td>
</tr>
<tr>
<td>MAT 2240</td>
<td>(3)</td>
<td>Introduction to Linear Algebra</td>
<td>MAT 1120</td>
</tr>
</tbody>
</table>

Choose one:
- **MAT 2110** (3) Techniques of Proof  
  (Pre: MAT 1120)
- **MAT 2510** (4) Sophomore Honors Seminar  
  (Pre: MAT 1120)

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#### B. General Mathematics Computation Concentration (27-28 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 2310</td>
<td>(3)</td>
<td>Computational Mathematics</td>
<td>MAT 1120</td>
</tr>
<tr>
<td>MAT 4310</td>
<td>(3)</td>
<td>Numerical Methods</td>
<td>MAT 2310</td>
</tr>
<tr>
<td>STT 3850</td>
<td>(4)</td>
<td>Statistical Data Analysis I</td>
<td>MAT 1110</td>
</tr>
</tbody>
</table>

Choose one:
- **MAT 3110** (3) Introduction to Modern Algebra  
  (WID)  
  (Pre: ENG 2001, MAT 2110 or 2510; Co: 2240)
- **MAT 3220** (3) Intro to Real Analysis I  
  (WID)  
  (Pre: ENG 2001, MAT 2110 or 2510)

Choose one:
- **MAT 4040** (1) Mathematics Capstone  
  (CAP)  
  (Pre: MAT 3110 or 3220; Sr. standing)
- **MAT 4510** (3) Senior Honors Thesis  
  (CAP)  
  (Pre: MAT 3510; 3.45+ GPA in math)

11-14 hours of approved electives** in mathematical sciences to bring total number of hours in AREA II to 65 (at least 3 hours at the 4000 level)

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#### C. A Computational Concentration (14 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>C S 1440</td>
<td>(4)</td>
<td>Computer Science I</td>
<td>MAT 1020 or 1025 w/min grade C-</td>
</tr>
<tr>
<td>C S 2440</td>
<td>(4)</td>
<td>Computer Science II</td>
<td>CS 1440 or 1445 w/min grade C; Co: CS 1100</td>
</tr>
<tr>
<td>C S 3430</td>
<td>(3)</td>
<td>Database</td>
<td>CS 2440 with min grade of C</td>
</tr>
<tr>
<td>C S 3460</td>
<td>(3)</td>
<td>Data Structures</td>
<td>CS 2440 with min grade of C</td>
</tr>
</tbody>
</table>

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#### D. Electives: 9 hours** of Approved courses in the sciences, which may include computer science

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**Must be approved by advisory committee.

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### III. MINOR (optional)

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### IV. ELECTIVES (taken to total 122 hours for the degree)

2 semester hours of free electives must be outside the major discipline.

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4/2013