### FOUNDATION COURSES

**Freshman Composition**
Complete one sequence
- Engl 101(3) _____ Engl 102(3) _____ or
- Engl 107(3) _____ Engl 108(3) _____ or
- Engl 109H(3) _____

**Mathematics:**
Satisfied by math pre-major courses

**Second Language (2nd semester proficiency)**

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### TIER ONE COURSES:

**Traditions and Cultures** (6 units)

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**Individuals and Societies** (6 units)

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**Natural Sciences**
Requirement met by major

### TIER TWO COURSES

**Arts** (3 units)

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**Humanities** (3 units)

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**Individuals and Societies** (3 units)

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**G/R/C/E/NW (or Diversity Emphasis):**
1 course must meet this requirement but can be double-dipped with Tier One or Tier Two Course

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### PRE-MAJOR COURSES (18-20 units)

**Mathematics:**
- Math 124 or 125 Calculus I (5/3) ___
- Math 129 Calculus II (3) ___
- Math 223 Vector Calculus (4) ___

**Physics:**
- Phys 141 (4) ___
- Phys 241(4) ___

**MAJOR COURSES (47 units) BOLDED COURSES MUST be C grades or better.**

**General Chemistry**
- Chem 151(4) ____ Chem 152 (4) ___

**Organic Chemistry**
- Chem 246a (3) ____ Chem 247a (2) ___
- Chem 246b (3) ____ Chem 247b (2) ___

**Quantitative Analysis**
- Chem 325 (2) ____ Chem 326 (2) ___

**Instrumental Analysis**
- Chem 401a (3) ____ Chem 400a (3) ___

**Biochemistry**
- Bioc 462a (4) ___

**Inorganic Chemistry**
- Chem 404a (3) ____ Chem 412 (3) ___

**Physical Chemistry**
- Chem 480a (3) ___
- Chem 480b (or 481) (3) ___
- Chem 400b (3) ___

**Core Electives (8 units)**
Choose with advisor approval.
Maximum of 3 units of research will apply to this specific requirement.

[ ] 120 units
[ ] 42 upper-division units
[ ] General education completed
[ ] Second Language requirement met
[ ] MCWA satisfied
[ ] Pre-major completed
[ ] Major completed
## 2010-2011 Sample Academic Plan

### BS Chemistry

*THIS IS A SAMPLE PROGRAM for planning purposes only; Consult your major advisor each term to customize and create your personal academic plan*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 120R, 124 or 125</td>
<td>4, 5 or 3</td>
<td>MATH 124 or 129</td>
<td>5 or 3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
<td>3</td>
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<tr>
<td>CHEM 151</td>
<td>3 &amp; 1</td>
<td>CHEM 152</td>
<td>3 &amp; 1</td>
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<tr>
<td>Gen-Ed or Foreign Language (FL) as needed</td>
<td>3+</td>
<td>Gen-Ed or Foreign Language (FL) as needed</td>
<td>3+</td>
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<tr>
<td>MATH 129 or 223</td>
<td>3 or 4</td>
<td>MATH 223 (if needed)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 246a &amp; 247a</td>
<td>3 &amp; 2</td>
<td>CHEM 246b &amp; 247b</td>
<td>3 &amp; 2</td>
</tr>
<tr>
<td>PHYS 141</td>
<td>4</td>
<td>PHYS 241 (or 141 if needed)</td>
<td>4</td>
</tr>
<tr>
<td>Gen-Ed or FL as needed</td>
<td>3+</td>
<td>Gen-Ed or FL as needed</td>
<td>3+</td>
</tr>
<tr>
<td>PHYS 241 (if still needed)</td>
<td>4</td>
<td>CHEM 404a</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 325 &amp; 326</td>
<td>2 &amp; 2</td>
<td>CHEM 401a</td>
<td>3</td>
</tr>
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<td>Choose from:</td>
<td>3+</td>
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<tr>
<td>BIOC 462a</td>
<td>3+</td>
<td>CHEM 480a (if still needed)</td>
<td>3+</td>
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<tr>
<td>CHEM 480a</td>
<td></td>
<td>CHEM 480b &amp; CHEM 400b</td>
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<tr>
<td>CHEM elective</td>
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<td>(if CHEM 480a was completed)</td>
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<tr>
<td>Gen-Ed or FL as needed</td>
<td>3+</td>
<td>CHEM elective</td>
<td>3+</td>
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<tr>
<td>Choose from:</td>
<td></td>
<td>Gen-Ed or FL as needed</td>
<td>3+</td>
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<tr>
<td>CHEM 462a</td>
<td>3</td>
<td>CHEM 400a</td>
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<tr>
<td>CHEM 480a (if still needed)</td>
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<td>CHEM 400b (if needed)</td>
<td>3</td>
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<tr>
<td>CHEM 480b (only after taking 480a)</td>
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<td>CHEM elective (if needed)</td>
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<tr>
<td>CHEM elective (if needed)</td>
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<td>CHEM 412 (if needed)</td>
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<tr>
<td>CHEM 400a</td>
<td>3</td>
<td>Gen-Ed or FL as needed</td>
<td>3+</td>
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<tr>
<td>CHEM 412</td>
<td>3</td>
<td>Any to reach 120 total units (+)</td>
<td></td>
</tr>
<tr>
<td>Gen-Ed or FL as needed</td>
<td>3+</td>
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</tbody>
</table>

**TOTAL UNITS REQUIRED:** 120 Minimum (of which 42 must be upper-division >300 level)

On average, students complete 30 units per academic year - work with an advisor to plan each term!

The BS CHEM will provide 38 of the required 42 units of upper-division work. You must make up for this deficiency by completing other course work as upper-division. (Tier 2 gen-eds, electives, minor courses, etc.)

*For more information, contact a chemistry advisor at 626-7908*

2/8/2011