Cooperative 3-2 Program for students majoring in **MATHEMATICS** at SUNY Fredonia and an appropriate curriculum at an affiliated engineering institution 2012-2014

REQUIREMENTS LISTED IN CATALOG MUST BE FULFILLED FOR GRADUATION

### FIRST YEAR (FREDONIA)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>CHEM 115-125 Gen. Chemistry I w/Lab</td>
<td>4  CHEM 116-126 Gen Chemistry II w/Lab</td>
</tr>
<tr>
<td>MATH 122 Univ. Calculus I</td>
<td>4  MATH 123 Univ. Calculus II</td>
</tr>
<tr>
<td>ENGL 100 English Composition</td>
<td>3  PHYS 230-232 Univ. Physics I w/Lab</td>
</tr>
<tr>
<td>CCC •</td>
<td>3  CCC •</td>
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<td>14</td>
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### SECOND YEAR (FREDONIA)

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>MATH 223 Univ. Calculus III</td>
<td>4  MATH 224 Differential Equations</td>
</tr>
<tr>
<td>PHYS 231-233 Univ. Physics II w/Lab</td>
<td>5  MATH 231 Linear Algebra</td>
</tr>
<tr>
<td>MATH 210 Math Structures &amp; Proof</td>
<td>4  CSIT 121 Computer Science I •</td>
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<tr>
<td>CCC •</td>
<td>3  CCC's •</td>
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(If transcript does not list Math as major, see Director to declare Math)

### THIRD YEAR (FREDONIA) ++

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>MATH 331 Abstract Algebra I</td>
<td>3  MATH 420 Advanced Calculus+++</td>
</tr>
<tr>
<td>MATH 323 Inter. Real Analysis</td>
<td>3  MATH ----- Mathematics Electives +</td>
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<tr>
<td>---</td>
<td>3  (MATH 351, 332, 325, 457)</td>
</tr>
<tr>
<td>PHYS 321 Engineering Statics</td>
<td>3  PHYS 322 Mechanics of Solids++</td>
</tr>
<tr>
<td>PHYS 329 Engineering Dynamics++</td>
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</tr>
<tr>
<td>STAT 350 Probability &amp; Statist.</td>
<td>3  MATH 405 Senior Seminar</td>
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</table>

(See Director for transfer interview) (See Mathematics Chair for transfer letter)

### FOURTH AND FIFTH YEARS (AFFILIATED INSTITUTION)

Math Elective (as advised)

- Must complete the College Core Curriculum (CCC) either at Fredonia or engineering institution. Upper level is not required for 3-2 students. Also not required for 3-2: second social science course, second speaking intensive course, foreign language if earn 70 or better on Regent’s Checkpoint B, and American History category if earn 85 or better on Regent’s exam. See the current undergraduate Catalog for details regarding the CCC.
- For students transferring to Syracuse, additional CSIT courses are required.
- For students interested in electrical engineering, replace one mathematics elective with Circuit Analysis II (PHYS 324).
- Students interested in electrical or computer engineering must take six hours of Circuit Analysis. Electrical, computer and chemical engineers may, in most cases, omit PHYS 322 and 329.
- May substitute PHYS 425 for Advanced Calculus (offered in fall semesters)

PHYS 234, Modern Physics, is required at some institutions, particularly Columbia and UB Electrical Engineering (spring semester).