### LOWER DIVISION GENERAL EDUCATION REQUIREMENTS

**A. Skills**

<table>
<thead>
<tr>
<th>Course</th>
<th>grade/credit</th>
<th>VCCS transfer equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Communication–6 hours</td>
<td></td>
<td>AS/ENG 111</td>
</tr>
<tr>
<td>ENGL 110C English Composition</td>
<td>3</td>
<td>131</td>
</tr>
<tr>
<td>ENGL 211C, 231C</td>
<td></td>
<td>AS/ENG 112, 210, or 115,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>131</td>
</tr>
<tr>
<td>Oral Communication–3 hours</td>
<td></td>
<td>CST 100, 105, 110, 111,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>112, or 126</td>
</tr>
<tr>
<td>Mathematics–3 hours</td>
<td></td>
<td>AS/ITE 119</td>
</tr>
<tr>
<td>MATH 162M</td>
<td></td>
<td>satisfied in the major</td>
</tr>
<tr>
<td>Language and Culture–0-6 hours</td>
<td></td>
<td>AS/HS/TOEFL</td>
</tr>
</tbody>
</table>

**B. Ways of Knowing**

<table>
<thead>
<tr>
<th>Course</th>
<th>grade/credit</th>
<th>VCCS transfer equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 121A, ARTS122A</td>
<td>3</td>
<td>AS/ART 100–106, 111–114</td>
</tr>
<tr>
<td>DANC 185A, MUSC 264A, THEA 241A, COMM/THEA</td>
<td>3</td>
<td>MUS 121, 122, 125; CST 130, 141, 142, 151, 152, 231, 232, 250;</td>
</tr>
<tr>
<td>History–3 hours</td>
<td></td>
<td>HIS 101, 102, 111, 121, 122, 203, 204, 231, 232, 253, 254</td>
</tr>
<tr>
<td>Literature–3 hours</td>
<td></td>
<td>AS/ENG 125, 236, 237, 241–246, 251–256, 267, or 268</td>
</tr>
<tr>
<td>Philosophy and Ethics–3 hours</td>
<td></td>
<td>AS/PHI 100, 101, 102, 111, 112, 115, 220, REL 230, 231, or 232</td>
</tr>
</tbody>
</table>

**Natural Science and Technology–8 hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>grade/credit</th>
<th>VCCS transfer equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Impact of Technology–3 hours</td>
<td>3</td>
<td>AS/ENG 112, 210, or 115, 131</td>
</tr>
</tbody>
</table>

**Enterance Writing Sample Placement Test:**

**Enterance Math Placement Test:**

### Physics Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>grade/credit</th>
<th>Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 211 Calculus I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 212 Calculus II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 312 Calculus III</td>
<td>4</td>
<td>MATH 285</td>
</tr>
<tr>
<td>MATH 307 Differential Equations</td>
<td>3</td>
<td>MATH 280</td>
</tr>
<tr>
<td>MATH 316 or 401 or 421 or 422</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHEM 121N/122N Chemistry I**</td>
<td>4</td>
<td>CHM 111 or 113</td>
</tr>
<tr>
<td>CHEM 123N/124N Chemistry II**</td>
<td>4</td>
<td>CHM 112 or 114</td>
</tr>
<tr>
<td>CS 150 Intro to Programming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 231N University Physics I*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHYS 232N University Physics II*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHYS 303 Laboratory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 323 Modern Physics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 355 Math Methods</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 319 Analytical Mechanics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 413 Methods of Exp. Physics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 425 Electromagnetism I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 452 Intro. Quantum Mechanics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 453 Electromagnetism II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 454 Thermal Physics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 456 Inter. Quantum Mech.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHYS 499W or 489W/490W Thesis</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*Physics majors must earn a grade of “C” or better in PHYS 231 and PHYS 232.**

**(CHEM 137N/138N) or (CHEM 121N/122N/123N/124N)**

### UPPER DIVISION GENERAL EDUCATION

Satisfied by any University approved 2nd major, minor, cluster, or two upper-division courses (6 credits) outside of the College of Sciences, and not required by the major (Option D).

**120 HOURS AND A 2.0 GRADE POINT AVERAGE IN THE MAJOR, MINOR, AND OVERALL ARE NEEDED TO GRADUATE.**

**Additional Graduation Requirements:**

Application for Graduation

Passage of Physics Exit Exam

Senior Assessment

**PHYSICS MINOR: (12 credits at 300-400 level)**

<table>
<thead>
<tr>
<th>Course</th>
<th>grade/credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 319</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 323</td>
<td>3</td>
</tr>
</tbody>
</table>

6 additional credits at 300-400 level

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**edited: July 19, 2012**