## Academic Planning Sheet

**B.S.E. Engineering**

**Mechatronics Specialization**

**Colorado State University – Pueblo**

2012-2013 Catalog

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### Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 101</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
<tr>
<td>EN 103</td>
<td>Problem Solving for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 126</td>
<td>Calculus &amp; Analytic Geometry I</td>
<td>5</td>
</tr>
<tr>
<td>ENG 101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>General Education Courses</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Semester Hours</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Spring Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 107</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>MATH 224</td>
<td>Calculus &amp; Analytic Geometry II</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 221/L</td>
<td>General Physics I/Lab</td>
<td>5</td>
</tr>
<tr>
<td>ENG 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Semester Hours</strong></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 211</td>
<td>Engineering Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>EN 231/L</td>
<td>Circuit Analysis/Lab</td>
<td>5</td>
</tr>
<tr>
<td>MATH 207</td>
<td>Matrix &amp; Vector Algebra w/ App.</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 222/L</td>
<td>General Physics II/Lab</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Semester Hours</strong></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Third Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 321</td>
<td>Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>EN 343</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>EN 360</td>
<td>Control Systems I</td>
<td>3</td>
</tr>
<tr>
<td>EN 362</td>
<td>Introduction to Mechatronics</td>
<td>3</td>
</tr>
<tr>
<td>EN 365</td>
<td>Stochastic Systems Engineering</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Semester Hours</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Fourth Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 430</td>
<td>Project Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>EN 473</td>
<td>Computer Integrated Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EN 486</td>
<td>Senior Seminar</td>
<td>2</td>
</tr>
<tr>
<td>SPCOM 103</td>
<td>Speaking and Listening</td>
<td>3</td>
</tr>
<tr>
<td>General Education Courses</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Semester Hours</strong></td>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Spring Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 462</td>
<td>Industrial Robotics</td>
<td>3</td>
</tr>
<tr>
<td>EN 487</td>
<td>Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>Technical Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Math/Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>General Education Courses</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Semester Hours</strong></td>
<td><strong>18</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Disclaimer:** The Academic Planning Sheet is designed as a guide for students planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered CSU-Pueblo.
**General Education Requirements:** 15 semester hours

- ENG 101: English Composition I (3)
- ENG 102: English Composition II (3)
- Mathematics Course (3)
- MATH 126: Calculus & Analytic Geometry I (5)
- Humanities Courses (9)
- SPCM 103: Speaking and Listening (3)
- History Course (3)
- Social Sciences Courses (6)
- Natural and Physical Sciences Courses (8) (2 courses with labs)
  - PHYS 221/L: General Physics I/Lab (5)
  - PHYS 222/L: General Physics II/Lab (5)

**Course Completed elsewhere**

(Ex: English 101)

**CSU-Pueblo equivalent**

(Ex: English 101)

**Major Requirements:**

**Specific Requirements for the BSE-Mechatronics:**

**Semester Hours: 80 semester hours**

- EN 101: Introduction to Engineering (2)
- EN 103: Problem Solving for Engineers (3)
- EN 107: Engineering Graphics (2)
- EN 211: Engineering Mechanics I (3)
- EN 212: Engineering Mechanics II (3)
- EN 231/L: Circuit Analysis/Lab (5)
- EN 260: Basic Electronics (2)
- EN 263: Electromechanical Devices (3)
- EN 321: Thermodynamics I (3)
- EN 324/L: Materials Science and Engineering (4)
- EN 343: Engineering Economy (3)
- EN 360: Control Systems I (3)

**Technical Electives (3)**

- Math/Science Electives (3)

Technical Electives must be chosen from an approved list or have the approval of an Engineering advisor.

**Other Required Courses:**

**Required Semester Hours:** 49 semester hours

- MATH 126: Calculus & Analytic Geometry I (5)
- MATH 224: Calculus & Analytic Geometry II (5)
- MATH 207: Matrix & Vector Algebra with Applications (2)
- MATH 337: Differential Equations I (3)
- PHYS 221/L: General Physics I/Lab (5)
- PHYS 222/L: General Physics II/Lab (5)
- ENG 101: English Composition I (3)
- ENG 102: English Composition II (3)
- SPCM 103: Speaking and Listening (3)
- General Education Courses (15)

(Courses italicized meet General Education requirements)

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**Institutional Graduation Requirements:**

- Total of 120 semester hours, minimum.
- Complete a minimum of 40 semester hours in upper-division courses.
- Overall cumulative grade point average of 2.00.
- A minimum of 60 semester hours must be earned from a four year institution. Of theses, a minimum of 30 semester hours of credit must be earned in residence.
- Of the last 30 semester credits earned immediately preceding graduation, no more than 15 may be completed at other colleges or universities.
- All other requirements as specified in the Catalog.

**Additional Major Graduation Requirements:**

- Total of 129 semester hours, minimum.
- Students are required to have earned a cumulative GPA of 2.00 or better in required EN courses.

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