## ACADEMIC PLANNING SHEET

### B.S.I.E. INDUSTRIAL ENGINEERING

### COLORADO STATE UNIVERSITY – PUEBLO

**DEPARTMENT CHAIR:** Dr. Jane M. Fraser, Chair/Professor  
**PHONE:** 549-2036  
**EMAIL:** jane.fraser@colostate-pueblo.edu  
**ADMINISTRATIVE ASSISTANT:** Ms. Loretta Cisneros  
**PHONE:** 549-2890  
**EMAIL:** loretta.cisneros@colostate-pueblo.edu

### 2012-2013 CATALOG

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td><strong>Second Year</strong></td>
</tr>
<tr>
<td>EN 101: Introduction to Engineering</td>
<td>EN 107: Engineering Graphics</td>
</tr>
<tr>
<td>EN 103: Problem Solving for Engineers</td>
<td>MATH 224: Calculus &amp; Analytic Geometry II</td>
</tr>
<tr>
<td>MATH 126: Calculus &amp; Analytic Geometry I</td>
<td>PHYS 221/L: General Physics I/Lab</td>
</tr>
<tr>
<td>ENG 101: English Composition I</td>
<td>ENG 102: English Composition II</td>
</tr>
<tr>
<td>General Education Courses</td>
<td>General Education Courses</td>
</tr>
<tr>
<td>TOTAL SEMESTER HOURS 16</td>
<td>TOTAL SEMESTER HOURS 15</td>
</tr>
<tr>
<td><strong>Second Year</strong></td>
<td><strong>Third Year</strong></td>
</tr>
<tr>
<td>EN 211: Engineering Mechanics I</td>
<td>EN 321: Thermodynamics</td>
</tr>
<tr>
<td>EN 231/L: Circuit Analysis/Lab</td>
<td>EN 343: Engineering Economy</td>
</tr>
<tr>
<td>EN 215: Intro to Industrial &amp; Systems Engineering</td>
<td>EN 365: Stochastics Systems Engineering</td>
</tr>
<tr>
<td>PHYS 222/L: General Physics II/Lab</td>
<td>EN 439: Time and Motion Studies</td>
</tr>
<tr>
<td>MATH 207: Matrix &amp; Vector Algebra w/ App.</td>
<td>EN 471: Operations Research</td>
</tr>
<tr>
<td>TOTAL SEMESTER HOURS 18</td>
<td>TOTAL SEMESTER HOURS 15</td>
</tr>
<tr>
<td><strong>Third Year</strong></td>
<td><strong>Fourth Year</strong></td>
</tr>
<tr>
<td>EN 321: Thermodynamics</td>
<td>EN 430: Project Planning</td>
</tr>
<tr>
<td>EN 343: Engineering Economy</td>
<td>EN 440: Safety Engineering</td>
</tr>
<tr>
<td>EN 365: Stochastics Systems Engineering</td>
<td>EN 473: Computer Integrated Manufacturing</td>
</tr>
<tr>
<td>EN 439: Time and Motion Studies</td>
<td>EN 475: Facility Planning and Design</td>
</tr>
<tr>
<td>EN 471: Operations Research</td>
<td>EN 486: Senior Seminar</td>
</tr>
<tr>
<td>TOTAL SEMESTER HOURS 15</td>
<td>TOTAL SEMESTER HOURS 17</td>
</tr>
<tr>
<td><strong>Fourth Year</strong></td>
<td><strong>Total Semester Hours</strong></td>
</tr>
<tr>
<td>EN 430: Project Planning</td>
<td>EN 477: Operations Planning and Control</td>
</tr>
<tr>
<td>EN 440: Safety Engineering</td>
<td>MATH 488: Industrial Engineering Design</td>
</tr>
<tr>
<td>EN 473: Computer Integrated Manufacturing</td>
<td>Math/Science Electives</td>
</tr>
<tr>
<td>EN 475: Facility Planning and Design</td>
<td>General Education Courses</td>
</tr>
<tr>
<td>EN 486: Senior Seminar</td>
<td>General Education Courses</td>
</tr>
<tr>
<td>TOTAL SEMESTER HOURS 14</td>
<td>TOTAL SEMESTER HOURS 15</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.

05/30/12
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
- Humanities Courses (9)  
  - SPCOM 103: Speaking and Listening
- History Course (3)
- Social Sciences Courses (6)
- Natural and Physical Sciences Courses (8) (2 courses with labs)  
  - PHYS 221/L: General Physics I/Lab
  - PHYS 222/L: General Physics II/Lab

Course Completed elsewhere   CSU-Pueblo equivalent
(Ex: English 101)   (Ex: English 101)

Major Requirements:

Specific Requirements for the BSIE: 77 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 215: Intro to Industrial & Systems Engineering (3)
- EN 231/L: Circuit Analysis/Lab (5)
- EN 321: Thermodynamics I (3)
- EN 324/L: Materials Science and Engineering/Lab (4)
- EN 343: Engineering Economy (3)

Specific Requirements for the BSIE cont’d:

- EN 365: Stochastic Systems Engineering (4)
- EN 420: Simulation Experiments (4)
- EN 430: Project Planning (3)
- EN 439: Time and Motion Studies (2)
- EN 440: Safety Engineering (3)
- EN 441/L: Engineering of Manufacturing Process/Lab (4)
- EN 443: Quality Control and Reliability (3)
- EN 471: Operations Research (3)
- EN 473: Computer Integrated Manufacturing (3)
- EN 475: Facility Planning and Design (3)
- EN 477: Operations Planning and Control (3)
- EN 486: Senior Seminar (2)
- EN 488: Industrial Engineering Design (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 207: Matrix & Vector Algebra with Applications (2)
- MATH 224: Calculus & Analytic Geometry II (5)
- MATH 337: Differential Equations I (3)
- PHYS 221/L: General Physics I/Lab (5)
- PHYS 222/L: General Physics II/Lab (5)
- EN 101: English Composition I (3)
- EN 102: English Composition II (3)
- SPCOM 103: Speaking and Listening (3)
- General Education Courses (15)

(Courses italicized meet General Education requirements)

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

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.