**LIBERAL STUDIES REQUIREMENTS (43 credits)**
See Liberal Studies Guide for Goal and Enrichment choices

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 102</td>
<td>Critical Writing</td>
</tr>
<tr>
<td>ENGL 104 or ENGL 220</td>
<td>Critical Reading* or Intro to Literary and Cultural Studies*</td>
</tr>
<tr>
<td>COMM 200</td>
<td>Public Speaking*</td>
</tr>
</tbody>
</table>

*Course requirements as indicated below (36 credits)*

- **Basic Requirements (9 credits)**
  - ENGL 102: Critical Writing 3
  - ENGL 104 or ENGL 220: Critical Reading* or Intro to Literary and Cultural Studies* 3
  - COMM 200: Public Speaking* 3

- **The Arts (3 credits)**
  - Goal 3

- **Global Community (9 credits)**
  - Goal – Non-US 3
  - Goal – Non-US 3
  - Goal – US 3

- **Human Institutions/Interpersonal Relationships (3 credits)**
  - PHI 123: Ethics 3

**Science, Technology & Math (12 credits)**

- CHEM 107: General Chemistry I 3
- CHEM 111: General Chemistry I Lab 1
- MATH 225: Calculus I 4
- PHYS 211: General Physics I/Lab I 4

**Challenges of the Modern Age (0 credits)**

- **ENRICHMENT COURSE REQUIREMENTS**
  - Choose two courses from four of the following Enrichment areas.
  - (7 credits)

- **The Arts**
  - This requirement has been waived

- **Global Community**
  - ECON 201: Macroeconomics 3

- **Human Institutions/Interpersonal Relationships**
  - This requirement has been waived

**Science, Technology & Math**

- MATH 230: Calculus II 4

**OTHER BASIC REQUIREMENTS**

Check with your advisor or a current degree audit report to see if you have been exempted from this course. The credit earned in this course will not be counted toward the 120 credit hour minimum needed to earn a degree.

- **ACSD 110: Beginning Algebra** 3

**COMPUTER COMPETENCY**

Students must demonstrate "computer competency" by:

- Passed Exam: Pass Computer Competency Exam at SRU Orientation
- OR CPSC ______: Complete one of the following courses: CPSC 100, 110, 130, or PE 202 at SRU or another post-secondary institution 1-3

**IMPORTANT CURRICULUM GUIDE NOTES**

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisors to ensure accurate progress towards degree completion. The information on this guide is current as of the date below. Students are responsible for curriculum requirements at the time of enrollment at the University.

- Course may have a prerequisite. See Undergraduate Online Catalog.
- Course can be counted as a Liberal Studies Requirement, but earns credit only once toward your 120-credits total.
- Course counts for 50% Major requirement and Major GPA

PASSHE = Pennsylvania State System of Higher Education Institution

**MARJOR REQUIREMENTS (87 credits)**

- 44 major credits must be taken at SRU or PASSHE
- 44 major credits must be taken at the 300 level or above

<table>
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<tr>
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<tr>
<td>ENGR 110^</td>
<td>Intro to Engineering</td>
</tr>
<tr>
<td>ENGR 120^</td>
<td>Engineering Design Tools *</td>
</tr>
<tr>
<td>PHYS 314^</td>
<td>Engineering Mechanics 1: Statics *</td>
</tr>
<tr>
<td>ISE 330^</td>
<td>Six Sigma Methodology *</td>
</tr>
<tr>
<td>ISE 362^</td>
<td>Lean Service Systems*</td>
</tr>
<tr>
<td>ISE 372^</td>
<td>Manufacturing Systems Design and Analysis*</td>
</tr>
<tr>
<td>ISE 382^</td>
<td>Sustainable Processes*</td>
</tr>
<tr>
<td>ISE 402^</td>
<td>Work Design*</td>
</tr>
<tr>
<td>ISE 421^</td>
<td>Lean Supply Chain*</td>
</tr>
<tr>
<td>ISE 432^</td>
<td>Productivity Analysis*</td>
</tr>
<tr>
<td>ISE 442^</td>
<td>Human Factor Engineering*</td>
</tr>
<tr>
<td>ISE 488^</td>
<td>Senior Project</td>
</tr>
<tr>
<td>MATH 311^</td>
<td>Deterministic Models of Operations Research*</td>
</tr>
<tr>
<td>MATH 312^</td>
<td>Stochastic Models of Operations Research*</td>
</tr>
<tr>
<td>MATH 316^</td>
<td>Advanced Methods of Operations Research*</td>
</tr>
<tr>
<td>ACCT 209^</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>ACCT 210^</td>
<td>Managerial Accounting*</td>
</tr>
</tbody>
</table>

**Required Engineering Courses (48 credits)**

**Required Math and Science Courses (39 credits)**

- CPSC 146: Programming Principles * |
- CPSC 246: Advanced Programming Principles * |
- PHYS 212^: General Physics II / Lab * |
- PHYS 213^: General Physics III / Lab * |
- PHYS 331^: Mathematical Methods of Physics * |
- MATH 230^: Calculus II * |
- MATH 231^: Calculus III * |
- MATH 309^: Linear Algebra* |
- MATH 350^: Engineering Statistics * |
- STAT 252^: Intro to Statistical Modeling * |
- STAT 372^: Forecasting & Time Series * |
- STAT 373^: Statistical Quality Control * |

**COLLEGE-WIDE REQUIREMENTS**

Students must take the following four courses (12 credits)

- CHEM 107: General Chemistry I |
- CHEM 111: General Chemistry I Lab |
- MATH 225: Calculus I* |
- PHYS 211: General Physics I/Lab |

**GPA REQUIREMENT**

2.50 or higher Major GPA
2.50 or higher Overall GPA

**INDUSTRIAL AND SYSTEMS ENGINEERING – BS (6182)**

Effective Fall 2018
Revised 07/2018