## First Year

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ENC 1101 Composition I</td>
<td>3 ENC 1102 Composition II</td>
</tr>
<tr>
<td><strong>4</strong> MAC 2281 or MAC 2311 Calculus I</td>
<td><strong>4</strong> MAC 2282 or MAC 2312 Calculus II</td>
</tr>
<tr>
<td>3 CHS 2440 or CHM 2045 Chemistry I</td>
<td>3 PHY 2048 General Physics I</td>
</tr>
<tr>
<td><strong>1</strong> CHS 2440L or CHM 2045L Chemistry I Lab</td>
<td><strong>1</strong> PHY 2048L General Physics I Lab</td>
</tr>
<tr>
<td>R EGN 3000 Foundations of Engineering</td>
<td>(1) PHZ 2102† Problems Physics I</td>
</tr>
<tr>
<td>1 EGN 3000 LAB Foundations of Engineering</td>
<td>3 St. GenEd Humanities Elective</td>
</tr>
<tr>
<td>3 St. GenEd Social Science Elective</td>
<td>3 FKL Fine Arts Elective</td>
</tr>
<tr>
<td><strong>15 Total Credits</strong></td>
<td><strong>17 (18) Total Credits</strong></td>
</tr>
</tbody>
</table>

## Second Year

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
<th>Summer School</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4</strong> MAC 2283 or MAC 2313 Calculus III</td>
<td>3 EGN 3311 Statics</td>
<td>3 EGN 3343 Thermo</td>
</tr>
<tr>
<td>3 PHY 2049 General Physics II</td>
<td>3 EGN 3365 Materials Engineering I</td>
<td>3 EGN 3615 Engr Econ</td>
</tr>
<tr>
<td><strong>1</strong> PHY 2049L General Physics II Lab</td>
<td>3 EGN 3373 Intro to Electrical Systems I</td>
<td>(FKL Soc/Behav Elect)</td>
</tr>
<tr>
<td>2 EGN 4450 Linear Systems</td>
<td>3 EGN 3433 Modeling &amp; Analysis of Syst or MAP 2302 Differential Equations</td>
<td>3 EGN 1113 Design</td>
</tr>
<tr>
<td>3 EGN 3443 Probability &amp; Statistics for Engr</td>
<td>3 FKL Human/Diversity &amp; Global Elective</td>
<td>Graphics</td>
</tr>
<tr>
<td>3 FKL Humanities Elective (with HHCP)</td>
<td><strong>16 Total Credits</strong></td>
<td><strong>9 Total Credits</strong></td>
</tr>
</tbody>
</table>

## Third Year

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
<th>Internship/Co-op</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ESI 4007† Engineering Programming</td>
<td>3 ESI 4620S Design of Industrial Info Systems</td>
<td>List Company/employer name and position</td>
</tr>
<tr>
<td>3 EIN 4312C§ Work Analysis</td>
<td>3 EIN 4333S Production Control</td>
<td></td>
</tr>
<tr>
<td>3 EIN 4621† Manufacturing Processes</td>
<td>3 ESI 4221S Industrial Statistics/Quality Control</td>
<td></td>
</tr>
<tr>
<td>3 ESI 4312* Deterministic Operations Research</td>
<td>3 ESI 4313S Probabilistic OR</td>
<td></td>
</tr>
<tr>
<td>3 ENC 3246 Communication for Engrs (6A WI)</td>
<td>3 Tech Elective Industrial Engineering</td>
<td></td>
</tr>
<tr>
<td><strong>15 Total Credits</strong></td>
<td><strong>15 Total Credits</strong></td>
<td><strong>15 Total Credits</strong></td>
</tr>
</tbody>
</table>

## Fourth Year

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 EIN 4364† Facilities Design &amp; Cost Analysis</td>
<td>3 EIN 4243C§ Human Factors (6A)</td>
</tr>
<tr>
<td>3 ESI 4606† Engineering Analytics I</td>
<td>3 EIN 4891S Capstone Design (CD)</td>
</tr>
<tr>
<td>3 ESI 4244† Design of Experiments</td>
<td>3 EIN 4601C§ Automation and Robotics</td>
</tr>
<tr>
<td>3 ESI 4523* Industrial Systems Simulation</td>
<td>3 ESI 4607S Engineering Analytics II</td>
</tr>
<tr>
<td>2 Tech Elective Industrial Engineering</td>
<td><strong>14 Total Credits</strong></td>
</tr>
<tr>
<td><strong>12 Total Credits</strong></td>
<td><strong>12 Total Credits</strong></td>
</tr>
</tbody>
</table>

**Notes:** Courses in bold must be completed with an overall grade point average of 2.4, see overleaf.

† - Optional, but highly encouraged
R - Required course
F – Course offered only in the fall semester (EIN and ESI courses are taught once a year)
S – Course offered only in the spring semester (EIN and ESI courses are taught once a year)
Chemistry will be applied as FKL Life Science.
Entrance Requirements for B.S. in Industrial Engineering

- Completion of the following courses with a minimum grade of C and a cumulative 2.4 GPA (based on best attempt) for the following courses:
  - Calculus I or Engineering Calculus I (MAC2311 or MAC2281)
  - Chemistry I (CH2440 & 2440L or CHM 2045 & 2045L)
  - Calculus II or Engineering Calculus II (MAC2312 or MAC2282)
  - Physics I with lab (PHY2048, 2048L)
  - Calculus III or Engineering Calculus III (MAC2313 or MAC 2283)
  - Physics II with lab (PHY2049, PHY2049L)

- Need a USF GPA and an Overall GPA of 2.00 or better

Continuation Requirements

- The minimum acceptable grade in all BSIE required math, science, engineering, and specialization courses is a C or higher (C- is insufficient).
- A minimum GPA of 2.0 in the following categories must be maintained at all times: Overall, USF, Math/Science, Engineering Courses and Specialization Courses.
- All math, science and engineering courses must be successfully completed in no more than two registered attempts. Grades of W, I, IF, U, R, and M are considered attempts. Registration that is canceled for non-payment is also considered an attempt.

Gordon Rule
Gordon Rule (6A) is fully met through the mathematics courses above, ENC 1101, ENC 1102, ENC 3246 and EIN 4243C. Gordon Rule communication requirement is met for any student entering USF with 60 or more hours.

Exit Requirements
Exit Requirements: Exit requirements must be taken at USF. The Capstone Design (CD) and Writing Intensive (WI) exit requirements are met through ENC 3246 and EIN 4891.

FKL Course Sequence
Foundation of Knowledge & Learning (FKL) courses may be taken in any order except EGN 3615 which must be completed before the fall term of the third year.

Course Equivalencies

<table>
<thead>
<tr>
<th>Courses at USF</th>
<th>Courses at a Florida State Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 2281 Engineering Calculus I or MAC 2311 Calculus I</td>
<td>MAC X311 or MAC X281</td>
</tr>
<tr>
<td>MAC 2282 Engineering Calculus II or MAC 2312 Calculus II</td>
<td>MAC X312 or MAC X282</td>
</tr>
<tr>
<td>MAC 2283 Engineering Calculus III or MAC 2313 Calculus III</td>
<td>MAC X313 or MAC X283</td>
</tr>
<tr>
<td>MAP 2302 Differential Equations or EGN 3433 Modeling Analysis of Eng Systems</td>
<td>MAP X302 or MAP X305</td>
</tr>
<tr>
<td>CHM 2045/CHM 2045L General Chemistry I with lab or CHS 2440/2440L General Chemistry for Engineers with lab</td>
<td>CHM X045/X045L or CHM X045C or CHM X041/X045L or CHS X440/X440L</td>
</tr>
<tr>
<td>PHY 2048/2048L General Physics I with PHY 2048L</td>
<td>PHY X048/X048L or PHY X048C or PHY X043/X048L</td>
</tr>
<tr>
<td>PHY 2049/2049L General Physics II or PHY 2061 Enriched Physics II with PHY 2049L</td>
<td>PHY X049/X049L or PHY X049C or PHY X044/X049L</td>
</tr>
</tbody>
</table>