# Curriculum Guide - Updated September 2019

## Chemical Engineering and ChE-Materials Engineering Majors

Florida State University  
BS in Chemical Engineering  
128 Credit Hours

## FRESHMAN YEAR (1ST)

<table>
<thead>
<tr>
<th>Term</th>
<th>Courses</th>
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<tbody>
<tr>
<td>Fall</td>
<td>CHM 1045 - Gen Chemistry I 3 ECH 3023 - Mass &amp; Energy Bal I 3</td>
</tr>
<tr>
<td></td>
<td>CHM 1045L - Gen Chem I Lab 1 CHM 2210 - Organic Chem I 3</td>
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<tr>
<td></td>
<td>MAC 2311 - Calculus I 4 MAC 2313 - Calculus III 5</td>
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<tr>
<td></td>
<td>ENC 1101 - English I 3 PHY 2048C - Gen Physics A w/ L 5</td>
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<td>Liberal Studies Course #1 3 EGN 1004L - 1st Yr Engr Lab 1</td>
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<tr>
<td>Spring</td>
<td>CHM 1046 - Gen Chemistry II 3 ECH 3024 - Mass &amp; Energy Bal II 4</td>
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<tr>
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<td>CHM 1046L - Gen Chem II Lab 1 ECH 3301 - Process Anal &amp; Des 4</td>
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<tr>
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<td>MAC 2312 - Calculus II 4 CHM 2211 - Organic Chem II 3</td>
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<td>ENC 2135 - English II 3 PHY 2049C - Gen Physics B w/ L 5</td>
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<td>BSC 2010 – General Biology I 3</td>
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<tr>
<td>Summer</td>
<td>Liberal Studies Course #2 3 Liberal Studies Course #3 3 (see Note 3, below)</td>
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## SOPHOMORE YEAR (2ND)

<table>
<thead>
<tr>
<th>Term</th>
<th>Courses</th>
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<tbody>
<tr>
<td>Fall</td>
<td>ECH 3101 - Thermodynamics 3 ECH 3266 - Transport Phenom I 3</td>
</tr>
<tr>
<td></td>
<td>ECH 3854 - ChE Computations 4 ECH 4937 - Chem Engr Statistics 3</td>
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<tr>
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<td>Liberal Studies Course #5 3</td>
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<tr>
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<td>EGN 1004L - 1st Yr Engr Lab 1</td>
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<tr>
<td>Spring</td>
<td>ECH 3274 - Mass &amp; Energy Bal II 4 ECH 4267 - Transport Phenom II 3</td>
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<td>ECH 3418 - Separations Processes 3 ECH 4627 - Transport Phenom II 3</td>
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<td>ECH 4267 - Transport Phenom II 3 ECH 4323 - Process Control 3</td>
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<tr>
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<td>ECH 4615 - ChE Process Des. II 3 EGM 3512 - Engr Mechanics 4</td>
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<td>CHM/BCH/ECH XXXX – AdvChemEl 4 EEL 3003 - Intro Electrical Engr 3</td>
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<tr>
<td>Summer</td>
<td>Liberal Studies Course #4 3</td>
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</tbody>
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## JUNIOR YEAR (3RD)

<table>
<thead>
<tr>
<th>Term</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>MAC 2211 - Organic Chem II 3 ECH 4504 - Kinetics &amp; React Des 3</td>
</tr>
<tr>
<td></td>
<td>ECH 4604 - ChE Process Design I 4</td>
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<td>Liberal Studies Course #6 3</td>
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<tr>
<td></td>
<td>EGN 1004L - 1st Yr Engr Lab 1</td>
</tr>
<tr>
<td>Spring</td>
<td>ECH 4323 - Process Control 3 ECH 4615 - ChE Process Des. II 3</td>
</tr>
<tr>
<td></td>
<td>EGM 3512 - Engr Mechanics 4 EEL 3003 - Intro Electrical Engr 3</td>
</tr>
<tr>
<td>Summer</td>
<td>Liberal Studies Course #7 3</td>
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## SENIOR YEAR (4TH)

<table>
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<tr>
<th>Term</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ECH 4404L - Unit Ops Lab 3 ECH 4504 - Kinetics &amp; React Des 3</td>
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<tr>
<td></td>
<td>ECH 4604 - ChE Process Design I 4</td>
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<td>Liberal Studies Course #8 3</td>
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<td>EGN 1004L - 1st Yr Engr Lab 1</td>
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<tr>
<td>Spring</td>
<td>ECH 4937 - Chem Engr Statistics 3 Chemical Engr Elective I 4</td>
</tr>
<tr>
<td></td>
<td>Liberal Studies Course #9 3</td>
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<td></td>
<td>EGN 1004L - 1st Yr Engr Lab 1</td>
</tr>
<tr>
<td>Summer</td>
<td>Liberal Studies Course #10 3</td>
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</tbody>
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1 Students taking MAC 1105, MAC 1114, and/or MAC 1140 as prerequisites to MAC 2311 should take a math course every term (including summers) until completing the math sequence.

2 History, Social Science, Ethics, E-series and Humanities electives are to be selected to satisfy the Liberal Studies requirements. Students must choose one course from each of the following categories to fulfill the statewide requirements: [ARH 2000, ANT 2000, ECO 2013, POS 1041, PSY 2012, SYG 1000] and [ ARH 2000, HUM 2020, LIT 2000, MUL 2010, PHI 2010, THE 2000]. Two (2) courses must include a writing "W" designation. The Liberal Studies courses taken must include two multicultural course, one course with an "x" designation and one course with a "y" designation. Students must also meet the Civic Literacy requirement by taking AMH 2020 (history) or POS 1041 (social science), or pass the U.S. Citizenship Test at FSU with a 60/100.

3 Most courses shown in the Freshman and Sophomore years of this Guide are also taught during the Summer terms, during which students are encouraged to make up missed classes. Nine (9) hours of summer credit must be taken at one of the twelve state universities in Florida sometime during the college career. EGM 3512 can also be taken during the summer.

4 See approved Advanced Chemistry and Chemical Engineering electives on reverse side.