# CHEMICAL ENGINEERING

## Biomolecular Engineering Concentration


<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Sophomore Year</th>
<th>Junior Year</th>
<th>Senior Year</th>
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</thead>
<tbody>
<tr>
<td>4 CH 1010 General Chemistry</td>
<td>5 BIOL 1100 Principles of Biology I</td>
<td>3 CHE 3210 Chemical Engr. Thermodynamics II</td>
<td>3 BCHM 4310 Physical Approach to Biochem.</td>
</tr>
<tr>
<td>3 ENGL 1030 Accelerated Composition</td>
<td>3 CH 2230 Organic Chemistry</td>
<td>4 CHE 3300 Mass Transfer and Separation Proc.</td>
<td>3 CHE 4070 Unit Operations Lab. II</td>
</tr>
<tr>
<td>2 ENGR 1020 Engineering Discipline and Skills</td>
<td>4 MATH 1060 Calculus of One Variable I</td>
<td>3 PHYS 2210 Physics with Calculus II</td>
<td>3 CHE 4310 Chemical Process Design I</td>
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<tr>
<td>4 MATH 1060 Calculus of One Variable I</td>
<td>3 Gen Ed1</td>
<td>3 STAT 4110 Statistical Methods for Process Dev. and Control</td>
<td>2 CHE 4430 Safety, Environ &amp; Prof. Practice I</td>
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<tr>
<td>3 Gen Ed1</td>
<td>16</td>
<td>3 Biochemistry Requirement2</td>
<td>3 CHE 4500 Chemical Reaction Engineering</td>
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<td>3 Gen Ed1</td>
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### General Education Requirements

<table>
<thead>
<tr>
<th>LIT</th>
<th>Non-Lit</th>
<th>SS1</th>
<th>SS2</th>
<th>ENGR 5th</th>
<th>ENGR 6th</th>
<th>STS</th>
<th>CCA</th>
</tr>
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<tbody>
<tr>
<td>LIFE</td>
<td>Palmetto Fellows</td>
<td>Honors</td>
<td>Athlete</td>
<td>RiSE</td>
<td>ROTC</td>
<td>Med School</td>
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### Change of Major Checklist

<table>
<thead>
<tr>
<th>Required</th>
<th>Completed</th>
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<tbody>
<tr>
<td>CH 1010</td>
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<tr>
<td>ENGL 1030</td>
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<tr>
<td>ENGR 1020</td>
<td></td>
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<tr>
<td>CHE 1300</td>
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<tr>
<td>MATH 1060</td>
<td></td>
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<tr>
<td>MATH 1080</td>
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<tr>
<td>PHYS 1220</td>
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GPA = 2.0; C or Better Required in Each Class

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#### Notes

- No student may exceed a maximum of two attempts, including a W, to complete successfully any CHE course.
- CHE 1300 is only taught in the Spring and Summer.

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**Notes**

- See the policy on Humanities and Social Sciences for Engineering Curricula. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society requirement.
- Select from BCHM 3010, 3050, 4230, or CH 3600
- Select from BE 4280, 4350, BIOE 4400, 4490, 4760, BMOL 4030, 4270, CHE 4010, or MICR 4130
- **Notes**

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Comments:

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2016 – 2017 General Education Worksheet for Engineering

C. Arts and Humanities: Literature [Lit] .................................................................................................................. 3 credits
ENGL 2020, 2120, 2130, 2140, 2150. CHIN 4010, GER 2600. HON 1900, 2210. JAPN 4010, RUSS 3600, 3610
Literature taught in a foreign language: FR 3000, 3040, GER 3060, 3600, 3610, ITAL 3010, 3020, JAPN 4060, SPAN 3040, 3110, 3130

C. Arts and Humanities: Non-Literature [NL] ...................................................................................................... 3 credits
AAH 1010, ART 2100CA, 3750, ASL 3050CA, CAAH 2010CA, CHIN (PHIL) 3120, (PHIL) 3130, 4990, COMM 1800CA, 3030, 3080, 3090, 4020, ENGL (GW) 3010, 3550, 3570, ENGL (LANG) 4540, FR 3070, GW (ENGL) 3010, 4050, GER 3400, HON 1910, 2010ST, 2030, 2100, 2220, HUM 3010, 3020, HUM 3060, 3090CA, JAPN 3070, 3080, LANG 3400, 3420, 3560, (ENGL) 4540, LARC 1160ST, MUSC 2100CA, 3080, 3090, 3110, 3120, 3130, 3140CA, MUSC 3170, 3610, 3620, 3630, 3640, 3690, 3700, 3710, 3720, PHIL 1010, 1020, 1030, 1240ST, 2100ST, (CHI) 3120, (CHI) 3130, 3160, 3170, 3180, PHIL 3230, 3240ST, 3250, 3260ST, 3270, 3440, 3450ST, REL 1010CA, 1020CA, 3010, 3020, 3030, 3060, 3070, 3090, 3120, 3130, 3150, RUSS 3400, SPAN 3070, 3080, STS 1010ST, 1020ST, 2105ST, 3010ST, 3030ST, THEA 2100, 2790, 3080, 3090, THEA 3150, 3160, 3170, WS 3010

D. Social Sciences [SS] ........................................................................................................................................ 6 credits

E. Cross-Cultural Awareness [CCA] ..................................................................................................................... 3 credits
AAH 1020, AGRB 2050ST, ANTH 2010CA, ART 2100NL, ASL 3050NL, CAAH 2010NL, COMM 1800NL, GEOG 1030SS, HIST 1720SS, 1730SS, 1930SS, HON 1930, 2090, HUM 3090NL, IS 1010, 2100, LANG 2500, 2540, MUSC 2100NL, 3140NL, PAS 3010SS, POSC 1020SS, 1040SS, PSYC 2500SS, REL 1010NL, 1020NL, WS 1030, or through a University-approved cross-cultural experience

F. Science and Technology in Society [STS] ........................................................................................................... 3 credits
AGED (EDF) 4800, AGRB 2050CA, (ECON) 4570, AVS 3150, 4150, BIOL 2000, 2010, 2030, 2040, 2100, 2110, 2200, 4730, CH 1050, 1060, COMM 1070, COMM 3070, CPSC 2920, CTE 1150, 2210, ECE 1010, ECON 3190, (AGRB) 4570, ENGL 3490, ENGR 2200, 2210, ENR 3120, FOR 4160, ENSP (GEOL) 1250, 2000, (PES) 3150, ENSP 4000, ENT 2000, FDSC 2140, FOR (ENR) 4160, GEOL 1120, 1200, (ENSP) 1250, 2700, 3000, HCG (NURS) 3330, HIST 1220SS, 1240SS, 3210, 3220, 3230, 3920, 4240, 4910, HLTH 4310, HON 1940, 2010NL, 2060, IE 4880, LARC 1160NL, MKT 4450, MUSC 3180, NURS 1400, (HCG) 3330, NUTR 2030, 2100, PES (ENSP) 3150, PHIL 1240NL, 2100NL, 3240NL, 3260NL, 3280, 3400, 3450NL, PHYS 2450, PKSC 3680, PLPA 2130, PRMT 2110, PSYC 2750SS, RS (SOC) 4010, SOC (RS) 4010, 4030, STAT 2220, STS 1010NL, 1020NL, 1200, 1710, 2150NL, 2160, STS 3010NL, 3030NL, 4980, 4990

Additional A&H/SS Requirement [**5th and ***6th] ................................................................................................. ** as required by engineering major

Any 1000 – 4999 course in the following rubrics: AAH, ANTH, ARAB, ART, ASL, CHIN, DANC, ECON, FR, GEOG, GER, GW, HIST, HUM, ITAL, JAPN, LANG, LAW, MUSC, PA, PAS, PHIL, PORT, POSC, PSYC, REL, RS, RUSS, SOC, SPAN, THEA, WS
Rubrics with exceptions for additional requirement: AGRB 1000-2999, CAAH 2100, COMM [except 1500, 2500], EAS 1230, ENGL 2000-4999 [except 2170, 3040, 3100, 3120, except ENGL 3140, 3150, 3160, 3330], HON 1900, 1910, 1920, 2010, 2030, 2100, 2200, 2210, 2220, IS 2100, STS 1010, 1020, 3030

** Additional course (**5th) only required by CHE, ENVE, ME and MSE. CPE and EE require the additional 5th or a technical elective.

BIOE, BE, CE and IE do not require 5th.

BOLD indicates no pre-reqs required

Underline indicates MUSC courses require auditions, are 1 hour, may be repeated or grouped to achieve credit required.