

## Chemical and Biomolecular Engineering Catalog 2017

<b>Fall</b> 16 hours	<b>Math 141 or 147 (4) FA, SP, SU</b> Prereq- Math 130 or Math ACT 28 or Math SAT 630	<b>Chem 120 or 128 (4) FA, SP, SU</b> Math 130	<b>English 101 or 118 (3) FA, SP, SU</b>	<b>EF 151 or 157 (4) FA, SP</b> Coreq- Math 141 or 147 and EF 105	<b>EF 105 (1) FA, SP</b> Coreq- EF 151 or 157
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<b>Spring</b> 15 hours	<b>Math 142 or 148 (4) FA, SP, SU</b> Prereq- Math 141 or 147	<b>Chem 130 or 138 (4) FA, SP, SU</b> Prereq- Chem 120 or 128	<b>English 102 (3) FA, SP, SU</b> Prereq- English 101 or 118	<b>EF 152 or 158 (4) FA, SP</b> Prereq- EF 151 or 157 Coreq- Math 142 or 148
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<b>Fall</b> 15 hours	<b>Math 231 or 237 (3) FA, SP, SU</b> Prereq- Math 142 or 148	<b>CBE 201 (4) FA, SU</b> Prereq- EF 152/158 & Chem 130/138 Coreq- Math 231	<b>CBE 235 (3) FA</b> Prereq- EF 152/158 & Chem 130/138 Coreq- Biology 160 or 168	<b>Biology 160 or 168 (3) FA, SP, SU</b> Coreq- Chemistry 120 or 128	<b>EF 230 (2) FA, SP</b> Prereq- EF 105 or CS 102 Co-req-EF 152/158 or Phy136/138
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<b>Spring</b> 19 hours	<b>Chem 210 (3) &amp; 219 (1) FA, SP</b> formerly Chem 310 and 319 Prereq- Chem 130 or 138	<b>Math 241 or 247 (4) FA, SP, SU</b> Prereq- Math 142 or 148	<b>CBE 250 (4) SP, SU</b> Prereq- EF 152/158 & Chem 130/138 Coreq- Math 241 or 247	<b>CBE 240 (4) SP</b> Prereq- EF 152/158 & Chem 130/138 Coreq- Math 241 or 247	<b>Gen Ed (3) FA, SP, SU</b> Social Science
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<b>Fall</b> 15 hours	<b>Chemistry 260 or 268 (3) FA, SP, SU</b> formerly Chem 350 or 358 Prereq- Chemistry 130 or 138	<b>CBE 301 (3) FA</b> Coreq- EF 230	<b>CBE 350 (3) FA</b> Prereq- CBE 201, 240 and 250	<b>Physics 231 (3) FA, SP, SU</b> Coreq- Math 142 or 148	<b>Gen Ed (3) FA, SP, SU</b> Arts and Humanities
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<b>Spring</b> 16 hours	<b>CBE 340 (3) FA, SP, SU</b> Prereq- CBE 201, 240 and 250 Restrictions: 2.3 GPA	<b>CBE 360 (3) SP, SU</b> Prereq- CBE 201, 240 and 250 Coreq- Math 231 Restrictions: 2.3 GPA	<b>CBE 380 (1) SP</b> Grading: Satisfactory/ No Credit Prereq- CBE 201, 240 and 250	<b>Bio Option I ** (3) FA, SP, SU</b>	<b>Tech. Elective (3) FA, SP, SU</b> Petition required in advance See note below***	<b>Gen Ed (3) FA, SP, SU</b> Arts and Humanities
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<b>Fall</b> 16 hours	<b>CBE 445 (3) FA</b> Prereq- CBE 340 and 360	<b>CBE 415 (WC) (4) FA</b> Prereq- CBE 340 and 360 Coreq- CBE 301 and 350 Restriction Chem E and 2.3 GPA	<b>CBE 480 (3) FA</b> Prereq- CBE 340 and 360 and Chemistry 350 or 358 Coreq- CBE 445	<b>Gen Ed (3) FA, SP, SU</b> Cultures and Civilizations	<b>Gen Ed (3) FA, SP, SU</b> Cultures and Civilizations
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<b>Spring</b> 16 hours	<b>CBE 401 (1) SP</b> Prereq- CBE 350, 445, 480 Coreq- CBE 488 or 490	<b>CBE 488 or 490 (3) SP (OC)</b> Prereq- CBE 445 and 480	<b>Chem Option I *(3) FA, SP, SU</b>	<b>Tech. Elective*** (3) FA, SP, SU</b> Petition required in advance	<b>Tech. Elective*** (3) FA, SP, SU</b> Petition required in advance	<b>Gen. Ed. (3) FA, SP, SU</b> Social Science
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\* **Chem Option I:** Any 200 level or above BCMB courses; any 200-level or above CHEM courses; Environmental Engineering 554, 562; MSE 340/347, MSE 360/367; any 200-level or above MICR courses.

\*\* **Biology Option I:** BCMB 230, BCMB 311, BCMB 321, BCMB 401, BCMB 402; BIOL 220/229, BIOL 240, BIOL 260/269; MICR 210, CBE 455

\*\*\* One technical elective must be a chemical and biomolecular engineering course, with the exclusion of CBE 457. MSE 201 or 207 can be used as technical elective.

### Progression to Upper Division

Progression of students in the Department of Chemical and Biomolecular Engineering to departmental courses numbered 310 and above is competitive and is based on capacity. Factors considered include overall grade point average, performance in selected lower-division courses, and evidence of satisfactory and orderly progress through the prescribed curriculum.

### Upper-Division Status

A lower-division student must apply for progression to upper division status after completing CBE 201 , CBE 235 , CBE 240 , and CBE 250 with a grade of C - or better in each course and an overall GPA of 2.3 or better. Grades of C- or better in these four courses are required for graduation.

### Provisional Status

Students who have completed CBE 201 , CBE 235 , CBE 240 , and CBE 250 with an overall GPA of at least 2.3 may apply for provisional status. Any student granted provisional status must retake the 200 level CBE course or courses in which a grade less than C- was earned and achieve a C- or better to be admitted to full upper-division status. Grades of C- or better in these four courses are required for graduation. The granting of provisional upper-division status is based on availability of space in the departmental programs after upper-division status students have been accommodated. Provisional students are required to demonstrate the ability to perform satisfactorily in upper-division courses by completing a total of seven departmental courses with a grade of C or better in each course (including the four required for upper-division status). Permission to continue with upper-division classes depends on this minimum level of performance.

Any student with an overall GPA below 2.1 will not be admitted to upper-division chemical and biomolecular engineering courses. Students who have not been admitted to upper-division or provisional status will be dropped from upper-division departmental classes.

Students also have opportunities for an Honors Concentration. See the Undergraduate Catalog for details and requirements.

### UTRACK Milestones:

<b>Term 1</b> Math 130 or higher or one SS or one AH or one CC	<b>Term 2</b> Math 130 or higher	<b>Term 3</b> EF 151/157 or Physics 135/137	<b>Term 4</b> EF 152/158 or Physics 136/138	<b>Term 5</b> ME 202 or CS 102 or MSE 201 or CBE 201	<b>Term 6 through 8</b> No Milestones
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