

## Chemical and Biomolecular Engineering Catalog 2022

### Biomolecular Concentration

Fall 16 hours	<b>Math 132 or 141 or 147 (3-4) (QR) FA,SP,SU</b>	<b>Chem 122(3) and 123(1) or 128 (4) (NS) FA, SP, SU</b>	<b>EF 142 or 151 or 157 (4) (EI) FA, SP</b>	<b>EF 105 (1) FA, SP</b>	<b>English 101/118 or 198 or 131 (3) FA, SP, SU</b>
	Prereq- Math 141 is ACT Math 28 or SAT Math 660	Prereq-Math 119; recommended background in Math 131	Coreq- Math 132/141/147 or higher and EF 105 or CS 101 or CS 102	Coreq- EF 151 or 157	101 Regular; 118 Honors; 198 Chancellor Honors Only; 131 English as Second Language
	Prereq-Math 132 is Math 131				
Spring 15 hours	<b>Math 142 or 148 (4) (QR) FA, SP, SU</b>	<b>Chem 132(3) and 133(1) or 138 (4) (NS) FA, SP, SU</b>	<b>EF 152 or 158 (4) (NS and EI) FA, SP, SU</b>	<b>English 102 or 290 or 298 or 132 (3) FA, SP, SU</b>	
	Prereq- Math 132 or 141 or 147	Prereq- Chem 122 and 123 or 128	Prereq-EF 142/151/157 with C or higher Coreq- Math 142 or 148	102 Prereq 101 or 118; 290 Prereq AP 101 credit 298 Prereq Chancellor Honors only & 198; 132 Prereq 131 ESL	
Fall 16 hours	<b>Math 231 or 237 (3) FA, SP, SU</b>	<b>CBE 201 (4) FA, SU</b>	<b>CBE 235 (3) FA</b>	<b>Biology 160 or 168 (3) FA, SP, SU</b>	<b>Vol Core (3) FA, SP, SU</b>
	Prereq- Math 142 or 148	Prereq- EF 152/158 & Chem 132 and 133 or 138 Coreq- Math 231	Prereq- EF 152 or 158 and Chem 132 and 133 or 138	Strongly recommended students take Chemistry 122 and 123 or 128 prior	Social Science (SS)
Spring 18 hours	<b>Math 241 or 247 (4) FA, SP, SU</b>	<b>CBE 240 (4) SP</b>	<b>CBE 250 (4) SP, SU</b>	<b>Physics 231 (3) FA, SP, SU</b>	<b>Vol Core (3) FA, SP, SU</b>
	Prereq- Math 142 or 148	Prereq- EF 152/158 & Chem 132 and 133 or 138 Coreq- Math 241 or 247	Prereq- EF 152/158 & Chem 132 and 133 or 138 Coreq- Math 241 or 247	Prereq- Phys 135 or EF 151 and 152 Coreq- Math 142 or 148	Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS
Fall 15 hours	<b>Chemistry 260 or 268 (3) FA, SP, SU</b>	<b>Chemistry 269 (1) FA, SP, SU</b>	<b>CBE 301 (4) FA</b>	<b>CBE 350 (4) FA</b>	<b>Vol Core (3) FA, SP, SU</b>
	Prereq- Chemistry 132 and 133 or 138	Prereq- Chemistry 132 and 133 or 138 Coreq- Chemistry 260 or 268	Prereq- CBE 201, 240, and 250 or consent of instructor	Prereq- CBE 201, 240 and 250 Coreq- CBE 301	Arts and Humanities (AH)
Spring 16 hours	<b>CBE 320 (3) (OC) SP</b>	<b>CBE 340 (3) SP, SU</b>	<b>CBE 360 (3) SP, SU</b>	<b>Biology 240 (4) FA, SP, SU</b>	<b>Chem 360 or 368 (3) FA, SP, SU</b>
	Prereq- CBE 201, 240, and 250 Coreq- CBE 301 and 350	Prereq- CBE 201, 240 and 250	Prereq- CBE 201, 240 and 250 Coreq- Math 231	Prereq- BIOL 160 or 168 and Coreq-Chemistry 132 and 133 or 138	Prereq- Chem 260 or 268
Fall 17 hours	<b>CBE 445 (3) FA</b>	<b>CBE 480 (4) FA</b>	<b>BCMB 401 or 412 (4) FA, SP</b>	<b>Vol Core (3) FA, SP, SU</b>	<b>CBE 415 (WC and EI) (3) FA</b>
	Prereq- CBE 340 and 360	Prereq- CBE 340 and 360 and Chemistry 260 or 268 Coreq- CBE 445	401 Prereq- Chem 260 or 268; 401 Coreq- Chem 360 or 368 412 Prereq- Bio 240	Global Citizenship United States (GCUS)	Prereq- CBE 340 and 360; English 102, 132, 290, or 298 Coreq- CBE 301 and 350 Restriction- CBE majors
Spring 15 hours	<b>CBE 488 or 490 (3) SP (AOC)</b>	<b>CBE 475 (3) SP</b>	<b>Vol Core (3) FA, SP, SU</b>	<b>Vol Core (3) FA, SP, SU</b>	<b>Bio Option I* (3) FA,SP,SU</b>
	Prereq- CBE 445 and 480		Global Citizenship International (GCI)	Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS	choose from list below

\*Bio Option 1: BCMB 230, 311, 321, 402, 415; Biology 220- 229, 260- 269, 280; Chemical & Biomolecular Engineering 455; Microbiology 210, 321, 329

#### 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.

Volunteer Core courses highlighted in light orange.