

## CHEMICAL ENGINEERING CURRICULUM AY 2022-23

Fall Term

Spring Term

### First Year

	EGGG	101	Introduction to Engineering (FYE)	2			CHEG	112	Introduction to Chemical Engineering	3
	CHEM	111	General Chemistry	3			CHEM	112	General Chemistry	3
	MATH	242	Analytic Geometry & Calculus B	4			MATH	243	Analytic Geometry & Calculus C	4
	CISC	106	General Computer Science for Engineers	3			PHYS	207	Fundamentals of Physics I	3
	ENGL	110	Seminar in Composition	3			PHYS	227	Fundamentals of Physics Lab I	1
				15					Breadth Requirement Elective 1	3
										17

### Second Year

	CHEG	231	Chemical Engineering Thermodynamics	3			CHEG	304	Random Variability in Chemical Proce	3
	CHEM	220	Quantitative Analysis	3			CHEG	325	Chemical Engineering Thermodynamic	3
	CHEM	221	Quantitative Analysis Laboratory	1			CHEM	444	Physical Chemistry II	3
	PHYS	208	Fundamentals of Physics II	3			CHEM	445	Physical Chemistry Laboratory I *	0/1
	PHYS	228	Fundamentals of Physics Lab II	1			MATH	305	Applied Math for Biomed, Chem & Bi	3
	MSEG	201	Materials Science for Engineers	3					Breadth Requirement Elective 3	3
			Breadth Requirement Elective 2	3						15/16
				17						

### Third Year

	CHEG	332	Chemical Engineering Kinetics	3			CHEG	342	Heat and Mass Transfer	3
	CHEG	341	Fluid Mechanics	3			CHEG	345	Chemical Engineering Laboratory I	3
	CHEM	331	Organic Chemistry	3			CHEM	332	Organic Chemistry <b>or</b>	
	CHEM	333	Organic Chemistry Majors Lab I (lecture onl	1/2			CHEM	527	Introductory Biochemistry	3
			Technical Elective 1	3					Breadth Requirement Elective 4	3
			Technical Elective 2	3					CHEG Elective 1	3
				16/17						15

### Fourth Year

	CHEG	401	Chemical Process Dynamics and Control	3			CHEG	432	Chemical Process Analysis (DLE & C;	3
	CHEG	431	Chemical Process Analysis	3					CHEG Elective 3	3
	CHEG	445	Chemical Engineering Laboratory II	3					Technical Elective 3	3
			CHEG Elective 2	3					Technical Elective 4 <b>or</b> CHEG Electiv	3
			Breadth Requirement Elective 5	3					Breadth Requirement Elective 6	3
				15						15

**Total Credit Hours                      126**

\* If CHEM 333 is taken for two credits, CHEM 445 is not required.

**Biology requirement:** Students must meet the department's Biology requirement by virtue of a score of 4 or 5 on the AP Biology exam; a score of 6 or 7 on the IB (Higher Level) exam; 3 credits from taking BISC 207; 3 credits from taking CHEM 527, or by taking a course approved by the Chair or the Chair's designee.

**Note:** Minimum grade of C- is required in all CHEG courses, MATH242/243/305, CISC106, CHEM444, ENGL110 and all Breadth Requirement courses.