

Chemical Engineering Concentration Outline

()=Pre-requisites, Co=Co-requisites

Fall Semester

Freshman

ENGR120	Intro to Engineering & Design	2
ENGR125	Engineering Graphics	3
MATH191	Calculus I (P5, or MATH167 or MATH168)	4
CHEM131	General Chemistry I (P3, MATH165, MATH166, MATH168, or MATH191, MATH195)	4
ENGL115	College Writing I	3
		16

Spring Semester

ENGR181	Material Properties and Processes	3
ENGR185	Engineering Statics (MATH191)	3
MATH192	Calculus II (MATH191 or MATH195)	4
CHEM132	General Chemistry II (CHEM131)	4
RELT100	God & Human Life	3
		17

Sophomore

ENGR225	Circuit Analysis (MATH191)	3
PHYS241	Physics for Scientists I (MATH192, Co: PHYS271)	4
PHYS271	Phys For Sci Lab 1 (Co: PHYS241)	1
MATH240	Calculus III (MATH192)	4
CHEM231	Organic Chemistry I (CHEM132)	4
		16

ENGR285	Engineering Dynamics (ENGR185, PHYS241, and MATH192)	3
ENGR275	Electronics I (ENGR225)	3
MATH286	Differential equations (MATH192)	3
HLED135	Wellness	3
COMM104	Communication Skills	3
REL	Religion (RELB, RELG, RELT)	3
		18

Junior

ENGR330	Thermodynamics (PHYS241)	3
ENGR323*	Chemical Reaction Engineering (Chem 132 and MATH 286)	3
CPTR151	Computer Science I	3
CHEM330	Quantitative Chemical Analysis (CHEM132)	4
GEN ED	Arts/humanities	3
		16

ENGR310	Linear Systems Analysis (MATH215, MATH286, CPTR151)	3
ENGR355	ChemE Lab (CHEM330)	4
ENGR382*	Seperation Processes (ENGR 323, ENGR 330)	3
ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
ENGL215	College Writing II (ENGL 115 or ENGL 117)	3
		16

Senior

ENGR491	Review of Engineering Design (ENGR355, 385 or 390)	1
ENGR450	Engineering Economy (MATH191)	2
ENGR410	Feedback Control Systems (ENGR275, ENGR285, ENGR310)	4
ENGR480*	Process Design (ENGR323)	3
REL	Religion (RELB, RELG, RELT)	3
HIST110	Worldviews, Cultures, and God	3
		16

ENGR492	Senior Design Project (ENGR491)	3
Elective	ENGR Elective	3
ENGR440	Heat & Mass Transfer (ENGR360, MATH286)	3
GEN ED	Arts/Humanities	3
GEN ED	Social Sciences	3
REL	Religion	3
		18

Offered every other year*

Suggested 4-year course outline per Bulletin 2022-2023

Total Credits for Graduation

133