

Chemical Engineering Concentration Outline

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

Fall Semester

Spring Semester

Freshman

ENGR120	Intro to Engineering & Design	2	ENGR18X	Material Properties and Processes	3
ENGR125	Engineering Graphics	3	MATH192	Calculus II (MATH191 or MATH195)	4
MATH191	Calculus I (P5, or MATH167 or M	4	CHEM132	General Chemistry II (C- or better in CHEM131)	4
CHEM131	General Chemistry I (P3, MATH165, MATH166, MATH168, or MATH191, MATH195)	4	RELT100	God & Human Life	3
ENGL115	College Writing I	<u>3</u>	ENGR185	Engineering Statics (MATH191)	3
		16			<u>17</u>

Sophomore

ENGR225	Circuit Analysis (MATH191)	3	ENGR285	Engineering Dynamics (ENGR185, PHYS241, and MATH192)	3
PHYS241	Physics for Scientists I (MATH192, Co: PHYS271)	4	MATH286	Differential equations (MATH192)	3
MATH240	Calculus III (MATH192)	4	HLED135	Wellness	3
CHEM231	Organic Chemistry I (CHEM132)	3	COMM104	Communication Skills	3
PHYS271	Phys For Sci I Lab	1	REL	Religion	3
		<u>15</u>	ENGR275	Electronics I (ENGR225)	<u>3</u>
					18

Junior

CPTR151	Computer Science I	3	ENGR310	Linear Systems Analysis	3
CHEM330	Quantitative Chemical Analysis (CHEM132)	3	ENGR355	ChemE Lab (CHEM330)	4
CHEM431	Physical Chem I (Choose one: Se	3	ENGR382	Seperation Processes (ENGR 32X, ENGR 330 or CHEM 430)	3
ENGR323	Chemical Reaction Engineering (Chem 132 and MATH 286)	3	ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
HIST110	Worldviews, Cultures, and G	<u>3</u>	ENGL215	College Writing II	<u>3</u>
		15			16

Senior

ENGR491	Review of Engineering Design	1	Elective	ENGR Elective	3
ENGR450	Engineering Economy (MATH145 or MATH191)	2	ENGR492	Senior Design Project (ENGR385 or ENGR390)	3
ENGR410	Feedback Control Systems (ENGR275 ENGR285 ENGR310)	4	ENGR440	Heat & Mass Transfer (ENGR360, MATH286)	3
ENGR480*	Process Design (ENGR464)	3	GEN ED	Arts/Humanities	3
REL	Religion (RELB, RELG, RELT)	3	GEN ED	Social Sciences	3

GEN ED	Arts/humanities	<u>3</u>	REL	Religion	<u>3</u>
		16			18

Offered every other year*

Suggested 4-year course outline per Bulletin 2021-2022 **Total Credits for Graduation** **131**