

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 ,	4
ENGL115	College Writing I	<u>3</u>
		<u>16</u>

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	<u>3</u>
		<u>17</u>

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
		<u>16</u>

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

Junior

ENGR330	Thermodynamics (PHYS241)	3
ENGR323*	Chemical Reaction Engineering (Chem 132 and MATH 286)	3
ENGR365	Numerical Methods for Engineers	3
CPTR151	Computer Science I	3
CHEM330	Quantitative Chemical Analysis (4
		<u>16</u>

ENGR310	Linear Systems Analysis (MATH215, MATH286, CPTR151)	3
ENGR355	ChemE Lab (CHEM330)	3
ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
ENGR382*	Separation Processes (ENGR 323, ENGR 330)	3
ENGL215	College Writing II (ENGL 115 or ENGL 117)	<u>3</u>
		<u>15</u>

Senior

ENGR410	Feedback Control Systems (ENGR275, ENGR285, ENGR310)	4
ENGR491	Review of Engineering Design (ENGR355, 385 or 390)	1

ENGR440	Heat & Mass Transfer (ENGR360, M	3
ENGR492	Senior Design Project (ENGR491)	3

ENGR450	Engineering Economy (MATH191)	2	INEN221	Introduction to Innovation and Entrepreneurship	3
ENGR480*	Process Design (ENGR323)	3	GEN ED	Arts/humanities	3
REL	Religion (RELB,RELG,RELT)	3	GEN ED	Social Sciences	3
HIST110	Worldviews, Cultures, and God	3	REL	Religion	3
		<u>16</u>			<u>18</u>
Offered every other year*					
Suggested 4-year course outline per Bulletin 2023-2024				Total Credits for Graduation	132