

**Chemical Engineering Concentration Outline**  
( )=Pre-requisites, Co=Co-requisites

MPE = P5

Some general education courses may be taken during the summers

**Fall Semester**

**Freshman**

ENGR120	Intro to Engineering & Design	2
ENGR125	Engineering Graphics Calculus I (P5, or MATH167)	3
MATH191	or MATH168)	4
CHEM131	General Chemistry I	4
ENGL115	College Writing I	3
		<u>16</u>

**Spring Semester**

ENGR181	Material Properties and Processes	3
CPTR151	Computer Science I	3
MATH192	Calculus II (MATH191 or MATH195)	4
CHEM132	General Chemistry II	4
RELT100	God & Human Life	3
		<u>17</u>

**Sophomore**

ENGR185	Engineering Statics (MATH191) Physics for Scientists I	3
PHYS241	(MATH192, Co: PHYS271) Phys For Sci Lab 1	4
PHYS271	(Co: PHYS241)	1
MATH240	Calculus III (MATH192)	4
CHEM231	Organic Chemistry I (CHEM132) 8:30-9:20 MWRF	4
		<u>16</u>

ENGR225	Circuit Analysis (MATH191) Engineering Dynamics	3
ENGR285	(ENGR185, PHYS241 , and MATH192)	3
MATH286	Differential equations (MATH192)	3
HLED135	Wellness	3
COMM104	Communication Skills	3
INEN221	Introduction to Innovation and	3
		<u>18</u>

**Junior**

ENGR275	Electronics I (ENGR225) Chemical Reaction Engineering	3
ENGR323*	(Chem 132 and MATH 286)	3
ENGR330	Thermodynamics (PHYS241)	3
ENGR365	Numerical Methods for Engineers	3
CHEM330	Quantitative Chemical Analysis (CHEM132)	4
		<u>16</u>

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

**Senior**

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

ENGR440	Heat & Mass Transfer Senior Design Project	3
ENGR492	(ENGR491)	3
REL	Religion (RELB, RELG, RELT)	3
GEN ED	Arts/humanities	3
GEN ED	Social Sciences	3
REL	Religion	3
		<u>18</u>

Offered every other year\*

Suggested 4-year course outline per Bulletin 2024-2025

**Total Credits for Graduation**

**132**