Chemical Engineering Concentration Outline

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

MPE = P5

Some general education courses may be taken during the summers

Fall Semester			**Spring Semester**		
Freshman					
ENGR120	Intro to Engineering & Design	2	ENGR181	Material Properties and Processes	3
ENGR125	Engineering Graphics	3	CPTR151	Computer Science I	3
MATH191	Calculus I (P5, or MATH167 or MATH168)	4	MATH192	Calculus II (MATH191 or MATH195)	4
CHEM131	General Chemistry I (P3, MATH165 , MATH166 , MATH168, or MAT	4	CHEM132	General Chemistry II (CHEM131)	4
ENGL115	College Writing I	3	RELT100	God & Human Life	3
		16			17
Sophomore					
ENGR185	Engineering Statics (MATH191) 8:30 MWF	3	ENGR225	Circuit Analysis (MATH191)	3
PHYS241	Physics for Scientists I 10:30 M-F (MATH192, Co: PHYS271)	4	ENGR285	Engineering Dynamics (ENGR185, PHYS241 , and MATH192)	3
PHYS271	Phys For Sci Lab 1 M 15:30 (Co: PHYS241)	1	MATH286	Differential equations (MATH192)	3
ENGR365	Numerical Methods for Engineers 14:00-15:15 MW	3	HLED135	Wellness	3
			COMM104	Communication Skills	3
CHEM330	Quantitative Chemical Analysis 9:30 TR, 13:30-17:20 TR (CHEM132	4	INEN221	Introduction to Innovation and Entrepreneurship	3
		16			18
Junior					
ENGR275	Electronics I (ENGR225)	3	ENGR310	Linear Systems Analysis (MATH215, MATH286, CPTR151)	3
ENGR323*	Chemical Reaction Engineering 15:30-16:45 MW (Chem 132 and MATH 286)	3	ENGR355	ChemE Lab (CHEM330)	3
ENGR330	Thermodynamics 12:30-13:45 MW (PHYS241)	3	ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
HIST110	Worldviews, Cultures, 9:30 or 11:30 MWF and God	3	ENGR382*	Seperation Processes(ENGR 323, ENGR 330)	3
CHEM231	Organic Chemistry I (CHEM132) 8:30-9:20 MWRF	3			
CHEM241	Organic Chemistry Lab	1	ENGL215	College Writing II (ENGL 115 or ENGL 117)	3
		16			15
Senior					
ENGR410	Feedback Control Systems (ENGR275, ENGR285, ENGR310)	4	ENGR440	Heat & Mass Transfer (ENGR360, MATH286)	3
ENGR491	Review of Engineering Design(ENGR355, 385 or 390)	1	ENGR492	Senior Design Project (ENGR491)	3
GEN ED	Social Sciences	3	REL	Religion (RELB, RELG, RELT)	3
ENGR480*	Process Design (ENGR323)	3	GEN ED	Arts/humanities	3
REL	Religion (RELB,RELG,RELT)	3	ENGR450	Engineering Economy (MATH191)	2
MATH240	Calculus III (MATH192)	4	REL	Religion	3
		18			17

Offered every other year*

Suggested 4-year course outline per Bulletin 2024-2025

Total Credits for Graduation **133**