Chemical Engineering Concentration Outline

Fall Semester

Freshman

ENGR120	Intro to Engineering & Design	2
ENGR125	Engineering Graphics	3
Math191	Calculus I (P5, or MATH167 or MA	4
CHEM131	General Chemistry I (P3, MATH165 , MATH166 , MATH168, or MATH191 , MATH195)	4
HLED120/FT	Fit for Life/Fitness Activity	1
ENGL115	College Writing I	3
		17

Sophomore

ENGR225	Circuit Analysis (MATH191)	3
PHYS241	Physics for Scientists I (MATH192, Co: PHYS271)	5
MATH240	Calculus III (MATH192)	4
CHEM231	Organic Chemistry I (CHEM132)	4
FTES	Physical Fitness Activity	1
		17

Junior

CPTR151	Computer Science I	3
CHEM200	Quantitative Analysis (CHEM132)	4
CHEM431	Physical Chem I (Choose one: Set	3
ENGR464*	**Kinetics & Reactor Design** (ENGR345)	3
Gen ED	History	3
		16

Senior

ENGR491	Review of Engineering Design	1
ENGR450	Engineering Economy (MATH145 or MATH191)	2
ENGR410	Feedback Control Systems (ENGR275 ENGR285 ENGR310)	4

Spring Semester

ENGR180	Material Science (CHEM131)	4
MATH192	Calculus II (MATH191 or MATH195)	4
CHEM132	General Chemistry II (C- or better in CHEM131)	4
RELT100	God & Human Life	3
ENGR185	Engineering Statics (MATH191)	3
		18

ENGR285	Engineering Dynamics (ENGR185, PHYS241 , and MATH192)	3
MATH286	Differential equations (MATH192)	3
GEN ED	Religion (RELB,RELG,RELT)	3
COMM104	Communication Skills	3
ENGR485	Community Service	2
ENGR275	Electronics I (ENGR225)	3
		17

ENGR310	Linear Systems Analysis (MATH215, MATH286, CPTR151)	3
ENGR355	ChemE Lab (CHEM200)	4
ENGR345*	**ChemE Fundamentals** (MATH191, CHEM131)	3
ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
ENGL220/EN	Technical Writing/College Writing II (ENGL 115 or ENGL 117)	3
		16

Elective	ENGR Elective	3
ENGR492	Senior Design Project (ENGR385 or ENGR390)	3
ENGR440	Heat & Mass Transfer (ENGR360, MATH286)	3

ENGR480*	**Process Design** (ENGR464)	3	GEN ED	Arts/Humanities	3
GEN ED	Religion (RELB,RELG,RELT)	3	ENGR	ENGR Elective	6
GEN ED	Social Sciences	3	RELT340	Religion & Ethics in …	3
		16			18

Offered every other year*

Suggested 4-year course outline per Bulletin 2019-2020 **Total Credits for Graduation** **135**