

## Binary Program Course Requirements Case School of Engineering

### Chemical Engineering (DRAFT)

Courses equivalent to the following need to be taken prior to admission to Case School of Engineering for all degree programs

Subject Code	Course Number	Course Title	Semester Credit Hours
CHEM	105	Principles of Chemistry I	3
CHEM	106	Principles of Chemistry II	3
CHEM	113	Principles of Chemistry Lab	2
ENGR	131	Elementary Computer Programming	3
MATH	121	Calculus for Science & Engineering I	4
MATH	122	Calculus for Science & Engineering II	4
MATH	223	Calculus for Science & Engineering III	3
MATH	224	Elementary Differential Equations	3
PHYS	121	General Physics I	4
PHYS	122	General Physics II	4
		Humanities and Social Sciences	22
		(including college level writing proficiency)	0
		Physical Education (2 semesters)	0
			55

Other courses for the Chemical Engineering major to be taken prior to CSE enrollment

	Subject Code	Course Number	Course Title	Semester Credit Hours
*	CHEM	223	Introduction to Organic Chemistry I	3
*	CHEM	224	Introduction to Organic Chemistry II	3
*	CHEM	336	Physical Chemistry II	3
**	ENGR	225	Thermo Fluids Heat and Mass Tran	3
**	STAT	313	Statistics for Experimenters	3
**	ENGR	200	Statics and Strength Materials	3

\* required course

\*\* recommended course

Binary-Chemical Engineering students may choose from the following breadth areas:

Biochemical Engineering  
Biomedical Engineering  
Computing

Electrochemical Engineering  
Environmental Engineering  
Management / Entrepreneurship

Polymer Science  
Research

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**Chemical Engineering**

Fall Year 1

Subject Code	Course Number	Course Title	Hours per Week		Semester Credit Hours
			Class	Lab	
ECHE	260	Introduction to Chemical Systems	3	0	3
ENGR	225	Thermo Fluids Heat and Mass Tran	4	0	4
ECHE	360	Transport Phenomenon Chemical Systems	0	3	3
ECHE	151	Chemical Engineering at Case	3	0	3
			10	3	13

Spring Year 1

Subject Code	Course Number	Course Title	Hours per Week		Semester Credit Hours
			Class	Lab	
ECHE	363	Chemical Engineering	3	0	3
ECHE	361	Separation Process	3	0	3
ECHE	365	Measurements Laboratory	0	3	3
ENGL	398N	Professional Communication	3	0	3
ECHE	364	Chemical Reaction Processes	3	0	3
			12	3	15

Fall Year 2

Subject Code	Course Number	Course Title	Hours per Week		Semester Credit Hours
			Class	Lab	
ECHE	398	Process Analysis and Design	3	0	3
ECHE	362	Chemical Engineering Lab	0	4	4
ENGR	210	Intro to Circuits and Instruments	4	0	4
ECHE	367	Process Control	4	0	4
		Technical Elective in related breadth area	3	0	3
			12	4	18

Spring Year 2

Subject Code	Course Number	Course Title	Hours per Week		Semester Credit Hours
			Class	Lab	
ECHE	399	Chemical Engineering. Design Project	3	0	3
STAT	313	Statistics for Experimenters	3	0	3
		Technical Elective in related breadth area	3	0	3
		Technical Elective in related breadth area	3	0	3
			12	0	12