CHEMICAL ENGINEERING

Plan of Study

Below is a sample plan of study that illustrates one way to achieve the program requirements. Any given student's plan of study may differ based on a variety of factors (e.g., advanced credit, placement exams, adding a minor). Enrolled students will work with their academic advisor; utilize the degree audit/planner to create a specific plan of study.

Course	Title	Hours
Freshman		
Fall		
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Lab	1
RHIT 100	Foundations for Rose-Hulman Success	1
MA 111	Calculus I	5
HUM H190	First-Year Writing Seminar	4
CHE 101	Introduction to Chemical Engineering	2
	Hours	**16**
Winter		
CHEM 113	General Chemistry II	3
CHEM 113L	General Chemistry II Laboratory	1
MA 112	Calculus II	5
PH 111	Physics I	4
PH 111L	Physics I Lab	0
HSSA Elective		4
	Hours	**17**
Spring		
CHE 110	Excel for Chemical Engineers	2
CHEM 115	General Chemistry III	3
CHEM 115L	General Chemistry III Laboratory	1
MA 113	Calculus III	5
PH 112	Physics II	4
PH 112L	Physics II Lab	0
	Hours	**15**
Sophomore		
Fall		
CHE 201	Conservation Principles and Balances	4
CHEM 251	Organic Chemistry I	3
CHEM 251L	Organic Chemistry I Laboratory	1
MA 221	Matrix Algebra & Differential Equations I	4
HSSA Elective		4
	Hours	**16**
Winter		
CHE 202	Basic Chemical Process Calculations	4
CHEM 252	Organic Chemistry II	3
CHEM 252L	Organic Chemistry II Laboratory	1
MA 222	Matrix Algebra & Differential Equations II	4
HSSA Elective		4
	Hours	**16**
Spring		
CHE 301	Fluid Mechanics	4
CHE 303	Chemical Engineering Thermodynamics	4
MA 223	Engineering Statistics	4
HSSA Elective		4
	Hours	**16**
Junior		
Fall		
CHE 304	Multi-Component Thermodynamics	4
CHE 320	Fundamentals of Heat & Mass Transfer	4
CHE 315	Materials Science and Engineering	4
CHEM 225	Analytical Chemistry	3
CHEM 225L	Analytical Chemistry Laboratory	1
	Hours	**16**
Winter		
CHE 210	Programming for Chemical Engineers	2
CHE 321	Applications of Heat & Mass Transfer	4
CHEM 360	Introduction to Physical Chemistry for Engineers	4
CHE 340	Process Control	4
ENGL H290	Technical & Professional Communication	4
	Hours	**18**
Spring		
CHE 404	Reaction Engineering	4
CHE 409	Professional Practice	1
CHE 411	Chemical Engineering Laboratory I	3
Free Elective		2
Free Elective		4
	Hours	**14**
Senior		
Fall		
CHE 412	Chemical Engineering Laboratory II	4
CHE 416	Design I: Proc Econ & Equp Dsn	4
Free Elective		4
Elective (CHE)		4
	Hours	**16**
Winter		
CHE 413	Chemical Engineering Laboratory III	4
CHE 417	Design II: Proc Synth & Analys	4
Free Elective		4
HSSA Elective		4
	Hours	**16**
Spring		
CHE 418	Chemical Engineering Design III: Capstone Design Project	2
HSSA Elective		4
HSSA Elective		4
Free Elective		4
Elective (CHE)		4
	Hours	**18**
	Total Hours	**194**