

Chemical Engineering

Northwest Missouri State University				University of Missouri-Rolla				
Semester	NMSU #	Title	Hours	UMR #	Title	Hours	Hours	
First	MATH 120	Calculus I	4	MATH 014	Calculus w/Analytic Geometry I	4		
	CHEM 114	General Chemistry I	3	CHEM 001	General Chemistry	4		
	CHEM 115	General Chemistry I Lab	1	CHEM 002	General Chemistry Lab	1		
	CS 130	Using Computers*	3	CS 072	Software Application on the PC*	3		
	ENGL 111	Composition	3	ENG 020	Exposition and Argumentation	3		
	Total Semester Hours			14	Total Semester Hours			15
Second	MATH 121	Calculus II	4	MATH 015	Calculus w/Analytic Geometry II	4		
	CHEM 116	General Chemistry II	3	CHEM 003	General Chemistry	3		
	CHEM 117	General Chemistry II Lab	1	CHEM 008	Qualitative Analysis	2		
	HIST 155	America - A Historical Survey	3	HIST 175	U.S. History to 1877	3		
	ECON 151 or ECON 150	General Economics II or General Economics I	3	ECON 121 or ECON 122	Principles of Microeconomics or Principles of Macroeconomics	3		
	ENGL 112 or ENGL 315 or SPCH 102	Composition or Technical Writing or Fundamentals of Oral Communication	3	ENG 060 or ENG 160 or SPMS 085	Writing and Research or Technical Writing or Principles of Speech	3		
	Total Semester Hours			17	Total Semester Hours			18
	Third	MATH 321	Multivariate Calculus	4	MATH 022	Calculus w/Analytic Geometry III	4	
PHYS 120 and PHYS 121		Fundamentals of Classical Physics I (4) and Lab (1)	5	PHYS 023	Engineering Physics I	4		
PHYS 322**		Statics	3	IDE 050**	Engineering Mechanics - Statics	3		
CS 149		FORTRAN Programming	3	CS 073 and CS 077	Basic Scientific Programming (2) and Lab (1)	3		
Total Semester Hours			15	Total Semester Hours			14	
Fourth	MATH 361	Differential Equations	3	MATH 204	Elementary Differential Equations	3		
	PHYS 230 and PHYS 231	Fundamentals of Classical Physics II (4) and Lab (1)	5	PHYS 024	Engineering Physics II	4		
	CHEM 342	Organic Chemistry	3	CHEM 221	Organic Chemistry I	3		
	CHEM 343	Organic Chemistry Lab	2	CHEM 222	Organic Chemistry I Lab	1		
		Humanities Elective	3		Humanities Elective	3		
Total Semester Hours			16	Total Semester Hours			14	

This is a guide; with the consent of your advisor you may choose to vary the sequence or combination of some courses in a manner appropriate to individual course requirements and prerequisites.

A grade of "C" or better is required in calculus and physics.

*Will not count toward degree; credit and grade will transfer.

**Will apply to UMR Chemical Engineering degree as Free Elective.