

Chemical Engineering

Southwestern Illinois College					University of Missouri-Rolla			
Semester	SWIC #	Title	Hours	Grade	UMR #	Title	Hours	
First	MATH 203	Analytic Geometry & Calculus I	5		MATH 014	Calculus w/Analytic Geometry I	4	
	CHEM 105	Inorganic Chemistry I	5		CHEM 001, 002	General Chemistry and Lab	5	
		Pending Evaluation			IDE 020	Engineering Design with Computer Application	3	
	ENG 101	Rhetoric & Composition I	3		ENG 020	Exposition & Argumentation	3	
Total Semester Hours			13		Total Semester Hours			15
Second	MATH 204	Analytic Geometry & Calculus II	5		MATH 015	Calculus w/Analytic Geometry II	4	
	CHEM 106	Inorganic Chemistry II	5		CHEM 003, 008	General Chemistry and Quantitative Analysis	5	
	PHYS 204**	Engineering Physics (Mechanics)	4		GNCR**	General Credit	4	
	POLS 150	Intro to American Government	3		POL SC 090	American Government	3	
Total Semester Hours			17		Total Semester Hours			16
Third	MATH 205	Analytic Geometry & Calculus III	4		MATH 022	Calculus w/Analytic Geometry III	4	
	PHYS 205**	Engineering Physics (Heat, Electricity, and Magnetism)	4		PHYS 023**	Engineering Physics I	4	
		PHYS 263**	Analytical Mechanics - Statics	3		IDE 050**	Engineering Mechanics - Statics	3
	CIS 250 or	C++ Programming I or	3		CS 74,78 or	Intro to Programming Methodology and Lab (3) or	3	
	CIS 260	Advanced C++ Programming II	3		CS 53, 54	Intro to Programming and Lab (4)	3	
	ENG 102 or	Rhetoric & Composition II or	3		ENG 060 or SPMS	Writing & Research or	3	
SPCH 151	Fundamentals of Public Speaking	3		085	Principles of Speech	3		
Total Semester Hours			17		Total Semester Hours			17
Fourth	MATH 290	Differential Equations	3		MATH 204	Elementary Differential Equations	3	
	PHYS 206	Engineering Physics (Wave, et al)	4		PHYS 024	Engineering Physics II	4	
	CHEM 253***	Quantitative Analysis	5		CHEM 051, 052***	Elementary Quantitative Analysis and Lab	4	
	ECON 201 or	Principles of Economics I (Macro) or	3		ECON 122 or	Principles of Macroeconomics or	3	
	ECON 202	Principles of Economics II (Micro)	3		ECON 121	Principles of Microeconomics	3	
Total Semester Hours			15		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.

*Either PHY 263 (UMR IDE 050) OR GE 271 (UMR EE 281) will apply to UMR Chemical Engineering degree as a Free Elective.

**The combination of SWIC PHYS 204 & 205 is equivalent to UMR PHYS 023.

***Will apply to UMR Chemical Engineering degree as an Advanced Chemistry Elective.