

## Chemical Engineering

Semester	Truman State University				University of Missouri-Rolla		
	TS #	Title	Hours	Grade	UMR #	Title	Hours
First	MATH 198	Analytic Geometry & Calculus I	5		MATH 014	Calculus w/Analytic Geometry I	4
	CHEM 120	General Chemistry I	4		CHEM 001,002	General Chemistry (4) and Lab (1)	5
	ENG 190	Writing Critical Thinking	3		ENG 020	Exposition & Argumentation	3
	HIST 104	U.S. History I, 1607 - 1877	3		HIST 175	U.S. History to 1877	3
	Total Semester Hours			15	Total Semester Hours		
Second	MATH 263	Analytic Geometry & Calculus II	5		MATH 015	Calculus w/Analytic Geometry II	4
	PAYS 195	Physics w/Calculus I	5		PHYS 023	Engineering Physics I	4
	CHEM 121	General Chemistry II	4		CHEM 003,008	General Chemistry (3) and Qualitative Analysis	5
		Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
	Total Semester Hours			17	Total Semester Hours		
Third	MATH 264	Analytic Geometry & Calculus III	3		MATH 022	Calculus w/Analytic Geometry III	3
	PHYS 196	Physics w/Calculus II	5		PHYS 024	Engineering Physics II	4
	PHYS 387	Statics**	3		IDE 050	Engineering Mechanics - Statics**	3
	PHYS 208	Design & Drafting	2		IDE 020	Engineering Design w/Computer Applications	3
	CS 180	Foundations of Computer Science	3		CS 053	Introduction to Programming	3
	Total Semester Hours			16	Total Semester Hours		
Fourth	MATH 365	Ordinary Differential Equations	3		MATH 204	Elementary Differential Equations	3
	CHEM 222	Intro to Quantitative Analysis	4		CHEM 051,052	Elementary Quantitative Chemical Analysis and Lab	4
	ENG 314 or	English Composition II or			ENG 060 or	Writing and Research or	
	ENG 212 or	Technical Writing or	3		ENG 160 or	Technical Writing or	3
	COMM 170	Fundamentals of Speech			SPMS 085	Principles of Speech	
	ECON 201 or	Principles of Microeconomics or	3		ECON 121 or	Principles of Microeconomics or	3
	ECON 200	Principles of Macroeconomics			ECON 122	Principles of Macroeconomics	
		Humanities/Social Science Elective	3			Humanities/Social Science Elective	3
Total Semester Hours			16	Total Semester Hours			16

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 PHYS 387 (UMR BE 050) OR PHYS 383 (UMR EE 281) will apply to the UMR Chemical Engineering degree as a Free Elective.