

**Chemical Engineering Program 2009/2011 (131 Hours)**

Offered:  
F=Fall  
S=Spring  
M=Summer

Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or with Concurrency	Prerequisites	Offered:		
<b>English - 6 hours</b>									
		EH 101	3	Freshman Composition I	Placement		FSM		
		EH 102	3	Freshman Composition II	EH 101		FSM		
<b>Mathematics - 15 hours</b>									
		MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement		FSM		
		MA 172	4	Calculus B	MA 171		FSM		
		MA 201	4	Calculus C	MA 172		FSM		
		MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201		FSM		
**	<b>Class has required recitation section</b>								
<b>Chemistry - 15 hours</b>									
		CH 121	3	General Chemistry I	CH 101 or Plcmt, MA 112, Prereq w/Con: MA 113 or 115, Coreq: CH 125		FSM		
		CH 125	1	General Chemistry Lab I	Coreq: CH 121		FSM		
		CH 123	3	General Chemistry II	CH 121, Coreq: CH 126		FSM		
		CH 126	1	General Chemistry Lab II	Coreq: CH 123		FSM		
**		CH 331	3	Organic Chemistry I	CH 123, CH 126, Coreq: CH 331R		FSM		
**		CH 335	1	Organic Chemistry Lab I	Prereq w/Con: CH 331		FSM		
**		CH 332	3	Organic Chemistry II	CH 331, Coreq: CH 332R		FSM		
<b>Biology - 3 hours</b>									
		BYS 201	3	Intro to Molecular Biological Systems	CH 123		S		
<b>Physics - 8 hours</b>									
		PH 111	3	General Physics w/Calculus I	MA 171		FSM		
		PH 114	1	General Physics Lab I	Prereq w/Con: PH 111		FSM		
		PH 112	3	General Physics w/Calculus II	MA 172, PH 111		FSM		
		PH 115	1	General Physics Lab II	Prereq w/Con: PH 112		FSM		
<b>History, Social &amp; Behavioral Sciences - 9 hours</b>									
		HY	3	History	Must take a six hour sequence in a discipline.		FSM		
			3		See Humanities & Fine Arts List at		FSM		
			3		<a href="http://www.uah.edu/engineering/StudentAffairs/forms.php">http://www.uah.edu/engineering/StudentAffairs/forms.php</a> .		FSM		
<b>Humanities &amp; Fine Arts - 9 hours</b>									
		EH	3	Literature	See History, Social & Behavioral Sciences list at		FSM		
			3	Fine Arts	<a href="http://www.uah.edu/engineering/StudentAffairs/forms.php">http://www.uah.edu/engineering/StudentAffairs/forms.php</a> .		FSM		
		PHL 202	3	Introduction to Ethics			FSM		
<b>Engineering Core - 12 hours</b>									
		CHE 197	3	Computer Methods for Chemical Engineers	Level II Math Placement or Coreq: MA 112		F		
		CHE 244	3	Intro to Chemical Engineering Systems	CH 123, CHE 197, PH 111		S		
		CHE 294	3	Nature & Properties of Materials	CH 123, MA 201, PH 112		FM		
		CHE 344	3	Chemical Engineering Thermodynamics	CHE 244, CH 341		SM		
<b>Chemical Engineering Option - 54 hours</b>									
		MAE 271	3	Statics	PH 111, Prereq w/Con: MA 201		FSM		
		EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244 or MAE 285)		FSM		
		ISE 321	3	Engineering Economy	MA 172, Sophomore Standing		FSM		
		CHE 295	1	Nature & Properties of Materials Lab	Prereq w/Con: CHE 294		FM		
		CH 341	3	Physical Chemistry I	CH 123, MA 201, PH 112		F		
		CHE 347	3	Quantitative Modeling for Chemical Engrs	CHE 244, MA 238		SM		
		MAE 310	3	Fluid Mechanics I	MA 238, MAE/CE 271 & (MAE 285 or CPE 112 or CHE 197)		FSM		
		CHE 439	2	Unit Operations Lab I	BYS 201, Prereq w/Con: CHE 441, CHE 443, CHE 446		F		
		CHE 440	2	Unit Operations Lab II	CHE 439, CHE 441, CHE 443		S		
		CHE 441	3	Chemical Kinetics & Reactor Design	CHE 344, CHE 347		F		
		CHE 342	3	Transport Phenomena	CHE 244, Prereq w/Con: MAE 310		S		
		CHE 443	3	Mass Transfer Operations	CHE 342, CHE 344, MAE 310		F		
		CHE 445	3	Chemical Process Control	CHE 347, CHE 441		S		
		CHE 446	3	Analysis & Design of Transport Equipment	MAE 310, Prereq w/Con: CHE 443		F		
		CHE 448	3	Chemical Engineering Design	CHE 441, CHE 443, CHE 446, Prereq w/Con: CHE 445		S		
Select One Concentration	Biotechnology			CH 361	3	General Biochemistry I	BYS 201, CH 332, CH 335	FSM	
				CH 362	1	General Biochemistry Lab I	Prereq w/Con: CH 361	FSM	
				CH 363	3	General Biochemistry II	CH 361	S	
				CHE 460	3	Introduction to Bioprocess Engineering	CH 362, CH 363	F	
				CHE 461	3	Bioseparations	CH 362, CH 363, CHE 460	S	
	Materials Eng				CH 342	3	Physical Chemistry II	CH 341	S
					CH 346	1	Experimental Physical Chemistry II	CHE 295, Prereq w/Con: CH 342	S
					CH 440	3	Polymer Synthesis & Characterization	CH 331	F
					CHE 494	3	Applied Materials Engineering	CHE 294, CH 342 or CH 348	S
					CHE 495	3	Polymer Engineering	CH 341, CH 440	F

All prerequisite classes must be completed with a "C" or higher grade.  
The Catalog is the final authority for all degree requirements.

Updated  
May 4, 2009

**ENGINEERING**  
**APPROVALS:**

Advisor	Date	Department Chair	Date	Dean of Engineering	Date
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