

CHEMICAL ENGINEERING

CODE: 4170 (140701-01)

2009-2011 Catalog

Bachelor of Science In Chemical Engineering

Students with ACT score of 28 or above in mathematics and with at least 8 weeks of trigonometry in high school may register for Mathematics 270, Calculus I, upon entry. Students with ACT scores between 25-27 may take the advanced placement test given by the math department. Those who do not meet these qualifications must take Mathematics 109, Algebra, and Mathematics 110, Trigonometry, and are advised to complete these courses in the summer semester prior to the freshman year.

First Semester		Credit	Second Semester		Credit		
Freshman Year							
CHEE	101	Intro to Chemical Engr	1	CHEM	108	General Chemistry II*	3
CHEM	107	General Chemistry I*	3	CHEM	115	Gen Lab	2
ENGL	101	Rhet and Comp*	3	ENGL	102	Comp and Lit*	3
MATH	270	Calculus I*	4	MATH	301	Calculus II*	4
		Elective (BIOL) ^{1,2}	3	PHYS	201	General Physics I	4
		Elective (HIST) ¹	3				
			17				16
Sophomore Year							
CHEE	201	Chem Engr Calc*	4	CHEM	231	Organic Chemistry I	3
CHEM	221	Analytical Chemistry ²	3	ENGR	210	Engr Analysis	2
ENGR	218	Statics & Mechanics	3	ENGR	301	Thermodynamics*	3
MATH	302	Calculus III	4	MATH	350	Diff Equations	3
		Elective (LIT) ¹	3			Elective (BHSC) ¹	3
						Elective (ARTS) ¹	3
			17				17
Junior Year							
CHEE	317	Materials of Engr	3	CHEE	302	Transfer Operations	3
ECON	430	Economics of Industrial Projects	3	CHEE	310	Chem Engr Thermo	3
ENGR	201	Electrical Circuits ²	3	CHEM	302	Physical Chemistry II	3
ENGR	305	Transport Phenomena	3	CHEE	405	Process Heat Transfer	3
CMCN	310	Public Speaking	3	CHEE	427	Advanced Materials	3
CHEM	233	Organic Chem Lab	1				
			16				15
Senior Year							
CHEE	400	Process Simulation	3	CHEE	404	Chem Engr Lab II	2
CHEE	401	Stage Operations Design	3	CHEE	408	Comp-Aided Proc Design	3
CHEE	403	Chem Engr Lab I	2	CHEE	413	Proc Control in CHEE	3
CHEE	407	Chem Engr Plant Design	3	CHEM	402	Chemistry of Materials ²	3
CHEE	420	Chem Reaction Engr	3	PHIL	316	Professional Ethics	3
						Elective (CHEE) ^{2,3}	3
			14				17

*Requires grade of C or better.

¹ Must be chosen from the College of Engineering approved list.

² Biology Emphasis: May be elected and requires the following course sequence:

BIOL 110 and 112 as Elective (BIOL)

BIOL111 & 113-substituted for ENGR 201

PHYS 215 and CHEM 234 substituted for CHEM 221

CHEM 232—Organic II as Elective (CHEE)

CHEM 317-substituted for CHEM 402

³ Requires permission of Department

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Biology Emphasis

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Freshman Year							
CHEE	101	Intro to Chemical Engr	1	CHEM	108	General Chemistry II*.....	3
CHEM	107	General Chemistry I*.....	3	CHEM	115	Gen Lab.....	2
ENGL	101	Rhet and Comp*.....	3	ENGL	102	Comp and Lit*.....	3
MATH	270	Calculus I*.....	4	MATH	301	Calculus II*.....	4
BIOL	110	Prin. of Biology I.....	3	PHYS	201	General Physics I.....	4
		Elective (HIST) ¹	3	BIOL	112	Prin. of Biology I Lab	1
			17				17
Sophomore Year							
CHEE	201	Chem Engr Calc*.....	4	CHEM	232	Organic Chemistry II.....	3
CHEM	231	Organic Chemistry I.....	3	ENGR	210	Engr Analysis.....	2
ENGR	218	Statics & Mechanics.....	3	ENGR	301	Thermodynamics*.....	3
MATH	302	Calculus III.....	4	MATH	350	Diff Equations.....	3
		Elective (LIT) ¹	3	PHYS	215	Physics Lab I.....	1
			17				15
Junior Year							
CHEE	317	Materials of Engr.....	3	CHEE	302	Transfer Operations.....	3
ECON	430	Economics of Industrial Projects....	3	CHEE	310	Chem Engr Thermo.....	3
ENGR	305	Transport Phenomena.....	3	CHEM	302	Physical Chemistry II.....	3
CMCN	310	Public Speaking.....	3	CHEE	405	Process Heat Transfer.....	3
CHEM	233	Organic Chem Lab I.....	1	CHEE	427	Advanced Materials.....	3
BIOL	111	Prin. of Biology II.....	3				
BIOL	113	Prin. of Biology II Lab.....	1				
			17				15
Senior Year							
CHEE	400	Process Simulation.....	3	CHEE	404	Chem Engr Lab II.....	2
CHEE	401	Stage Operations Design.....	3	CHEE	408	Comp-Aided Proc Design.....	3
CHEE	403	Chem Engr Lab I.....	2	CHEE	413	Proc Control in CHEE.....	3
CHEE	407	Chem Engr Plant Design.....	3	CHEM	234	Organic Chem Lab II.....	2
CHEE	420	Chem Reaction Engr.....	3	PHIL	316	Professional Ethics.....	3
CHEM	317	Biochemistry.....	3			Elective (BHSC) ¹	3
			17				16

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