

CHEMICAL ENGINEERING

Courses highlighted are available at Newberry College
Curriculum Example*

FRESHMAN YEAR

_____ 4 CH 1010 General Chemistry
_____ 3 ENGL 1030 Accelerated Composition
_____ 2 ENGR 1020 Engineering Discipline and Skills⁴
_____ 4 MATH 1060 Calculus of One Variable I
_____ 3 Gen Ed¹
16

_____ 4 CH 1020 General Chemistry
_____ 3 CHE 1300 Intro to Chemical Engineering
_____ 4 MATH 1080 Calculus of One Variable II
_____ 3 PHYS 1220 Physics with Calculus I
_____ 3 Gen Ed¹
17

SOPHOMORE YEAR

_____ 5 BIOL 1100 Principles of Biology I
_____ 3 CH 2230 Organic Chemistry
_____ 4 CHE 2110 Mass and Energy Balances
_____ 4 MATH 2060 Calculus of Several Variables
_____ 3 Gen Ed¹
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_____ 3 CH 2240 Organic Chemistry
_____ 1 CH 2290 Organic Chemistry Lab.
_____ 3 CHE 2200 Chemical Engr. Thermodynamics I
_____ 4 CHE 2300 Fluids/Heat Transfer
_____ 4 MATH 2080 Int. to Ordinary Differential Eqtns
15

JUNIOR YEAR

_____ 3 CHE 3210 Chemical Engr. Thermodynamics II
_____ 4 CHE 3300 Mass Transfer and Separation Proc.
_____ 3 PHYS 2210 Physics with Calculus II
_____ 3 STAT 4110 Statistical Methods for Process Dev. and Control
_____ 3 Biochemistry Requirement²
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_____ 3 BIOE 3020 Biomaterials
_____ 2 BIOL 4340 Biological Chem. Lab. Techniques
_____ 3 BMOL 4250 Biomolecular Engineering
_____ 3 CHE 3070 Unit Operations Lab. I
_____ 3 CHE 3190 Engineering Materials
_____ 3 Gen Ed¹
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SENIOR YEAR

_____ 3 BCHM 4310 Physical Approach to Biochem.
_____ 3 CHE 4070 Unit Operations Lab. II
_____ 3 CHE 4310 Chemical Process Design I
_____ 2 CHE 4430 Safety, Environ & Prof. Practice I
_____ 3 CHE 4500 Chemical Reaction Engineering
_____ 3 Gen Ed¹
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_____ 3 BMOL 4290 Bioprocess Engineering
_____ 3 CHE 3530 Process Dynamics and Control
_____ 3 CHE 4330 Process Design II
_____ 1 CHE 4440 Safety, Environ & Prof. Practice II
_____ 3 Gen Ed¹
_____ 3 Engineering Requirement³
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133 Total Semester Hours

All Clemson engineering students begin in our General Engineering program and move into their specified major once the departmental standards are completed. Clemson courses ENGL 1030, MATH 1060 and 1080, PHYS 1220, CH 1010, ENGR 1020 and ENGR 1410/or CHE 1300 must all be completed with a "C" or higher before declaring and starting courses in your engineering major.

Footnotes:

¹ See Policy on Humanities and Social Sciences for Engineering Curricula. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements.

² Select from BCHM 3010, BCHM 3050, BCHM 4230 or CH 3600

³ Select from BE 4280, BE 4350, BIOE 4400, BIOE 4490, BIOE 4760, BMOL 4030, BMOL 4270, CHE 4010 or MICR 4130

⁴ ENGR 1050 and ENGR 1060 may be substituted for ENGR 1020

- CHE 1300 is only taught in the Spring and Summer.

- CHE 2000 level classes are taught ONCE per year and NOT in the summer.

*See catalog for current curriculum at catalog.clemson.edu

General Education Requirements						
LIT	Non-Lit	SS1	SS2		CCA	STS
Other						
LIFE	Palmetto Fellows	Honors	Athlete	RiSE	ROTC	Med School

Comments: