

Chemical Engineering B.S.Ch.E.

Chemical Engineering B.S.Ch.E. Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Chemical Engineering degree. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy (<http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy/>) in the Academic Regulations chapter for university requirements of the program. Entering freshmen will be required to participate in selected Freshman Engineering Student Services.

First Year	Units	
	Fall	Spring
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) ¹	4	
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	3	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
GNEG 1111 Introduction to Engineering I	1	
Fine Arts Core Elective (satisfies General Education Outcome 3.1) ²	3	
Select one of the following to satisfy General Education Outcome 4.2:		
HIST 2003 History of the American People to 1877 (ACTS Equivalency = HIST 2113) or HIST 2013 History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123) or PLSC 2003 American National Government (ACTS Equivalency = PLSC 2003)	3	
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
CHEM 1123 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture)		3
CHEM 1121L University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)		1
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)		3
GNEG 1121 Introduction to Engineering II		1
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) (Satisfies General Education Outcome 3.4)		4
Year Total:	17	16

Second Year	Units	
	Fall	Spring
MATH 2584 Elementary Differential Equations	4	
CHEM 3603 Organic Chemistry I	3	
CHEM 3601L Organic Chemistry I Laboratory	1	
CHEG 2113 Introduction to Chemical Engineering I	3	
PHYS 2074 University Physics II (ACTS Equivalency = PHYS 2044 Lecture) (Satisfies General Education Outcome 3.4)	4	
MATH 2574 Calculus III (ACTS Equivalency = MATH 2603)		4
CHEM 3613 Organic Chemistry II		3
CHEM 3611L Organic Chemistry II Laboratory		1
CHEG 2133 Fluid Mechanics or CHEG 2133H Honors Fluid Mechanics		3
CHEG 2313 Thermodynamics of Single-Component Systems or CHEG 2313H Honors Thermodynamics of Single-Component Systems		3
Social Sciences State Minimum Core Elective (Satisfies General Education Outcomes 3.3 and 4.1) ³		3
Year Total:	15	17

Third Year	Units	
	Fall	Spring
CHEM 3813 Elements of Biochemistry or CHEM 4813H Honors Biochemistry I	3	
CHEG 3144 Heat and Mass Transfer	4	
CHEG 3323 Thermodynamics of Multi-Component Systems or CHEG 3323H Honors Thermodynamics of Multi-Component Systems	3	
Select one of the following to satisfy General Education Outcome 3.3:		
ECON 2143 Basic Economics: Theory and Practice or ECON 2013 Principles of Macroeconomics (ACTS Equivalency = ECON 2103)	3	
Humanities State Minimum Core Elective (Satisfies General Education Outcomes 3.2 and 5.1) ⁴	3	
CHEG 3713 Chemical Engineering Materials Technology		3
CHEG 3333 Chemical Engineering Reactor Design or CHEG 3333H Honors Chemical Engineering Reactor Design		3
CHEG 3253 Chemical Engineering Computer Methods		3
CHEG 3233L Chemical Engineering Laboratory I		3
Social Sciences State Minimum Core Elective (Satisfies General Education Outcome 3.3) ⁵		3
Technical Elective		3
Year Total:	16	18

Fourth Year	Units	
	Fall	Spring
CHEG 4163 Separation Processes or CHEG 4163H Honors Separation Processes	3	
CHEG 4413 Chemical Engineering Design I or CHEG 4413H Honors Chemical Engineering Design I	3	
CHEG 4813 Chemical Process Safety or CHEG 4813H Honors Chemical Process Safety	3	
Advanced Science Elective	3	
Technical Elective	3	
CHEG 4332L Chemical Engineering Laboratory II		2
CHEG 4423 Automatic Process Control or CHEG 4423H Honors Automatic Process Control		3
Satisfies General Education Outcome 6.1:		
CHEG 4443 Chemical Engineering Design II or CHEG 4443H Honors Chemical Engineering Design II		3
Advanced Science or Chemical Engineering Elective		3
Chemical Engineering Elective		3
Year Total:	15	14
Total Units in Sequence:		128

¹ Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 2554.

² The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include: ARCH 1003, ARHS 1003, COMM 1003, DANC 1003, LARC 1003, MLIT 1003, MLIT 1003H, MLIT 1013, MLIT 1013H, MLIT 1333, THTR 1003, THTR 1013, or THTR 1013H.

³ The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 4.1 include: ANTH 1023, COMM 1023, HDFS 1403, HDFS 2413, HIST 1113, HIST 1123, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2813, INST 2813H, PLSC 2013, PLSC 2813, PLSC 2813H, RESM 2853, SOCI 2013, SOCI 2013H, or SOCI 2033.

⁴ The Humanities Elective courses which satisfy General Education Outcomes 3.2 and 5.1 include: CLST 1003, CLST 1003H, CLST 1013, HUMN 1124H, PHIL 2003, PHIL 2003C, PHIL 2003H, PHIL 2103, or PHIL 2103C.

⁵ The Social Sciences Elective courses which satisfy General Education Outcome 3.3 include: AGECE 1103, AGECE 2103, ANTH 1023, COMM 1023, ECON 2013, ECON 2023, ECON 2143, EDST 2003, HDFS 1403, HDFS 2413, HDFS 2603, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2003, HIST 2013, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2813, INST 2813H, PLSC 2003, PLSC 2013, PLSC 2203, PLSC 2813, PLSC 2813H, PSYC 2003, RESM 2853, SOCI 2013, SOCI 2013H, SOCI 2033. Note, courses cannot be counted twice in degree requirements.