

Biomedical Engineering B.S.Bm.E.

Biomedical Engineering B.S.Bm.E. Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Biomedical Engineering degree and a suggested sequence for students who enter the College through the Freshman Engineering Program. 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.

First Year	Units	
	Fall	Spring
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013)	3	
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405)	4	
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) (with lab)	4	
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	3	
GNEG 1111 Introduction to Engineering I	1	
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023)		3
Freshman Science Elective with lab*		4
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
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
GNEG 1121 Introduction to Engineering II		1
Year Total:	15	15

Second Year	Units	
	Fall	Spring
Sophomore Science Elective with lab**	4	
BMEG 2614 Introduction to Biomedical Engineering	4	
MATH 3083 Linear Algebra	3	
BIOL 1543 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture) & BIOL 1541L Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)	4	
BMEG 2813 Biomechanical Engineering		3
BMEG 2904 Biomedical Instrumentation (with Lab)		4
MATH 2584 Elementary Differential Equations		4

BIOL 2533 Cell Biology		3
Fine Arts Elective (from Univ/State Core List)		3
Year Total:	15	17

Third Year	Units	
	Fall	Spring
BMEG 3634 Biomaterials (with lab)	4	
BMEG 3124 Biomedical Signals and Systems (with lab)	4	
CHEG 2313 Thermodynamics of Single-Component Systems or MEEG 2403 Thermodynamics	3	
CHEM 3603 Organic Chemistry I & CHEM 3601L Organic Chemistry I Laboratory	4	
Social Science Elective (from Univ/State Core List)	3	
BMEG 3653 Biomedical Modeling and Numerical Methods		3
BMEG 3824 Biomolecular Engineering (with lab)		4
BMEG 3801 Clinical Observations and Needs Finding		1
CHEG 2133 Fluid Mechanics or MEEG 3503 Mechanics of Fluids		3
BIOL 2213 Human Physiology (ACTS Equivalency = BIOL 2414 Lecture) & BIOL 2211L Human Physiology Laboratory (ACTS Equivalency = BIOL 2414 Lab)		4
STAT 2023 Biostatistics		3
Year Total:	18	18

Fourth Year	Units	
	Fall	Spring
BMEG 4813 Biomedical Engineering Design I	3	
BMEG 4623 Biomedical Transport Phenomena	3	
BMEG Elective	3	
Science Elective	3	
Social Science Elective (from Univ/State Core List)	3	
BMEG 4823 Biomedical Engineering Design II		3
BMEG Elective		3
BMEG Elective		3
Social Science Elective (from Univ/State Core List)		3
Humanities Elective (from Univ/State Core List)		3
Year Total:	15	15

Total Units in Sequence: 128

* The Freshman Science Elective must be chosen from either CHEM 1123/CHEM 1121L or PHYS 2074.

** The Sophomore Science Elective must be either PHYS 2074 or CHEM 1123/CHEM 1121L. (Whichever was not chosen as the Freshman Engineering Science Elective).