

Bachelor of Science in Biomedical Engineering

2017-2018

Suggested Plan of Study – Freshman Admission

Course	CR	Course	Offered	Alt courses/Prerequisites and Corequisites
Term 1		<i>Fall</i>		
BME1008	1	Introduction to Biomedical Engineering	F, S	
BSC2010	3	Integrated Principles of Biology 1	F, S, Su	
BSC2010L	1	Integrated Principles of Biology 1 Lab	F, S, Su	Alt course: BSC2044L/ISC2400L (X-Lab 1)
CHM2045	3	General Chemistry	F, S, Su	Alt course: CHM2047/CHM2095
CHM2045L	1	General Chemistry Laboratory	F, S, Su	Alt course: CHM2047L/CHM2054L/ISC2400L (X-Lab 1)
IUF1000	3	What is the Good Life	F, S, Su	
MAC2311	4	Analytic Geometry and Calculus 1	F, S, Su	Alt course: Calculus AB or Calculus BC with a score of 3 or higher on AP exam
Term Credit	16			
Term 2		<i>Spring</i>		
CHM2046	3	General Chemistry 2	F, S, Su	Alt course: CHM2047/CHM2051/CHM2096
CHM2046L	1	General Chemistry 2 Lab	F, S, Su	Alt course: CHM2047L/CHM2054L/ISC2401L (X-Lab 2)
ENC1101	3	Expository and Argumentative Writing	F, S, Su	
MAC2312	4	Analytic Geometry and Calculus 2	F, S, Su	Prereq: MAC2311 or MAC3472 with min grade of C
PHY2048	3	Physics with Calculus 1	F, S, Su	Alt course: PHY2060
PHY2048L	1	Lab for Physics with Calculus 1	F, S, Su	Alt course: PHY2053L/PHY2064L/ISC2400L (X-Lab 1)
Term Credits	15			
Term 3		<i>Fall</i>		
CHM3217	4	Organic Chemistry/Biochemistry 1	F, S, Su	Alt course: CHM2210+CHM2211; Prereq: CHM2046, CHM2047 or CHM2051; CHM2046L or CHM2047L
COP2271	2	Computer Programming for Engineers (Matlab or C++)	F, S, Su	Alt course: COP3275/COP3502/others (with approval)
COP2271L	1	Computer Programming for Engineers Lab (same language)	F, S, Su	Alt course: COP3275/COP3502/others (with approval)
MAC2313	4	Analytic Geometry and Calculus 3	F, S, Su	Prereq: MAC2312, MAC2512 or MAC3473 with min grade of C
PHY2049	3	Physics with Calculus 2	F, S, Su	Alt course: PHY2061; Prereq: PHY2048
PHY2049L	1	Lab for Physics with Calculus 2	F, S, Su	Alt course: PHY2054L/PHY2064L/ISC2401L (X-Lab 2)
Term Credits	15			
Term 4		<i>Spring</i>		
EGM2511 or EMA3010	3	Engineering Mechanics: Statics (Biomechanics track prereq) Materials (Biomaterials track prereq)	F, S, Su	EGM2511 Prereq: PHY2048 EMA3010 Prereq: CHM2045
BME3060	3	Biomedical Fundamentals	F, S	Prereq: CHM2046 or CHM2096 and MAC2313 with min grades of C; Coreq: PHY2049, MAP 2302, and BME1008
EEL3111C	4	Circuits 1	F, S, Su	Prereq: MAC2312 and PHY2049
MAP2302	3	Elementary Differential Equations	F, S, Su	Prereq: MAC2312, MAC2512 or MAC3473 with min grade of C
PCB3713C	4	Cellular and Systems Physiology	S	Prereq: BSC2010 and CHM2046, CHM2047, or CHM2096 and PHY2048 or PHY2060, all with min grades of C; Coreq: PHY2049 or PHY2061
Term Credits	17			
Lower Div	63			

NOTE: BME is a limited access program. **Bold** courses are critical tracking and must be completed with a min 2.8 CT GPA, grade of C or better, no more than 2 attempts.

Course	CR	Course	Offered	Alt courses/Prerequisites and Corequisites
Term 5		<i>Fall</i>		
BME3053C	2	Computer Applications for BME	F, S	Prereq: COP2271 and COP2271L or equivalent and MAC2312, with min grades of C
BME4311	3	Molecular Biomedical Engineering	F, S	Prereq: BSC2010, CHM3217 or CHM2211, and PCB3713C with min grades of C
BME4409	3	Quantitative Physiology	F, S	Prereq: BME3060, PCB3713C, and MAP2302 with min grades of C
BME4503	3	Biomedical Instrumentation	F, S	Prereq: MAC2313, MAP2302, PHY2049, and EEL3111C with min grades of C
BME4503L	1	Biomedical Instrumentation Lab	F, S	Prereq: MAC2313, MAP2302, and PHY2049 with min grades of C
EGM2511 or EMA3010	3	Engineering Mechanics: Statics (Biomechanics track prereq) Materials (Biomaterials track prereq)	F, S, Su	EGM2511 Prereq: PHY2048 EMA3010 Prereq: CHM2045
Term Credits	15			
Term 6		<i>Spring</i>		
BME3323L	3	Cellular Engineering Lab	F, S	Prereq: PCB3713C or instructor permission; Coreq: BME4311 or instructor permission
BME4621	3	Biomedical Thermodynamics and Kinetics	S	Prereq: CHM3217 or CHM2210 and CHM2211 with min grades of C, BME3060 and BME4311
BME4632	3	Biomedical Transport Phenomena	F, S	Prereq: BME3060 with min grade of C
BME Track	3		Varies	
GenEd_S	3	State Core (Social and Behavioral Science)	F, S, Su	
STA3032	3	Engineering Statistics	F, S, Su	Prereq: MAC2311
Term Credits	18			
Term 7		<i>Fall</i>		
BME4531	3	Medical Imaging	F	Prereq: MAC2313, MAP2302, and PHY2049 with min grades of C
BME4882	3	Senior Design, Professionalism and Ethics 1	F	Prereq: BME4503, BME4503L, BME4409, and senior standing
BME Elective	3		F, S, Su	
BME Track	6		Varies	
ENC3246	3	Professional Communication for Engineers	F, S, Su	Prereq: ENC1101 or ENC1102
Term Credits	18			
Term 8		<i>Spring</i>		
BME4883	3	Senior Design, Professionalism and Ethics 2	S	Prereq: BME4503, BME4503L, and senior standing
BME Elective	3		F, S, Su	
BME Track	6		Varies	
GedEd_H	3	State Core (Humanities)	F, S, Su	
GenEd_S	3	State Core (Social and Behavioral Science)	F, S, Su	
Term Credits	18			
Upper Div	69			
BSBME	132			

BME Track: 15 credits of 3000/4000-level courses selected from approved lists (see BME website or advisor for options).