PURDUE UNIVERSITY

Biomedical Engineering

College of Engineering

Code-BME
130 Credits for Graduation
*** Courses used to calculate BME Major GPA**

Required Biomedical Engineering Courses (40 credits)

https://engineering.purdue.edu/BME/Academics/BMEUndergraduateProgram/AcademicDocuments/PlanofStudy

BME Courses (29 credits)*

______ (3) BME 20100 Biomolecules: Struct, Funct & Engr Apl
______ (1) BME 20500 Biomolec & Cellular Sys Lab Princip
______ (1) BME 29000 Frontiers in BME
______ (3) BME 20400 Biomechanics Hard/Soft Tissue
______ (1) BME 20600 Biomechanics and Biomaterial Lab
______ (3) BME 25600 Physiol Modeling Human Health
______ (3) BME 30100 Bioelectricity

(3) BME 30400 Biomedical Transport Fundamentals
(3) BME 30500 Bioinstrumentation, Circuit and Meas
(2) BME 30600 Biomedical Transport Lab
(2) BME 39000 Profes Devlp and Design in BME
(1) BME 48800 Preliminary Project Design
(2) BME 48900 Senior Design Project Lab
(1) BME 49000 Professional Elements of Design

Core Engineering Courses (12 credits)*

______ (3) ME 27000 Basic Mechanics I
______ (3) ME 20000 Thermodynamics I

(3) MSE 23000 Structures and Properties Materials
(3) ECE 30100 Signals and Systems

Selectives - (21 credits) (https://engineering.purdue.edu/BME/Academics/BMEUndergraduateProgram/AcademicDocuments/PlanofStudy)

______ (15) Engineering Selectives (Including Quantitative Breadth Requirement)
______ (6) Life Sciences Core Selectives

Other Program Course Requirements (50 credits)

______ (4) MA 16500/16100 Calculus I *(Satisfies FYE requirement)*
______ (4) MA 16600/16200/17300 Calculus II *(Satisfies FYE requirement)*
______ (4) MA 26100 Multivariate Calculus (*Satisfies Math and Physics requirement*)
______ (4) MA 26200 Linear Algebra & Ord Diff. Eq. *(Satisfies Math and Physics requirement*)
______ (3) STAT 51100 Statistical Methods (*Satisfies Biomedical Engineering Required Course requirement)**
______ (4) CHM 11500 General Chemistry I *(Satisfies FYE requirement; Science Selective for core*
______ (4) CHM 11600/13600 General Chemistry II *(Satisfies FYE requirement; Science Selective for core)*
______ (4) PHYS 17200 Modern Mechanics *(Satisfies FYE requirement; Science Selective for core)*
______ (3) PHYS 24100 Electricity and Optics *(Satisfies Math and Physics requirement)*
______ (3) BIOL 23000 Biology of the Living Cell *(Satisfies Life Science Core requirement)*
______ (2) ENGR 13100/14100 Transforming Ideas to Innovation I *(Satisfies FYE requirement)*
______ (2) ENGR 13200/14200 Transforming Ideas to Innovation II (*Satisfies FYE requirement)*
______ (3) CS 15900 Programming Apps for ENGRS (*Satisfies FYE Science Requirement)*
______ (3) ENGL 10100 English Composition *(Satisfies FYE requirement; Written Communication/ Informational Literacy for core)*
______ (3) Unrestricted Electives

General Electives (18 credits)

______	(3) Ethics/Healthcare Policy Selective	______	(3) G.E.-IV	______	( ) ______	______	( ) ______
______	(3) G.E.-II	______	(3) G.E.-V	______	( ) ______	______	( ) ______
______	(3) G.E.-III	______	(3) G.E.- VI	______	( ) ______	______	( ) ______

University Core Requirements

Human Cultures Humanities	☐	______	*Science, Technology & Society Selective*	☐	______
Human Cultures Behavioral/Social Science	☐	______	*Written Communication*	☐	______
Information Literacy	☐	______	*Oral Communication*	☐	______
Science Selective	☐	______	*Quantitative Reasoning*	☐	______
Science Selective	☐	______			

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The student is ultimately responsible for knowing and completing all degree requirements.
Degree Works is knowledge source for specific requirements and completion

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Biomedical Engineering

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Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	MA 16500		4	MA 16600	MA 16500
4	CHM 11500		4	CHM 11600	CHM 11500
4	PHYS 17200		3	CS 15900	
2	ENGR 13100		2	ENGR 13200	ENGR 13100
3/4	ENGL 10100/10600/10800		3	General Elective	
17/18			**16**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	BME 20100	CHM 11600, ENGR 13100,13200, MA 16600	3	BME 20400	BIOL 23000, ME 27000
3	BIOL 23000		3	MSE 23000	CHM 11500, MA 16500
1	BME 20500	CHM 11600 ,ENGR 13100,13200,MA 16600	1	BME 20600	ME 27000,BME 20500
1	BME 29000	BME majors only	3	BME 25600	PHYS 24100, BIOL 23000, CS 15900
4	MA 26100	MA 16600	4	MA 26200	MA 26100
3	ME 27000	PHYS 17200, ENGR 13200	3	ME 20000	CHM 11500, ENGR 13200
3	PHYS 24100	PHYS 17200, MA 16600			
18			**17**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	BME 30100	PHYS 24100, MA 16600, CS 15900	2	BME 30600	BME 30400
3	BME 30500	PHYS 24100 or 27200, MA 26200 or 26600, BME 20600	1	BME 39000	BME 29000, Junior standing
3	BME 30400	ME 20000, MA 26200 or 26600	3	ECE 30100	BME 30500, MA 26200
3	BME Technical Elective		3	STAT 51100	MA 16600
3	General Education or Ethics Selective		3	BME Technical Selective	
			3	General Elective or Ethics Selective	
15			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
1	BME 48800	BME 30600	3	BME Technical Selective	
2	BME 48900		3	BME Technical Elective	
1	BME 49000	BME 39000, ECE 30100 and senior standing	3	Life Science Selective	
3	BME Technical Selective (Q.B)		3	General Elective	
3	General Elective		3	General Elective	
3	Life Science Elective				
3	Unrestricted Elective				
16			**15**		

129 semester credits required for Bachelor of Science in Biomedical Engineering degree.
A minimum Graduation Index and BME Major GPA of at least 2.0 is required to qualify for graduation with a BSBME.
All required First Year Engineering (FYE) courses must be completed with a C- or above for entry into BME.

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