

Biomedical Engineering

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
BME 101 or GE A/B/B/C/C 4	BME 101 or GE A/B/B/C/C 4	BME 202 MATH 126 or 129 4	BISC 220L (GE D) 4	EE 202L PHYS 152L, (MATH 245) 4	TECHNICAL ELECTIVE 4	BME 302 EE 202L 4	BME 415 2
WRIT 150 4	GESM 4	GE A/B/B/C/C (gw or gp as needed) 4	BME 210 (MATH 245) 4	BME 423 MATH 245 4	GE A/B/B/C/C (gw or gp as needed) 4	BISC 320L, BISC 312 or HBIO 301L *See Special Note* 4	GE A/B/B/C/C (gw or gp as needed) 4
MATH 125 (GE F)* 4	MATH 126 OR MATH 129* MATH 125 4	PHYS 151L (GE E) MATH 125 or 126 or 226 4	MATH 245 MATH 226 or 229 4	CHEM 322aL CHEM 105bL 4	WRIT 340 4	BME 445aL Senior Project Prereq: BME 210 Co-req: EE 202 2	BME 445bL Senior Project BME 445aL 2
CHEM 105aL (GE E)* 4	CHEM 105bL CHEM 105aL 4	MATH 226/229 4	PHYS 152L PHYS 151L, (MATH 226) 4	BME ANCHOR COURSE 4	CHEM 322bL or 400-level BME Course 4	BME 413 PHYS 152L 4	BME 403L Prereq: BISC 220 & MATH 245 Co-req: EE 202 4
ENGR 102 Recommended 2	TAC 165 or OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	TECHNICAL ELECTIVE 2	TECHNICAL ELECTIVE 4

BIOMEDICAL

MATHEMATICS (16 UNITS)

MATH 125: Calculus I*

MATH 126 or 129: Calculus II*

MATH 226 or 229: Calculus III

MATH 245: Mathematics of Phys. and Engr.

PHYSICS (8 UNITS)

PHYS 151L: Mechanics and Thermodynamics

PHYS 152L: Electricity and Magnetism

CHEMISTRY (16 UNITS)

CHEM 105aL: General Chemistry*

CHEM 105bL: General Chemistry

CHEM 322aL: Organic Chemistry

CHEM 322bL: Organic Chemistry or
400-level BME course

BIOLOGY (8 UNITS)

BISC 220L: Cell Biology & Physiology

Choice between: BISC 320L
BISC 312, or HBIO 301L

GENERAL EDUCATION (32 UNITS)

GE A The Arts (1 Course)*

GE B Humanistic Inquiry (2 Courses)

GE C Social Analysis (2 Courses)

GE D Life Sciences (1 Course)*

GE E Physical Sciences (1 Course)*

GE F Quantitative Reasoning (1 Course)*

GE G,H Global Perspectives (2 Courses)*

GESM General Education Seminar (1 Course)

WRITING (8 UNITS)

WRIT 150: Writing and Critical Reasoning

WRIT 340: Advanced Writing

ENGINEERING (55 UNITS)

BME 101: Intro. to Biomedical Engineering

BME 202: Control/Comm. in Nervous System

BME 210: Biomed. Comp. Simulation Methods

BME 302L: Medical Electronics

BME 403L: Physiological Systems

BME 413: Bioengineering Signals & Systems

BME 415: Regulation of Medical Products

BME 423: Statistical Methods in BME

BME 445aL: Senior Projects

BME 445bL: Senior Projects

EE 202L: Linear Circuits

ENGR 102: Engineering Freshman Academy

BME ANCHOR COURSE:

BME 404, BME 410L, BME 430, BME 450,
or BME 451

TECHNICAL ELECTIVES (10 UNITS)

SPECIAL NOTES

*BISC 320L has a prerequisite of CHEM 105bL.
BISC 312 and HBIO have no prerequisites.

Courses with the * symbol may be satisfied
with AP, IB or A-Level exams. See page 18 for
more information.

GESM#: GESM can be taken from GE categories: A,
B, or C. Courses listed in the guide are options for a
four-year course plan.

GE: Engineering students are encouraged to satisfy
GE-G and GE-H with a course that also satisfies a
Core Literacy. GE-H may be satisfied by AP/IB.
Additionally, your GESM course should be taken in
categories A, B, or C only. See page 17 for more
information and consult your advisor for detailed
assistance.

TECHNICAL ELECTIVES (10 units): Taken from
ONE of the following three areas of specialization:
Bioelectronics/Computers: (BME 201, BME 204,
BME 426, BME 427, BME 430, BME 451, BME 453,
CSCI 445, EE 109L, EE 209, EE 338, EE 348L, EE
352L, EE 354L, EE 454L, EE 483, ENGR 345 or ITP
308) or Biomechanics: (AME 201, AME 204, AME
301, AME 302, AME 308 or ITP 308, AME 309, BME
201, BME 204, BME 404, BME 408, BME 412, BME
414, BME 426, BME 427, BME 453 or MASC 310)
Molecular-Cellular Engineering: (BME 201, BME
204, BME 406, BME 412, BME 414, BME 430, BME
453, BME 459, CHE 330, CHE 350, CHE 460L, CHE
489, ENGR 305, TAC 308, or MASC 310)

The Organic Chemistry option allows students in
BME, BMEL, and BMEN to replace one semester
of Organic Chemistry with an additional 4-unit
400-level BME course.