

BIOMEDICAL ENGINEERING *STANDARD TRACK-FALL2025*

1

BMEN 1025 (4)
Computer-Aided Design
& Fabrication

CHEN 1201 (4)
Gen Chem for Engineers

BIEN 2810 (3)
Biology for Engineers

APPM 1350 (4)
Calculus 1 For Engineers

2

BMEN 1000 (1)
Explore BME
Spring Only

CHEN 1203 (2)
Gen Chem for Engineers 2
(PR: CHEN 1201 or CHEM 1113)
(CR: CHEN 1221)

CHEM 1221 (1)
Eng. Gen Chem Lab
(PR: CHEN 1201 or CHEM 1113)(CR: CHEN 1203)

PHYS 1110 (4)
General Physics 1
(CR: APPM 1350)

Humanities & Social Science (3)
Lower Division

APPM 1360 (4)
Calculus 2 For Engineers
(PR: APPM 1350 or APPM 1345)

3

BMEN 2100 (3)
Biomedical Principles
and Methods
(PR: APPM 1350, BIEN 2810
CHEN 1201, PHYS 1110)

Humanities & Social Science (3)
Lower Division

Humanities & Social Science (3)
Lower Division

PHYS 1120 (4)
General Physics 2
(PR: PHYS 1110) (CR: APPM 1360)

APPM 2350 (4)
Calculus 3 For Engineers
(PR: APPM 1360)

4

BMEN 2010 (3)
Biomaterials
(PR: CHEN 1201)
Spring Only

Free Elective (3)

CHEN 1310 (3)
Intro to Engineering
Computing
(CR: Calculus 1)

PHYS 1140 (1)
Experimental Physics
(CR: PHYS 1120)

MCEN 2023 (3)
Statics & Structures
(PR: APPM 1360, PHYS 1110)

APPM 2360 (4)
Linear Algebra &
Differential Equations
(PR: APPM 1360)

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BMEN 4117 (3)
Anatomy & Physiology for
Biomedical Engineering
(PR: BMEN 2100)
(RPR: BMEN 2010)
Fall Only

BMEN 3010 (3)
Biotransport
(PR: BMEN 2100, CHEN 1310,
PHYS 1110)
(CR: APPM 2360)
Fall Only

CHEN 3010 (3)
Applied Data Analysis
(PR: APPM 2360, CHEN 1310)

Humanities & Social Science (3)
Upper Division

ECEN 2250 (3)
Intro to Circuits &
Electronics
(PR: APPM 1360, PHYS 1120) (CR:
APPM 2360 or MATH 3430)

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BMEN 3030 (4)
Bioinstrumentation
(PR: BMEN 2100, ECEN 2250)
Spring Only

General Technical Elective (3)
Upper Division

General Technical Elective (3)
Upper Division

Writing Requirement(3)

ECEN 3301 (3)
Biomedical Signals
& Systems
(PR: ECEN 2250)
Spring Only

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BMEN 4010 (3)
BME Design 1
(PR: BMEN 1025, BMEN 2010,
BMEN 3010)
(CR: Writing)
Fall Only

Focus Technical Elective (3)
Upper Division

General Technical Elective (3)
Upper Division

Engineering Technical Elective (3)
Lower or Upper Division

Engineering Technical Elective (3)
Lower or Upper Division

Free Elective (3)

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BMEN 4020 (3)
BME Design 2
(PR: BMEN 4010)
Spring Only

Focus Technical Elective (3)
Upper Division

Engineering Technical Elective (3)
Upper Division

Humanities & Social Science (3)
Upper Division

Free Elective (3)

Example
COURSE NUMBER (Cr.)
Course Name
(PR: Pre-Requisites)
(CR: Co-Requisites)
(RPR: Recommended Pre-Requsite)
(RCR: Recommended Co-Requsite)

Biomedical Engineering Curriculum

Notable Course Substitutions for Industry

- **APPM 1350:** MATH 1300, APPM 1345
- **APPM 1360:** MATH 2300
- **APPM 2350:** MATH 2400
- **APPM 2360:** MATH 2130 and MATH 3430 (taken as a sequence)
- **BMEN 1025:** MCEN 1025, GEEN 1017 and BMEN 1035
- **BMEN 4117:** BMEN 5117, MCEN 4117 or 5117
- **CHEM 1221:** CHEM 1114, CHEM 1134
- **CHEN 1201:** CHEN 1211 (CHEM 1113 approved for transfer students)
- **CHEN 1203:** CHEN 1211 (CHEM 1133 approved for transfer students)
- **CHEN 1310:** CSCI 1300 (**CS Minors Only**)
- **BIEN 2810:** MCDB 1150, EBIO 1210 and 1220 (Taken as a sequence)
- **CHEN 3010:** STAT 4000 (**CS Minors Only**)
- **MCEN 2023:** CVEN 2121, GEEN 2851

Technical Electives

Industry/Graduate School Track requires a total of 24 credits of Technical Electives. Visit the program's [Advising & Curriculum](#) webpage for options.

Focus Electives

6 credits of technical electives must be taken from the Focus Elective list on the Biomedical Engineering website. Please consult the Advising & Curriculum website for a current list of options.

Humanities & Social Science Electives

[Humanities, Social Sciences, and Writing Requirements](#) for options

Writing Requirement Options

- ENES 1010 (freshmen only), ENES 3100
- WRTG 3030, WRTG 3035
- PHYS 3050
- ENLP 3100 (previous success in an ENLP course highly recommended)

Grade Requirements

The minimum passing grade for a prerequisite or co-requisite course within the biomedical engineering curriculum is a C-. This requirement includes courses completed in another program or department (APPM, PHYS, etc.). The minimum passing grade for standalone classes is a **D-**. In addition, students need to have a cumulative and major GPA of at least 2.000 in order to graduate from the College of Engineering. **Pass/Fail** is only permitted for BMEN 1000 and Free Elective credits.

Effective: Fall 2025

Common Biomedical Engineering Resources

Clubs&Organizations



[Biomedical Engineering Society](#)



[Society of Women Engineers](#)



[National Society of Black Engineers](#)



[Society of Asian Scientists & Engineers](#)



[Engineers Without Borders USA](#)

Pre-Med & Career Services



Pre-Health Advising can help with:

- Understanding Medical School requirements
- MCAT Preparations
- PA/MD/DO distinctions
- More!

Look for the pre-health icon in Buff Portal Advising



Career Services
Meet with a
Career Services
Advisor

Career Services can help with:

- Resume/Cover Letters
- Using the Handshake Portal
- Interview skills
- More!

Look for the icon in Buff Portal Advising