

The following requirements must be fulfilled:

First semester	
BISC 1111	Introductory Biology: Cells and Molecules
BME 1010	Introduction to Biomedical Engineering
CHEM 1111	General Chemistry I ¹
MATH 1231	Single-Variable Calculus I ¹
SEAS 1001	Engineering Orientation
UW 1020	University Writing ¹
Second semester	
BISC 1112	Introductory Biology: The Biology of Organisms
BME 1020	Introduction to Biomedical Engineering
CHEM 1112	General Chemistry II ¹
MATH 1232	Single-Variable Calculus II ¹
PHYS 1025	University Physics I with Biological Applications ¹
Third semester	
APSC 2113	Engineering Analysis I
BME 2810	Biomedical Engineering Seminar I
ECE 2110	Circuit Theory
MATH 2233	Multivariable Calculus ¹
PHYS 1026	University Physics II with Biological Applications ¹
Fourth semester	
BME 2815	Biomedical Engineering Seminar II

[ECE 2210](#)

Circuits, Signals, and Systems

Programming Elective I ²Restricted Engineering Elective ³Restricted Engineering Elective ³Humanities, social science, or non-technical elective ⁴**Fifth semester**[BME 3820](#)

Engineering Analysis of Neural, Muscular, and Cardiovascular Physiology

[BME 3825](#)

Medical Measurement Laboratory

[BME 4820](#)

Anatomy and Physiology for Engineers

[ECE 3220](#)

Introduction to Digital Signal Processing

Programming Elective II ²Technical elective ⁵[BME 3910](#)

Capstone Design Preparation

Sixth semester[APSC 3115](#)

Engineering Analysis III

[BME 3915W](#)

Biomedical Engineering Capstone Project Lab I

Two Humanities, social science, or non-technical electives ⁴Two technical electives ⁵**Seventh semester**[BME 4920W](#)

Biomedical Engineering Capstone Project Lab II

[MAE 4168](#)

Introduction to Biomaterials

[PHYS 3127](#)

Biophysics: Macroscopic Physics in the Life Sciences

Humanities, social science, or non-technical elective ⁴

Technical elective ⁵

Eighth semester

[BME 4925W](#) Biomedical Engineering Capstone Project Lab III

[PHIL 2135](#) Ethics in Business and the Professions

Humanities, social science, or non-technical elective ⁴

Technical elective ⁵

Science Elective ⁶

¹Course satisfies the [University General Education Requirement](#) in math, science, and writing.

²One pair of programming electives selected from the following:

[CSCI 1111](#) Introduction to Software Development

or [CSCI 1112](#) Algorithms and Data Structures

[ECE 1120](#) C Programming for Electrical and Computer Engineering

or [ECE 1125](#) Data Structures and Algorithms for ECE

[MAE 1117](#) Introduction to Engineering Computations

or [MAE 2117](#) Engineering Computations

³Two restricted engineering electives. Potential selections include:

[APSC 2057](#) Analytical Mechanics I

[APSC 2058](#) Analytical Mechanics II

[CE 2220](#) Introduction to the Mechanics of Solids

[ECE 2115](#) Engineering Electronics

[ECE 2140](#) Design of Logic Systems

[ECE 3310](#) Introduction to Electromagnetics

[MAE 2131](#)

Thermodynamics

⁴At least two social and behavioral sciences courses must be selected from the [University General Education Requirement list](#); the remaining course must be selected from either the University General Education Requirement list or the [SEAS Humanities, Social Science, and Non-Technical Elective Requirement list](#). At least one humanities course must be selected from the University General Education Requirement list; the remaining two courses must be selected from either the University General Education Requirement list or the SEAS General Education Requirement list.

⁵All technical electives must be approved by the academic advisor and must include at least three courses approved by the advisor as having engineering content.

⁶One science elective selected from the following:

[CHEM 3165](#)

Biochemistry I

[PHYS 3128](#)

Biophysics: Microscopic Physics in the Life Sciences