NCSU BIOMEDICAL ENGINEERING UNDERGRADUATE PROGRAM

First Years and Sophomores

CODA
Change of Degree Application

Non-CODA

PY 205/206
Physics Mechanics
4

PY 208/209
Physics E&M
4

MA 141
Calculus I
4

MA 242
Calculus III
4

MA 241
Calculus II
4

MA 331 or MA 341
Differential Equations
3

CH 101/102
General Chemistry I
4

CH 201/202
General Chemistry II
4

ENG 101
Acad Writing & Research
4

CH 221/222
Organic Chemistry I
4

E 101 S
Intro Engineering
1

BIO 183
Introductory Biology
4

E 102 F
Engr 21st Century
2

E 115 F/S
Computing Environments
1

Sophomores

BME 298 F/S F/S
BME Design I
2

BME 207 S F
BME Electronics
4

BME 201 F S/U1
Comp Methods in BME
or
CSC 113 F/S
Intro to Computing MATLAB
3

BME 205 F/S F/S/U2
BME Mechanics
4

BME 209 F/S F/S
Materials Science
4

Juniors

GATEWAY ELECTIVE
(Choose THREE)

315 Biotransport	F S
325 Biochemistry	F S
Pre-Med: BCH 351	
335 Biomaterials	F S
345 Solid Mech.	F S
355 Biocontrols	F S
365 Signals & Syst.	F S
375 Microcontroller	F S
385 Bioinstrument.	F S

3 each

Need 2 total

BME 398 F/S F/S
BME Design II
2

BME 301 F/S S
Human Phys: Electrical
4

BME 302 F/S F
Human Phys: Mech
4

OR

STEM Elective ***(Choose ONE)***
Extra Gateway or Specialty Elective or Approved >300 STEM Course
Must be Engineering Elective if taking BCH 351 as Gateway

PHI 325
Biomedical Ethics
3

Seniors

SPECIALTY ELECTIVES
(Choose FOUR)

From one or two of the following areas:

Pharmacoengineering
Regenerative Medicine
Rehabilitation Eng
Biosignals and Imaging
Medical Microdevices

3 each

BME 451 F F
Senior Design
3

BME 452* S S
Senior Design
3

Offered at **NCSU** or **UNC**
F = fall
S = spring
U1 = Summer Session I
U2 = Summer Session II

→ Pre-Requisite

- - - - → Co- or Pre-Req

Credit Hours

***BME 452** has the same prerequisite courses as BME 451 with a corequisite of 3 additional Gateway or Specialty Electives.

Last updated Sept 2024