

State University of New York at Binghamton
Thomas J. Watson College of Engineering and Applied Science
BS in Biomedical Engineering Four-Year-Program

FALL 2026
Engineering Design Division

Year 1

Fall

MATH 224/225 Calculus I
CHEM 111 Chemical Principles
EDD 111 Introduction to Engineering Design
EDD 103 Engineering Communications I
General Education Elective
Physical Activity/Wellness

Spring

MATH 226/227 Calculus II
PHYS 131 Calculus-based Physics I
EDD 112 Introduction to Engineering Analysis
EDD 104 Engineering Communications II
General Education Elective
Physical Activity/Wellness

Year 2

Fall

BME 201 Introduction to Biomedical Engineering
MATH 324 ODE's for Scientists/Engineers
CHEM 231 Organic Chemistry I
BIOL 113 Intro to Cell & Molecular Biol

Spring

BME 203 Biomedical Modeling Numerical Methods
BME 213 Biomolecular Engineering
MATH 323 Calculus III
PHYS 132 Gen. Physics II (Calculus-based)
General Education Elective

Year 3

Fall

BME 313 Biomaterials
BME 318 Biomechanics
BME 324 Biomedical Instruments
BME 330 Biothermodynamics
BME Depth or Science Elective

Spring

BME 303 Bio-Fluid Mechanics
BME 340 Bioinformatics and Biostatistics
BME 351 Biomedical Engineering Lab
BIOL 311 Cell Biology
or
BIOL 332 Genetics
or
BIOL 401 Molecular Genetics
General Education Elective

Year 4

Fall

BME 413 Biomedical Transport Phenomena
BME 432 Ethics in Engineering
BME 433 Human Physiology
BME 450 Biomedical Engineering Design I
BME Depth elective

Spring

BME 451 Biomedical Engineering Design II
Science Elective Must be 4-credits
BME Depth or Science Elective
BME Depth Elective

*BME depth electives are chosen from your concentration.

**Science electives include:

PSYC 111, PSYC 220, ANTH 243, ANTH 240, Any 300-level and above course in BCHM, CHEM, BIOL, PSYC

PRE-MED
Biomedical Engineering with MCAT Preparation
FALL 2026
Engineering Design Division

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Fall

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 CHEM 111 Chemical Principles
 EDD 111 Introduction to Engineering Design
 EDD 103 Engineering Communications I

General Education Elective

Physical Activity/Wellness

Spring

MATH 226/227 Calculus II
 PHYS 131 General Physics I Calculus-based
 EDD 112 Introduction to Engineering Analysis
 EDD 104 Engineering Communications II

General Education Elective
 Physical Activity/Wellness

Year 2

Fall

BME 201 Introduction to Biomedical Engineering
 MATH 324 ODE's for Scientists/Engineers
 CHEM 231 Organic Chemistry I
 BIOL 113 Intro to Cell & Molecular Biol

Spring

BME 203 Biomedical Modeling & Numerical Methods
 BME 213 Biomolecular Engineering
 MATH 323 Calculus III
 PHYS 132 Gen. Physics II (Calculus-based)
 Pre-Med Elective

Year 3

Fall

BME 318 Biomechanics
 BME 324 Biomedical Instruments
 BME 330 Biothermodynamics
 CHEM 341 Intermediate Inorganic Chemistry
 Pre-Med Elective

Spring

BME 303 Bio-Fluid Mechanics
 BME 340 Bioinformatics and Biostatistics
 BME 351 Biomedical Engineering Lab
 Pre-Med Elective
 Pre-Med Elective

MCAT typically taken after Junior Year - Before MCAT, you need to take: BIOL 113, 114, 115, CHEM 111, 231, 332, 335, PHYS 131, 132, PSYC 111, BIOL 304 or BCHM 403, BME 340, ANTH 240 or 243.

Year 4

Fall

BME 313 Biomaterials
 BME 413 Biomedical Transport Phenomena
 BME 432 Ethics in Engineering
 BME 433 Human Physiology
 BME 450 Biomedical Engineering Design I
 BME Depth Elective

Spring

BME 451 Biomedical Engineering Design II
 BIOL 311 Cell Biology
 or
 BIOL 332 Genetics
 or
 BIOL 401 Molecular Genetics
 BME Depth Elective
 General Education Elective
 General Education Elective