

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

Application Code: 274

(If undecided use: 0229)

FALL 2022

Engineering Design Division

(The freshman year is common to all engineering majors)

Fall

MATH 224/225 Diff Calc/Int Calc(M)
CHEM 111 Chemical Principles (L)
EDD 111 Introduction to Engineering Design
EDD 103 Engineering Communications I

General Education Elective (A, G, N, P)

Body/Wellness

Spring

MATH 226/227 Int Tech&App/Inf S. (MATH 225)
PHYS 131 General Physics I Calculus-based (MATH 225)
EDD 112 Introduction to Engineering Analysis (J) (EDD 111)
EDD 104 Engineering Communications II (EDD 103)
BIOL 113 Intro to Cell & Molecular Biol, or

General Education Elective (A, G, N, P)

Body/Wellness

Year 2

Fall

BME 201 Introduction to Biomedical Engineering
(MATH 225, PHYS 131, EDD 112) (Co-req: BIOL 113)
MATH 324 Ordinary Differential Equations
(MATH 227)
CHEM 231 Organic Chemistry I (CHEM 111)

General Education Elective (A, G, N, P)

Spring

BME 203 Biomedical Modeling & Numerical Methods
(MATH 324 or 371, BME 201)

Fall

BME 313 Biomaterials (CHEM 231, BME 213, BIOL 113)
BME 318 Biomechanics (PHYS 131, MATH 227)
BME 324 Biomedical Instrumentations (L)
(BME 201, BME 203, BME 213, PHYS 132)
BME 330 Biothermodynamics
(MATH 323, MATH 324, PHYS 131)

BME Depth or Science Elective*

Fall

BME 413 Biomedical Transport Phenomena (BME
330,
BME 318, BME 303)
BME 432 Ethics in Engineering (H) (Co-req: BME 450)
BME 433 Human Physiology
(CHEM 231, BIOL 113)

BME 450 Biomedical Engineering Design I (BME 318,
BME 351) (Co-req: BME 413)

BME Depth elective*

** Students who are planning on taking the MCAT, must choose two additional BME depth electives from any of the other BME concentration.

BME Major Concentrations:

Students are required to select an area of emphasis to gain more in-depth knowledge and specialty training in biomedical engineering. Students must take any two courses from the list of courses prescribed in each concentration to declare their concentration. Courses chosen from a concentration fulfill the BME Depth Electives.