Math 20100
Calculus I
Pr: Math 19500 (C min.)
3 cr.
Math 20200
Calculus II
Pr: Math 20100 (C min.)
3 cr.
Math 20300
Calculus III
Pr: Math 20200 (C min.)
4 cr.
Math 39100
Differential Equations
Pr: Math 20200
3 cr.
Math 39200
Linear Algebra/Vector Analysis
Pr: Math 20200
3 cr.
BME 50100
Cell and Tissue Mechanics
Pr: ME 33000 or ChE 31000, Bio 32100
3 cr. (Spring Only)
BME 50300
Cell and Tissue Biomaterial Interactions
Pr: ME 33000 or ChE 31000, Bio 32100
3 cr. (Spring Only)
BME 50500
Biomedical Transducers and Instrumentation
Pr: BME 30500
4 cr. (Spring Only)
BME 51000
Engineering Mechanics I
Pr: Phys 20700 (C min.) & Math 20200 (C min.)
3 cr.
BME 52000
Biomedical Circuits with Lab
Pr/Co: Phys 20800 (C min.), Math 39100 (C min.)
4 cr. (Spring Only)

Engineering Electives
BME 39003 BME Independent Study
BME 51000 Microfloc. Devs. in Biotech
BME 51000 Neur Engr & App Biotech
BME 52000 Organ Transp. Pharmkin
BME 52000 Biomedical Imaging
BME 53000 Biomedical Signal Proc.
Csc 10200 Introduction to Computing
ChE 53000 ChE Thermodynamics II
ChE 54200 Transport II
EE 53000 Electromagnetics
Engr 14200 Continuum Mechanics
Engi 11100 Engineering Analysis
ME 14500 Computer-Aided Drafting
ME 24700 Engineering Mechanics II
ME 32200 Computer Methods in Engr.
ME 37100 Computer-Aided Design
3 cr.

Technical Elective
(See list of Technical Electives below)
3 cr.

Technical Elective (I Course)
Bio 10200 Foundations of Biology II
Bio 26600 Intro to Genetics
Bio 35000 Microbiology
Bio 35400 Intro to Neurobiology
Bio 37500 Developmental Biology
Bio 41000 Cell Dev-Senessence
Bio 42000 Virology
Bio 42500 Cancer Biology
Bio 48300 Laboratory in Biotech.

Technical Elective (II Course)
BME 30400 Cell and Tissue Engr.
BME 30400 Pharm. Applications
BME 46000 Advanced Biomedical
BME 7000 Lab in Cell & Mol Engr
BME 8000 Bone Biol. & Biomch.
BME 9000 Skeletal Soft Tissue
BME 9000 Ethics in Biomed. Engr.
BME 9000 Entrepreneurship
Chem 24300 Quantitative Analysis
Chem 26100 Organic Chemistry I
Chem 26200 Organic Chemistry Lab I
Chem 26300 Organic Chemistry II
Chem 33000 Physical Chemistry I
Chem 33200 Physical Chemistry II
Chem 45902/52002 Biochemistry I
Or any course from Engineering Electives
3-5 cr. (Partial List of Approved Courses)

Engr 10100
General Chemistry I
Pr: Math 19500 (C min.)
4 cr.
Chem 10401
General Chemistry II
Pr: Chem 10300 (C min.)
4 cr.
Chem 21000
Applied Chemistry for BME
Pr: Chem 10401; engineering majors only
3 cr. (Fall Only)
Che 22900 (Spring only)
Chemical Engineering Thermo I
Pr: Chem 10401 (C min.), Phys 20700 (Cmin.)
Pre/Co: Math 39100
3 cr.
Che 34100
Transport Phenomena I
Pr: Math 39100 (C min.) & Che 22900
3 cr.
ME 24600
Engineering Mechanics I
Pr: Phys 20700 (C min.) & Math 20200 (C min.)
Pre/Co: Math 14500 or BME 22000
3 cr.
ME 33000
Mechanics of Materials
Pr: Math 23000 (C min.) & ME 24600
3 cr.
Bio 53000
Biomedical Transducers and Instrumentation
Pr: BME 30500
4 cr. (Spring Only)
Bio 53100
Experimental Methods in BME
Pr: BME 22000, BME 33000, Engr 21007
Pre/Co: Bio 2290
3 cr. (Spring Only)
Bio 522900
Cell and Molecular Biology
Pr: Bio 10100, Bio 32100 & Chem 21000
(Chem 2100 formerly Chem 35300)
4 cr.

1. The latest version of the curriculum sheet supersedes any curriculum and pre/corequisite information in the Undergraduate Bulletin or online.
2. “C” Passing Grade Requirement: Courses in shaded area (□) require a minimum passing grade of “C”.
3. Skills tests: Certain students may be required to pass CUNY Assessment Tests in one or more subjects within 1 or 2 years of admission.
4. Liberal Arts electives: BME students must take five approved courses and Engr 30000 (Social, Economic, and Cultural Impact of Biomedical Technology), for a total of 18 credits, of which at least two (6 credits) must be at the 20000 level or higher. A list of approved courses is posted on the School of Engineering web site at ccny.cuny.edu/engineering/gen-ed and can be viewed at the Office of Undergraduate Affairs (ST-209) or the Office of Student Programs (ST-2M7).
   - Each course falls into one or more liberal arts clusters, specified in the list. The six courses must collectively occupy at least three clusters. The four clusters are: (f) Professional & Ethical Responsibilities, (g) Communication, (h) Global & Societal Context, and (i) Contemporary Issues.
   - Most students must also satisfy Pathways liberal arts requirements. See ccny.cuny.edu/engineering/pathways.
5. Pre-med Curriculum: Pre-med students must take the Organic Chemistry sequence (Chem 26100, 26200, 26300) as the Technical Electives. This will increase the pre-med total credits by 2.
6. Other Graduation Requirements: Apply for graduation during registration for the last semester. Minimum GPA of 2.00. Minimum QPA of zero. Residency Requirement: 30 credits of 30000-level or higher Biomedical Engineering courses taken at CCNY.
7. Program Changes: Substitution of other courses for required courses must be approved by the Chair of the Biomedical Engineering Department (ST-401), and Associate Dean of the Office of Undergraduate Affairs (ST-209).
8. Transfer students with credit for Math 20200 are considered too advanced for Engr 10100. They should take BME 59100 (a 1-credit Independent Study course) instead of Engr 10100. FIQSWS 10206 fulfills all requirements for Eng 11000 and Engr 10100.
9. Transfer students who have completed Engr. 23000 (Thermodynamics) must complete ME 35600 (Fluid Mechanics) instead of ChE 34100 (Transport Phenomena I).

Total Credits: 128-130.