

BIOMEDICAL ENGINEERING CURRICULUM AY 2021-2022

Fall Term

Spring Term

First Year

EGGG 101 Introduction to Engineering (FYE)	2	BMEG 100 Fundamentals in Biomedical Engineering	2
BISC 207 Introductory Biology I	4	CHEM 104 General Chemistry (a)	3
CHEM 103 General Chemistry	3	CHEM 134 General Chemistry Lab	1
CHEM 133 General Chemistry Lab	1	CISC 106 General Computer Science for Engineers	3
MATH 241 Analytic Geometry & Calculus A	4	ENGL 110 Seminar in Composition	3
Breadth Requirement Elective 1	3	MATH 242 Analytic Geometry & Calculus B	4
	17		16

Second Year

BMEG 341 Biomedical Experiment Design & Analysis	3	BMEG 301 Quantitative Cellular Physiology	3
CHEM 321 Organic Chemistry I	3	BMEG 230 Circuits, Signals & Systems for Biomed. Apps.	3
CHEM 325 Organic Chemistry Lab I	1	BMEG 260 Intro to Medical Device Design	3
MATH 243 Analytic Geometry & Calculus C	4	MATH 305 Applied Math for Biomed, Chem & Biomol. Eg.	3
PHYS 203 Fund of Physics w/ Biomed Appl I (b)	4	PHYS 204 Fund of Physics w/ Biomed Appl II (c)	4
	15		16

Third Year

BMEG 310 Bioengineering Mechanics	4	BMEG 311 Bioengineering Mechanics II	3
BMEG 309 Bioengineering Mechanics Lab I	1	BMEG 340 Biomedical Modeling and Simulation	3
BMEG 302 Quantitative Systems Physiology	3	BMEG 360 Biomedical Engineering Junior Design	2
BMEG 330 Biomedical Instrumentation	3	BMEG 420 Biological Transport Phenomena	4
MSEG 201 Materials Science for Engineers	3	Technical Elective 2	3
Technical Elective 1	3		15
	17		

Fourth Year

BMEG 460 Biomedical EG Design (DLE and Capstone)	6	PHIL 444 Medical Ethics (d)	3
Technical Elective 3	3	Technical Elective 4	3
Breadth Requirement Elective 2	3	Technical Elective 5	3
Breadth Requirement Elective 3	3	Breadth Requirement Elective 4	3
	15	Breadth Requirement Elective 5	3
			15

Total Credit Hours 126

- (a) Department will accept CHEM 108 General Chemistry for Life Sciences II in place of CHEM 104/134.
- (b) Department will accept PHYS 207/227 in place of PHYS 203.
- (c) Department will accept PHYS 208/228 in place of PHYS 204.
- (d) PHIL 444 satisfies an upper-level College of Engineering Breadth Requirement.

Note: Minimum grade of C- is required in ENGL 110 and all Breadth Requirement courses.