

BS in Biomedical Engineering

Sequence of Courses

The biomedical engineering program requires the completion of 128-129 credit hours for graduation. Specific degree requirements are given below. Students select 12 credit hours of engineering technical electives, and 3 credit hours of open technical electives selected from a wide range of courses. Contact the biomedical engineering department for a list of applicable engineering and open technical electives.

Program Requirements

Course	Title	Hours
Foundation Courses		
ENGL 101 or ENGL 100	College English I English Composition	3
ENGL 102	College English II	3
COMM 111	Public Speaking	3
PHIL 385	Engineering Ethics	3
Fine arts/humanities & social/behavioral sciences courses ¹		15
Mathematics/Natural Sciences		
MATH 242 & MATH 243	Calculus I and Calculus II	10
IME 254	Engineering Probability and Statistics I	3
MATH 555	Differential Equations I	3
PHYS 313	Physics for Scientists I	4
PHYS 314	Physics for Scientists II	4
BIOL 210	General Biology I	4
BIOL 223	Human Anatomy and Physiology	5
BIOL 420 or CHEM 661	Molecular Cell Biology Principles of Biochemistry	3-4
CHEM 211 & CHEM 212	General Chemistry I and General Chemistry II	10
CHEM 533	Elementary Organic Chemistry	3
Major Courses		
AE 223	Statics	3
EE 282	Circuits I	4
ME 398	Thermodynamics I	3
IME 255	Engineering Economy	3
BME 115	Biomedical Engineering Seminar (taken in the first semester)	0
BME 335	Biomedical Computer Applications	3
BME 452	Biomechanics	3
BME 462	Introduction to Biofluids	3
BME 477	Introduction to Biomaterials	3
BME 480	Bioinstrumentation	3
BME 482	Design of Biodevices	3
BME 585	Capstone Design I	3
BME 595	Capstone Design II	3
Technical Electives ²		
Engineering technical electives		12
Open technical electives		3
Total Credit Hours		128-129

¹ Refer to graduation requirements at the beginning of this section for details

² Contact the biomedical engineering department for list of applicable technical elective courses.

Premed Students

Curriculum differences for premed students in the biomedical engineering program consist of the following:

1. BIOL 211 is required for premed students;
2. 1-credit-hour labs, PHYS 315 and PHYS 316, must be taken with the 4 credit-hour lecture courses of PHYS 313 and PHYS 314, respectively;
3. CHEM 531 and CHEM 532 are required for biomedical engineering students in the premed curriculum, and will satisfy the biomedical engineering curriculum organic chemistry requirement.

Biomedical engineering students who are in the premedicine curriculum are encouraged to also meet frequently with the WSU premed advisors to learn about other premed requirements. WSU premed advisors are located in Fairmount College of Liberal Arts and Sciences Advising Center, 115 Grace Wilkie Hall 316-978-3700.