

Biomedical Engineering



Catalog Term: Fall 2024

Total Credit Hours: 128/129

FRESHMAN			
FALL	Hrs	SPRING	Hrs
ENGL 101 * College English I Pre-req: See Course Catalog	3	ENGL 102 * College English II Pre-req: ENGL 101 with "C" or better	3
MATH 242 Calculus I Pre-req: MATH 111 and 123 with "C" or better or MATH 112 with "C" or better	5	MATH 243 Calculus II Pre-req: MATH 242 with "C" or better	5
CHEM 211 + Lab General Chemistry I Co-req: MATH 111	5	CHEM 212 + Lab General Chemistry II Pre-req: CHEM 211 with "C" or better	5
General Education* First Year Seminar (Bucket 7) Note a	3	PHYS 313 Physics for Scientist I Co-req: MATH 243 with "C" or better	4
BME 115 Biomedical Engineering Seminar (Offered Fall and Spring)	0		
Total Hours	16	Total Hours	17

SOPHOMORE			
FALL	Hrs	SPRING	Hrs
COMM 111 * Public Speaking	3	MATH 555 Differential Equations I Pre-req: MATH 243 with "C" or better	3
BIOL 223 + Lab Human Anatomy and Physiology Pre-req: CHEM 211	5	AE 223 Statics Pre-req: PHYS 313 with "C" or better Co-req: MATH 243	3
BIOL 210 + Lab General Biology I Co-req: CHEM 211 recommended (Offered Fall and Spring)	4	CHEM 533 Elementary Organic Chemistry Pre-req: CHEM 212 with "C" or better (Offered Spring Only)	3
BME 477 Intro to Biomaterials Pre-req: CHEM 211 and (PHYS 313 or PHYS 213) all with "C" or better (Offered Fall and Spring)	3	IME 254 Engr Probability and Statistics I Pre-req: MATH 243 with "C" or better (Offered Fall and Spring)	3
BME 335 Biomedical Computer Applications Co-req: MATH 242 (Offered Fall and Spring)	3	BME 482 Design of Biodevices Co-req: BME 335 (Offered Fall and Spring)	3
Total Hours	18	Total Hours	15

JUNIOR			
FALL	Hrs	SPRING	Hrs
PHIL 385 Engineering Ethics (Bucket 6) or PHIL 386 Biomedical Engineering Ethics Pre-req: Junior or senior standing	3	General Education* Fine Arts and Humanities (Bucket 6, PHIL excluded) Note a	3
ECE 282 + Lab Circuits I Co-req: MATH 243	4	BIOL 420 + Lab Molecular Cell Biology Pre-req: BIOL 210 and CHEM 212 (Offered Spring only)	4
ME 398 Thermodynamics I Pre-req: MATH 243 and PHYS 313 with "C" or better	3	CHEM 661 Introductory Biochemistry Pre-req: CHEM 532 or CHEM 533 (Offered Fall and Spring)	3
BME 452 Biomechanics Pre-req: MATH 243 and AE 223 with "C" or better (Offered Fall and Spring)	3	PHYS 314 Physics for Scientist II Pre-req: MATH 243 with "C" or better and PHYS 313 (Offered Fall and Spring)	4
BME 462 + Lab Introduction to Biofluids Pre-req: AE 223 and MATH 555 with "C" or better Co-req: Biol 223 and ME 398 (Offered Fall and Spring)	3	BME 480 Bioinstrumentation Pre-req: EE 282, IME 254, and BME 335 all with "C" or better (Offered Fall and Spring)	3
Engineering Plus Requirement (1 of 3) See notes		Engineering Technical Elective Note b	3
Total Hours	16	Total Hours	16/17

SENIOR			
FALL	Hrs	SPRING	Hrs
General Education* Social & Behavioral Science (Bucket 5) Note a	3	General Education* Social & Behavioral Science (Bucket 5) Note a	3
IME 255 * Engineering Economy Coreq: MATH 242	3	Engineering Technical Elective Note b	3
BME 585 Capstone Design I Pre-req: BME 482 with "C" or better and Program Consent (Offered Fall only)	3	BME 595 Capstone Design II Pre-req: BME 585 and PHIL 385 or 386 with "C" or better (Offered Spring only)	3
Engineering Technical Elective Note b	3	General Education or Open Elective* (Bucket 7) Note c	3
Engineering Technical Elective Note b	3	Engineering Technical Elective Note b	3
Engineering Plus Requirement (2 of 3) See notes		Engineering Plus Requirement (3 of 3) See notes	
Total Hours	15	Total Hours	15

* May be available as an online or hybrid class

Last Updated: 4/2024

a. Humanities/Fine Arts/Social & Behavioral Science Courses must be from an approved list which appears in the Schedule of Courses and/or the community college Transfer Guides

b. Check with Undergraduate Catalog and/or Advisor for specific courses to satisfy BME Concentration and Technical Electives.

c. All incoming freshman are required to take one First-Year Seminar as part of their General Education program. Students who are exempt from FYS requirements may take an additional open elective.

<http://catalog.wichita.edu/undergraduate/academic-information/general-education-program/general-education-courses/#text>