

BIOMEDICAL ENGINEERING CURRICULUM

BACHELOR OF SCIENCE IN BME - PREHEALTH BIOMATERIALS TRACK - FALL 2022 AND LATER

NAME:

ID:

EMAIL:

CUMULATIVE GPA:

1st Year (Fall)	Prerequisite	Cr	Semester	1st Year (Spring)	Prerequisite	Cr	Semester
Chem 125 Chem I	None	3		Chem 126 Chem II	MATH 110 or higher and CHEM 125 or CHEM 121	3	
Chem 125A Chem Lab	None	1		BME 101- Freshman Seminar S	None	0	
ENGL 101	None	3		ENGL 102	ENGL 101	3	
Math 111 Calc I	None	4		Math 112 Calc II	MATH 111	4	
Phys 111 Physics I	coreq PHYS 111A, MATH 111	3		Phys 121 Physics II	PHYS 111, PHYS 111A, MATH 111 / coreq PHYS 121A	3	
Phys 111A Phys I Lab	PHYS111A	1		Phys 121A Phys. II Lab	PHYS 111A	1	
FED 101	ENGL 101 and (ENGR 101 and MATH 110) or MATH 111	2					
		17				15	
2nd Year (Fall)	Prerequisite	Cr	Semester	2nd Year (Spring)	Prerequisite	Cr	Semester
Math 211(13) Calc IIIA	Math 112	3		CHEM244 Organic Chemistry II	CHEM243	3	
Engr Prob & Stat: Math 279 (333)	Math 112	2		CHEM244A Orgo Lab **	Chem 125A	2	
BME 111 - Intro to Anatomy and Phy	None	3		BME 301 - Electrical Fund U	MATH 112, PHYS 121	3	
BME 304 - Material Fund	(CHEM 126 or CHEM 122) and PHYS 111	3		BME 302 - Mech Fund U	MATH 112, PHYS 121	3	
CHEM 243 Org Chem	CHEM 126	3		R120:102 BioII or R120:201 ***	None	4	
R120:101 BioI or Biol205/206 **	BIOL200	4		*Liberal Arts Literacy 2XX	VARIOUS	3	
		18				18	
3rd Year (Fall)	Prerequisite	Cr	Semester	3rd Year (Spring)	Prerequisite	Cr	Semester
BME385 Cell & Biomat Lab	MATH 112, PHYS 121, BME 304 and (MATH 279 or MATH 333)	3		Liberal Arts Literacy 3XX		3	
MTEN 201 Intro to Princ Mat Eng	CHEM126, MATH 112, & PHYS 121	3		BME352 Biol Thermodynamics	MATH 112, PHYS 111, CHEM 126, BME 111, Corequisites: MATH 211 or MATH 213.	3	
CHEM473 Biochemistry1	CHEM 244 or CHEM 245	3		BME 210 Biomed Computing U	Sophomore standing	3	
*Liberal Arts Literacy 3XX	Various	3		BME 382 Eng Mod Phys Sys	BME 111, BME 301, BME 302 and MATH 222	3	
Math 222 Diff Equations	Math 112	4		BME 420 Adv. Biomat. Science	BME 302, BME 304, and (MTSE 301 or MTEN 201)	3	
		16				15	
4th Year (Fall)	Prerequisite	Cr	Semester	4th Year (Spring)	Prerequisite	Cr	Semester
BME427 Biotransport	MATH 222 and (BME 303 or R120 102 or BIOL 201).	3		BME422 - Biomat. Charact. S	MATH 112, PHYS 121, BME 304 and (MTSE 301 or MTEN 201)	3	
BME383 Meas Lab Phys Sys U	BME 302, (BME 210 or BME 310), (MATH 279 or MATH 333)	3		*Engineering Track Elective		3	
BME 495 Capstone Design I	Various- See Catalog. Senior Standing required	2		BME 496 Capstone Design II	BME 495	3	
BME430 Tissue Engineering	BME302, (BME303 or R120:102), BME 304, MATH 222, MTSE 301	3		Capstone HSS 4XX	Senior Standing	3	
Management GER - IE492	Various	3		*Engineering Track Elective		3	
		14				15	
All courses are offered Fall and Spring semester unless otherwise labeled: F -Fall only; S -Spring only; U -also offered Summer)						TOTAL CREDITS	128
Additional Coursework	Prerequisite	Cr	Semester	Additional Coursework	Prerequisite	Cr	Semester

Students must earn a grade of "C" or better to satisfy most course prerequisites.

*** For Liberal Arts Literacy, Engineering Electives and Sci or Engineering Electives please fill in the course number in the space provided in the Prerequisite column.**

***Students who score a 5 on the AP Biology exam are recommended to take a higher level Biology sequence: Biol205/206 and Biol201/202, see advisor

** this course is not required for accredited BME curriculum

Liberal arts STS221 or STS352 and STS359 for MCAT preparation

*** lab component of this course not required for accredited BME curriculum