

BIOMEDICAL ENGINEERING CURRICULUM

BACHELOR OF SCIENCE IN BME - **BIOMATERIALS TRACK** - FALL 2019 AND LATER

NAME:

ID:

1st Year (Fall)	Prerequisite	Cr	Semester	1st Year (Spring)	Prerequisite	Cr	
Chem 125 Chem I	None	3		Chem 126 Chem II	Chem 125	3	
Chem 125A Chem Lab	None	1		BME 101- Freshman Seminar S		0	
HUM 101 Writ, Speak, Think I:	None	3		HUM 102	Hum 101	3	
Math 111 Calc I	None	4		Math 112 Calc II	Math 111	4	
Phys 111 Physics I	Phys 111A, Math 111/*	3		Phys 121 Physics II	Phys 111, Phys 121A*, Math 112*	3	
Phys 111A Phys I Lab	Phys 111A*	1		Phys 121A Phys. II Lab	Phys 111A	1	
FED 101	None	2					
		17				14	
2nd Year (Fall)			Semester	2nd Year (Spring)			
Math 211(13) Calc IIIA	Math 112	3		Math 222 Diff Equations	Math 112	4	
Engr Prob & Stat: Math 279 (333)	Math 112	2		BME 210 Computing for BMEs	Sophomore standing	3	
BME 304 - Material Fundamentals	C in PHYS111 & CHEM126	3		BME 302 - Mech Fund U	C in MATH 112, PHYS 121	3	
BME 303 - Biological Fundamentals	C in CHEM 126	3		BME 301 - Electrical Fund U	C in MATH 112, PHYS 121	3	
BME 111 - Intro to Anatomy and Phys	None	3		Liberal Arts Literacy 3XX	VARIOUS	3	
Liberal Arts Literacy 2XX	Hum 102	3					
		17				16	
3rd Year (Fall)				3rd Year (Spring)			
CHEM 243 Org Chem	CHEM 126	3		Engineering Elective	VARIOUS	3	
MTSE301 Princ. Mat. Sci. & Eng.	CHEM126, MATH 112, & PHYS 121	3		BME382 Eng Mod Phys Sys	C in BME 111, BME 301, BME 302 and Math 222	3	
BME498 Biomedical Thermodynamics	CHEM126, MATH112, PHYS111, MATH211	3		BME385 Cell & Biomat Lab	C in BME111, BME301, BME302, MATH222	3	
Advanced Science Elective	VARIOUS	3		Management GER - IE492	VARIOUS	3	
Liberal Arts Literacy 3XX	VARIOUS	3		BME420 Adv. Biomat. Science S	BME302, BME 304, MATH222, & MTSE 301 or BME 321	3	
		15				15	
4th Year (Fall)				4th Year (Spring)			
BME 495 Capstone Design I	BME 372 OR MTSE 301 OR (MECH 236 & BME321)	2		BME 496 Capstone Design II	BME 495	3	
BME383 Meas Lab Phys Sys	BME302, BME 210, & MATH 279	3		Capstone HSS 4XX	Senior Standing	3	
BME430 Tissue Engineering F	BME302, (BME303 or R120:102), BME 304, MATH 222, MTSE 301	3		BME422 Biomaterial Charact S	VARIOUS	3	
Advanced Science Elective	VARIOUS	3		Engineering Track Elective	VARIOUS	3	
BME427 Biotransport F	CHE230 or BME498 & MATH222	3					
		14				12	
					TOTAL CREDITS	120	
Additional Coursework	Prerequisite	Cr	Semester	Additional Coursework	Prerequisite	Cr	Semester

All courses are offered Fall and Spring semester unless otherwise labeled: (**F**-Fall only; **S**-Spring only; **U**-also offered Summer)

Engineering Elective: Technical elective courses with sufficient engineering content: Generally any 300-level or higher courses with prefix BME, ME, CHE, EE, OPSE (excluding MECH320)

Advanced Science Elective: Generally any 300-level or higher science course with prefix CS, MATH, PHYS, CHEM, IE, MTSE **exceptions apply, chosen with your academic advisor

Liberal Arts Literacy: A comprehensive list of 200 level GER courses can be found here: bit.ly/2TL9wXO and 300 level found here: bit.ly/2WG0mhc The BME department recommends ENG340, ENG352, PHIL351