

BIOMEDICAL ENGINEERING CURRICULUM

BACHELOR OF SCIENCE IN BME - **BIOMATERIALS TRACK** - FALL 2021 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 (MECH236 & BME320) OR (MECH236 & BME321) OR BME386	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