

# BIOMEDICAL ENGINEERING CURRICULUM

BACHELOR OF SCIENCE IN BME - **BIOMECHANICS 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 124 Chem Lab	None	1		BME 101- Freshman Seminar <b>S</b>		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					
		16				15	
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 302 - Mech Fund <b>U</b>	C in MATH 112, PHYS 121	3		BME 301 - Electrical Fund <b>U</b>	C in MATH 112, PHYS 121	3	
BME 303 - Biological Fundamentals	Sophomore with C in CHEM126	3		BME 304 - Material Fundamentals	C in PHYS111 and CHEM126	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)			
MATH 337 Linear Algebra	MATH 112	3		BME351 - Intro to BioFluid Mech <b>S</b>	BME 302, MECH 236 and BME 321	3	
MECH 236 Dynamics	BME 302	2		BME382 Eng Mod Phys Sys	C in BME 111, BME 301, BME 302 and Math 222	3	
BME 321 Adv Mech for BME <b>F</b>	C in BME302	3		BME384 Biomech Lab	BME 302, MECH 236, BME 321, BME, 210, MATH 279	3	
Advanced Science Elective	VARIOUS	3		BME478 Intro CAD for Biomech	BME302 & BME321	4	
Liberal Arts Literacy 3XX	VARIOUS	3		MANAGEMENT (IE492)	VARIOUS	3	
		14				16	
4th Year (Fall)				4th Year (Spring)			
Engineering Track Elective	VARIOUS	3		BME 496 Capstone Design II	BME 495	3	
Advanced Science Elective	VARIOUS	3		Capstone HSS 4XX	Senior Standing	3	
BME383 Meas Lab Phys Sys	BME302, BME 210, & MATH 279	3		Engineering Track Elective	VARIOUS	3	
BME451 Biomechanics I <b>F</b>	MECH 236 and BME321	3		BME452 Mech. B&P of Biomat. <b>S</b>	BME302,304,321; MATH222,337&279	3	
BME 495 Capstone Design I	BME372 OR MTSE301 OR (MECH236 & BME320) OR (MECH236 & BME321) OR BME 386	2					
		14				12	
All courses are offered Fall and Spring semester unless otherwise labeled: ( <b>F</b> -Fall only; <b>S</b> -Spring only; <b>U</b> -also offered Summer)						<b>TOTAL DEGREE CREDITS</b>	<b>120</b>
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](http://bit.ly/2TL9wXO) and 300 level found here: [bit.ly/2WG0mhc](http://bit.ly/2WG0mhc) The BME department recommends ENG340, ENG352, PHIL351