

# BIOMEDICAL ENGINEERING CURRICULUM

*BACHELOR OF SCIENCE IN BME - UNDECIDED TRACK - SPECIALIZATION RECOMMENDED BY END OF 2nd YEAR*

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 <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					
		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 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 304 - Material Fund	C in CHEM 126, Sophomore Standing	3	
BME 303 - Biological Fund	C in CHEM 126, Sophomore Standing	3		BME 210 - Process Fund Biol Sign	Sophomore Standing	3	
BME 111 - Anat & Phys	None	3		Liberal Arts Literacy 3XX	VARIOUS	3	
Liberal Arts Literacy 2XX	Hum 102	3				16	
		17					
COMPLETE COURSES FOR ONLY ONE OF THE FOLLOWING TRACKS							
3rd Yr (Fall) BIOMATERIALS	3rd Yr (Fall) Med Dev and Imag	3rd Yr (Fall) BIOMECH		3rd Yr (Spring) BIOMATERIALS	3rd Yr (Spring) Med Dev and Imag	3rd Yr (Spring) BIOMECH	
CHEM 243 Org Chem	MATH 337 Linear Algebra	MATH 337 Linear Algebra		Engineering Track Elective	Advanced Science Elective	BME351 - Intro BioFluid Mech	
BME385 Cell & Biomat Lab	Engineering Elective	MECH 236 Dynamics		BME382 Eng Mod Phys Sys	BME333 Biomed Signals & Sys.	BME382 Eng Mod Phys Sys	
MTSE301 Princ. Mat. Sci. & Eng.	BME372 Biomed Electronics <b>F</b>	BME 321 Adv Mech BME <b>F</b>		Advanced Science Elective	BME373 Biomed. Electronics II <b>S</b>	BME384 Biomech Lab <b>S</b>	
BME 498 Biomedical Thermo	BME382 Eng Mod Phys Sys	Advanced Science Elective		BME420 Adv. Biomat. Science <b>S</b>	BME383 Meas Lab Phys Sys <b>U</b>	BME478 Intro CAD Biomech <b>S</b>	
Liberal Arts Literacy 3XX	Liberal Arts Literacy 3XX	Liberal Arts Literacy 3XX		Management GER (IE492)	Management GER (IE492)	Management GER (IE492)	
4th Yr (Fall) BIOMATERIALS	4th Yr (Fall) Med Dev and Imag	4th Yr (Spring) BIOMECH		4th Yr (Spring) BIOMATERIALS	4th Yr (Fall) Med Dev and Imag	4th Yr (Fall) BIOMECH	
BME427 Biotransport <b>F</b>	Engineering Elective	Engineering Elective		BME422 - Biomat. Charact. <b>S</b>	BME489 Medical Instrument <b>S</b>	BME452 Mech. of Biomat. <b>S</b>	
Advanced Science Elective	Advanced Science Elective	Advanced Science Elective		Engineering Elective	Advanced Science Elective	Engineering Track Elective	
BME383 Meas Lab Phys Sys	BME386 Med Device Lab <b>F</b>	BME383 Meas Lab Phys Sys		BME 496 Capstone Design II	BME 496 Capstone Design II	BME 496 Capstone Design II	
BME430 Tissue Engineering <b>F</b>	BME 471 Princ of Med Imaging <b>F</b>	BME451 Biomechanics I <b>F</b>		Capstone HSS 4XX	Capstone HSS 4XX	Capstone HSS 4XX	
BME 495 Capstone Design I	BME 495 Capstone Design I	BME 495 Capstone Design I					

**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, check 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 and ENG352