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	
BME 111 - Intro to Phys	None	3		Chem 124 Chem Lab	Chem 126	1	
HUM 101 Writ, Speak, Think I:	None	3		FED 101	None	2	
Math 111 Calc I	None	4		HUM 102	Hum 101	3	
Phys 111 Physics I	Phys 111A, Math 111/*	3		Math 112 Calc II	Math 111	4	
Phys 111A Phys I Lab	Phys 111A*	1		Phys 121 Physics II	Phys 111, Phys 121A*, Math 112*	3	
BME 101- Freshman Seminar **F**		0		Phys 121A Phys. II Lab	Phys 111A	1	
		17				17	
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		CHEM 243 Org Chem	CHEM 126	3	
BME 304 - Material Fund	C in BME 111, CHEM 126	3		BME 302 - Mech Fund **U**	C in MATH 112, PHYS 121	3	
BME 303 - Biological Fund **F**	C in BME 111, CHEM 126	3		BME 301 - Electrical Fund **U**	C in MATH 112, PHYS 121`	3	
CS101 or BIONF 135 or CS 115	None	3		Liberal Arts Literacy 3XX	VARIOUS	3	
Liberal Arts Literacy 2XX	Hum 102	3					
		17				16	

COMPLETE COURSES FOR ONLY *ONE* OF THE FOLLOWING TRACKS

3rd Yr (Fall) BIOMATERIALS	3rd Yr (Fall) Instrumentation	3rd Yr (Fall) BIOMECH	3rd Yr (Spring) BIOMATERIALS	3rd Yr (Spring) Instrumentation	3rd Yr (Spring) BIOMECH
MATH 337 Linear Algebra	MATH 337 Linear Algebra	MATH 337 Linear Algebra	CHE230 Chem. Eng. Thermo	Advanced Science Elective	BME351 - Intro to BioFluid Mec
CHEM244 Organic Chemisty II	ECE251 Digital Design	MECH 236 Dynamics	BME382 Eng Mod Phys Sys	BME333 Biomed Signals & Sys.	BME382 Eng Mod Phys Sys
BME 310 Biomed Computing	BME372 Biomed Electronics **F**	BME 321 Adv Mech BME **F**	BME385 Cell & Biomat Lab	BME373 Biomed. Electronics II **S**	BME384 Biomech Lab **S**
CHE210 Chemical Proc. Calc. I	BME 310 Biomed Computing	BME 310 Biomed Computin	BME420 Adv. Biomat. Science **S**	BME383 Meas Lab Phys Sys **U**	BME478 Intro CAD Biomech **S**
MTSE301 Princ. Mat. Sci. & Eng.	BME382 Eng Mod Phys Sys	Advanced Science Elective	Management GER (IE492)	Management GER (IE492)	Management GER (IE492)
Liberal Arts Literacy 3XX	Liberal Arts Literacy 3XX	Liberal Arts Literacy 3XX			
4th Yr (Fall) BIOMATERIALS	**4th Yr (Fall) Instrumentation**	**4th Yr (Spring) BIOMECH**	**4th Yr (Spring) BIOMATERIALS**	**4th Yr (Fall) Instrumentation**	**4th Yr (Fall) BIOMECH**
Engineering Track Elective	Engineering Track Elective	Engineering Track Elective	BME422 - Biomat. Charact. **S**	Advanced Science Elective	BME452 Mech. of Biomat. **S**
Advanced Science Elective	BME386 Bioinstrument. Lab **F**	Advanced Science Elective	BME427 Biotransport **s**	Advanced Science Elective	Engineering Track Elective
BME383 Meas Lab Phys Sys	BME489 Medical Instrument **F**	BME383 Meas Lab Phys Sys	BME 496 Capstone Design II	BME 496 Capstone Design II	BME 496 Capstone Design II
BME430 Tissue Engineering **F**	BME 471 Princ of Med Imaging **F**	BME451 Biomechanics I **F**	Capstone HSS 4XX	Capstone HSS 4XX	Capstone HSS 4XX
BME 495 Capstone Design I	BME 495 Capstone Design I	BME 495 Capstone Design I			

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

Highlighted courses are specific for a particular track (Biomaterials, Bioinstrumentation, or Biomechanics). All other courses are common across all BME concentrations.

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: Courses to be included have the prefix Com, Eng, Hist, Lit, Phil, STS, and Thtr. The BME department recommends *ENG340* and *ENG352*