

BIOMEDICAL ENGINEERING CURRICULUM

BACHELOR OF SCIENCE IN BME - BIOMECHANICS TRACK - FALL 2022 AND LATER

NAME: _____

ID: _____

1st Year (Fall)	Prerequisite	Cr	Semester	1st Year (Spring)	Prerequisite	Cr	Semester
Chem 125 Chem I	None	3		Chem 126 Chem II	Chem 125	3	
Chem 124 Chem Lab	None	1		BME 101- Freshman Seminar S		0	
ENGL 101	None	3		ENGL 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 303 - Biological Fundamentals	C in CHEM 126	3	
BME 302 - Mech Fund U	C in MATH 112, PHYS 121`	3		BME 301 - Electrical Fund U	C in MATH 112, PHYS 121	3	
BME 210 Computing for BMEs	Sophomore standing	3		BME 304 - Material Fundamentals	C in PHYS111 and CHEM126	3	
BME 111 - Intro to Anatomy and	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 S	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	C in BME302	3		BME384 Biomech Lab	BME 302, MECH 236,BME 321, BME, 210, MATH 279	3	
Sci or Eng Elective (1)	See approved list on advising	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 -Elective	See approved list on advising website	3		BME 496 Capstone Design II	BME 495	3	
Sci or Eng Elective (2)		3		Capstone HSS 4XX	Senior Standing	3	
BME383 Meas Lab Phys Sys	BME302,BME 210,& MATH 279	3		Engineering -Elective	See approved list on advising website	3	
BME451 Biomechanics I F	MECH 236 and BME321	3		BME452 Mech. B&P of Biomat. S	BME302,304,321; MATH222,337&279	3	
BME 495 Capstone Design I	BME 372 OR MTSE 301 OR (MECH 236 & BME321) or BME 386	2					
		14				12	
All courses are offered Fall and Spring semester unless otherwise labeled: (F -Fall only; S -Spring only; U -also offered Summer)						TOTAL DEGREE 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: Please see the list here <https://biomedical.njit.edu/academics/undergraduate/curriculum.php>

Science Elective: Please see the list here <https://biomedical.njit.edu/academics/undergraduate/curriculum.php>

Liberal Arts Literacy: The BME department approved electives are ENG340, ENG352, PHIL351 , STS221 or STS352 and STS359