

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

NAME:		ID:		EMAIL:		GPA:	
1st Year (Fall)	Prerequisite	Cr	Semester	1st Year (Spring)	Prerequisite	Cr	Semester
CHEM 125 CHEM I	None	3		CHEM 126 CHEM II	MATH 110 or higher and CHEM 125 or CHEM 121 with a C or higher	3	
CHEM 125A Chem Laboratory	None	1		BME 101- Freshman Seminar S		0	
ENGL 101	None	3		ENGL 102	ENGL 101	3	
MATH 111 Calc I	None	4		MATH 112 Calc II	MATH 111 with a C or better.	4	
PHYS 111 Physics I	coreq PHYS 111A, MATH 111	3		PHYS 121 Physics II	PHYS 111, PHYS 111A, MATH 111 with a C or higher / coreq PHYS 121A, MATH 112 with a C or better.	3	
PHYS 111A Physics I Lab	coreq PHYS 111	1		PHYS 121A Physics II Lab	PHYS 111/PHYS 111A and MATH 111 with grade of C or better. Coreq: PHYS 122	1	
FED 101	ENGL 101 and (ENGR 101 and MATH 110) or MATH 111	2					
		17				14	
2nd Year (Fall)			Semester	2nd Year (Spring)			Semester
MATH 211(13) Calc IIIA	MATH 112 with a C or higher.	3		Math 222 Diff Equations	MATH 112 with a C or higher.	4	
MATH 279 (333) Engr Prob &	Math 112	2		BME 302 - Mech Fund U	MATH 112, PHYS 121 with a C or higher.	3	
BME 301 - Electrical Fund U	MATH 112, PHYS 121 with a C or higher. Pre/Coreq: FED 101	3		BME 304 - Material Fund	(CHEM 126 or CHEM 122) and PHYS 111 with a C or higher.	3	
BME 303 - Biological Fund	CHEM 126 or CHEM 121 with a C or higher.	3		BME 210 - Process Fund Biol	MATH 112 with a C or higher.	3	
BME 111 - Intro to Anatomy and	Prereq/Coreq FED 101 with a C or higher.	3		*Liberal Arts Literacy 2XX	VARIOUS	3	
*Liberal Arts Literacy 2XX	VARIOUS	3					
		17				16	

COMPLETE COURSES FOR ONLY ONE OF THE FOLLOWING TRACKS					
3rd Yr (Fall) BIOMATERIALS	3rd Yr (Fall) Med Dev and Img	3rd Yr Fall BIOMECH	3rd Yr (Spring) BIOMATERIALS	3rd Yr (Spring) Med Dev and Img	3rd Yr (Spring) BIOMECH
CHEM 243 Org Chem	MATH 337 Linear Algebra	MATH 337	Liberal Arts Literacy 3XX	Advanced Science Elective	BME351 - Intro
BME385 Cell & Biomat Lab	BME 386 Medical Device Lab F	MECH 236	BME 383 Meas Lab Phys Sys	BME 372 Electronics Med Devices S	BME382 Eng
MTEN201 Intro. Princ. Mat.	BME 333 Biomed Signals & Sys. F	BME 321 Adv	BME 422 - Biomat. Charact.	Engineering Elective	BME384
BME352 Biol Thermodynamics	BME382 Eng Mod Phys Sys	Advanced	BME 420 Adv. Biomat. Science	BME383 Meas Lab Phys Sys U	BME478 Intro
Liberal Arts Literacy 3XX	Liberal Arts Literacy 3XX	Liberal Arts	Management GER (IE492)	Management GER (IE492)	Management
4th Yr (Fall) BIOMATERIALS	4th Yr (Fall) Med Dev and Imag	4th Yr Fall BIOMECH	4th Yr (Spring) BIOMATERIALS	4th Yr (Fall) Med Dev and Imag	4th Yr (Spring) BIOMECH
Advanced Science Elective	Engineering Elective	Engineering	Engineering Elective	BME 472 FDA Reg. of Med. Devices	BME452 Mech.
Advanced Science Elective	Advanced Science Elective	Advanced	Engineering Elective	Advanced Science Elective	Engineering
BME382 Eng Mod Phys Sys	Advanced Science Elective	BME383 Meas	BME 496 Capstone Design II	BME 496 Capstone Design II	BME 496
BME430 Tissue Engineering	BME 471 Princ of Med Imaging F	BME451	Capstone HSS 4XX	Capstone HSS 4XX	Capstone HSS
BME 495 Capstone Design I	BME 495 Capstone Design I	BME 495	BME427 Biotransport		

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

Students must earn a grade of "C" or better to satisfy most course prerequisites.

* For Liberal Arts Literacy, Engineering Electives and Sci or Engineering Electives please fill in the course number in the space provided in the Prerequisite column.

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

Liberal Arts Literacy: The BME department recommended electives are COM 313, COM 319, PHIL351, STS221 or STS352 and STS359.