

# Biomedical Engineering (suggested premed curriculum)

1 <sup>st</sup> YEAR	Session	Course	BME Curriculum	SH	Pre-Requisite or Co-Requisite	
Fall Semester	F/S	22M:031	Engineering Math I – Single Variable Calculus	4	P: H.S. Algebra & Trigonometry	
	F	59:005	Engineering Problem Solving I	3		
	All	4:011	Principles of Chemistry I	4		
	All	10:003	Accelerated Rhetoric (or 10:001 & 10:002)	4		
	F	59:090	First-Year Engineering Seminar	1	Freshman Status	
				<b>Total</b>	<b>16</b>	
Spring Semester	F/S	22M:032	Engineering Math II – Multivariable Calculus	4	P: 22M:031	
	S	59:006	Engineering Problem Solving II	3	C: 22M:031	
	F/S	29:081	Introductory Physics I	4	C: 22M:031	
	All	22M:033	Engineering Math III – Matrix Algebra	2	C: 22M:032	
	All	4:012	Principles of Chemistry II	4	P: 4:011	
S	51:090	BME Forum	0	Freshman Status		
				<b>Total</b>	<b>17</b>	
2 <sup>nd</sup> YEAR	All	22M:034	Engineering Math IV – Differential Equations	3	P: 22M:032 and 22M:033	
	Fall Semester	F	2:010	Principles of Biology I	4	P: 4:011
		All	59:007	Engineering Fundamentals I – Statics	2	P: 22M:031; C: 29:081
	F/S	59:008	Engineering Fundamentals II – Electrical Circuits	3	C: 22M:034	
	All	59:009	Engineering Fundamentals III – Thermodynamics	3	P: 22M:031, 4:011, 29:081	
	F/S	51:091	BME Professional Seminar	0	Sophomore Status	
				<b>Total</b>	<b>15</b>	
Spring Semester	S	51:030	Cell Biology for Engineers	2	P: 2:010; C: 27:130 & 51:130	
	All		General Education Component #1	3		
	F/S	2:011	Principles of Biology II (EFA #1)	4	P: 2:010	
	S	51:130	Cell Biology for Engineers Laboratory	1	P: 2:010, 4:012, C: 27:130, 51:030	
	F/S	27:130	Human Physiology	3	P: 2:010, 4:012	
	All	4:121	Organic Chemistry I (EFA #2)	4	P:4:012	
F/S	51:091	BME Professional Seminar	0	Sophomore Status		
				<b>Total</b>	<b>17</b>	
3 <sup>rd</sup> YEAR	F	51:070	Biomaterials and Implant Design	3	P: 27:130, 51:030; C:57:019	
	Fall Semester	All	4:122	Organic Chemistry II (EFA #3)	3	P: 4:121
		All	57:019	Mechanics of Deformable Bodies	3	P: 59:007, 22M:034
	All	4:141	Organic Chemistry Lab (EFA #4)	3	C: 4:122	
	F/S	57:017	Computers in Engineering	3	59:006	
	All		General Education Component #2	3		
	F/S	51:091	BME Professional Seminar	0	Junior Status	
				<b>Total</b>	<b>18</b>	
Spring Semester	S	99:110	Biochemistry (EFA #5)	3		
	F/S	29:082	Introductory Physics II (with lab)	4	P: 29:081, C: 22M:032	
	S	51:075	Cell-Material Interactions	3	C: 51:070	
	S	51:060	Data and Image Acquisition and Analysis	4	P: 57:017, 59:008, 51:040; C:51:080	
	S	51:080	Data Acquisition Design Laboratory	2	C: 51:060	
F/S	51:091	BME Seminar	0	Junior Status		
				<b>Total</b>	<b>16</b>	
4 <sup>th</sup> YEAR	F	51:085	BME Senior Design	4	P 51:070, 51:080, 51:050, Senior	
	Fall Semester	F/S	171:161	Biostatistics	3	P: 22M:032
		F	51:050	Biomechanics : Theory and Design	3	P: 57:019, 27:130
	F	51:040	Biological Systems Analysis	3	P: 51:130, 27:130, 22M:034 C:57:017	
	All		General Educations Component #3	3		
	F	51:092	Leadership and Resourcefulness	0		
				<b>Total</b>	<b>16</b>	
Spring Semester	S	51:086	BME Senior Design	4	P: 51:085, Senior Status	
	All		General Education Component #4	3		
	F/S		EFA Elective #6	3		
	F/S		EFA Elective #7	3	At least one EFA is technical	
All		General Education Component #5	3			
				<b>Total</b>	<b>16</b>	