

# BIOMEDICAL ENGINEERING: CELLULAR ENGINEERING

1 <sup>st</sup> Year	Session	Course	Course Title	SH	P: Prerequisite; C: Corequisite	
Fall	F/S	MATH:1550	Engineering Math I – Single Variable Calculus	4	ALEKS score of 75 or higher OR MPT 3 score of 9 or higher	
	F	ENGR:1100	Introduction to Engineering Problem Solving	3		
	All	CHEM:1110	Principles of Chemistry I & Lab	4		
	All	RHET:1030	Rhetoric	4		
	F	ENGR:1000	Engr Success for First-Year Students	1*	Status: First Year	
<b>Total</b>				<b>16</b>		
Spring	All	MATH:1560	Engineering Math II – Multivariable Calculus	4	P: MATH:1550	
	All	MATH:2550	Engineering Math III – Matrix Algebra	2	P: MATH:1550	
	F/S	ENGR:1300	Introduction to Engineering Computing	3	C: MATH:1550	
	All	PHYS:1611	Introductory Physics I with Lab	4	C: MATH:1550	
	All	CHEM:1120	Principles of Chemistry II & Lab	4	P: CHEM:1110	
	S	BME:1010	BME Forum	1*	Status: First Year	
<b>Total</b>				<b>18</b>		
2 <sup>nd</sup> Year	All	MATH:2560	Engineering Math IV – Differential Equations	3	P: MATH:1560, MATH:2550	
	All	BIOL:1411	Foundations of Biology	4	P: CHEM:1110	
	All	ENGR:2110	Engineering Fundamentals I – Statics	2	P: MATH:1550;	
	Fall	All	ENGR:2120	Engineering Fundamentals II – Electrical Circuits	3	C: MATH:1560, PHYS:1611
		All	ENGR:2130	Engineering Fundamentals III – Thermodynamics	3	P: CHEM:1110, PHYS:1611;
	F/S	BME:2010	BME Professional Seminar	1*	C: MATH:1560	
	<b>Total</b>				<b>16</b>	Status: Second Year
Spring	All	HHP:3500	Human Physiology	3	P: BIOL:1411, CHEM:1110	
	F/S	BME:2200	Systems, Instrumentation, & Data Acquisition / Lab	4	P: ENGR:2120;	
	All	ENGR:2750	R#1: Mechanics of Deformable Bodies	3	C: HHP:3500, BIOS:4120 (STAT:3510)	
	All	BIOS:4120	E#1: Focus Area Elective #1	4	P: ENGR:2110; C: MATH:2560	
	All	BIOS:4120	Intro to Biostatistics (or STAT:3510 Biostatistics)	3		
	F/S	BME:2010	BME Professional Seminar	1*	Status: Second Year	
<b>Total</b>				<b>18</b>		
3 <sup>rd</sup> Year	F/S	BME:2400	Cell Biology for Engineers / Lab	3	P: BIOL:1411; C: BIOS:4120 (STAT:3510)	
	All	ENGR:2730	E#2: Focus Area Elective #2	3		
	Fall	F/S	BME:2500	Biomaterials & Biomechanics / Lab	4	P: ENGR:2110;
		All		E#3: Focus Area Elective #3	3	C: HHP:3500, BIOS:4120 (STAT:3510)
	All		General Education Component Elective #1	3		
	F	BME:3010	Leadership and Resourcefulness	1*	Status: Third Year	
	<b>Total</b>				<b>17</b>	
Spring	S	BME:5421	R#2: Cell Material Interactions	3	P: BME:2400	
	F/S	BME:2210	Bioimaging & Bioinformatics / Lab	4	P: ENGR:1300, BIOL:1411;	
	All		E#4: Focus Area Elective #4	3	C: BIOS:4120 (STAT:3510)	
	All		E#5: Focus Area Elective #5	3		
	All		General Education Component Elective #2	3		
	S	BME:4010	BME Design Seminar	1*	Status: Third Year	
<b>Total</b>				<b>17</b>		
4 <sup>th</sup> Year	F	BME:4910	BME Senior Design I	4	P: Senior Status, BIOS:4120 (STAT:3510), BME:4010	
	Fall	F	BME:5430	R#3: Biotransport	3	P: BME:2500
		All		E#6: Focus Area Elective #6	3	
	All		General Education Component Elective #3	3		
	All		General Education Component Elective #4	3		
<b>Total</b>				<b>16</b>		
Spring	S	BME:4920	BME Senior Design II	4	P: BME:4910	
	S	BME:5435	R#4: Systems Biology for BME	3	P: BME:2400, BME:2200	
	F/S	PHYS:1612	E#7: Focus Area Elective #7	3		
	All		Introductory Physics II with lab	4	P: PHYS:1611; C: MATH:1560	
<b>Total</b>				<b>17</b>		

\* 1sh; does not count toward 128 sh total required for graduation

Note: Two Track Electives must be Engineering topics courses

Please check MyUI for the most up to date course offerings and pre/corequisites