

# BIOMEDICAL ENGINEERING: BIOINFORMATICS

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  Status: First Year
	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*	
<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>	
Fall	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; C: MATH:1560, PHYS:1611
	All	ENGR:2120	Engineering Fundamentals II – Electrical Circuits	3	C: MATH:2560
	All	ENGR:2130	Engineering Fundamentals III – Thermodynamics	3	P: CHEM:1110, PHYS:1611; C: MATH:1560
		OR	OR		OR
	S	ENGR:2995	Intro to AI and Machine Learning	3	P: ENGR:1400; C: MATH:2550
F/S	BME:2010	BME Professional Seminar	1*	Status: Second Year	
<b>Total</b>				<b>16</b>	
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; C: HHP:3500, BIOS:4120 (STAT:3510)
	F/S	BME:2210	Bioimaging & Bioinformatics / Lab	4	P: ENGR:1300, BIOL:1411; C: BIOS:4120 (STAT:3510)
	F/S	ENGR:2730	R#1: Computers in Engineering	3	P: ENGR:1300
	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>	
Fall	F/S	BME:2400	Cell Biology for Engineers / Lab	3	P: BIOL:1411; C: BIOS:4120 (STAT:3510)
	F/S	ECE:3330	R#2: Intro to Software Design	3	P: ENGR:2730
	F (odd years)	BME:5320	R#3: Bioinformatics Techniques	3	P: ENGR:2730 or CS:2110 or CS:5110, BIOL:1411
	All		E#1: Focus Area Elective #1	4	
	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 (even years)	BME:5330	R#4: Computational Genomics	3	P: ENGR:1300, BIOS:4120 (or STAT:3510)
			E#2: Focus Area Elective #2	3	
			E#3: Focus Area Elective #3	3	
	All		General Education Component Elective #2	3	
	All		General Education Component Elective #3	3	
S	BME:4010	BME Design Seminar	1*	Status: Third Year	
<b>Total</b>				<b>17</b>	
Fall	F	BME:4910	BME Senior Design I	4	P: Senior Status, BIOS:4120 (STAT:3510), BME:4010
	F/S	BME:2500	Biomaterials & Biomechanics / Lab	4	P: ENGR:2110; C: HHP:3500, BIOS:4120 (STAT:3510)
			E#4: Focus Area Elective #4	3	
			E#5: Focus Area Elective #5	3	
	All		General Education Component Elective #4	3	
	<b>Total</b>				<b>17</b>
Spring	S	BME:4920	BME Senior Design II	4	P: BME:4910
			E#6: Focus Area Elective #6	3	
			E#7: Focus Area Elective #7	3	
	F/S	PHYS:1612	Introductory Physics II with lab	4	P: PHYS:1611; C: MATH:1560
All		General Education Component Elective #5	3		
<b>Total</b>				<b>17</b>	

\* 1sh; does not count toward 128 sh total required for graduation  
Please check MyUI for the most up to date course offerings and pre/corequisites

Note: Two Track Electives must be Engineering topics courses