

Biomedical Engineering

1st 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	059:005	Engineering Problem Solving I	3		
	All	004:011	Principles of Chemistry I	4		
	All	010:003	Accelerated Rhetoric (or 10:001 & 10:002)	4		
	F	059:090	First-Year Engineering Seminar	1	First Semester Standing	
Total				16		
Spring Semester	F/S	22M:032	Engineering Math II – Multivariable Calculus	4	P: 22M:031	
	S	059:006	Engineering Problem Solving II	3	C: 22M:031	
	F/S	029:081	Introductory Physics I	4	C: 22M:031	
	All	22M:033	Engineering Math III – Matrix Algebra	2	P: 22M:031	
	All	004:012	Principles of Chemistry II	4	P: 004:011	
	S	051:090	Biomedical Engineering First-Year Forum	0		
Total				17		
2nd YEAR	All	22M:034	Engineering Math IV – Differential Equations	3	P: 22M:032 and 22M:033	
	Fall Semester	F	002:010	Principles of Biology I	4	P: 004:011
		All	059:007	Engineering Fundamentals I – Statics	2	P: 22M:031; C: 029:081, 22M:032
	F/S	059:008	Engineering Fundamentals II – Electrical Circuits	3	C: 22M:034	
	All	059:009	Engineering Fundamentals III – Thermodynamics	3	P: 22M:032, 004:011, 029:081	
	F/S	051:091	Professional Seminar: Biomedical Engineering	0	Sophomore Status	
Total				15		
Spring Semester	S	051:030	Cell Biology for Engineers	2	P: 002:010; C: 027:130, 051:130	
	All		General Education Component #1	3		
	F/S	057:017	Computers in Engineering	3	P: 059:006, Sophomore Standing	
	S	051:130	Cell Biology for Engineers Laboratory	1	C: 027:130, 051:030	
	F/S	027:130	Human Physiology	3	P: 002:010, 004:012	
	All	057:019	Mechanics of Deformable Bodies	3	P: 059:007 C: 22M:034	
	F/S	051:091	Professional Seminar: Biomedical Engineering	0	Sophomore Status	
Total				15		
3rd YEAR	F	051:040	Biological Systems Analysis	3	P: 051:030, 027:130, 22M:034 C:057:017	
	Fall Semester	F/S	029:082	Introductory Physics II (with lab)	4	P: 029:081, C: 22M:032
		F	051:050	Biomechanics : Theory and Design	3	P: 057:019, 027:130
	All		General Education Component #2	3		
	F	051:070	Biomaterials and Implant Design	3	P: 057:019; 004:012	
	F/S	051:091	Professional Seminar: Biomedical Engineering	0	Sophomore standing or higher	
	Total				16	
Spring Semester	S	171:161	Biostatistics	3	P: 22M:032	
	All		General Education Component #3	3		
	S	051:075	Cell-Material Interactions	3	P: 027:130, 051:030; C: 051:070	
	S	051:060	Data and Image Acquisition and Analysis	4	P: 057:017, 059:008, 051:040; C:051:080	
	S	051:080	Data Acquisition Design Laboratory	2	C: 051:060	
	All		General Education Component #4	3		
F/S	051:091	Professional Seminar: Biomedical Engineering	0	Sophomore standing or higher		
Total				18		
4th YEAR	F	051:085	Biomedical Engineering Senior Design I	4	P 051:075, 051:080, 051:050, Senior Standing	
	Fall Semester	F/S		EFA Elective #1	3	
		F/S		EFA Elective #2	3	
		F/S		EFA Elective #3	3	
		F/S		EFA Elective #4	3	
	F	051:092	Leadership and Resourcefulness	0	P: Completed 6- 051:090/051:091 combined	
Total				16		
Spring Semester	S	051:086	Biomedical Engineering Senior Design II	4	P: 051:085, Senior Status	
	F/S		EFA Elective #5	3	At least one EFA is technical	
	F/S		EFA Elective #6	3		
	F/S		EFA Elective #7	3		
	All		General Education Component #5	3		
Total				16		