

### Biomedical Engineering (BME) Program of Study

		Fall Semester			Spring Semester		
		Course	Course Title	Hrs.	Course	Course Title	Hrs.
<b>Freshman</b>		CH 115/116	General Chemistry I/Lab	4	BY 123	Introductory Biology I	4
		EGR 110	Introduction to Engineering I	1	CH 117/118	General Chemistry II/Lab	4
		EH 101	English Composition I	3	EGR 111	Introduction to Engineering II	1
		MA 125	Calculus I	4	EH 102	English Composition II	3
		ME 102	Engineering Graphics	2	MA 126	Calculus II	4
			<b>Total Credits:</b>	<b>14</b>		<b>Total Credits:</b>	<b>16</b>
<b>Sophomore**</b>		BY 210	Genetics	3	BME 210	Engineering Biology	3
		EGR 265	Math Tools for Engineers†	4	CE 210	Statics	3
		PH 221/L	General Physics I and Lab	4	EE 312	Electrical Systems	3
		MA 260	Linear Algebra	3	EGR 150	Computer Methods and Engineering	3
		MSE 280	Engineering Materials	3	PH 222/L	General Physics II and Lab	4
			<b>Total Credits:</b>	<b>17</b>		<b>Total Credits:</b>	<b>16</b>
<b>Junior</b>		BME 310	Biomaterials	3	BME 313	Bioinstrumentation	3
		BME 312	Biocomputing	3	BME 333	Biomechanics of Solids	3
		BME 350	Biological Transport Phenomena	3	BME 340	Bioimaging	3
		BY 409	Mammalian Physiology	4	Elective††	MA/SCI/EGR/BME	3
		ME 215	Dynamics	3	HFA I	Core Curriculum Area II	3
			<b>Total Credits:</b>	<b>16</b>	SBS I	Area IV Core Curriculum	3
<b>Senior</b>		BME 401	BME Seminar *	1	BME 4xx	BME Elective	3
		BME 3xx/4xx	BME/EGR Elective**	3	BME 499	Senior Design	3
		BME 4xx	BME Elective	3	HFA III	Core Curriculum Area II	3
		BME 423	Living Systems Analysis	3	SBS II	Core Curriculum Area IV	3
		BME 498	Product Development	3	SBS III	Core Curriculum Area IV	3
		HFA II	Core Curriculum Area II				
		<b>Total Credits:</b>	<b>16</b>		<b>Total Credits:</b>	<b>15</b>	

\* Seminars may be taken during any semester depending on the student's schedule

\*\* Supplemental sophomore career advising is offered by BME faculty in addition to the academic advising provided by the School of Engineering Office of Academic Programs (OAP). Schedule approval must be obtained through the academic advisors in the OAP until a student has earned 48 credit hours applicable to the BME degree. BME faculty advises and approves schedules for BME students in good standing with 48 or more credit hours.

\*\*\* Must be chosen from the approved list of electives and contain 3 credit hours of engineering topics.

† Can substitute MA 227 and MA 252 for EGR 265 and the MA/SCI/EGR/BME elective (from the approved list).

†† Students using this curriculum as a pre-health professional program (pre-med, pre-dental or pre-optometry) should take BY 124 Intro to Biology II, CH 235/236 Organic Chemistry I and CH 237/238 Organic Chemistry II to prepare for professional school entrance exams. Three credit hours from the organic chemistry sequence may count toward the BME degree if taken as the MATH/SCI/EGR elective. Additionally, BY 261 Microbiology and BY 330 Cell Biology are highly recommended.