

# Biomedical Engineering Course Flowchart

<b>1<sup>st</sup> Semester (Fall)</b>	<b>ENGI 1100</b> MATH 2413	MATH 1314 <b>BIOL 1306</b>	<b>BIOL 1106</b> BIOL 1306	CHEM Placement Test or MATH 2312 <b>CHEM 1311</b>	<b>CHEM 1111</b> CHEM 1311	<b>ENGL 1301</b>	MATH Placement Test or MATH 2312 <b>MATH 2413</b>
<b>2<sup>nd</sup> Semester (Spring)</b>	MATH 2413 & CHEM 1311 <b>ENGI 1331</b> or PHYS 2325	MATH 1314 <b>BIOL 1307</b>	<b>BIOL 1107</b> BIOL 1307	MATH 2312, CHEM 1311 <b>CHEM 1312</b>	CHEM 1111 <b>CHEM 1112</b> CHEM 1312	MATH 2413 <b>MATH 2414</b>	<b>PHYS 2325</b> MATH 2414
<b>3<sup>rd</sup> Semester (Fall)</b>	ENGI 1100, ENGI 1331 <b>BIOE 2100</b>	CHEM 1312 <b>CHEM 2323</b>	CHEM 1112 <b>CHEM 2123</b> CHEM 2323	ENGL 1301 <b>ENGL 1302</b>	MATH 2414 <b>MATH 2415</b>	PHYS 2325 <b>PHYS 2326</b> MATH 2415	
<b>4<sup>th</sup> Semester (Spring)</b>	ENGI 1331, PHYS 2326, CHEM 1312, MATH 2415 <b>BIOE 2331</b> MATH 3321	ENGI 1100, ENGI 1331, ENGL 1301, ENGL 1302, MATH 2413, MATH 2414 <b>ECE 2201</b> MATH 2415, MATH 3321, PHYS 2326	CHEM 2323/2123 <b>BCHS 3304</b>	MATH 2414 <b>MATH 3321</b>	<b>Social Science Core</b>	<b>Creative Arts Core</b>	
<b>5<sup>th</sup> Semester (Fall)</b>	PHYS 2325 <b>MECE 3400</b> MATH 3321	ENGI 1100, ENGL 1302 and one of: ECE 2201 or INDE 2333 <b>ENGI 2304</b>	MATH 2414 <b>INDE 2333</b>	<b>HIST 1377</b>	<b>POLS 1336</b>		
<b>6<sup>th</sup> Semester (Spring)</b>	<b>BIOE 3341</b> BIOE 3340	BCHS 3304, BIOL 1306/1106, BIOL 1307/1107, PHYS 2326, ENGI 1331, BIOE 2331, ECE 2201, MATH 3321 <b>BIOE 3340</b>	<b>BIOE 3140</b> BIOE 3340	BIOE 2100, MATH 2415 <b>BIOE 4302</b> BIOE 3340/3140	<b>BIOE Track Course</b>	<b>HIST 1378</b>	
<b>7<sup>th</sup> Semester (Fall)</b>	ENGI 2304, INDE 2333, MECE 3400 & all BIOE 3000-level courses <b>BIOE 4335</b> BIOE 4315 & 4115	ECE 2201, MATH 2415, MATH 3321, PHYS 2326 <b>BIOE 4315</b> BIOE 4115	<b>BIOE 4115</b> BIOE 4315	<b>BIOE Track Course</b>	<b>BIOE Track Course</b>	<b>POLS 1337</b>	
<b>8<sup>th</sup> Semester (Spring)</b>	BIOE 4335 <b>BIOE 4336</b>	BCHS 3304 <b>BIOE 4350</b> BIOE 3340/3140	<b>BIOE 4150</b> BIOE 4350	<b>BIOE Track Course</b>	<b>BIOE Track Course</b>	<b>Language, Philosophy, &amp; Culture Core</b>	

Pre-Requisite

**Course #**

Co-Requisite

# Biomedical Engineering Course Flowchart

Track	Course	Prerequisites	Semester Offered
<b>Bionanoscience</b>	BIOE 4303: Biomaterials	BIOE 3340/3140	Fall
	BIOE 4310: Drug Delivery and Design	BIOE 3340/3140	Spring
	BIOE 4311: Advances in Vision Research	BCHS 3304 Co-requisite: BIOE 3340/3140	Fall
	BIOE 4319: Mass Transport in Biological Systems	BIOE 3340	Fall
	BIOE 4349: Biomedical Microdevices	BIOE 3340/3140	Spring
	BIOE 4347: Cell and Molecular Biology for BME	BIOE 3340/3140	Fall/Spring
	BIOE 4348: Tissue Engineering—Principles & Practice	BIOE 4303/4347	Spring
	BIOE 4366: Biomolecular Engineering Fundamentals	Co-requisite: BIOE 4350/4150	Spring
<b>Neural, Cognitive, &amp; Rehabilitation Engineering</b>	BIOE 4305: Brain-Machine Interfacing	ENGI 1331, INDE 2333 Co-requisite: BIOE 4315/4115	Fall
	BIOE 4313: Intro to Neurocomputing	INDE 2333, MATH 2415, 3321	Spring
	BIOE 4309: Neural Technology Interfaces	BIOE 3340/3140	Spring
	BIOE 4342: Biomedical Signal Processing	BIOE 4315/4115, ECE 3337	Spring
	BIOE 4397: Neural Engineering Methods & Applications	BIOE 3340	Fall
	ECE 3337: Signals & Systems Analysis	ECE 2202	Fall/Spring
<b>Biomedical Imaging</b>	BIOE 4307: Intro to Optical Imaging	BIOE 2331, MATH 3321	Fall
	BIOE 5317: Intro to Biomedical Imaging	BIOE 4302, 3340, INDE 2333	Spring
	BIOE 5320: Intro to Electromagnetic Imaging	BIOE 4302, 3340, PHYS 2326, INDE 2333	Fall
<b>Additional Electives</b>	BIOE 3351: Introduction to Diseases	Co-requisite: BIOE 3340 or consent of instructor	Fall
	BIOE 5318: Bioinformatics	BIOE 3341 or consent of instructor	Fall
	BIOE 4397: Engineering of the Human Body	BIOE 3340/3140	Spring
	BIOE 5319: Global Healthcare	BIOE 3340 or consent of instructor	Spring/Summer
	ECE 3355/3155: Electronics	ECE 2202, ENGI 2304 Co-requisite: ECE 3337	Fall/Spring
	ECE 3456: Analog Electronics	ECE 3355/3155	Fall/Spring