

Biomedical Engineering Course Flowchart (2017-2018)

1st Semester (Fall)	ENGI 1100 MATH 1431	MATH 1310 BIOL 1361	BIOL 1161 BIOL 1361	CHEM Placement Test or MATH 1330 CHEM 1331	CHEM 1111 CHEM 1331	ENGL 1303	MATH Placement Test or MATH 1330 MATH 1431
2nd Semester (Spring)	MATH 1431 & CHEM 1331 or PHYS 1321 ENGI 1331	MATH 1310 BIOL 1362	BIOL 1162 BIOL 1362	MATH 1330, CHEM 1331 CHEM 1332	CHEM 1111 CHEM 1112 CHEM 1332	MATH 1431 MATH 1432	PHYS 1321 MATH 1432
3rd Semester (Fall)	ENGI 1100, ENGI 1331 BIOE 2100	CHEM 1332 CHEM 3331	CHEM 1112 CHEM 3221 CHEM 3331	ENGL 1303 ENGL 1304	MATH 1432 MATH 2433	PHYS 1321 PHYS 1322 MATH 2433	
4th Semester (Spring)	ENGI 1331, PHYS 1322, CHEM 1332, MATH 2433 BIOE 2331 MATH 3321	ENGI 1100, ENGI 1331, ENGL 1303, ENGL 1304, MATH 1431, MATH 1432 ECE 2201 MATH 2433, MATH 3321, PHYS 1322	CHEM 3331/3221 BCHS 3304	MATH 1432 MATH 3321	Social Science Core	Creative Arts Core	
5th Semester (Fall)	PHYS 1321 MECE 3400 MATH 3321	ENGI 1100, ENGL 1304 & one of: CHEE 2331, CIVE 2330, ECE 2201, INDE 2333, MECE 2336, PETR 2311 ENGI 2304	MATH 1432 INDE 2333	HIST 1377	HIST 1378	POLS 1336	
6th Semester (Spring)	BIOE 3341 BIOE 3340	BCHS 3304, BIOL 1361/1161, BIOL 1362/1162, PHYS 1322, ENGI 1331, BIOE 2331, ECE 2201, MATH 3321 BIOE 3340	BIOE 3140 BIOE 3340	BIOE Track Course	BIOE Track Course		
7th Semester (Fall)	ENGI 2304, INDE 2333, MECE 3400, & all req'd BIOE 3000-level courses BIOE 4335 BIOE 4315 & 4115	ECE 2201, MATH 2433, MATH 3321, PHYS 1322 BIOE 4315 BIOE 4115	BIOE 4115 BIOE 4315	BIOE Track Course	BIOE Track Course	POLS 1337	
8th Semester (Spring)	BIOE 4335 BIOE 4336	BIOE Track Course	BIOE Track Course	BIOE Track Course	Language, Philosophy, & Culture Core		

Pre-Requisite

Course #

Co-Requisite

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Track	Course	Prerequisites	Semester Offered
Required by all tracks	BIOE 4302: Numerical Analysis	BIOE 2100, MATH 2433 Co-requisite: BIOE 3340/3140	Spring
	BIOE 4350 & 4150: Genomics & Proteomics & Lab	BCHS 3304 Co-requisite: BIOE 3340/3140	Spring
Bionanoscience	BIOE 4366: Biomolecular Engineering Fundamentals	BIOE 3341 Co-requisite: BIOE 4350/4150	Fall
	BIOE 5341: Advanced Biofluid Dynamics	BIOE 3340, 4302	Spring
	BIOE 4349: Biomedical Microdevices	ENGI 1331, PHYS 1322, MATH 3321, BIOE 2331, BIOE 3340/3140	Spring
	BIOE 5316: Transport Phenomena in Biosystems	BIOE 4302, 3340/3140	Fall
	BIOE 5323: Regenerative Medicine & Stem Cell Engineering	BIOE 3340/3140 & MATH 3321	Fall
	Advances in Vision Research	BIOL 1361/1161, BIOL 1362/1162, BCHS 3304 Co-requisite: BIOE 3340/3140	Spring
	Drug Delivery and Design	BIOE 3340, 3140	Fall
	Biomaterials	BIOE 3340, 3140	Fall
Neural, Cognitive, & Rehabilitation Engineering	Cellular and Molecular Bioengineering	BIOE 3340, 3140	Fall
	BIOE 4342: Biomedical Signal Processing	BIOE 4315, 4115, ECE 3337	Spring
	ECE 3337: Signals & Systems Analysis	ECE 1331, ECE 2201, MATH 3321. Co-requisite: ECE 2202	Fall/Spring
	Brain-Machine Interfacing	Co-requisite: BIOE 4315/4115	Fall
	Intro to Neurocomputing	Brain-Machine Interfacing	Spring
Biomedical Imaging	Neural Interfaces	Co-requisite: BIOE 3340/3140	Spring
	BIOE 5320: Intro to Electromagnetic Imaging	BIOE 4302, 3340, PHYS 1322, INDE 2333	Fall
	BIOE 5317: Intro to Imaging	BIOE 4302, 3340, INDE 2333	Spring
Technical Electives	BIOE 4307: Intro to Optical Imaging	BIOE 2331, MATH 3321	Fall
	BIOE 3351: Introduction to Diseases	Co-requisite: BIOE 3340/3140	Fall
	BIOE 5319: Global Healthcare	BIOE 3340/3140 (or consent of instructor)	
	ECE 3355/3155: Electronics	ECE 3337, ENGI 2304 Co-requisite: ECE 3155	
	ECE 3456: Analog Electronics	ECE 3155, ECE 3355	