

Biomedical Engineering Course Flowchart

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

Pre-Requisite

Course #

Co-Requisite

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Track	Course	Prerequisites	Semester Offered
Bionanoscience	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: Cellular 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
Neural, Cognitive, & Rehabilitation Engineering	BIOE 4305: Brain-Machine Interfacing	ENGI 1331, INDE 2333 Co-requisite: BIOE 4315/4115	Fall
	BIOE 4313: Introduction to Neural Computation	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 4308: Neural Engineering Methods & Applications	BIOE 3340	Fall
	ECE 3337: Signals & Systems Analysis	ECE 2202	Fall/Spring
Biomedical Imaging	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
Additional Electives	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 4314: Engineering Physiology of the Human Body	BIOE 3340/3140	Spring
	BIOE 5319: Introduction to 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