

Biomedical Engineering Course Flowchart

Academic Year: 2019-2020

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 and one of: ECE 2201 or INDE 2333 ENGI 2304	MATH 1432 INDE 2333	HIST 1377	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	MATH 1432 BIOE 4302 BIOE 3340	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 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	BCHS 3304 BIOE 4350 BIOE 3340	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
Required by all tracks	BIOE 4302: Numerical Analysis	BIOE 2100, MATH 2433 Co-requisite: BIOE 3340/3140	Spring
	BIOE 4350 & 4150: Genomics & Proteomics with Lab	BCHS 3304 Co-requisite: BIOE 3340/3140	Fall/Spring
Bionanoscience	BIOE 4303: Biomaterials	BIOE 4302, 3340/3140	Fall
	BIOE 4310: Drug Delivery and Design	BIOE 3340, 3140	Fall
	BIOE 4311: Advances in Vision Research	BIOL 1361/1161, BIOL 1362/1162, BCCHS 3304 Co-requisite: BIOE 3340/3140	Spring
	BIOE 4349: Biomedical Microdevices	BIOE 3340/3140	Spring
	BIOE 4366: Biomolecular Engineering Fundamentals	BIOE 3341 Co-requisite: BIOE 4350/4150	Fall
	BIOE 4397: Mass Transport for Bio-systems	BIOE 3340, 3140	Fall
	BIOE 4397: Cell and Molecular Biology for BME	BIOE 3340, 3140	Fall/Spring
	BIOE 4397: Tissue Engineering—Principles & Practice	BIOE 3340, 3140	Spring
Neural, Cognitive, & Rehabilitation Engineering	BIOE 4305: Brain-Machine Interfacing	Co-requisite: BIOE 4315/4115	Fall
	BIOE 4313: Intro to Neurocomputing	BIOE 4305	Spring
	BIOE 4309: Neural Technology Interfaces	Co-requisite: BIOE 3340/3140	Spring
	BIOE 4342: Biomedical Signal Processing	BIOE 4315, 4115, ECE 3337	Spring
	ECE 3337: Signals & Systems Analysis	ECE 2201, MATH 3321 Co-requisite: 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 1322, INDE 2333	Fall
Additional Electives	BIOE 3351: Introduction to Diseases	Co-requisite: BIOE 3340/3140	Fall
	BIOE 5318: Bioinformatics	BIOE 3341 or consent of instructor	Fall
	ECE 3355/3155: Electronics	ECE 2202, ECE 3337, ENGI 2304 Co-requisite: ECE 3155	Fall/Spring
	ECE 3456: Analog Electronics	ECE 3155, ECE 3355	Fall/Spring