

BME Major Checklist - Neuroengineering

BME Major Checklist - Neuroengineering		
Year	Math Courses	Pre-Requisites
	MATH 1431: Calculus 1	Placement Exam
	MATH 1432: Calculus 2	MATH 1431
	MATH 2433: Calculus 3	MATH 1432
	INDE 2333: Engineering Statistics	MATH 1432 & BIOE 1331/1397
	MATH 3321: Engineering Math	MATH 1432
Year	Biology	Pre-Requisites
	BIOL 1361 w/ 1161 (Biological Science w/ Lab)	MATH 1310 or equivalent
	BIOL 1362 w/ BIOL 1162	MATH 1310 or equivalent and BIOL 1361/1161
	BIOL 4315 Neuroscience	BIOL 1361/ 1161, 1362/1162, CHEM 1331 & 1332
Year	Chemistry	Prerequisites
	CHEM 1331/ 1111 (Chemistry 1/ Fund. Of Chem Lab)	MATH 1330 equivalent & completion of chem placement test or CHEM 1301
	CHEM 1332/ 1112 (Chemistry II and Lab)	MATH 1330 or equivalent & CHEM 1331/1111
	CHEM 3331/ 3221 (Organic Chemistry/ Lab)	CHEM 1332
	CHEE 2331 (Chemical Processes)	ECE 1331 or BIOE 1397/1331, CHEM 1332, MATH 1432, & PHYS 1321
	BCHS 3304 (Biochemistry I)	CHEM 3331/ 3221
Year	Physics	Prerequisites
	PHYS 1321 (University Physics I)	MATH 1432
	PHYS 1322 (University Physics II)	PHYS 1321 & credit for or current enrollment in MATH 2433
Year	Mechanical Engineering	Prerequisites
	MECE 3400 (Intro to Mechanics)	PHYS 1321 & credit for or concurrent enrollment in MATH 3321
Year	Electrical Engineering	Prerequisites
	ECE 2300/ 2100 (Circuit Analysis/ Lab)	BIOE 1100 & 1331/1397, ENGL 1304, MATH 1432, PHYS 1321, & credit for or concurrent enrollment in MATH 2433, 3321, & PHYS 1322
	ECE 3337 (Analysis)	MATH 3321, BIOE 1331/1397, ECE 2300
	ECE 3355/ 3155 (Electronics/ Lab)	ECE 2100, 2300, 3337, & ENGL 2304

Year	Biomedical Engineering	Prerequisites
	BIOE 1100 (Intro. To BME)	BME major declaration
	BIOE 1397 (Comp. & Prob. Solving)	MATH 1431
	BIOE 3340 (Quantitative Physiology)	BIOL 1161, 1162, 1361, 1362, CHEM 3221, 3331, MATH 3321, MECE 3400, and credit for or concurrent enrollment in CHEE 2331, ECE 2100 & 2300
	BIOE 3440 (Biotherm. & Biofluids)	BIOE 3340, ECE 2100, 2300, CHEE 2331, AND MECE 3400
	BIOE 4458 (Instrumentation Electronics)	ECE 3155, 3337, & 3355
	BIOE 3366 (Digital Signal Processing)	ECE 3337
	BIOE Elective	Varies by course
	BIOE Elective	Varies by course
	BIOE 4334 Capstone Design	ENGI 2304, INDE 2333, and either BIOE 5455 or BIOE 3366 & 4458
Year	Core Curriculum (Not Covered by Major)	Prerequisites
	English 1303 or 1309 (Communication 3 Hrs.)	For 1303 - Score of 240 on the TASP Writing Test
	English 1304 or 1310 (Communication 3 Hrs)	1303 or 1309
	History 1376 or 1377 (American History 3 Hrs.)	NA
	History 1378 (American History 3 Hrs.)	NA
	POLS 1336 (Government 3 Hrs.)	NA
	POLS 1337 (Government 3 Hrs.)	NA
	Humanities - 3 Hrs.	
	Visual & Performing Arts (3 Hrs.)	
	ENGI 2304 (Technical Communication)	ENGL 1304 & Completion of one of the following: CHEE, ECE, MECE, INDE, or CIVE 1331
	Social & Behavioral Science (3 Hrs.)	

Biomedical Engineering – Neuroengineering Option Undergraduate Curriculum Flowchart 2012 – 2013

