

Biomedical Engineering and Electrical Engineering
Curriculum Checksheet - Effective Fall 2023 And After

Name: _____

Program Total Credits = 157-158

COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR	COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR
1st Year Fall				1st Year Spring			
BIOM 100	Overview of Biomedical Engineering	F	1	LIFE 102	Attributes of Living Systems	F, S, SS	4
ECE 102	Digital Circuit Logic	F, S	4	ECE 103	DC Circuit Analysis (MATH 159 or 160)	F, S	3
CHEM 111	General Chemistry I (MATH 118 or 127 or 141 or 155 or 160 or 161 or 229 or 261)	F, S, SS	4	MATH 161	Calc for Physical Scientists II ((MATH 124 or 127); (MATH 159 or 160))	F, S, SS	4
MATH 160	Calculus for Physical Scientists I (MATH 124* ; (MATH 126* or 127*))	F, S, SS	4	PH 141	Physics for Scientists and Engineers I (MATH 159/conc or MATH 160/conc)	F, S, SS	5
CO 150	College Composition (CO 130 or placement by ACT or SAT or DSP Survey or Challenge Exam)	F, S, SS	3				
	Total		16				Total 16
2nd Year Fall				2nd Year Spring			
BIOM 200	Fundamentals of Biomedical Engineering (BIOM 100/conc; LIFE 102; MATH 160)	F	2	ECE 202	Circuit Theory Applications (ECE 103; MATH 161)	S, SS	4
CS 150B ¹	Culture and Coding: Python (no prereqs) <i>See footnote for alternative options</i>	F, S	3	ECE 232	Introduction to Project Practices (ECE 202/conc or ECE 395B/conc or ECE 495B/conc)	F, S	1
MATH 261	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4	ECE/STAT 303	Introduction to Communications Principles (MATH 261; MATH 340/conc)	S	3
PH 142	Physics for Scientists and Engineers II (PH 141; MATH 161 /conc)	F, S	5	MATH 340	Intro to ordinary Differential Equations (MATH 261)	F, S, SS	4
CHEM 112	General Chemistry Lab I (CHEM 111/conc or CHEM 117/conc)	F, S, SS	1	MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	4
	Total		15				Total 16
3rd Year Fall				3rd Year Spring			
ECE 311	Linear Systems Analysis (ECE 202; MATH 340; ECE 331/conc; ECE 341/conc)	F	3	BIOM 300	Problem-Based Learning BME Lab (BIOM 101 or BIOM 200 or (BIOM 100; CBE 205; MECH 262); (MATH 340 or 345))	S	4
ECE 331	Electronics Principles I (MATH 340; PH 142; ECE 202; ECE 311/conc; ECE 341/conc)	F	4	ECE 312	Linear Systems Analysis II (ECE 311)	S	3
ECE 341	Electromagnetics Fields and Devices I (MATH 340; PH 142; ECE 202; ECE 311/conc; ECE 331/conc)	F	3	ECE 332	Electronics Principles II (ECE 331)	S	4
CS 164 ¹	CS1- Computational Thinking with Java (CS 150B* or CS 152* or CS 163) <i>See footnote for alternative options</i>	F, S	4	ECE 342	Electromagnetic Fields and Devices II (ECE 341)	S	3
	Total		14				Total 14
4th Year Fall				4th Year Spring			
BMS 300	Principles of Human Physiology ((BZ 101 or 110 or LIFE 102); (CHEM 103 or 107 or 111))	F, S, SS	4	BIOM 431	Biomedical Signal and Image Processing (ECE/STAT 303; ECE 311; PH 142)	S	3
CHEM 113	General Chemistry II ((CHEM 107 or 111 or 117); (MATH 124 or 127 or 141/conc or 155/conc or 160/conc or 161/conc or 229/conc or 261/conc))	F, S, SS	3	CHEM 245	Fundamentals of organic Chemistry (CHEM 107 or 113)	F, S, SS	4
ECE 251	Introduction to Microcontrollers and IoT (ECE 102)	F, S	4	MECH 337	Thermodynamics (MATH 261; PH 141)	F, S	4
ECE-TE	ECE Technical Elective _____	F, S, SS	3	ECE-TE	ECE Technical Elective _____		3
BME BE	_____	F, S, SS	3	ECON 202 (AUCC 3C)	Principles of Microeconomics (MATH 117 or 118 or 127 or 160)	F, S, SS	3
	Total		17				Total 17
5th Year Fall				5th Year Spring			
BIOM 486A	Biomedical Design Practicum: Capstone Design I (BIOM 300; BIOM 431; ECE 311; ECE 332; ECE 342)	F	4	BIOM 486B	Biomedical Design Practicum: Capstone Design II (BIOM 486A; (PH 353 or (CBE 451 or ECE 312) or (MECH 325; MECH 344))	S	4
BME-TE	BME Technical Elective _____	F, S, SS	3	BME-TE	BME Technical Elective _____	F, S, SS	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4	ECE-TE	ECE Technical Elective _____	F, S, SS	3
CO 301B or JTC 300	CO 301B: Writing in Disciplines: Science JTC 300: Strategic Writing & Communication (CO 150 or HONR 193 for both)	F, S, SS	3	AUCC	_____	F, S, SS	3
AUCC	_____	F, S, SS	3	AUCC	_____	F, S, SS	3
	Total		17				Total 16

All course prerequisites for required undergraduate ECE courses must be completed with a C or better

Please note that curricula can change; be sure to check DARS/Degree Audit and with your advisors regularly to ensure you are on track.

¹ CS 150B + CS 164: Students may also choose one of the following: 1)Arts/Humanities AUCC + CS 152+CS162 -OR- 2)Arts/Humanities AUCC+CS 163

AUCCs- Additional All University Core Courses (click here for list)	
3 credits - 1C Diversity, Equity, and Inclusion:	
6 credits - 3B Arts and Humanities:	_____
3 credits - 3C Social/Behavioral Science:	ECON 202
3 credits - 3D Historical Perspective:	

Key:
/conc = may be taken concurrently Term: F = Fall, S = Spring, SS = Summer Session
Grey indicates Biomedical Engineering courses
Light green indicates labs
Red indicates time-consuming/difficult courses
Must have at least a "C" in BOLDED courses
BOLDED and * = Must have at least a "B" in courses