

Biomedical Engineering and Electrical Engineering
Curriculum Checksheet - Effective Summer 2023 and Prior

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	CHEM 112	General Chemistry Lab I (CHEM 111/conc or CHEM 117/conc)	F, S, SS	1
MATH 160	Calculus for Physical Scientists I (MATH 124* ; (MATH 126* or 127*))	F, S, SS	4	MATH 161	Calc for Physical Scientists II ((MATH 124 or 127); (MATH 159 or 160))	F, S, SS	4
CO 150	College Composition (CO 130 or placement by ACT or SAT or DSP Survey or Challenge Exam)	F, S, SS	3	PH 141	Physics for Scientists and Engineers I (MATH 159/conc or MATH 160/conc or (MATH 126/conc; MATH 155/conc) or (MATH 127/conc; MATH 155/conc))	F, S, SS	5
Total 16				Total 17			
2nd Year Fall				2nd Year Spring			
MATH 261	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4	ECE 202	Circuit Theory Applications (ECE 103; MATH 161)	S, SS	4
BIOM 200	Fundamentals of Biomedical Engineering (BIOM 100/conc; LIFE 102; F MATH 160)	F	2	ECE 232	Introduction to Project Practices (ECE 202/conc or ECE 395B/conc or ECE 495B/conc)	F, S	1
PH 142	Physics for Scientists and Engineers II (PH 141; MATH 161 /conc)	F, S	5	ECE/STAT 303	Introduction to Communications Principles (MATH 261 ; MATH 340/conc)	S	3
(CS 163 or 164) or (CS 152 and (MATH 151 or STAT 158))	CS 163- CS1 (Java) No Prior Programming Experience (CS 150A or 150B or 152 or CIS 240 or MATH 124 or 127)	F, S, SS	3-4	MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	4
	CS 164- CS1 Computational Thinking with Java (CIS 240* or CS 150A* or 150B* or 152* or 163)			MATH 340	Intro to ordinary Differential Equations (MATH 261)	F, S, SS	4
	CS 152- Python for STEM (CS 163 or MATH 124* or 125* or 126* or 127* or 141 or 155 or 156 or 157 or 159 or 160)						
	MATH 151- Mathematical Algorithms in Matlab I (MATH 141 or 155 or 160)						
	STAT 158- Intro to "R" Programming (none)						
Total 14-15				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
BME BE	BME Broad Elective	F, S, SS	3	ECE 342	Electromagnetic Fields and Devices II (ECE 341)	S	3
AUCC		F, S, SS	3				
Total 16				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	ECON 202 (AUCC 3C)	Principles of Microeconomics (MATH 117 or 118 or 127 or 160)	F, S, SS	3
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	CHEM 245	Fundamentals of organic Chemistry (CHEM 107 or 113)	F, S, SS	4
AUCC		F, S, SS	3	ECE-TE	ECE Technical Elective _____		3
Total 17				Total 17			
5th Year Fall				5th Year Spring			
BIOM 486A	Biomedical Design Practicum: Capstone Design I (BIOM 300; ((BIOM 421; CBE 320; CBE 442) or (BIOM 431; ECE 311; ECE 332; ECE 342) or (BIOM 441; MECH 301A; MECH 301B/conc; MECH 307))	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	3	ECE-TE	ECE Technical Elective _____	F, S, SS	4
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				
Total 16				Total 14			

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.

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:
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
Rev 3-16-23 KED