

**Curriculum Checksheet - Effective Fall 2018 And After**

**Program Total Credits = 158 or 159**

COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR	COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR
<b>1<sup>st</sup> Year Fall</b>				<b>1<sup>st</sup> Year Spring</b>			
BIOM 100	Overview of Biomedical Engineering	F	1	CHEM 112	General Chemistry Lab I (CHEM 111 or 117 or conc.)	F, S, SS	1
ECE 102	Digital Circuit Logic	F, S	4	ECE 103	DC Circuit Analysis (MATH 160)	F, S	3
CHEM 111	General Chemistry I (MATH 118 or 141 or 155 or 160 or 161 or 229 or 261; CHEM 105 or an appropriate score in the chemistry preparation module)	F, S, SS	4	LIFE 102	Attributes of Living Systems	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	MATH 161	Calculus for Physical Scientists II (MATH 124; MATH 159 or 160)	F, S, SS	4
MATH 160	Calculus for Physical Scientists I (MATH 124 and 126 (B or better))	F, S, SS	4	PH 141*	Physics for Scientists and Engineers I (MATH 126 or conc.; MATH 155 or 159 or 160 or conc.)	F, S, SS	5
<b>Total 16</b>				<b>Total 17</b>			

<b>2nd Year Fall</b>				<b>2nd Year Spring</b>			
BIOM 200	Fundamentals of Biomedical Engineering (BIOM 100 or conc.; LIFE 102; MATH 160)	F	2	ECE 202	Circuit Theory Applications (ECE 103; MATH 161)	S, SS	4
CS 163 OR CS 164	Java (CS1) No Prior Programming (MATH 124) OR Java (CS1) Prior Programming (MATH 124)	F, S	4	ECE / STAT 303	Introduction to Communication Principles (MATH 261; MATH 340 or 345 or conc.)	S	3
MATH 261	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4	MATH 340	Introduction to Ordinary Differential Equations (MATH 255 or 261)	F, S, SS	4
PH 142	Physics for Scientists and Engineers II (MATH 161 or 255 or 271 or conc.; PH 141)	F, S	5	PH 314	Introduction to Modern Physics (MATH 261 or conc.; PH 142)	S	4
<b>Total = 14 or 15</b>				<b>Total 15</b>			

<b>3rd Year Fall</b>				<b>3rd Year Spring</b>			
ECE 311	Linear Systems Analysis I (ECE 202; MATH 340; ECE 331 or conc.; ECE 341 or ECE 451 or 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 (ECE 202; MATH 340; PH142; ECE 311 or conc.; ECE 341 or ECE 451 or conc.)	F	4	BMS 300	Principles of Human Physiology (BZ 101 or 110 or LIFE 102; F, S, SS CHEM 103 or 107 or 111)	F, S, SS	4
ECE 341	Electromagnetics Fields and Devices I (ECE 202; MATH 340; PH 142; ECE 311 or conc.; ECE 331 or conc.)	F	3	ECE 332	Electronics Principles II (ECE 331)	S	4
LIFE 210	Introductory Eukaryotic Cell Biology (CHEM 111; CHEM 112; LIFE 102) (LIFE 210 or Broad Elective - changes pending)	F	3	ECE 342	Electromagnetic Fields and Devices II (ECE 341)	S	3
AUCC		F, S, SS	3				
<b>Total 16</b>				<b>Total 15</b>			

<b>4th Year Fall</b>				<b>4th Year Spring</b>			
CHEM 113	General Chemistry II (CHEM 107 or 111 or 117; MATH 124 or MATH 141, 155, 160, 161, 229, 261 or conc.)	F, S, SS	3	BIOM 431	Biomedical Signal and Image Processing (ECE 303; ECE 311; PH 142)	S	3
ECE 404	Experimental Optical Electronics (conc. w/ ECE 441)	F	2	CHEM 245	Fundamentals of Organic Chemistry (CHEM 107 or 113)	F, S, SS	4
ECE 441	Optical Electronics (ECE 342)	F	3	ECE 457	Fourier Optics (ECE 311; ECE 342)	S	3
MECH 337	Thermodynamics (MATH 261; PH 141)	F, S	4	ECON 202	Principles of Microeconomics (MATH 117 or 118 or 141 or 155 or 160)	F, S, SS	3
PH 353	Optics and Waves (MATH 261; PH 142)	F	4	MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	4
<b>Total 16</b>				<b>Total 17</b>			

<b>5th Year Fall</b>				<b>5th Year Spring</b>			
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 301; MECH 307)	F	4	BIOM 486B	Biomedical Design Practicum: Capstone Design II (BIOM 486A; (CBE 451) or (ECE 312) or (MECH 325; MECH 344) or (PH 353).	S	4
ECE-TE*	ECE Technical Elective _____		3	ECE-TE*	ECE Technical Elective _____		3
PH 451	Intro Quantum Mechanics I (PH 314; MATH 340 or 345)	F	3	ECE-TE*	ECE Technical Elective _____		3
CO 301B OR JTC 300	Writing in the Disciplines: Sciences OR Professional & Technical Communication (CO 150 or HONR 193)	F, S, SS	3	AUCC		F, S, SS	3
AUCC		F, S, SS	3	AUCC		F, S, SS	3
<b>Total 16</b>				<b>Total 16</b>			

\* - All course prerequisites for 100-, 200-, 300- and 400-level required ECE courses must be completed with a C or better

**Please note that curricula can change; be sure to check with your advisers regularly to ensure you are on track.**

Additional All University Core Courses (AUCCs)
6 cr - 3B Arts and Humanities: _____
3 cr - 3C Social/Behavioral Science: <i>ECON 202</i>
3 cr - 3D Historical Perspective: _____
3 cr - 3E Global/Cultural Awareness: _____

Key:
"conc." = concurrent enrollment Term: F = Fall, S = Spring, SS = Summer Session
Grey indicates Biomedical Engineering courses
Light green indicates labs
Red indicates exceptionally time-consuming/difficult courses
<b>Must have at least a "C" in BOLDED courses</b>