

Curriculum Check Sheet **158 Credits**
Biomedical Engineering AND Chemical & Biological Engineering

First Year - 31 Credits – (prereqs) **CR FA SP**

BIOM 101	Intro to Biomedical Engineering	F	3	
CBE 101	Chemical and Biological Engin. I	F	3	
MATH 160	Calculus for Physical Scientists I (MATH 124 or 126)	F,S,SS	4	
CHEM 111	General Chemistry I (MATH 118 or 124 or 155 or 160 or 161 or 229 or 261)	F,S,SS	4	
CHEM 112	General Chemistry Lab I (CHEM 111 concurrent or CHEM 117 concurrent)	F,S,SS	1	
CBE 102	Chem. and Bio. Engin. II	S	3	
MATH 161	Calculus for Physical Scientists II (MATH 124 or 126)	F,S,SS	4	
PH 141	Physics for Scientists and Engineers I (MATH 126 and 155 or 160)	F,S,SS	5	
CHEM 113	General Chemistry II (CHEM 107 or 111 or 117; MATH 124 or 141 or 155 (or conc.) or 160 (or conc.) or 161 (or conc.) or 229 (or conc.) or 261 (or conc.))	F,S,SS	3	
CHEM 114	General Chemistry Lab II (CHEM 112 or 113 (or conc.))	F,S,SS	1	

Third Year - 32 Credits **Cr FA SP**

CBE 310	Molecular Concepts and Applications (CBE 210; MATH 340)	F	3	
CBE 330	Process Simulation (CBE 210; MATH 340)	F	3	
CBE 331	Momentum Transfer and Mechanical Separations (CBE 210 or MECH 237; MATH 340)	F	4	
BC 351	Principles of Biochem. (BZ 110 or 120 or LIFE 102; CHEM 245 or 341 or 345)	F,S,SS	3	
LIFE 210	Intro Eukaryotic Cell Biology (CHEM 111, 112 (or conc.); LIFE 102)	F,S	3	
BMS 300	Principles of Human Physiology (BZ 101 or 110 or LIFE 102; CHEM 103 or 107 or 111)	F,S,SS	4	
BIOM 330	Transp. Phenom. in BME (BIOM 300; BMS 300; CBE 332 or MECH 344)	S	3	
CBE 320	Chemical and Biological Reactor Design (CBE 201; CBE 330)	S	3	
CBE 332	Heat and Mass Transfer Fundamentals (CBE 330; CBE 331)	S	3	
CBE 333	Chem & Bio Engineering Transfer Laboratory (CBE 332 or conc.)	S	2	
CBE 493	Profess. Development Semester	S	1	

Second Year - 34 Credits **Cr FA SP**

MATH 261	Calc for Physical Scientists III (MATH 161)	F,S,SS	4	
CO 150	College Comp (CO 130 or SAT vrb1/crit1 reading score 600, or ACT English score 26)	F,S,SS	3	
CBE 201	Material and Energy Balances (CBE 102 or MATH 151 (or conc); CHEM 111; LIFE 102 (or conc); PH 141)	F	3	
CHEM 341	Modern Organic Chemistry I (CHEM 113)	F,S,SS	3	
LIFE 102	Attributes of Living Systems	F,S,SS	4	
CBE 210	Thermodynamic Process Analysis (CBE 201; MATH 261)	S	3	
MATH 340	Intro to Ordinary Differential Equations (MATH 255 or MATH 261)	F,S,SS	4	
PH 142	Physics for Scientists and Engineers II (MATH 161 (or conc.) or MATH 255 (or conc.); PH 141)	F,S	5	
CHEM 343	Modern Organic Chemistry II (CHEM 245 or CHEM 341 or CHEM 345)	F,S,SS	3	
CHEM 344	Modern Organic Chemistry Laboratory (CHEM 113; CHEM 114)	F,S,SS	2	

Fourth Year – 32 Credits **Cr FA SP**

BIOM 400	Kinetics of Biomolecular and Cellular Systems (BIOM 330 or CBE 320)	F	3	
CBE 442	Separation Processes (CBE 332)	F	4	
CBE 443	Chem & Bio Eng Lab II (CBE 442)	F	2	
CBE 430	Process Control and Instrumentation (CBE 320; CBE 330; CBE 442)	F	3	
AUCC			3	
CIVE 262	Engineering Mechanics (MATH 161; PH 141)	S	4	
BIOM 300	Problem-based Learning BME Lab (BIOM 101; MATH 340)	S	4	
BIOM/CBE	Technical Elective		3	
AUCC			3	
STAT 315	Stats for Engineers and Scientists (MATH 161 or MATH 255)	F,S,SS	3	

Fifth Year - 29 Credits **Cr FA SP**

BIOM486A	Capstone Design Practicum I (BIOM 300; BIOM 330 or 441 or ECE 441)	F	4	
BIOM/CBE	Technical Elective		3	
	Additional Communication	F, S, SS	3	
CBE451	Chemical Engin. Design I (CBE 320; CBE 442 or conc.)	F	3	
AUCC			3	
BIOM486B	Capstone Des. Pract. II (BIOM 300; BIOM 330 or 441 or ECE 441;	S	4	
BIOM	Technical Elective		3	
AUCC			6	

3B Arts and Humanities 6 _____
3C Social/Behavioral Science 3 _____
3D Historical Perspective 3 _____
3E Global/Cultural Awareness 3 _____
Additional Communication 3 _____

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Students: Please note that curricula can change; be sure to check with your adviser regularly to be sure you are on track.