Biomedical Engineering and Electrical Engineering

Curriculum Checksheet - Effective Fall 2025 And After

Name: _____

Program Total Credits = 158

COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR
1st Year Fall			
CHEM 111 or CHEM 120	General Chemistry I (MATH 118 or 127 or 141 or 155 or 160) **OR** Foundations of Modern Chemistry (MATH 118 or MATH 127 or MATH 155 or MATH 160)	F, S, SS	4
CHEM 112 or CHEM 121	General Chemistry Lab I (CHEM 111/conc or CHEM 117/conc) **OR** Foundations of Modern Chemistry Lab (CHEM 120/conc)	F, S, SS	1
CS 150B[1]	Culture and Coding: Python (no prereqs) *See footnote for alternative options*	F, S	3
ENGR 111	Fundamentals of Engineering	F, S	3
MATH 160	Calculus for Physical Scientists I (MATH 124*; (MATH 126* or 127*))	F, S, SS	4
		Total	**15**
2nd Year Fall			
BIOM 200	Fundamentals of Biomedical Engineering (LIFE 102/conc; MATH 160)	F	2
ECE 205	Analog Circuits I (ENGR 114/conc or ENGR 123/conc; **MATH 160**)	F, S	3
ECE 252	Intro to Digital Circuits (ENGR 114/conc or ENGR 123/conc)	F, S	3
LIFE 102	Attributes of Living Systems	F, S, SS	4
MATH 261	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4
		Total	**16**
3rd Year Fall			
ECE/STAT 303	Introduction to Communications Principles (MATH 261; MATH 340/conc)	F	3
ECE 311	Linear Systems Analysis (ECE 202 or ECE 206; MATH 340; ECE 331/conc; ECE 341/conc)	F	3
ECE 331	Electronics Principles I (MATH 340; PH 142; ECE 202 or ECE 206; ECE 311/conc; ECE 341/conc)	F	4
ECE 341	Electromagnetics Fields and Devices I (MATH 340; PH 142; ECE 202 or ECE 206; ECE 311/conc; ECE 331/conc)	F	3
		Total	**13**
4th Year Fall			
BMS 300	Principles of Human Physiology ((BZ 101 or 110 or LIFE 102); (CHEM 103 or 107 or 111))	F, S, SS	4
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
ECE 253	Introduction to IoT, Microcontrollers & C (ECE 102 or ECE 252)	F, S	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4
BME BE	_____	F, S, SS	3
		Total	**17**
5th Year Fall			
BIOM 486A	Biomedical Design Practicum: Capstone Design I (BIOM 300; BIOM 431; ECE 311; ECE 332; ECE 342)	F	4
BME-TE	BME Technical Elective _____	F, S, SS	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4
AUCC	_____	F, S, SS	3
AUCC	_____	F, S, SS	3
		Total	**17**

COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR
1st Year Spring			
CO 150	College Composition (CO 130 or placement by ACT or SAT or DSP Survey or Challenge Exam)	F, S, SS	3
ENGR 114	Engineering for Grand Challenges (ENGR 111 or MECH 104A or CBE 104A or CIVE 182A)	F, S	3
MATH 161	Calc for Physical Scientists II ((MATH 124 or 127); (MATH 159 or 160))	F, S, SS	4
PH 141	Physics for Scientists and Engineers I (MATH 159/conc or MATH 160/conc)	F, S, SS	5
		Total	**15**
2nd Year Spring			
CS 164[1]	CS1- Computational Thinking with Java (CS 150B* or CS 152* or CS 163) *See footnote for alternative options*	F, S	4
ECE 206	Analog Circuits II (ECE 103 or ECE 205; MATH 161)	S, SS	3
ECE 232	Introduction to Project Practices (ECE 202/conc or ECE 395B/conc or ECE 495B/conc)	F, S	1
MATH 340	Intro to ordinary Differential Equations (MATH 261)	F, S, SS	4
PH 142	Physics for Scientists and Engineers II (PH 141; MATH 161 /conc)	F, S	5
		Total	**17**
3rd Year Spring			
BIOM 300	Problem-Based Learning BME Lab (BIOM 200 or (CBE 205; MECH 262/conc); (MATH 340 or 345))	S	4
ECE 312	Linear Systems Analysis II (ECE 311)	S	3
ECE 332	Electronics Principles II (ECE 331)	S	4
ECE 342	Electromagnetic Fields and Devices II (ECE 341)	S	3
		Total	**17**
4th Year Spring			
BIOM 431	Biomedical Signal and Image Processing (ECE/STAT 303; ECE 311; PH 142)	S	3
CHEM 245	Fundamentals of organic Chemistry (CHEM 107 or 113)	F, S, SS	4
MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	4
MECH 339	Thermodynamics 1 (MATH 261; PH 141)	F, S	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
		Total	**17**
5th Year Spring			
BIOM 486B	Biomedical Design Practicum: Capstone Design II (BIOM 486A; ECE 312	S	4
BME-TE	BME Technical Elective _____	F, S, SS	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4
AUCC	_____	F, S, SS	3
AUCC	_____	F, S, SS	3
		Total	**17**

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: CS 150B

_____

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 11.5.24

Biomedical Engineering and Electrical Engineering **Name:**

Honors Track 1 Curriculum Checksheet - Effective Fall 2025 And After — Program Total Credits = 162

COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR	COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR
1st Year Fall				**1st Year Spring**			
CHEM 111 or CHEM 120	General Chemistry I (MATH 118 or 127 or 141 or 155 or 160) **OR** Foundations of Modern Chemistry (MATH 118 or MATH 127 or MATH 155 or MATH 160)	F, S, SS	4	CS 150B[1]	Culture and Coding: Python (no prereqs) *See footnote for alternative options*	F, S	3
CHEM 112 or CHEM 121	General Chemistry Lab I (CHEM 111/conc or CHEM 117/conc) **OR** Foundations of Modern Chemistry Lab (CHEM 120/conc)	F, S, SS	1	ENGR 114	Engineering for Grand Challenges (ENGR 111 or MECH 104A or CBE 104A or CIVE 182A)	F, S	3
HONR 192	Honors First Year Seminar	F, S	4	MATH 161	Calc for Physical Scientists II ((MATH 124 or 127); (MATH 159 or 160))	F, S, SS	4
ENGR 111	Fundamentals of Engineering	F, S	3	PH 141	Physics for Scientists and Engineers I (MATH 159/conc or MATH 160/conc)	F, S, SS	5
MATH 160	Calculus for Physical Scientists I (MATH 124*; (MATH 126* or 127*))	F, S, SS	4				
		Total	**16**			**Total**	**15**
2nd Year Fall				**2nd Year Spring**			
BIOM 200	Fundamentals of Biomedical Engineering (LIFE 102/conc; MATH 160)	F	2	ECE 206	Analog Circuits II (ECE 103 or ECE 205; MATH 161)	S, SS	3
ECE 205	Analog Circuits I (ENGR 114/conc or ENGR 123/conc; **MATH 160**)	F, S	2	ECE 232	Introduction to Project Practices (ECE 202/conc or ECE 395B/conc or ECE 495B/conc)	F, S	1
ECE 252	Intro to Digital Circuits (ENGR 114/conc or ENGR 123/conc)	F, S	3	HONR 193	Honors Seminar (HONR 192)	F, S	3
LIFE 102	Attributes of Living Systems	F, S, SS	4	MATH 340	Intro to ordinary Differential Equations (MATH 261)	F, S, SS	4
MATH 261	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4	PH 142	Physics for Scientists and Engineers II (PH 141; MATH 161 /conc)	F, S	5
		Total	**15**			**Total**	**16**
3rd Year Fall				**3rd Year Spring**			
CS 164[1]	CS1- Computational Thinking with Java (CS 150B* or CS 152* or CS 163) *See footnote for alternative options*	F, S	4	BIOM 300	Problem-Based Learning BME Lab (BIOM 200 or (CBE 205; MECH 262/conc); (MATH 340 or 345))	S	4
ECE/STAT 303	Introduction to Communications Principles (MATH 261; MATH 340/conc)	F	3	ECE 312	Linear Systems Analysis II (ECE 311)	S	3
ECE 311	Linear Systems Analysis (ECE 202 or ECE 206; MATH 340; ECE 331/conc; ECE 341/conc)	F	3	ECE 332	Electronics Principles II (ECE 331)	S	4
ECE 331	Electronics Principles I (MATH 340; PH 142; ECE 202 or ECE 206; ECE 311/conc; ECE 341/conc)	F	4	ECE 342	Electromagnetic Fields and Devices II (ECE 341)	S	3
ECE 341	Electromagnetics Fields and Devices I (MATH 340; PH 142; ECE 202 or ECE 206; ECE 311/conc; ECE 331/conc)	F	3	HONR 292 A, B, or C	Honors Seminar (HONR 192; 193) *HONR 292B is recommended to fulfill AUCC 3B	F, S	3
		Total	**17**			**Total**	**17**
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 253	Introduction to IoT, Microcontrollers & C (ECE 102 or ECE 252)	F, S	3	HONR 392	Honors Seminar (HONR 193)	F, S	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4	MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	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	MECH 339	Thermodynamics 1 (MATH 261; PH 141)	F, S	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; ECE 312	S	4
HONR 399	Pre-Thesis - Honors	F, S	1	HONR 499	Senior Honors Thesis (HONR 399)	F, S, SS	3
HONR 492	Honors Senior Seminar (HONR 392)	F, S	3	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	4	BME BE	_____	F, S, SS	3
		Total	**15**			**Total**	**17**

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*

Track 1 Honors Program Required Courses in BLUE:
* HONR 192, 193, 292 A, B, or C, 392, 399, 492, 499
* One 200 or 300 level honors course in major (3 credits)
* One 300 or 400 level honors course in major (3 credits)
Reach out to your Honors advisor for Honors course offerings

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 11.5.24

Biomedical Engineering and Electrical Engineering **Name:**

Honors Track 2 Curriculum Checksheet - Effective Fall 2025 And After

Program Total Credits = 165

COURSE	NAME (PREREQS (";" DENOTES "AND"))	TERM	CR
1st Year Fall			
CHEM 111 or CHEM 120	General Chemistry I (MATH 118 or 127 or 141 or 155 or 160) **OR** Foundations of Modern Chemistry (MATH 118 or MATH 127 or MATH 155 or MATH 160)	F, S, SS	4
CHEM 112 or CHEM 121	General Chemistry Lab I (CHEM 111/conc or CHEM 117/conc) **OR** Foundations of Modern Chemistry Lab (CHEM 120/conc)	F, S, SS	1
HONR 192	Honors First Year Seminar	F, S	4
ENGR 111	Fundamentals of Engineering	F, S	3
MATH 160	Calculus for Physical Scientists I (MATH 124*; (MATH 126* or 127*))	F, S, SS	4
		Total	**16**
1st Year Spring			
CS 150B[1]	Culture and Coding: Python (no prereqs) *See footnote for alternative options*	F, S	3
ENGR 114	Engineering for Grand Challenges (ENGR 111 or MECH 104A or CBE 104A or CIVE 182A)	F, S	3
MATH 161	Calc for Physical Scientists II ((MATH 124 or 127); (MATH 159 or 160))	F, S, SS	4
PH 141	Physics for Scientists and Engineers I (MATH 159/conc or MATH 160/conc)	F, S, SS	5
		Total	**15**
2nd Year Fall			
BIOM 200	Fundamentals of Biomedical Engineering (LIFE 102/conc; MATH 160)	F	2
CO 150	College Composition (CO 130 or placement by ACT or SAT or DSP Survey or Challenge Exam)	F, S, SS	3
ECE 205	Analog Circuits I (ENGR 114/conc or ENGR 123/conc; **MATH 160**)	F, S	2
ECE 252	Intro to Digital Circuits (ENGR 114/conc or ENGR 123/conc)	F, S	3
LIFE 102	Attributes of Living Systems	F, S, SS	4
MATH 261	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4
		Total	**18**
2nd Year Spring			
ECE 206	Analog Circuits II (ECE 103 or ECE 205; MATH 161)	S, SS	3
ECE 232	Introduction to Project Practices (ECE 202/conc or ECE 395B/conc or ECE 495B/conc)	F, S	1
MATH 340	Intro to ordinary Differential Equations (MATH 261)	F, S, SS	4
PH 142	Physics for Scientists and Engineers II (PH 141; MATH 161 /conc)	F, S	5
AUCC		F, S, SS	3
		Total	**16**
3rd Year Fall			
CS 164[1]	CS1- Computational Thinking with Java (CS 150B* or CS 152* or CS 163) *See footnote for alternative options*	F, S	4
ECE/STAT 303	Introduction to Communications Principles (MATH 261; MATH 340/conc)	F	3
ECE 311	Linear Systems Analysis (ECE 202 or ECE 206; MATH 340; ECE 331/conc; ECE 341/conc)	F	3
ECE 331	Electronics Principles I (MATH 340; PH 142; ECE 202 or ECE 206; ECE 311/conc; ECE 341/conc)	F	4
ECE 341	Electromagnetics Fields and Devices I (MATH 340; PH 142; ECE 202 or ECE 206; ECE 311/conc; ECE 331/conc)	F	3
		Total	**17**
3rd Year Spring			
BIOM 300	Problem-Based Learning BME Lab (BIOM 200 or (CBE 205; MECH 262/conc); (MATH 340 or 345))	S	4
ECE 312	Linear Systems Analysis II (ECE 311)	S	3
ECE 332	Electronics Principles II (ECE 331)	S	4
ECE 342	Electromagnetic Fields and Devices II (ECE 341)	S	3
HONR 292 A, B, or C	Honors Seminar (HONR 192; 193) *HONR 292B is recommended to fulfill AUCC 3B	F, S	3
		Total	**17**
4th Year Fall			
BMS 300	Principles of Human Physiology ((BZ 101 or 110 or LIFE 102); (CHEM 103 or 107 or 111))	F, S, SS	4
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
ECE 253	Introduction to IoT, Microcontrollers & C (ECE 102 or ECE 252)	F, S	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
		Total	**17**
4th Year Spring			
BIOM 431	Biomedical Signal and Image Processing (ECE/STAT 303; ECE 311; PH 142)	S	3
CHEM 245	Fundamentals of organic Chemistry (CHEM 107 or 113)	F, S, SS	4
MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	4
MECH 339	Thermodynamics 1 (MATH 261; PH 141)	F, S	3
		Total	**14**
5th Year Fall			
BIOM 486A	Biomedical Design Practicum: Capstone Design I (BIOM 300; BIOM 431; ECE 311; ECE 332; ECE 342)	F	4
HONR 399	Pre-Thesis - Honors	F, S	1
BME-TE	BME Technical Elective _____	F, S, SS	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4
AUCC		F, S, SS	3
AUCC		F, S, SS	3
		Total	**18**
5th Year Spring			
BIOM 486B	Biomedical Design Practicum: Capstone Design II (BIOM 486A; ECE 312	S	4
HONR 499	Senior Honors Thesis (HONR 399)	F, S, SS	3
BME-TE	BME Technical Elective _____	F, S, SS	3
ECE-TE	ECE Technical Elective _____	F, S, SS	4
BME BE		F, S, SS	3
		Total	**17**

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*

Additional Requirements for Honors Track 2:
200 Level Honors Option in Major (3 cr): _____
300-400 Level Honors Option in Major (12 cr) : _____ _____ _____ _____
3 credits - 1C Diversity, Equity, Inclusion: _____
6 credits - 3B Arts and Humanitites: CS 150B _____
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

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Must have at least a "C" in BOLDED courses

BOLDED and * = Must have at least a "B" in courses

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