

# BIOMEDICAL ENGINEERING (B.S.)

## Curriculum Map

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
BIO 111 & BIOL 111	GENERAL BIOLOGY and GENERAL BIOLOGY LAB	4
ENG 104 or ENG 103 or ENG 111	COMPOSITION I or English Composition I with Co-requisite Support or COMPOSITION & LITERATURE FOR L	3
MATH 241	CALCULUS I WITH LABORATORY	3
UNIV 100	UNIVERSITY SUCCESS	2
Humanities & Fine Arts Option		3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CHEM 141 & CHML 141	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB	4
ENG 105 or ENG 112	COMPOSITION II or COMPOSITION	3
ECE 212 & ECEL 212	DIGITAL LOGIC and DIGITAL LOGIC LABORATORY	4
MATH 242	CALCULUS II WITH LABORATORY	3
Pathway Option		3
<b>Hours</b>		<b>17</b>
<b>Sophomore</b>		
<b>Fall</b>		
BIO 112 & BIOL 112	GENERAL BIOLOGY and GENERAL BIOLOGY LAB	4
CSC 118	COMPUTER SCIENCE I	3
MATH 243	CALCULUS III WITH LABORATORY	3
PHY 211 & PHYL 211	General Physics I and GENERAL PHYSICS LAB I	4
Pathway Option		3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
PHY 212 & PHYL 212	General Physics II and GENERAL PHYSICS LAB II	4
ECE 220 & ECEL 220	CIRCUIT THEORY and CIRCUITS LABORATORY	4
MATH 244	CALCULUS IV WITH LABORATORY	3
UNIV 200	CIVIC ENGAGEMENT	1
Pathway Option		3
<b>Hours</b>		<b>15</b>
<b>Junior</b>		
<b>Fall</b>		
BIO 470 & BIOL 470	HUMAN PHYSIOLOGY and HUMAN PHYSIOLOGY LAB	4
CHEM 142 & CHML 142	GENERAL CHEMISTRY II and GENERAL CHEMISTRY II LAB	4
ECE 312	COMPUTER ORGANIZATION & DESIGN	3
MATH 368	DIFFERENTIAL EQUATIONS	3
ECE 471 Biomedical Signal Processing		3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
CHEM 241 & CHML 241	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY I LAB	4
CIV 222	ENGINEERING MECHANICS I	3
ECE 360 & ECEL 360	EMBEDDED MICROPROCESSOR SYSTEM and MICROPROCESSOR LABORATORY	4

Humanities & Fine Arts Option		3
ECE 472 Biomedical Materials		3
<b>Hours</b>		<b>17</b>
<b>Senior</b>		
<b>Fall</b>		
BIO 440 & BIOL 440	CELL BIOLOGY and CELL BIOLOGY LAB	4
ECE 490	SENIOR DESIGN PROJECTS I	3
ECE 470 Biomedical Instrumentation		3
MATH 307	PROBLY & STATISTICS/ENGINEERG	3
Social & Behavioral Science Option		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
Technical Elective I		3
ECE 491	SENIOR DESIGN PROJECTS II	3
Technical Elective II		3
Technical Elective III		3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>126</b>

### Notes:

- Candidates that transfer 12 or more hours of college credit are exempt from UNIV 100 UNIVERSITY SUCCESS; however, the student must take 2 hours of general electives to replace the UNIV course.
- Online Graduation Clearance (**to be completed during the graduating semester only**).

Code	Title	Hours
<b>Technical Electives</b>		
BIO 318	INTRODUCTORY GENETICS	3
BIOL 318	INTRODUCTORY GENETICS LAB	1
BIO 393	INTRO TO MEDICAL TERMINOLOGY	3
ECE 355	CONTROL SYSTEMS	3
ECE 451	DIGITAL SIGNAL PROCESSING	3
ECE 493	SPCL TPCS N ELECTRL & COMPU EN	1-4
Other courses require Chair's approval		
<b>Total Hours</b>		<b>14-17</b>

1. Students who transfer 12 or more hours of college credit are exempt from UNIV 100 UNIVERSITY SUCCESS .
2. Students are required to take the Mathematics Placement Test to determine if they need to take any math courses before taking MATH 241 CALCULUS I WITH LABORATORY (C).