

## Biomaterials and Tissue Engineering Track, 2017-2018

Freshman	Credits
CHEM 1127Q – General Chemistry	4
MATH 1131Q – Calculus I	4
CSE 1010 – Introduction to Computing for Engineers	3
ENGL 1010 – Sem in Academic Writing OR ENGL 1011 Sem in Writing Through Lit	4
ENGR 1000 – Orientation to Engineering	1
	<b>16</b>
CHEM 1128Q – General Chemistry	4
MATH 1132Q – Calculus II	4
BIOL 1107 – Principles of Biology	4
ENGR 1166 – Foundations of Engineering (BME section)	3
	<b>15</b>
Sophomore	
PHYS 1501Q – Physics for Engineers I	4
MATH 2110Q – Multivariable Calculus	4
CE 2110 – Applied Mechanics I	3
PNB 2264 – Human Physiology & Anatomy	4
STAT 3025Q – Statistical Methods (Calculus Level)	3
	<b>18</b>
PHYS 1502Q – Physics for Engineers II	4
BME 3120 – LabView Basics for Engineers	1
MSE 2101 – Materials Science & Engineering I	3
ECE 2001 – Electrical Circuits	4
MATH 2410Q – Elementary Differential Equations	3
MATH 2210Q – Applied Linear Algebra	3
	<b>18</b>
Junior	
BME 3500 – Biomedical Engineering Measurements	4
ECE 3101 – Signals and Systems	3
BME 3600 – Biomechanics	4
BME 3700 – Biomaterials	4
<b>Content Area 1 (in Arts and Humanities, not PHIL)</b>	3
	<b>18</b>
BME 3900 – Junior Design	3
BME 4710 – Tissue Engineering	3
CHEM 3563 – Physical Chemistry	4
MCB 2210 – Cell Biology	3
<b>Content Area 2 (Social Science)</b>	3
	<b>16</b>
Senior	
BME 4900 – Biomedical Engineering Design I	3
PHIL 1104 – Philosophy & Ethics	3
<b>BME Elective</b>	3
<b>Track Elective</b>	3
<b>Content Area 2 (social science, not same department as junior year)</b>	3
	<b>15</b>
BME 4910W – Biomedical Engineering Design II	3
<b>BME Elective</b>	3
<b>Track Elective</b>	3
<b>Content Area 4 (Diversity)</b>	3
<b>Content Area 4 (International)</b>	3
	<b>15</b>
Total Credits	<b>131</b>

<b>BTE Track Electives, 2017-2018</b>	
MSE 2102 Materials Science & Engineering II	
MSE 3001 Applied Thermodynamics of Materials	
MSE 3002 Transport Phenomena in Materials Processing	
MSE 3003 Phase Transformation Kinetics & Applications	
MSE 3004 Mechanical Behavior of Materials	
MSE 3020 Failure Analysis	
MSE 3029 Ceramic Materials	
MSE 3030 Introduction to Composite Materials	
MSE 4001 Electrical & Magnetic Properties of Materials	
MSE 4021 Materials Joining	
MSE 4034 Corrosion & Materials Protection	
MSE 4038 Alloy Casting Processes	
MSE 4095 Special Topics in Materials Engineering	Topic requires BME Director approval
MSE 4240 Nanomaterials Synthesis & Design	
MSE 4241 Nanomaterials Characterization & Application	
CHEG 2103 Introduction to Chemical Engineering	
CHEG 2111 Chemical Engr. Thermodynamics I	
CHEG 3112 Chemical Engr. Thermodynamics II	
CHEG 3123 Fluid Mechanics	
CHEG 3124 Heat & Mass Transfer	
CHEG 3127 Fluid Mechanics Lab	
CHEG 3128 Heat/Mass/Kinetics Lab	
CHEG 3145 Chemical Engineering Analysis	
CHEG 3151 Process Kinetics	
CHEG 3156/MSE 3156 Polymeric Materials	
CHEG 3173 Introduction to Biochemical Engineering	
CHEG 4995 Special Topics in Chemical Engineering	Topic requires BME Director approval

<b>BTE BME Electives, 2017-2018</b>	
BME 4701 Advanced Biomaterials	
BME 4985 Special Topics in BME	Topic requires BME Director approval
BME 4999 Independent Study in BME	Topic requires BME Director approval