Biomedical and Mechanical Engineering

Bachelor of Engineering (21.5 credits)

First year		
1. 5.0 credits in:		5.0
CHEM 1001 [0.5]	General Chemistry I	
CHEM 1002 [0.5]	General Chemistry II	
BIOL 1003 [0.5]	Introductory Biology I	
MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	
ECOR 1010 [0.5]	Introduction to Engineering	
ECOR 1101 [0.5]	Mechanics I	
ECOR 1606 [0.5]	Problem Solving and Computers	
Second year		
2. 4.5 credits in:		4.5
MATH 2004 [0.5]	Multivariable Calculus for Engineering or Physics	
MATH 3705 [0.5]	Mathematical Methods I	
CCDP 2100 [0.5]	Communication Skills for Engineering Students	
MAAE 2101 [0.5]	Engineering Dynamics	
MAAE 2001 [0.5]	Engineering Graphical Design	
MAAE 2400 [0.5]	Thermodynamics and Heat Transfer	
MAAE 2300 [0.5]	Fluid Mechanics I	
MAAE 2700 [0.5]	Engineering Materials	
MAAE 2202 [0.5]	Mechanics of Solids I	
3. 0.5 credit from:		0.5
BIOL 2005 [0.5]	Human Physiology	
BIOL 2201 [0.5]	Cell Biology and Biochemistry	
CHEM 2203 [0.5]	Organic Chemistry I	
Third year		
4. 5.5 credits in:		5.5
ECOR 2606 [0.5]	Numerical Methods	
STAT 3502 [0.5]	Probability and Statistics	
SYSC 3203 [0.5]	Bioelectrical Systems	
SYSC 3610 [0.5]	Biomedical Systems, Modeling, and Control	
SYSC 4201 [0.5]	Ethics, Research Methods and Standards for Biomedical Engineering	
MAAE 3004 [0.5]	Dynamics of Machinery	
MAAE 3202 [0.5]	Mechanics of Solids II	
MAAE 4500 [0.5]	Feedback Control Systems	
MECH 3002 [0.5]	Machine Design and Practice	
MECH 3310 [0.5]	Biofluid Mechanics	
MECH 3710 [0.5]	Biomaterials	
5. 0.5 credit from:		0.5
BIOL 2005 [0.5]	Human Physiology	
BIOL 2201 [0.5]	Cell Biology and Biochemistry	
CHEM 2203 [0.5]	Organic Chemistry I	
Fourth year		
6. 3.0 credits in:		3.0
ECOR 3800 [0.5]	Engineering Economics	
ECOR 4995 [0.5]	Professional Practice	
MAAE 3400 [0.5]	Applied Thermodynamics	
MECH 4406 [0.5]	Heat Transfer	
MECH 4210 [0.5]	Biomechanics	
MECH 4013 [0.5]	Biomedical Device Design	
7. 1.0 credit in:		1.0
MAAE 4907 [1.0]	Engineering Design Project	
8. 0.5 credit in MAAE, MECH or AERO at the 4000-level, SYSC 4202 [0.5], SYSC 4203 [0.5]		0.5
9. 1.0 credit in Complementary Studies Electives		1.0
Total Credits		**21.5**

Notes:

1. For **Item 3** above, with the permission of their department, students may replace this requirement with an alternate 0.5 credit course in BIOL, BIOC or CHEM.
2. For **Item 5** above, with the permission of their department, students may replace this requirement with an alternate 0.5 credit course in BIOL, BIOC or CHEM.