Bioengineering Curriculum Advising Sheet

Math/Science Courses (Choose Option 1, 2 or 3)		Term Taken	Grade
Option 1: IMP covers PHY120,121 & MTH113, 115, 117			
1.5a	IMP 111 Integrated Math & Physics 1		
3a	IMP 112 Integrated Math & Physics 2		
5a	IMP 113 Integrated Math & Physics 3		
6a	MTH 130 Ordinary Differential Equations		
7a	CHM 101 Introductory Chemistry I[1]		
8a	Free Elective[2]:		
Option 2			
1b	MTH 110 Calculus I		
2b	MTH 112 Calculus II		
3b	MTH 115 Calculus III		
4b	MTH 117 Calculus IV		
5b	MTH 130 Differential Equations		
6b	PHY 120 Matter in Motion		
7b	PHY 121 Principles of Electromagnetics		
8b	CHM 101 Introductory Chemistry I[1]		
Option 3			
1c	MTH 113 AP Calculus		
2c	MTH 115 Calculus III		
3c	MTH 117 Calculus IV		
4c	MTH 130 Differential Equations		
5c	PHY 120 Matter in Motion		
6c	PHY 121 Principles of Electromagnetics		
7c	CHM 101 Introductory Chemistry I[1]		
8c	Free Elective[2]:		
GenEd Courses			
9	FYP 100 First Year Preceptorial		
10	SRS 200 Sophomore Research Seminar		
11	Social Science (ANT/ECO/HST/PSC/PSY/SOC):		
12	Humanities (ATH/AVA/CLS/EGL/MLL/PHL):		
13	Humanities Literature:		
14	Linguistic and Cultural Competency:		
15	Linguistic and Cultural Competency:		
Free Electives[2]			
16			
17			
18			
19			

1) Or CHM 102 Introductory Chemistry II or CHM 110 Accelerated Introductory Chemistry; note pre-med students should not take CHM 102 only, but CHM 110 if they place into it.
2) Pre-med students must get credit for four CHM courses including CHM 231 and CHM 232 Organic Chemistry I and II.

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	General Engineering Courses	Term Taken	Grade
20	CSC 10 _ Introduction to Computer Science		
21	ESC 100 Exploring Engineering		

	Bioengineering Foundation Courses		
Bioengineering			
22	BNG 101 Graphics and Visualization		
Biological Sciences			
23	BIO 112/101 Physiology of Cells and Organisms		
24	BIO 225 Molecular Biology of the Cell		
Biomechanics			
25	BNG 201 Biomechanics I		
26	BNG 202 Biomechanics II		
Biosignals and Instrumentation			
27	ECE 225 Electric Circuits		
28	ECE 240 Circuits and Systems		

	Bioengineering Core Courses		
Biological Sciences (one BIO 3_ _ requires lab)			
29	BIO 110/102 Heredity, Evolution and Ecology[3] or BIO 3		
30	BIO 3_ _		
Biomechanics (two from BNG 311, 331, BNG 338, BNG 344, BNG 345, BNG 346)			
31			
32			
Biosignals and Instrumentation			
33	ECE 241 Discrete Systems		
34	ECE/BNG 386 Intro to Biomedical Instrumentation		

	Bioengineering Electives		
Five courses from BNG, ECE, CSC 243 and other engineering courses subject to approval (but not BNG 240/BNG 375); one with lab and at least three must be > 300 level[4]			
35			
36			
37			
38			
	Bioengineering Elective w/Lab		
39			

	Bioengineering Capstone Experience		
40	BNG 495 Capstone Design		

3) Pre-med students must take BIO 102.

4) BNG 498, but not BNG 497 may count, the latter would be selected as a Free Elective