NAME: _____

UID: _____ __ A.A. __ A.S. __ Post-Bac

BIOENGINEERING

GENERAL EDUCATION REQUIREMENTS			
Fundamental Studies			
Academic Writing (AW)	ENGL 101		3
Professional Writing (PW)	ENGL 39X		3
Oral Communication (OC)			3
Distributive Studies			
History/Social Sciences (HS*)			3
History/Social Sciences (HS*)			3
Humanities (HU*)			3
Humanities (HU*)			3
Scholarship in Practice (SP*) out of major			3
I-Series Courses			
I-Series (IS*)			0/3
I-Series (IS*)			0/3
Diversity			
Understanding Plural Societies (UP*)			0/3
Understanding Plural Societies (UP*) OR Cultural Competency (CC*)			0/3
MAJOR REQUIREMENTS			
Basic Sciences			
CHEM 135-Chem Engr **or** 131 & 134 -Fund & Prin			3/3&1
CHEM 136 - Chemistry Lab for Eng			1
CHEM 231 and 232 - Organic Chemistry I & Lab			3 & 1
PHYS 161 - General Physics I (NS)			3
PHYS 260 and PHYS 261 - Gen Physics II & Lab (NL)			3 & 1
MATH 140 - Calculus I (MA/AR)			4
MATH 141 - Calculus II			4
MATH 241 - Calculus III			4
MATH 246 - Differential Equations			3
Engineering Sciences			
ENES 100 - Intro to Eng Design (SP)			3
ENES 102 - Mechanics I			3

* May satisfy more than one requirement. See www.gened.umd.edu

** See Bioengineering Advisor for appropriate electives: www.bioe.umd.edu

MAJOR REQUIREMENTS		
BIOE 120 - Biology for Engineers		3
BIOE 121 - Biology for Eng Lab		1
BIOE 221 - Intro to Bioengineering Major		1
BIOE 232 - Biological Thermodynamics		3
BIOE 241 - Biocomputation Methods		3
BIOE 331 - Biofluids		3
BIOE 340 - Modeling Phys. & Lab		4
BIOE 371 - Bioengineering Math & Stats		3
BIOE 372 - Biostatistics		3
BIOE 457 - Biomedical Elect. & Instrumentation		4
BIOE Foundational I		3
BIOE Foundational II		3
BIOE Elective I		3
BIOE Elective II		3
BIOE Elective III		3
BIOE Elective IV		3
BIOE 485 - Capstone I		3
BIOE 486 - Capstone II		3
BSCI 330 - Cell Biology and Physiology		4
Technical Requirements		
Biological Science Elective I (BSCI 2xx) **		3 or 4
Biological Science Elective II**		3
Breadth Elective **		3

Requirements for Graduation:

- ☐ Final 30 credits must be earned at UMD
- ☐ 15 of the final 30 credits must be earned at the 300-400 level
- ☐ 12 of the final 30 credits must be upper level major coursework
- ☐ A minimum 2.00 cumulative UM GPA and satisfactory completion of all degree requirements are required for graduation
- ☐ Students matriculating after Fall 2012 must have a 2.0 minimum GPA for all degree requirements, minor requirements, and undergraduate certificate requirements *(Major courses are defined as: departmental courses, basic sciences, engineering sciences, specified degree tracks, technical requirements/ technical electives and Professional Writing (PW)*
- ☐ A minimum of 120 credits is required to earn the degree

For Degree Clearance Only

Degree: B.S. BIOE Advisor: _____

Date:_____ Credits/ GPA: _____

Bioengineering Four Year Academic Plan

Name:_____ **UID:**_____

Year 1	Fall			Spring		
Gateway requirements include: ENGL 101, CHEM 135, MATH 141, PHYS 161 and an approved Distributive Studies course. (Directly admitted freshman must pass and complete these courses and ENES 100 by 45 UM credits.)	***Course***	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	ENES 100 (SP)	3		ENES102	3	
	CHEM 135	3		MATH 141	4	
	CHEM 136	1		PHYS 161 (NS)	3	
	MATH 140 (AR)	4		ENGL 101 (AW)	3	
	BIOE 120	3		Humanities (HU)*	3	
	BIOE 121	1				
	Total	**15**		**Total**	**16**	

Year 2	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	CHEM 231	3		BIOE 221	1	
	CHEM 232	1		BIOE 232	3	
	MATH 241	4		BIOE 371	3	
	BIOE 241	3		MATH 246	3	
	PHYS 260 and PHYS 261 (NL)	3 & 1		Bio. Science Elec. I (BSCI 2xx)	4	
				Hist & Social Sciences (HS)*	3	
	Total	**15**		**Total**	**17**	

Year 3	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	BIOE 331	3		BIOE 340	4	
	BIOE 372	3		BIOE 457	4	
	BSCI 330	4		BIOE Foundational II	3	
	BIOE Foundational I	3		BIOE Elective II	3	
	BIOE Elective I	3		Scholarship in Practice (SP)*	3	
	Total	**16**		**Total**	**17**	

Year 4	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	BIOE 485	3		BIOE 486	3	
	BIOE Elective III	3		BIOE Elective IV	3	
	Breadth Elective	3		Bio. Science Elective II	3	
	Humanities (HU)*	3		Professional Writing (PW)	3	
	Oral Communication (OC)	3		Hist & Social Sciences (HS)*	3	
	Total	**15**		**Total**	**15**	

*Students must complete two Distributive Studies courses that are approved for I-series courses. To complete all requirements following this plan, the Understanding Plural Societies (UP) and Cultural Competence (CC) courses must also fulfill Distributive Studies categories.

2021-2022