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
Mathmatics (MA)	MATH 140		4
Analytic Reasoning (AR)	MATH 140		0
Distributive Studies			
History/Social Sciences (HS*)			3
History/Social Sciences (HS*)			3
Humanities (HU*)	ENES 200		3
Humanities (HU*)			3
Natural Sciences No Lab (NS)	PHYS 161		3
Natural Sciences w/Lab (NL)	PHYS 260/PHYS 261		4
Scholarship in Practice (SP*) in major	ENES 100		3
Scholarship in Practice (SP*) out of major			3
Big Question Courses			
Big Question (SCIS*)	ENES 200		0
Big Question (SCIS*)			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)		0
PHYS 260 and PHYS 261 - Gen Physics II & Lab (NL)		0
MATH 140 - Calculus I (MA/AR)		0
MATH 141 - Calculus II		4
MATH 241 - Calculus III		4
MATH 243 - Intro to Linear Algebra & Diff Equations		4
BIOE 246 - Diff Equations for Bioengineering		3
Engineering Sciences		
ENES 100 - Intro to Eng Design (SP)		0
ENES 102 - Mechanics I		3

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 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
ENES 200 - Tech & Consequences (HU/SCIS)		0
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

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

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

Updated Fall 2024

Bioengineering Graduation Plan

Name:_____ **UID:**_____

Year 1	Fall			Spring		
Current Engineering Students: https://eng.umd.edu/services/academic-policies Prospective Engineering Students: https://lep.umd.edu/	***Course***	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	ENES 100 (SP)	3		BIOE 241	3	
	CHEM 135	3		MATH 141	4	
	CHEM 136	1		PHYS 161 (NS)	3	
	MATH 140 (AR)	4		BIOE 120	3	
	ENGL 101 (AW)	3		BIOE 121	1	
				Hist & Social Sciences (HS)*	3	
	Total	**14**		**Total**	**17**	

Year 2	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	CHEM 231	3		BIOE 232	3	
	CHEM 232	1		ENES 102	3	
	MATH 241	4		BIOE 246	3	
	MATH 243	4		Bio. Science Elec. I (BSCI 2xx)	4	
	PHYS 260 and PHYS 261 (NL)	3 & 1		ENES200 (HU/SCIS)	3	
	BIOE 221	1				
	Total	**17**		**Total**	**16**	

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 I	3	
	Oral Communication (OC)	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 II	3		BIOE Elective IV	3	
	BIOE Elective III	3		Bio. Science Elective II	3	
	Breadth Elective	3		Professional Writing (PW)	3	
	Humanities (HU)*	3		Hist & Social Sciences (HS)*	3	
	Total	**15**		**Total**	**15**	

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

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