

Chemical and Biomolecular Engineering Four Year Academic Plan

Name: _____

UID: _____

Year 1	Fall		
Gateway requirements include: ENGL 101, CHEM 135, MATH 141, PHYS 161 and an approved Distributive Studies course. (Directly admitted freshman must successfully complete these courses and ENES 100 by 45 UM credits.)	Course	Credit	Grade
	ENES100 (SP)	3	
	MATH 140 (AR)	4	
	CHEM 135	3	
	CHEM 136	1	
	Humanities (HU)*	3	
	Total	14	

Spring		
Course	Credit	Grade
CHBE 101	3	
MATH 141	4	
PHYS 161 (NS)	3	
ENGL 101 (AW)	3	
BIOE 120	3	
Total	16	

Year 2	Fall		
	Course	Credit	Grade
	MATH 241	4	
	CHEM 231	3	
	CHEM 232	1	
	PHYS 260 and PHYS 261 (NL)	3 & 1	
	CHBE 250	3	
	CHBE 301	3	
	Total	18	

Spring		
Course	Credit	Grade
MATH 246	3	
PHYS 270 and PHYS 271	3 & 1	
CHEM 241	3	
CHEM 242	1	
ORAL COMM (OC)	3	
CHBE 302	3	
Total	17	

Year 3	Fall		
	Course	Credit	Grade
	CHBE 410	3	
	CHBE 422	3	
	CHBE 440	3	
	CHEM 272	2	
	ENGL 393 (PW)	3	
	Scholarship in Practice (SP)*	3	
	Total	17	

Spring		
Course	Credit	Grade
BCHM 461 or 463	3	
ENMA 300, 425, or BIOE 453	3	
CHBE 424	3	
CHBE 426	3	
CHBE 333	1	
Humanities (HU)*	3	
Total	16	

Year 4	Fall		
	Course	Credit	Grade
	CHBE 437	3	
	CHBE 442	3	
	CHBE 444	3	
	Tech Elective (see advisor)	3	
	Hist & Social Sciences (HS)*	3	
	Total	15	

Spring		
Course	Credit	Grade
CHBE 446	3	
Tech Elective (see advisor)	3	
Tech Elective (see advisor)	3	
Hist & Social Sciences (HS)*	3	
Total	12	

*All students must complete two Distributive Studies courses that are approved for I-series courses. The Understanding Plural Societies (UP) and Cultural Competence (CC) courses may also fulfill Distributive Studies categories.

NAME: _____

CHEMICAL and BIOMOLECULAR ENGRUID: _____ A.A. A.S. Post-Bac

GENERAL EDUCATION REQUIREMENTS		
Fundamental Studies		
Academic Writing (AW)	ENGL 101	3
Professional Writing (PW)	ENGL 393	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*)		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 for Eng		3
CHEM 136 - Chemistry Lab for Eng		1
CHEM 231 and 232 - Organic Chemistry I & Lab		3 & 1
CHEM 241 and 242 - Organic Chemistry II & Lab		3 & 1
PHYS 161 - General Physics I (NS)		3
PHYS 260 and 261 - Gen Physics II & Lab (NL)		3 & 1
PHYS 270 and 271 - Gen Physics III & Lab		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

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

** For technical elective guidelines, see:

www.chbe.umd.edu/undergraduate/electives

MAJOR REQUIREMENTS		
BIOE 120 - Biology for Engineers		3
CHBE 101 - Intro to Chem & Biom. Eng		3
CHBE 250 - Comp Methods Chem & Bio		3
CHBE 301 - Chem & Biomolec Thermo		3
CHBE 302 - Chem & Biomolec Thermo II		3
CHBE 333 - Comm Skills for Eng		1
CHBE 410 - Statistics & Experimental Design		3
CHBE 422 - Chem & Biomolec Trans.		3
CHBE 424 - Chem & Biomolec Trans. II		3
CHBE 426 - Chem & Biomolec Sep. Processes		3
CHBE 437 - Chem & Biomolec Eng Lab		3
CHBE 440 - Chem Kinetics & Reactor		3
CHBE 442 - Chem Eng Systems Analysis		3
CHBE 444 - Process Eng Econ & Design I		3
CHBE 446 - Process Eng Econ & Design II		3
ENMA 300 or ENMA425 or BIOE453		3
CHBE 4XX - Elective **		3
CHBE 4XX - Elective **		3
CHBE 4XX - Elective **		3
Technical Requirements		
BCHM 461 - Biochem I or BCHM 463		3
CHEM 272 - Gen Bioanalytical Chem Lab		2

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 ENGL 393)
- A minimum of 120 credits is required to earn the degree

For Degree Clearance Only

Degree: B.S. CHBE

Advisor: _____

Date: _____

GPA/Credits: _____