NAME:

UID:

BIOCOMPUTATIONAL ENGINEERING

OID A.A A.J.L.	103	-Dac
GENERAL EDUCATION REQUIREMENT	S	
Fundamental Studies		
Academic Writing (AW) ENGL 101		3
Professional Writing (PW) @USG 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*) out of mj		3
I-Series		
I-Series (IS*)		0/3
I-Series (IS*)		0/3
Diversity		
Understanding Plural Societies (UP*)		0/3
Understanding Plural Societies (UP*) OR		0/3
Cultural Competency (CC*)		0/3
MAJOR REQUIREMENTS		
Basic Sciences		
CHEM 135- Chem Engr or CHEM 131+134 - Gen Chem+	Princ	3/3&1
CHEM136 - Chemistry Lab for Engr		1
CHEM 231 and 232 - Organic Chemistry I & Lab		
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
BIOE 120 - Biology for Engr or BSCI170 - Prin of Mol &	Cell Bio	3
BIOE 241 - Biocomputational Methods or equivalent		3

A.A. A.S.E.

Post-Bac

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

**See Biocomputational Engineering Advisor for electives: biocomp.umd.edu

For Degree Clearance Only			
Degree: B.S. BCE	Advisor:	_	
Date:	Credits/GPA:		

Maior Demainments O USO		
Major Requirements @ USG		
ENBC 301 - Intro to Biocomputational Engineering		1
ENBC 311 - Python for Data Analysis		3
ENBC 312 - Object Oriented Programming in C++		3
ENBC 321 - Machine Learning for Data Analysis		3
ENBC 322 - Algorithms		3
ENBC 331 - Applied Linear Systems and Diff Eqs		3
ENBC 332 - Statistics, Data Analysis, and Data Vis		3
ENBC 341 - Biomolecular Engineering Thermo		3
ENBC 342 - Comp Fluid Dynamics and Mass Transfel	r	3
ENBC 351 - Quantitative Mol and Cell Biology		3
ENBC 352 - Molecular Techniques Laboratory		2
ENBC 353 - Synthetic Biology		3
ENBC 425 - Imaging and Image Processing		3
ENBC 431 - Finite Element Analysis		3
ENBC 441 - Computational Systems Biology		3
ENBC 491 - Senior Capstone Design in BCE		3
Required Technical Electives (12 credits) ** @ USG	ì	
ENBC Technical Elective I		3
ENBC Technical Elective II		3
ENBC Technical Elective III		3
ENBC Technical Elective IV		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 upper level major credits must be earned at UMD

A minimum 2.00 cumulative UM GPA, and satisfactory completion of all degree requirements, is required for graduation

Students matriculating in Fall 2012 or after 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