

HARFORD COMMUNITY COLLEGE - Computer Science AS DEGREE
TOWSON UNIVERSITY 2 + 2 MB3 Bioinformatics Track

HARFORD COMMUNITY COLLEGE			TOWSON UNIVERSITY			
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	GenEd	COMMENTS	COURSE ID#
ENG 101	English Composition	3	ENGL 102	IA		2348
				IB	Using Information Effectively	
MATH 203	Calculus	4	MATH 273	IC		4407
				ID	Advanced Upper-Level Writing Course	
				IE	Creativity & Creative Development	
CHEM 111	General Chemistry I	4	CHEM 110	IIA		1041
CHEM 112	General Chemistry II	4	CHEM 111	IIA		1042
GH	Arts & Humanities	3		IIB1	Equivalency depends on choice.	
				IIB3	Contemporary Issues	
GH	Arts & Humanities	3		IIC1	Arts and Humanities	
GB	Behavioral and Social Sciences	3		IIC2		
GB	Behavioral and Social Sciences	3		IIC2		
				IIC3	Cultural Plurality & Diversity	
				IID	Global Awareness	
	TOTAL GenEds	27				
BIO 120	General Biology I	4	BIOL 201			666
CIS 115	Fundamentals of Programming	3	COSC 175			1335
CIS 201	Assembly Programming Language	4	COSC TLL			10186
CIS 205	Introduction to Visual BASIC.net or other CIS programming Language	4	CIS 265 or COSC TLL		Equivalency depends on course choice.	1348 10186
CIS 214	Java Programming Language	4	COSC TLL			10186
CIS 221	C++ Programming Language	4	COSC TLL			10186
CSI 131	Computer Science I	4	COSC 236			1344
CSI 132	Computer Science II	4	COSC 237			1345
MATH 204	Calculus II	4	MATH 274			4408
MATH 210	Discrete Structures	3	MATH 263			4401
	Physical Education Elective	1	PHEA TLL			10564
	Physical Education/Fitness Elective	1	PHEA TLL			10564
	PROGRAM REQUIREMENTS	40				
	Total Harford Program Requirements	67				
	TOTAL CREDITS IN TRANSFER	64				

- 64 credit transfer maximum.
- GenEds to be completed at Towson (18 Units)
GenEd credits to be completed: I.B, I.D, I.E, II.B.3, II.C.3, and II.D.

Major Requirements to be completed at Towson (37-43 Units)

BIOL 309	Genetics	(4)
BIOL 409	Molecular Biology	(4)
CHEM 331	Organic Chemistry I <i>and</i>	(5)
CHEM 332	Organic Chemistry II	(5)
	<i>Or</i>	
CHEM 330	Essentials of Organic Chemistry	(5)
CHEM 351	Intro Biochemistry	(3)
CIS 458	Organizational Database Management Systems	
	<i>Or</i>	(3)
COSC 457	Database Management Systems	
COSC 336	Data Structures and Algorithm Analysis	(3)
MATH 330	Intro to Statistical Methods	(4)
MBBB 301	Bioinformatics	(4)
MBBB 401	Advanced Bioinformatics	(3)
MBBB 493	Seminar in Bioethics	(1)

Complete a minimum of 3 units from the following:

BIOL491	Elective in Independent Research	(3)
BIOL 492	Independent Research	(1-3)
CHEM 491	Independent Research in Chemistry	(1-3)
COSC 495	Independent Study in Computer Science	(1-3)
	Approved Upper-level elective	(3-4)

General Electives (0-1)

- Total Credits to B.S. Degree (120-125)**

Harford Computer Science A.S. Degree	64
Completion of GenEd at TU	18
Completion of Major Requirements/General Electives	38-43