

HARFORD COMMUNITY COLLEGE - CHEMISTRY A.S. DEGREE (Non-Calculus Based Physics)
TOWSON UNIVERSITY 2 + 2 MB3 Biochemistry Track

HARFORD COMMUNITY COLLEGE			TOWSON UNIVERSITY			
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	GenEd	COMMENTS	COURSE ID#
ENG 101	College Composition	3	ENGL 102	IA		2348
CIS 102	Intro. Information Sciences	3	COSC 111	IB		1328
MATH 109	Precalculus Mathematics	4	MATH 119	IC		4381
				ID	Advanced Upper-Level Writing Course	
	GenEd Elective	3		IE	Equivalency depends on choice	
CHEM 111	General Chemistry I	4	CHEM 110	IIA		1041
CHEM 112	General Chemistry II A	4	CHEM 111	IIA		1042
GH	**Arts & Humanities	3		IIB1	Equivalency depends on choice.	
PHIL 205	Ethics (GH)	3	PHIL 253	IIB3	Transfers as IIB-10T Or Transfers as IIB-10T	6548
Or PHIL 221	Business Ethics (GH)		PHIL TLL			10434
Or PHIL 220	Bioethics (GH)		PHIL TLL			
ENG 109	Research Writing		ENGL 152			IIC1
GB	**GenEd - Behavioral/Social Science	3		IIC2	Equivalency depends on choice.	
GB	**GenEd - Behavioral/Social Science	3		IIC2	Equivalency depends on choice.	
				IIC3	Cultural Plurality & Diversity	
				IID	Global Awareness	
	TOTAL GenEds	36				
MATH 203	Calculus I	4	MATH 273			4407
MATH 204	Calculus II	4	MATH 274			4408
PHYS 101	Introductory Physics I	4	PHYS 211			6800
PHYS 102	Introductory Physics II	4	PHYS 212			6801
CHEM 207	Organic Chemistry I	4	CHEM 331		Transfers as lower level credit.	10134
CHEM 208	Organic Chemistry II	4	CHEM 332		Transfers as lower level credit.	10135
BIO 120	General Biology	4	BIOL 201			666
	Physical Education Elective	1	PHEA TLL			10564
	Physical Education/Fitness Elective	1	PHEA TLL			10564
	PROGRAM REQUIREMENTS	30				
	Total Harford Program Requirements	66				
	TOTAL CREDITS IN TRANSFER	64				

** Harford Community College students must complete one 3 credit diversity course which appears on the "Approved List" in the HCC catalog.

- **CIS 102 must be completed at Harford Community College**
- **MATH 203 must be completed at Harford Community College**
- **PHYS 101/102 SEQUENCE or PHYS 203/204 sequence must be completed AT Harford Community College.**
- **64 credit transfer maximum.**

- **GenEds to be completed at Towson: I.D,II.C.3, IID**

Major Requirements to be completed at Towson (36-38 Units) *(39-42 if MATH 204 is not completed at Harford.)*

BIOL 309	Genetics	(4)
BIOL 409	Molecular Biology	(4)
CHEM 210	Analytical Chemistry	(5)
CHEM 345	Principles of Physical Chemistry	(3)
CHEM 351	Intro Biochemistry	(3)
CHEM 356	Biochemistry Lab	(2)
CHEM 357	Biochemistry II	(3)
CHEM 372	Intermediate Laboratory I	(1)
MBBB 301	Intro to Bioinformatics	(4)
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)

Choose one of the following if MATH 204 Calculus II is not completed at Harford Community College:

MATH 274	Calculus II	
MATH 237	Elementary Biostatistics	(3-4)
MATH 231	Basic Statistics	

Upper level Elective (3-4)

General Electives (9-11)

(without the MATH 204 from Harford) (5-8)

• **Total Credits to B.S. Degree (121)**

Harford Chemistry A.S. Degree **64**

Completion of GenEd at TU **9**

Completion of Major Requirements/General Electives **48**