

HARFORD COMMUNITY COLLEGE - Physics AS DEGREE
TOWSON UNIVERSITY 2 + 2 Physics

HARFORD COMMUNITY COLLEGE			TOWSON UNIVERSITY			
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	GenEd	COMMENTS	COURSE ID#
ENG 101	College Composition	3	ENGL 102	IA		2348
ENG 109	Research Writing	3	ENGL 152	IB		2352
MATH 203	Calculus I	4	MATH 273	IC		4407
				ID	Advanced Upper-Level Writing Course	
				IE		
CHEM 111	General Chemistry I	4	CHEM 110	IIA		1041
CHEM 112	General Chemistry II	4	CHEM 111	IIA		1042
	Arts & Humanities	3		IIB1		
				IIB3		
	Arts & Humanities	3		IIC1	Arts and Humanities	
	Behavioral/Social Science	3		IIC2		
	Behavioral/Social Science	3		IIC2		
				IIC3	Cultural Plurality & Diversity	
				IID	Global Awareness	
	TOTAL GenEds	30				
CIS 102	Introduction to Information Science	3	COSC 115			
MATH 204	Calculus II	4	MATH 274			
MATH 206	Calculus II	4	MATH 275			
MATH 217	Linear Algebra	4	MATH 265			
MATH 208	Elementary Differential Equations	3				
PHYS 203	General Physics I	3	PHYS 241			
PHYS 204	General Physics II	4	PHYS 242			
PHYS 205	General Physics III	4	PHYS 243			
	CIS/CSI Elective	3-4				
	Physical Education Elective	1	PHEA TLL			10564
	Physical Education/Fitness Elective	1	PHEA TLL			10564
	PROGRAM REQUIREMENTS	34-35				
	TOTAL CREDITS IN TRANSFER	64-65				

- Calculus I must be completed at Harford Community College.
- **65** credit transfer maximum.
- **GenEds to be completed at Towson (15 Units): I.D, IE, IIB3, IIC3, IID**

Major Requirements to be completed at Towson

General Physics Track

Core

PHYS 307	Intro Math Physics	(3)
PHYS 311	Modern Physics	(4)
PHYS 341	Intermediate Physics Lab I	(3)
PHYS 351	Mechanics I	(4)
PHYS 354	Electricity and Magnetism I	(4)

Advanced Physics Requirements

PHYS 342	Intermediate Physics Lab II	(3)
PHYS 455	Quantum Mechanics	(3)
PHYS 485	Physics Seminar	(1)

Two from the following:

PHYS 352	Thermodynamics and Kinetic Theory	(3)
PHYS 451	Mechanics II	(3)
PHYS 454	Electricity and Magnetism II	(3)
PHYS 457	Solid State Physics	(3)
PHYS 459	Nuclear Physics	(3)

Physics Electives (5)

General Education **ID** (3)

General Education **IE** (3)

General Education **IIB3** (3)

General Education **IIC3** (3)

General Education **IID** (3)

General Electives (6)

Total Credits to B.S. Degree (121-122)

Harford Chemistry A.S. Degree	64-65
Completion of GenEd at TU	15
Completion of Major Requirements at TU	36
General Electives at TU	6

Applied Physics Track

Core

PHYS 307	Intro Math Physics	(3)
PHYS 311	Modern Physics	(4)
PHYS 341	Intermediate Physics Lab I	(3)
PHYS 351	Mechanics I	(4)
PHYS 354	Electricity and Magnetism I	(4)

Applied Physics Track Advanced Requirements

PHYS 342	Intermediate Physics Lab II	(3)
PHYS 361	Optics Fundamentals	(4)
PHYS 485	Physics Seminar	(1)

One course from the following

PHYS 335	Basic Electronics	(4)
PHYS 337	Digital Electronics	(4)

Plus one course from the following

PHYS 453	Physical Optics	(3)
PHYS 457	Solid State Physics	(3)

Upper level physics electives (3-4)

General Education ID	(3)
General Education IE	(3)
General Education IIB3	(3)
General Education IIC3	(3)
General Education IID	(3)

General Electives (6)

Total Credits to B.S. Degree (121-123)

Harford Chemistry A.S. Degree	64-65
Completion of GenEd at TU	15
Completion of Major Requirements at TU	36-37
General Electives at TU	6

Astrophysics Track

Core

PHYS 307	Intro Math Physics	(3)
PHYS 311	Modern Physics	(4)
PHYS 341	Intermediate Physics Lab I	(3)
PHYS 351	Mechanics I	(4)
PHYS 354	Electricity and Magnetism I	(4)

Astrophysics Track Advanced Physics Requirements

ASTR 161	General Astronomy I	(4)
ASTR 162	General Astronomy II	(4)
ASTR 303	Astrophysical Techniques	(3)
ASTR 331	Introduction to Astrophysics	(3)
ASTR 423	Particle Astrophysics	(3)
ASTR 470	Special Topics in Astrophysics	(3)
ASTR 495	Capstone Project in Astrophysics	(3)
PHYS 455	Quantum Mechanics	(3)
	General Education ID	(3)
	General Education IE	(3)
	General Education IIB3	(3)
	General Education IIC3	(3)
	General Education IID	(3)

Total Credits to B.S. Degree (123-124)

Harford Chemistry A.S. Degree	64-65
Completion of GenEd at TU	15
Completion of Major Requirements at TU	44