

**HARFORD COMMUNITY COLLEGE - COMPUTER SCIENCE A.S. DEGREE**  
**TOWSON UNIVERSITY/ COMPUTER SCIENCE - Computer Security Track B.S. DEGREE**

HARFORD COMMUNITY COLLEGE			TOWSON UNIVERSITY			
COURSE #	COURSE TITLE	CRS.	TU EQUIVALENCY	CORE	COMMENTS	COURSE ID#
				1.	Towson Seminar	
ENG 101	English Composition	3	ENGL 102	2.	English Composition	2348
MATH 203	Calculus I	4	MATH 273	3.	Mathematics	4407
***CMST 101	Speech Fundamentals	3	***COMM 131 (min 2.0)	4.	Creativity & Creative Development	1221***
**GH	Arts/Humanities Elective (GH)	3	Depends on choice.	5.	Arts & Humanities	
**GB	Behavioral/Social Science Elective (GB)	3	Depends on choice.	6.	Social & Behavioral Sciences	
*BIO/PHSC	Biological/Physical Science Elective	4	Depends on choice.	7.	Biological & Physical Science w/Lab	
*BIO/PHSC	Biological/Physical Science Elective	3-4	Depends on choice.	8.	Biological & Physical Science	
				9.	Advanced Writing Seminar	
				10.	Metropolitan Perspectives	
**GB	Behavioral/Social Science Elective (GB)	3	Depends on choice.	11.	The United States as a Nation	
				12.	Global Perspectives	
**GH	Arts/Humanities Elective (GH)	3	Depends on choice.	13.	Diversity & Difference	
				14.	Ethical Issues & Perspectives	
<b>Total CORE in Transfer</b>		<b>29-30</b>				
CIS 205	Intro Visual Basic.Net or Other CIS programming language	4	CIS 265 COSC	Equivalency depends on student choice.		1348
CIS 115	Fundamentals of Programming	3	COSC 175			1335
CIS 201	Assembly Programming Language	4	COSC TLL			1349
CIS 214	Java Programming Language	4	COSC TLL			10186
CIS 221	C++ Programming	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	MATH263			4401
	Physical Education Fitness Elective	1	PHEA TLL			10564
	Physical Education Elective	1	PHEA TLL			10564
<b>Program Requirements at Harford</b>		<b>36</b>				
<b>Total Program Requirements at Harford</b>		<b>65-66</b>				
<b>Total Credits in Transfer</b>		<b>64</b>				

64 credit transfer maximum. 15 Core Curriculum units must be completed at Towson University: 1, 9, 10, 12 and 14.

\*BIO 120 and BIO 121 or CHEM 111 and CHEM 112 or PHYS 203 and PHYS 204

\*\* HCC students must complete one 3-credit Diversity course. It is recommended students select a course from the approved list on Diversity courses found in the HCC catalog. GB and GH choices must be from different disciplines.

\*\*\*Requires Course Directive/Exception for Core placement.

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**Program requirements at Towson University: 49-51**

COSC 290	Principles of Computer Organization	(4)	
COSC 336	Data Structures & Algorithm Analysis	(4)	
COSC 418	Ethical & Societal Concerns of Computer Scientists	(3)	<i>(COSC 418 meets Core requirement 14.)</i>
COSC 350	Data Communications & Networking	(3)	
CIS 377	Information Systems Security	(3)	
COSC 457	Database Management Systems	(3)	
COSC 439	Operating Systems	(3)	
MATH 314	Introduction to Cryptography	(3)	
MATH 330	Introduction to Statistical Methods	(4)	
COSC 455	Prog. Languages: Design & Implementation	(3)	
COSC 450	Network Security	(3)	
COSC 440	Operating Systems Security	(3)	
COSC 458	Application Software Security	(3)	
COSC 481	Case Studies	(3)	
	Lab Science Course	(4-6)	<i>(Students must complete minimum of 12 approved science units).</i>

**Total Credits Toward B.S. Degree: (125-128 Units)**

Harford Computer Science A.S. Degree	64
Completion of Core at Towson	15
Completion of Program requirements at Towson	46-48