HARRISBURG AREA COMMUNITY COLLEGE (HACC) & SHIPPENSBURG UNIVERSITY (SHIP) TRANSFER GUIDE FOR MATH/ COMPUTER SCIENCE A.S. (#4030) AT HACC TO COMPUTER SCIENCE (CS), COMPUTER ENGINEERING (CE), OR SOFTWARE ENGINEERING (SE) B.S. AT SHIPPENSBURG UNIVERSITY

HACC COURSE	CRS.	SHIP EQUIV. COURSE / AREA SATISFIED	CRS.	
General Education Requirements (29 credits)				
ENGL 101 English Composition I	3	ENG 114 Academic Writing ^W	3	
ENGL 102 English Composition II	3	GEN 028 Gen Ed Trans Crtvty&Exprs-Lit ^L	3	
COMM 101 Effective Speaking	3	HCS 100 Intro to Human Communication ^O	3	
H&A (choose one): ART 181, 182, HUM 101,	3	Gen Ed: Arts ^A or Foreign Language ^F	3	
MUS 104, THTR 101, or Foreign Language				
Math: MATH 121 Calculus I	4	MAT 211 Calculus I/ Required ^{Q, 5}	4	
Math or Sci: MATH 122 Calculus II	4	MAT 212 Calculus II/ Required for CE only ³	4	
Science with Lab: BIOL 101, CHEM 101, or	4	BIO 161 or CHM 121 or PHY 205/ Required ^{N, 6}	4	
PHYS 211				
S&BS Elective: PSYC 101	3	PSY 101 General Psychology ^D /Required for	3	
		Computer Science - Artificial Intelligence		
First-Year Seminar, Phy Ed & Wellness	2	Elective ³	2	
Major Requirements (33 credits)				
CIS 110 Intro to Computer Systems or CNT	3	Elective ³	3	
120 Network Communications Technology				

PROGRAM TOTAL CREDITS	62	TRANSFERRABLE TOTAL CREDITS	62
MATH 222 Differential Equations		MAT 322 Dif Equations/ Required for CE only ³	
MATH 221 Calculus III		MAT 213 Calculus III/ Required for CE only ³	
Transfer Elective (choose one):	3		3
BIOL 102, CHEM 102, or PHYS 212	4	BIO 162, CHM 122, or PHY 206/ Required ^{N, 6}	4
		CS & SE only ³	
MATH 220 Linear Algebra	4	MAT 318 Elementary Linear Algebra/ Required for	4
MATH 202 Introduction to Statistics	4	Elective ³	4
MATH 125 Discrete Mathematics	3	MAT 225 Discrete Mathematics/ Required	3
CPS 230 Object Oriented Programming	3	Elective ³	3
CPS 162 Computer Science III	3	CSC 111 Computer Science II/ Required for CS only ³	3
		for Engineers/Required ⁴	
CPS 161 Computer Science II	3	CSC 110 Computer Sci I or ENGR 120 Programming	3
CPS 121 Computer Science I	3	SWE 100 Intro to Software Engineering ³	3
120 Network Communications Technology			
CIS 110 muo to Computer Systems of CN1	3	Elective	3

Overview of Shippensburg University's General Education Program

The General Education Program at Shippensburg University comprises 45 of the credit hours required for graduation. It consists of 5 themes with 2-3 required course goals in each theme

-Foundations: 15 credits (3 credit first-year seminar not currently required for transfer students)

• Writing^W, Oral Communication^O, History^H, Quantitative^Q

-Interconnections: 9 credits required from 3 goals with at least 3 credits required in Diversity and 3 credits in Global Perspectives

• Diversity^D, Global Perspectives^G, Foreign Language^F

-Citizenship & Responsibility: 6 credits required with no more than 1 course from the same goal category

• Citizenship^S, Ethical Reasoning^E, Critical Reasoning^R

Natural World & Technology: 9 credits required with at least 6 credits completed in the Natural World category
Natural World^N, Technology^T

-Creativity & Expression: 6 credits required with at least 3 credits required in the Literature category

• Literature^L, Arts^A, Creative^C

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SPECIAL NOTES

- 1. Additional transfer credits may be taken at HACC for transfer to Shippensburg. Please speak with your advisor and/or the SHIP transfer counselor for advisement on additional work.
- 2. 0-Level courses do not count toward graduation requirements and will not transfer.
- 3. CS, CE, and SE programs at Shippensburg allow very limited free electives. Courses not required for Gen Ed or B.S. major requirements will transfer as elective credits.
- 4. CS, CE, and SE at SHIP have a 2.0 GPA requirement. CS and SE have a Math Level 4 Placement requirement (College Algebra) while CE has a Math Level 6 Placement requirement (Calculus). CS requires completion of CPS 161 with a C or better.
- 5. Additional 100-level math courses that are required at HACC to reach the Math 121 level will count as electives at SHIP.
- 6. Computer Science and Software Engineering majors must complete a two-semester science sequence in either BIOL, CHEM, or PHYS. Computer Engineering majors must pursue the two-semester PHYS sequence.
- 7. CS students may specialize in one of the following pre-approved concentrations: Artificial Intelligence, Computer Science Applications, Computer Graphics, or CS w/ Secondary Field Concentration. Students who wish to design a personalized concentration may do so with the help of their advisor.
- 8. Courses for Shippensburg University have been selected by joint agreement between HACC and SHIP. However, curricula are subject to change. Please speak with your advisor and/or the SHIP transfer counselor if you have any questions.

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FOR FURTHER INFORMATION CONTACT:

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