## HARRISBURG AREA COMMUNITY COLLEGE (HACC) \& SHIPPENSBURG UNIVERSITY (SHIP) TRANSFER GUIDE FOR MATH/ COMPUTER SCIENCE A.S. (\#4030) AT HACC <br> 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 ${ }^{\text {w }}$ | 3 |
| ENGL 102 English Composition II | 3 | GEN 028 Gen Ed Trans Crtvty\&Exprs-Lit ${ }^{\text {L }}$ | 3 |
| COMM 101 Effective Speaking | 3 | HCS 100 Intro to Human Communication ${ }^{\circ}$ | 3 |
| H\&A (choose one): ART 181, 182, HUM 101, MUS 104, THTR 101, or Foreign Language | 3 | Gen Ed: Arts ${ }^{\text {A }}$ or Foreign Language ${ }^{\text {F }}$ | 3 |
| Math: MATH 121 Calculus I | 4 | MAT 211 Calculus I/ Required ${ }^{\text {Q }} 5$ | 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 PHYS 211 | 4 | BIO 161 or CHM 121 or PHY 205/ Required ${ }^{\text {N, } 6}$ | 4 |
| S\&BS Elective: PSYC 101 | 3 | PSY 101 General Psychology ${ }^{\text {D } / R e q u i r e d ~ f o r ~}$ Computer Science - Artificial Intelligence | 3 |
| First-Year Seminar, Phy Ed \& Wellness | 2 | Elective ${ }^{3}$ | 2 |
| Major Requirements (33 credits) |  |  |  |
| CIS 110 Intro to Computer Systems or CNT 120 Network Communications Technology | 3 | Elective ${ }^{3}$ | 3 |
| CPS 121 Computer Science I | 3 | SWE 100 Intro to Software Engineering ${ }^{3}$ | 3 |
| CPS 161 Computer Science II | 3 | CSC 110 Computer Sci I or ENGR 120 Programming for Engineers/Required ${ }^{4}$ | 3 |
| CPS 162 Computer Science III | 3 | CSC 111 Computer Science II/ Required for CS only ${ }^{3}$ | 3 |
| CPS 230 Object Oriented Programming | 3 | Elective $^{3}$ | 3 |
| MATH 125 Discrete Mathematics | 3 | MAT 225 Discrete Mathematics/ Required | 3 |
| MATH 202 Introduction to Statistics | 4 | Elective ${ }^{3}$ | 4 |
| MATH 220 Linear Algebra | 4 | MAT 318 Elementary Linear Algebra/ Required for CS \& SE only ${ }^{3}$ | 4 |
| BIOL 102, CHEM 102, or PHYS 212 | 4 | BIO 162, CHM 122, or PHY 206/ Required ${ }^{\text {N, } 6}$ | 4 |
| Transfer Elective (choose one): <br> MATH 221 Calculus III <br> MATH 222 Differential Equations | 3 | MAT 213 Calculus III/ Required for CE only ${ }^{3}$ MAT 322 Dif Equations/ Required for CE only ${ }^{3}$ | 3 |
|  |  |  |  |
| PROGRAM TOTAL CREDITS | 62 | TRANSFERRABLE TOTAL CREDITS | 62 |

## 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 ${ }^{\mathrm{W}}$, Oral Communication ${ }^{\mathrm{O}}$, History $^{\mathrm{H}}$, Quantitative ${ }^{\mathrm{Q}}$
-Interconnections: 9 credits required from 3 goals with at least 3 credits required in Diversity and 3 credits in Global Perspectives
- Diversity ${ }^{\text {D }}$, Global Perspectives ${ }^{\text {G }}$, Foreign Language ${ }^{F}$
-Citizenship \& Responsibility: 6 credits required with no more than 1 course from the same goal category
- Citizenship ${ }^{\text {S }}$, Ethical Reasoning ${ }^{\mathrm{E}}$, Critical Reasoning ${ }^{\mathrm{R}}$
-Natural World \& Technology: 9 credits required with at least 6 credits completed in the Natural World category
- Natural World ${ }^{\mathrm{N}}$, Technology $^{\mathrm{T}}$
-Creativity \& Expression: 6 credits required with at least 3 credits required in the Literature category
- Literature ${ }^{\mathrm{L}}$, Arts $^{\mathrm{A}}$, Creative ${ }^{\mathrm{C}}$


## HARRISBURG AREA COMMUNITY COLLEGE \& SHIPPENSBURG UNIVERSITY TRANSFER GUIDE FOR MATHEMATICS-COMPUTER SCIENCE

## 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.

## FOR FURTHER INFORMATION CONTACT:

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Mr. Damian Morales Assistant Director of Admissions Shippensburg University dmorales @ ship.edu<br>(717) 477-1231 or 800-822-8028<br>www.ship.edu/admissions/transfers

Mr. Roberto Marti Jr.<br>Coordinator, Transfer Services<br>Harrisburg Area Community College transfer@hacc.edu (717) 720-3353<br>https://www.hacc.edu/Students/TransferringfromHACC/

