

**HARRISBURG AREA COMMUNITY COLLEGE (HACC) & SHIPPENSBURG UNIVERSITY (SHIP)
TRANSFER GUIDE FOR MATHEMATICS/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. | SHIPPENSBURG UNIV. EQUIV. COURSE / AREA SATISFIED | CRS. |
|--|-----------|---|-----------|
| General Education Requirements (29 credits) | | | |
| ENGL 101 English Composition I | 3 | ENG 114 Writing Intensive First Year Seminar ^W | 3 |
| ENGL 102 English Composition II | 3 | ENG 250 Introduction to Literature ^L | 3 |
| COMM 101 Effective Speaking | 3 | HCS 100 Intro to Human Communication ^O | 3 |
| H&A: (choose one) ART 181, 182, HUM 101, MUS 104, THTR 101, SPN, FRCH, GRMN, or ARAB | 3 | Gen Ed: Arts ^A or Foreign Language ^F | 3 |
| Mathematics Elc: MATH 121 Calculus I | 4 | MAT 211 Calculus I/Required ^Q | 4 |
| Mathematics Elc: MATH 122 Calculus II | 4 | MAT 212 Calculus II/Required ^{2,6} | 4 |
| Core C Science: BIOL 101 or CHEM 101 or PHYS 211 ⁷ | 4 | BIO 161 or CHM 121 or PHY 205 ^N | 4 |
| S&BS: ANTH 205, GEOG 201, ECON 201, or HIST 102 | 3 | Gen Ed: Global Perspectives ^G | 3 |
| First-Year Seminar Elective | 1 | Elective ² | 1 |
| Physical Education & Wellness | 1 | Elective ² | 1 |
| Major Requirements and Transfer Electives (33 credits) | | | |
| CIS 110 or CNT 120 | 3 | Elective ² | 3 |
| CPS 121 JAVA Programming | 3 | Elective ² | 3 |
| CPS 161 Computer Science I | 3 | CSC 110/CSC 107 Computer Science I and Lab/Req ^T | 3 |
| CPS 162 Computer Science II | 3 | CSC 111 Computer Science II /Required | 3 |
| CPS 230 Object Oriented Programming | 3 | Elective ² | 3 |
| MATH 125 Discrete Mathematics | 3 | MAT 225 Discrete Mathematics/Required ^R | 3 |
| MATH 220 Linear Algebra | 4 | MAT 318 Elementary Linear Algebra/Required ^{5,8} | 4 |
| MATH 202 Introduction to Statistics | 4 | MAT 117 Applied Statistics/Elective ² | 4 |
| Continue BIOL, CHEM, or PHYS sequence ⁷ | 4 | BIO 162 or CHM 122 or PHY 206/Required | 4 |
| PSY 101 or SOCI 205 | 3 | Gen Ed: Diversity ^D | 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^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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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 SU transfer counselor for advisement on additional work.
2. 0-Level courses do not count toward graduation requirements and will not transfer. The Computer Engineering program at Shippensburg does not allow for any free electives while free electives are very limited for Software Engineering and Computer Science. If you wish to take courses not listed on this guide, you should speak with your advisor and/or the SU transfer counselor for advisement.
3. Courses for Shippensburg University have been selected by joint agreement of HACC and SU. However, curricula are subject to change. Please speak with your advisor and/or the SU transfer counselor if you have any questions. A transfer counselor from SU visits the Wildwood campus on a bi-weekly basis through the academic year. Call the SU Office of Admissions for the specific day and time.
4. CS, CE, and SE at SU 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). 0-level courses do not count toward graduation requirements and will not transfer.
5. Additional 100-level math courses that are required at HACC to reach the Math 121 level will count as electives at SU.
6. MAT 212 at SHIP is required for Computer Engineering majors but not for Computer Science or Software Engineering.
7. Computer Science and Software Engineering majors should pursue either the BIOL or CHEM sequence while Computer Engineering majors should pursue the PHYS sequence.
8. MAT 318 at SHIP is required for Computer Science and Software Engineering majors but not for Computer Engineering.
9. Students who wish to specialize in a particular area of computer science may opt to study in one of the following pre-approved concentrations: Computer Graphics: for the development of graphics intensive software; Embedded Programming: for developing software for embedded controllers; Related Discipline: for those students who would like to combine computer science with another discipline such as business, science, etc. Students who wish to design a personalized concentration may do so with the help of their advisor.

FOR FURTHER INFORMATION CONTACT:

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