



Mathematics/Computer Science

AS # 4030(62 credits)

Effective Fall 2018

This is an overview of the program. Any suggested course sequencing is meant to serve as a guideline for your semester planning. Students are expected to see your assigned advisor to develop and review their individual educational plans. Program specific questions can be directed to the faculty contacts. The scheduling of courses, program sequencing and curriculum are subject to change.

Developmental Courses as determined through College Placement Testing* and as Prerequisites:

* Please note: 0-level courses do not transfer and do not count toward graduation requirements; however, they are required to enter college level courses.

English as Second Language

___ Any ENGL ESL classes*

Reading Comprehension

___ ENGL 001*

___ ENGL 002*

___ ENGL 003*

Reading/Writing

Combination

___ ENGL 056ST (002/050)*

___ ENGL 057 (051/003)*

Writing Fundamentals

___ ENGL 050*

___ ENGL 051*

Freshman Year Exp.

___ FS 100 / 102

___ Dept. FYE

Math Testing Prior to 4/16

___ FS107 (option)

___ MATH 010*

___ MATH 020*

___ MATH 051*

Math Testing AFTER 4/16

___ FS107 (option)

___ MATH 033*

___ MATH 008*

___ MATH 044*

___ MATH 022*

___ MATH 055*

*See counselor/advisor to discuss this course or options to self-remediate and successfully place into higher- or college-level course

General Education Courses	
ENGL 101 (3)	Prerequisite: Completion of ENGL 003 and 051 or 057 with a grade of C or higher
ENGL 102 or 104 (3)	Prerequisite: Completion of ENGL 101 and 003 with a grade of C or higher.
COMM 101 (3)	Prerequisite: Completion of ENGL 003 and 051 or 057 with a grade of C or higher
Core A (3)	Humanities and Arts Elective: Select one of the following: ART 181 or 182; ENGL 206; HUM 101, 115 or 201; MUS 104, PHIL 200; THTR 101 or a foreign language course.
Core B (3)	Social and Behavioral Sciences Elective
General Education Transfer Electives (3 credits)	See transfer college checksheet for 3 credits of transferable elective credits
Any PE/Wellness (1)	Wellness Notes : See HACC catalog for a list of Wellness courses
One credit hour in FYS coursework	One credit hour in FYS coursework unless exempted by examination. Please see HACC Catalog for list of approved FYS courses.

Required Program Courses		
CIS 110 (3) OR CNT 120 (3)	Introduction to Computer Systems or Network Communications Technology	Pre or Coreq: CIS 105 with a grade of C or higher. Prerequisite: Eligibility for enrollment into ENGL 101 and MATH 055 (or MATH 051) or MATH 045; or permission of the Instructor.
CPS 121 (3)	Computer Science I – Introduction to Computer Programming JAVA	Prerequisite: Completion of Math 103 with a C or higher
CPS 161 (3)	Computer Science II – Algorithmic Design JAVA and C++	Prerequisite: Completion of CPS 121 with a C or higher
CPS 162 (3)	Computer Science III – Data Structures	Prerequisite: Completion of CPS 161 with a C or higher.

CPS 230 (3)	Object Oriented Programming JAVA	Prerequisite: Completion of CPS 121 with a C or higher or permission of the Instructor.
MATH 121 (4)	Calculus I	Prerequisite: Completion of MATH 119 or equivalent with a C or higher.
MATH 122 (4)	Calculus II	Prerequisite: Completion of Math 121 with a C or higher
MATH 125 (3)	Discrete Mathematics	Prerequisite: Completion of Math 119 with a C or higher
MATH 202(4)	Introduction to Statistics	Prerequisite: Completion of Math 051 or Math 055 with a C or higher
MATH 220 (4)	Linear Algebra	Prerequisite: Completion of Math 122 with a C or higher
BIOL 101 OR PHYS 201 OR PHYS 211 OR CHEM 101 (4)	General Biology (Core C Lab) OR General Physics I OR Physics for Engineers & Scientists I OR General Inorganic Chemistry	Prereq: H.S. Biol and Chem; Pre or Coreq: ENGL 101 and reading ability at the ENGL 003 level or higher; Prereq; Completion of MATH 104 or the equivalent, or MATH 105 or with a C or higher. Prereq: Completion of MATH 121 or equivalent with a grade of C or higher. Prereq: Completion of MATH 103, ENGL 057 (or a combination of ENGL 003, or 007 and 051 with C's or higher; and successful completion of (1) High school academic chemistry or (2) CHEM 100 with grades of C or, 3) Toledo Chemistry Placement Exam (minimum score of 26).
BIOL 102 OR PHYS 202 OR PHYS 212 OR CHEM 102 (4)	General Biology II OR General Physics II OR Physics for Engineers & Scientists II OR General Inorganic Chem & Qualitative Analysis	Prereq: Completion of BIOL 101 or the equivalent with a grade of C or higher. Prereq: Completion of PHYS 201 with a C or higher Prereq: Completion of MATH 122 and PHYS 211 or the equivalent with a C or higher. Prereq: Completion of CHEM 101 with a C or higher

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CIS 110 or CNT 120	3	COMM 101	3	CPS 162	3	CPS 230	3
CPS 121	3	CPS 161	3	MATH 202	4	Humanities and Arts Elective	3
ENGL 101	3	ENGL 102 or 104	3	MATH 220	4	Social/Behavior Science	3
FYS Elective	1	MATH 122 (Core C)	4	Wellness	1	Transfer Elective	3
MATH 121 (Core C)	4	MATH 125	3	BIO: 101 pr PHYS 201 or 211 or CHEM 101	4	BIOL 102 or PHYS 202 or PHYS 212 or CHEM 102	4

Counselor/Advisor Contact Information by Campus: Virtual: 800-ABC-HACC, option 7;
virtual@hacc.edu

<u>Gettysburg</u>	<u>Harrisburg</u>	<u>Lancaster</u>	<u>Lebanon</u>	<u>York</u>
Student Services	Advising and Transfer Center	Counseling and Advising	Receptionist Desk	Welcome Center
Lobby	Cooper 219	221 Main	Lobby	Leader 102
717-337-3855	717-780-2498	(717) 358-2988	717-270-4222	717-801-3213, ext. 3513