



**AS 4030 Mathematics/Computer Science**  
**Effective Fall 2018**

**62 Credits**

*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. The scheduling of courses, program sequencing and curriculum are subject to change.*

<b>Developmental Courses (as determined through College Placement Testing)* and Prerequisites:</b>					
<b>* Zero level courses must be completed with a C grade or higher.</b>					
<input type="checkbox"/>	ESL classes	<input type="checkbox"/>	Engl 050	<input type="checkbox"/>	Math 006
<input type="checkbox"/>	Engl 002	<input type="checkbox"/>	Engl 051	<input type="checkbox"/>	Math 090
<input type="checkbox"/>	Engl 003	<input type="checkbox"/>	Engl 057	<input type="checkbox"/>	Math 008
<input type="checkbox"/>	Engl 007			<input type="checkbox"/>	Math 022
				<input type="checkbox"/>	Math 033
				<input type="checkbox"/>	Math 044
				<input type="checkbox"/>	Math 045
				<input type="checkbox"/>	Math 055
				<input type="checkbox"/>	Math 103/104
				<input type="checkbox"/>	Math 119

<b>General Education Courses</b>		
<b>ENGL 101</b>	3cr	Prerequisites: Completion of ENGL 003 and 051 or 057 with a C or higher
<b>ENGL 102 or 104</b>	3cr	Prerequisites: Completion of ENGL 101 and 003 with a C or higher
<b>COMM 101</b>	3cr	Prerequisites: Completion of ENGL 003 and 051 or 057 with a C or higher
<b>Humanities And Arts</b>	3cr	Select from: Art 181 or 182; ENGL 206; HUM 101, 115 201; MUS 104; PHIL 200, THTR 101 or a Foreign Language Course
<b>Social and Behavioral Science</b>	3cr	Any Core B
<b>General Education Transfer Electives</b>	3cr	See transfer college checksheet for 3 credits of transferable elective credits.
<b>PE/Wellness</b>	1cr	See catalog for a list of Wellness Courses
<b>First Year Seminar (FYS)</b>	1cr	Please see HACC catalog for a list of approved courses

<b>Required Program Courses</b>			
<b>CIS 110 OR CNT 120</b>	3cr	Introduction to Computer Systems OR Network Communications Technology	Prerequisites: CIS 105 with a grade of C or higher. Prerequisites: Eligibility for enrollment into ENGL 101 and MATH 055 (or MATH 051) or MATH 045; or permission of the Instructor
<b>CPS 121</b>	3cr	Computer Science I – Introduction to Computer Programming JAVA	Prerequisites: Completion of Math 103 with a C or higher
<b>CPS 161</b>	3cr	Computer Science II – Algorithmic Design JAVA and C++	Prerequisites: Completion of CPS 121 with a C or higher
<b>CPS 162</b>	3cr	Computer Science III – Data Structures	Prerequisites: Completion of CPS 161 with a C or higher
<b>CPS 230</b>	3cr	Object Oriented Programming JAVA	Prerequisites: Complete of CPS 121 with a C or higher or permission of the Instructor.
<b>MATH 121</b>	4cr	Calculus I	Prerequisites: Completion of Math 119 or equivalent with a C or higher
<b>MATH 122</b>	4cr	Calculus II	Prerequisites: Completion of Math 121 with a C or higher
<b>MATH 125</b>	3cr	Discrete Mathematics	Prerequisites: Completion of Math 119 with a C or higher
<b>MATH 202</b>	4cr	Introduction to Statistics	Prerequisites: Completion of Math 051 or Math 055 with a C or higher
<b>MATH 220</b>	4cr	Linear Algebra	Prerequisites: Completion of Math 122 with a C or higher

<b>*BIOL 101 OR PHYS 201 OR PHYS 211 OR CHEM 101</b>	4cr	General Biology <b>OR</b> General Physics I <b>OR</b> Physics for Engineers & Scientists I or General Inorganic Chemistry	Prerequisites: Various prerequisites depending on course; Check course catalog; See Advising Notes
<b>*BIOL 102 OR PHYS 202 OR PHYS 212 OR CHEM 102</b>	4cr	General Biology II <b>OR</b> General Physics II <b>OR</b> Physics for Engineers & Scientists II or General Inorganic Chemistry II & Qualitative Analysis	Prerequisites: Various prerequisites depending on the course; Check course catalog; See Advising Notes

### Advising Notes

\*Students must take both sciences from the same discipline. Ex. If a student takes BIOL 101, their next science must be BIOL 102.

### 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		
MATH 121 (Core C)	4	MATH 125	3	BIO: 101 pr PHYS 201 or 211 or CHEM 101	4	Transfer Elective	3
						BIOL 102 or PHYS 202 or PHYS 212 or CHEM 102	4

### Counselor/Advisor Contact Information by Campus:

<b>Gettysburg</b>	<b>Harrisburg</b>	<b>Lancaster</b>	<b>Lebanon</b>	<b>York</b>
Student Services	Counseling and Advising	Counseling and Advising	Receptionist Desk	Counseling and Advising
Lobby	Cooper 219	221 Main	Lobby	Leader Suite 104
717-337-3855	717-780-2498	717-358-2988	717-270-4222	717-801-3213