Recommended Course Sequence

The number of credits you take each year will determine when you graduate. To graduate on time, you are strongly encouraged to enroll in at least 30 credits toward your degree during the calendar year, including fall and spring semesters and winter and summer sessions.

A.S. Degree Liberal Arts and Sciences (Mathematics and Science) – Computer Science (MA 440) - Catalog Year 2016-17

This suggested sequence is for students in the A.S. program in Liberal Arts and Sciences (Mathematics and Science) who wish to continue their studies in Computer Science, and are prepared to begin with MA 440 Pre-Calculus.

Fall Semester #1

Courses	Credits	Pre-requisites and co-requisites
ENGL 101 English Composition I (Required Core 1A: English Composition)	3	Pre-req.: BE 112/205 and 122/226 or passing score on CUNY placement, or exemption
MA 440 Pre- Calculus (or higher level) (Required Core 1.B. Mathematical and Quantitative Reasoning)	4	Pre-req.: MA 119 & 121 or placement on mathematics exam
Required Core 1.C. Life & Physical Sciences Select from BI 201, CHI 151, PH 301 or 311 or 411	4 - 4.5	Pre-req. for BI 201: BE 112/205 and 122/226 or passing score on CUNY placement, or exemption; Pre-req. for CH 151 and PH 301: MA 119 College Algebra & MA 121 Trigonometry or placement Pre-req. for PH 411: MA 440; Pre-req. for MA 311: MA 441
HE 101 Introduction to Health Ed. or HE 102 Health Behavior & Society	1-2	Co-req. for HE 102: BE 122 or 226 or passing score on CUNY placement, or exemption
Flexible Core - one course* from: 2. A, World Cultures and Global Issues OR 2.B. US in its Diversity OR 2. C. Creative Expression OR 2. D. Individual & Society	3	Check individual course pre- and co-requisites
Total credits for the term	**15 - 16.5**	

Spring Semester #1

Courses	Credits	Pre-requisites and co-requisites
ENGL 102 English Composition II (Required Core 1A: English Composition II)	3	Pre-req.: ENGL 101 or placement
MA 441 Analytical Geometry and Calculus I (Required Core 1B - Mathematical and Quantitative Reasoning)	4	Pre-req.: MA 440 Pre-Calculus (4 credits)[1]
CS 101 (Flexible Core 2. E)	4	Co-req.: MA 441
MA 471 Discrete Math (Concentration course)	3	Pre-requisite: MA 440
One course from PE 400 or 500 or DAN 100 series	1	None
Total credits for the term	**15**	

Fall Semester #2

Courses	Credits	Pre-requisites and co-requisites
MA 442 Analytical Geometry and Calculus II	4	Pre-req.: MA 441 with grade of C or better
CS 203 Algorithmic Problem Solving II in C++ (Flexible Core 2. A, B, C, D, or E)	4	Pre-req.: CS 101 and MA 441, both with grades of C or better
Flexible Core one course from 2. A, B, C, or D*	**3**	Pre-req. for SP 211: speech remediation if required
Flexible Core one course from 2. A, B, C, or D*	**3**	Check pre-requisites and co-requisites for individual courses
Total credits for the term	**14**	

Spring Semester #2

Courses	Credits	Pre-requisites and co-requisites
Concentration course(s) (3-6 credits): CS 201 Computer Organization (4) and Assembly Language *OR* CS 204 Algorithmic Problem Solving II in Java (4)	3-6	Pre-req.: CS 101 and MA 441, both with grades of C or better
SP 211 Speech Communication (if taken in Common Core, additional Concentration course: CS 220 Discrete Structures or MA 481 Probability and Statistics recommended)	3	Pre-req. for SP211: remedial speech if required Pre-req. for CS 220: MA 471 with C or better Co-req. for MA 481: MA 442
History or Social Science course (if taken in Common Core, additional course in Concentration: MA 461 Linear Algebra recommended	3-4	Pre-req. for MA 461: MA 442
Flexible Core one course from 2. A, B, C, or D *	3	Check pre-requisites and co-requisites for individual courses
Total credits for the term	**15 - 16**	
Total credits required for the A.S. in Liberal Arts & Sciences – Computer Science	**60**	

Notes:

1. All students must complete two (2) WI designated classes to fulfill degree requirements.
2. Students in degree programs must complete any required remedial speech courses before graduation.
3. *Students should select one course from each of the four flexible core categories: A, B, C, and D.
4. Students who do not place into MA 440 (Pre- Calculus) will need to take pre-requisite credit courses, indicated above, which do not count toward the program requirements.
5. INDICATE IF ANY COURSES ARE OFFERED ONLY IN FALL OR SPRING SEMESTERS

ADVISEMENT NOTE: Students must take <u>at least</u> *one two-course sequence* in each of *two different disciplines* (i.e., BI 201, 202; CH 151, 152; PH 301, 302; CS 101, 201, or 203; MA 441, 442). Students should select courses that will best prepare them for the majors they intend to pursue in baccalaureate programs