PROGRAM: AS COMPUTER SCIENCE
Division: Mathematics, Engineering and Physical Sciences
TECH-129 (914) 606-6788

65 Credits

Curriculum Chair
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Reviewed By <u>Curriculum Chair</u>/ Faculty / Counselor:
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Date:_____

Approved By Curriculum Chair/Faculty:
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Course #	SEMESTER 1	Credits	✓
ENG 101	*Composition & Literature 1*	3	
	Behavioral[1] _____	3	
	Humanities [1] _____	3	
COMSC 101	Computer Programming I	3	
COMSC 105	Computer Architecture I	3	

Course #	SEMESTER 2	Credits	✓
ENG 102	*Composition & Literature 2*	3	
	Social Science [1] _____	3	
COMSC 110	Computer Programming II	3	
COMSC 125	Computer Architecture II	3	
	Computer Science Elective #1: COMSC 108 or 116 [2]	3	
	PE (fitness)- _____	1	

Course #	SEMESTER 3	Credits	✓
MATH 181	*Calculus I*	4	
	Science I w/ Lab[3] _____	4	
COMSC 201A	Data Structures	4	
COMSC 207	Java Application Development	3	
COMSC 208A	Advanced .NET Development	4	

Course #	SEMESTER 4	Credits	✓
MATH 191	*Calculus II*	4	
	Science II w/ Lab[3] _____	4	
MATH 178	*Discrete Mathematics*	3	
	Computer Science Elective #3: COMSC 214A, or 212A[2]	3	
	PE (sport)- _____	1	

Bold italic items are Core Requirements.

Computer Science deals with the technical aspects of computing including the hardware components of the computer and the fundamental theories and algorithms of programming. Computer Science majors must have strong logical ability, analytical ability, and mathematical ability. **Requisites: Reading Placement score greater than 79 or a passing grade in READ 105 or higher and MATH 135 as a co-requisite or a pre-requisite of a passing grade in MATH 135 or higher.**

<u>COMSC 100 Intro to Computing Concepts:</u> Students who need to take developmental courses, and so are ineligible for COMSC 101 or COMSC 105, should take COMSC 100. It is a good alternative for students who are trying to decide between CS, CIS, Networking, or Computer Arts. Students who have never used a computer, not even for email, the internet or word processing should also take this course before taking COMSC 101.

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[1] <u>Math Requirements:</u> Students who need to take the prerequisite courses for MATH 181 or MATH 178 should start doing so in the first and/or second semesters in addition to or in place of one of the SOC/BEH/HUM courses. Computer Science students who need to take College Algebra, should take MATH 135 College Algebra with Trigonometry. After MATH 135, students should take MATH 161 Precalculus. For more information contact the Curriculum Chair.

[2] <u>Computer Science Electives (10 credits):</u> Students are required to take 3 Computer Science elective courses. Choices are limited to the courses indicated in the semester sequence table above. Students must take at least one 4-credit COMSC elective. Only one MATH elective may be taken.

[3] <u>Science Requirements (8 credits):</u> **The science requirement for the C.S. degree at W.C.C. is an 8 credit, two course paired sequence. For example, if a student takes General Biology I, then they must take General Biology II for their second science course.**

Approved Science Courses Pairs are: PHYSC 121 & 122 Engineering Physics I & II w/Lab, PHYSC 111 & 112 College Physics I & II w/Lab, BIOL 115 & 117 General Biology I & II w/Lab, BIOL 121 & 123 Anatomy & Physiology I & II w/Lab, CHEM 107 & 111 Inorganic Chemistry I & II w/Lab, and CHEM 201 & 205 Organic Chemistry I & II w/Lab. For more information contact the Curriculum Chair.

Core Course Requirements   (19 credits)   **Prerequisites**

Course	Credits	Prerequisites
COMSC 101 Computer Programming I	3cr.	Coreqs: MATH 135 and ENG 101
COMSC 105 Computer Architecture I	3cr.	Coreqs: MATH 135 and ENG 101
COMSC 110 Computer Programming II	3cr.	COMSC 101 Computer Programming I with Grade >= C
COMSC 125 Computer Architecture II	3cr.	COMSC 105 Computer Architecture I with Grade >= C
COMSC 201A Data Structures	4cr.	COMSC 110 Computer Programming II with Grade >= C
COMSC 207 Java Application Development	3cr.	COMSC 110 Computer Programming II with Grade >= C
COMSC 208A Advanced .NET Development	4cr.	COMSC 108 .NET GUI Development with Grade >= C

Electives - Choose 3 (At least one 4-credit COMSC elective. Only one MATH elective allowed.) (Total of 10 credits).

Course	Credits	Prerequisites
COMSC 108 .NET GUI Development	3cr.	COMSC 101 Computer Programming I with Grade >= C
COMSC 116 Linux Operating System	3cr.	COMSC 101 Computer Programming I with Grade >= C
COMSC 120 Internship in Computer Science	3cr.	COMSC 101 Computer Programming I and one other Computer Science course
COMSC 212A Advanced Java	4cr.	COMSC 207 Java Application Development with Grade >= C
COMSC 214A Web Programming	4cr.	COMSC 110 Computer Programming II with Grade >= C
MATH 230 Calculus III	4cr.	See catalog
MATH 215 Linear Algebra	4cr.	See catalog

Computer Science New Course Names/Numbers vs. Old Course Names/Numbers

New Course #	New Course Names	Old Course #	Old Course Names
COMSC 100	Intro to Computing Concepts	COMSC 100	Computer Science 0
COMSC 101	Computer Programming I	COMSC 101	Introduction to Computer Science
COMSC 105	Computer Architecture I	COMSC 203	Computer Architecture
COMSC 108	.NET GUI Development	COMSC 108	Visual Basic for Technology and VB GUI Development
COMSC 110	Computer Programming II	COMSC 110	Object-Oriented Design
COMSC 116	LINUX Operating System	COM SC 116	Unix for Technology and UNIX OS
COMSC 125	Computer Architecture II	COMSC 206	Computer Architecture II
COMSC 201A	Data Structures	COMSC 201	Introduction to Data Structures
COMSC 207	Java Application Development	COMSC 112	Java Programming for Technology and Java for CompSci
COMSC 208A	Advanced .NET Development	COMSC 208	Advanced Visual Basic
COMSC 214A	Web Programming	COMSC 122	Web Programming for CS

- *Behavioral Science* courses include Sociology, Psychology, Anthropology and Geography. General Psychology is the prerequisite for all upper level psychology courses.
- *Social Science* courses include History, Political Science, Economics and Geography.
- *Humanities* courses include Art, Dance, Drama, Music, Foreign Language, Film, Philosophy, Theater and Photography at ARTWS.

Advisement Notes:

SUNY Transfer Students: A student who plans on transferring to a SUNY 4-year college should plan their academic program to meet both the WCC and the SUNY general education requirements. See the following SUNY TRANSFER from – COMPUTER SCIENCE 0221 document which follows or the curriculum chair for advisement in this matter.