

PROGRAM: AS COMPUTER SCIENCE

Division: Math, Computer, Engineering & Physical Sciences & Technologies
TECH-106 (914) 606-6788

64 Credits

Curriculum Chair
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**Reviewed By Curriculum Chair/Faculty/
Counselor:** _____
Date: _____
Approved By Chairperson/Dean:

Course #	SEMESTER 1	Credits	✓
<i>ENG 101</i>	<i>Composition & Literature 1</i>	3	
	<i>Behavioral Science</i> <i>(see SUNY Gen. Ed Requirements)</i>	3	
	<i>Humanities (see SUNY Gen. Ed Requirements)</i>	3	
COMSC 101	Computer Programming I <i>(see coreq and prereq notes below)</i>	3	
<i>MATH 181</i>	<i>Calculus I or Prerequisite</i> <i>See Math Requirements Below</i>	4	

Course #	SEMESTER 2	Credits	✓
<i>ENG 102</i>	<i>Composition & Literature 2</i>	3	
	<i>Social Science</i> <i>(see SUNY Gen. Ed Requirements)</i>	3	
COMSC 110	Computer Programming II	3	
COMSC 116	LINUX Operating System	3	
<i>MATH 191</i>	<i>Calculus II or Prerequisite</i> <i>See Math Requirements Below</i>	4	

Course #	SEMESTER 3	Credits	✓
	<i>Science I w/ Lab</i> <i>(see Science Requirements)</i>	4	
COMSC 201A	Data Structures	4	
COMSC 207	Java Programming	3	
COMSC 214A	Web Programming	4	
	<i>PE (sport)</i> _____	1	

Course #	SEMESTER 4	Credits	✓
	<i>Science II w/ Lab</i> <i>(see Science Requirements)</i>	4	
<i>MATH 178</i>	<i>Discrete Mathematics</i>	3	
COMSC 217	Computer Architecture	3	
COMSC 208A	GUI Development	3	
	<i>PE (fitness)</i> _____	1	

Bold italic items are General Education 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.

ADVISEMENT NOTES

COMSC 101 Computer Programming I: The **Corequisite** for COMSC 101 is MATH 135 or MATH 161 or MATH 181 or MATH 191. The **Prerequisite** for **COMSC 101** is a Reading Placement score ≥ 80 or a passing grade in READ 105.

COMSC 100 Intro to Computing Concepts: Students who need to take developmental courses, and so are ineligible to take COMSC 101, 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.

Math Requirements: **Computer Science Math Requirements include MATH 181, MATH 191 and MATH 178.** Students who need to take the prerequisite courses for these required courses, (MATH 135 and MATH 161), must start taking these prerequisites in the first semester. While students may need to take MATH 135 and MATH 161, they will not be applied toward the degree. Computer Science students who need to take College Algebra, must take MATH 135 College Algebra with Trigonometry. After MATH 135, students must take MATH 161 Precalculus. **For more information contact the Curriculum Chair.**

(Turn over for more Advisement Notes)

ADVISEMENT NOTES CONTINUED

Science Requirements (8 credits): 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. For more information contact the curriculum chair.

Approved Science Courses Pairs

PHYS 121 & 122 Engineering Physics I & II w/Lab,
PHYS 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.

SUNY General Education Requirements:

WCC students must also take one course from each of the following categories to meet SUNY general educational requirements.

Social Science Courses: Select from SUNY GEN ED: *American History, Western Civilization or Other World Civilizations*

Humanities Courses: Select from SUNY GEN ED: *Arts or Foreign Language*

Behavioral Science Courses: ANTHR 101, GEOG 101, PSYCH 101, or SOC 101

Computer Science

<u>Core Curriculum Requirements</u>	(31 credits)	<u>Corequisites/Prerequisites</u>
COMSC 101 Computer Programming	3cr.	Coreq: MATH 135 or MATH 161 or MATH 181 or MATH 191 Prereq: Reading Placement score \geq 80 or a passing grade in READ 105 or higher
COMSC 110 Computer Programming II	3cr.	Prereq: COMSC 101 Computer Programming I with Grade \geq C
COMSC 116 Linux Operating System	3cr.	Prereq: COMSC 101 Computer Programming I with Grade \geq C
COMSC 201A Data Structures	4cr.	Prereq: COMSC 110 Computer Programming II with Grade \geq C
COMSC 207 Java Programming	3cr.	Prereq: COMSC 110 Computer Programming II with Grade \geq C
COMSC 208A GUI Development	4cr.	Prereq: COMSC 207 Java Programming with Grade \geq C OR permission from the Curriculum Chair.
COMSC 214A Web Programming	4cr.	Prereq: COMSC 110 Computer Programming II with Grade \geq C
COMSC 217 Computer Architecture	4cr.	Prereq: COMSC 101 Computer Programming I with Grade \geq C and MATH 135
MATH 178 Discrete Math	3cr.	Prereq: See catalog

Alternative Courses: These courses can only be taken as alternatives with permission from the Computer Science Curriculum Chair.

<u>Course</u>		<u>Prerequisites</u>
COMSC120 Internship in Computer Science	3cr.	COMSC 101 Computer Programming I and one other Computer Science course. Alternative for COMSC 116 only.
MATH 230 Calculus III	4cr.	See catalog course. Alternative for COMSC 208A or COMSC 214A only.
MATH 215 Linear Algebra	4cr.	See catalog course. Alternative for COMSC 208A or COMSC 214A only.