

Rowan College of South Jersey  
**COMPUTER SCIENCE**  
**Associate in Science (A.S.) – Transfer**  
Program Requirements

The goal of this program is to provide the first two years of a Computer Science baccalaureate degree program for the students who wish to transfer to a four-year program in Computer Science. The core curriculum will provide foundations in programming and problem solving, data representation and algorithms, object-oriented programming, computer organization and assembly language programming fulfilling the core competences of critical thinking and information technology. Although this program is primarily designed for students to transfer to a four-year program, after successful completion of this program, students will also find job opportunities in computer science and information technology areas. Students who have completed the program will be able to:

- Learn fundamental principles, theories, and analytical skills to solve computing problems throughout the program
- Analyze, design, choose the interface, coding, test and debug to effectively develop error-free computer programs
- Learn computer architecture, software design, and programming that are most widely used in Engineering, Science and Technology related fields
- Identify, formulate and solve problems and learn to adapt to evolving computer languages, systems and industry standards

**Required Core and Elective Courses**

<u>Communications</u>		<u>Credits</u>
EN 101	English Composition I	3
EN 102	English Composition II	3
 <b><u>Humanities / Social Science</u></b>		
____	Social Science Elective	3
____	Humanities Electives	3
____	Humanities Electives / Social Science Elective	3
 <b><u>Free Elective</u></b>		
____	Free Elective	2-4
 <b><u>Mathematics</u></b>		
MA 130	Calculus I	4
MA 140	Calculus II	4
MA ____	Mathematics elective - Linear Algebra (MA 212) Or Calculus III (MA 210)	4
MA 211	Discrete Mathematics	3
 <b><u>Science</u></b>		
PI 141	General Physics I	4
PI 142	General Physics II	4
 <b><u>Computer Science</u></b>		
CS 203	Assembly Language and Computer Organization	4
CS 212	C++ Programming	4
CS 112	Computer Science II	4
CS 216	Objects and Data Abstraction using Java	4
CS 232	Data Structures and Algorithms	4

**TOTAL MINIMUM CREDITS:     60**

**Electives:**

Humanities Elective / Social Science Elective: **9 credits** - must be chosen from the approved list of General Education courses. Refer the College Catalog and/or the Counseling Office.

Mathematics: Linear Algebra (MA 212) or Calculus III (MA 210)

**\*Students planning to transfer to Rowan University should take Linear Algebra MA 212 as their Mathematics elective**

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**Four Semester Sequence of Courses**

**FIRST YEAR – Fall Semester**

			<u>Credits</u>
_____	CS 212	C++ Programming	4
_____	EN 101	English Composition I	3
_____	MA 130	Calculus I	4
_____	_____	Humanities Elective	3
_____	_____	Social Science Elective	3

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**Spring Semester**

_____	CS 112	Computer Science II	4
_____	EN 102	English Composition II	3
_____	MA 140	Calculus II	4
_____	PI 141	General Physics I	4

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**SECOND YEAR - Fall Semester**

_____	CS 203	Assembly Language and Computer Organization	4
_____	CS 216	Intermediate Java Programming	4
_____	MA _____	Mathematics elective - Linear Algebra (MA 212) * Or Calculus III (MAT 210)	4
_____	_____	Humanities Elective / Social Science Elective	3

**15**

**Spring Semester**

_____	CS 232	Data Structures and Algorithms	4
_____	MA 211	Discrete Mathematics	3
_____	PI 142	General Physics II	4
_____	_____	Free Elective	2-4

**13**

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