Computer Science, A.S.

This is a 3+1 option program with Rowan University.

[AS-CSC; CIP Code 11.0701]

Associate in Science (A.S.) — Transfer

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 competencies 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.

Program Contact

Barun Dandapat, Associate Professor, Computer Science
bdandapat@rcsj.edu

Are you ready to get started at RCSJ? Visit *RCSJ.edu/Enroll* and complete the interest form.

FIRST YEAR – Fall Semester

☐	CSC 205 Programming in C++	4
☐	ENG 101 English Composition I	3
☐	MAT 108 Calculus I	4
☐	Humanities General Education Elective	3
☐	Social Science General Education Elective	3
		17

Spring Semester

☐	CSC 210 Object Oriented Programming in Java	4
☐	ENG 102 English Composition II	3
☐	MAT 122 Calculus II	4
☐	PHY 201 Physics with Calculus I	4
		15

SECOND YEAR - Fall Semester

☐	CSC 203 Assembly Language and Computer Organization	4
☐	CSC 216 Objects and Data Abstraction using Java	4
☐	MAT ____ Mathematics elective - Linear Algebra (MAT 202) * or Calculus III (MAT 221)	3-4
☐	Humanities Elective / Social Science Elective	3
		14-15

Spring Semester

☐	CSC 220 Data Structures and Algorithms	4
☐	MAT 201 Discrete Mathematics	3
☐	PHY 202 Physics with Calculus II	4
☐	HPE or Free Elective	2-4
		13-15

TOTAL MINIMUM CREDITS:60

Electives:

Humanities Elective / Social Science Elective: 9 credits - must be chosen from the approved list of General Education courses. Refer to the College Catalog and/or the Advising Office.
Mathematics: Linear Algebra (MAT 202) or Calculus III (MAT 221)

*Students planning to transfer to Rowan University should take Linear Algebra MAT 202 as their Mathematics elective.

Program Learning Outcomes

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

After completing the Computer Science A. S., students may choose to continue with the bachelor's degree pathway at RCSJ.

The 3+1 pathway enables students to complete three years of coursework at RCSJ and one year at Rowan University to earn a bachelor's degree. The 3+1 pathway follows Rowan's course curriculum, with junior year classes taught by RCSJ advanced-degree faculty.

Data Analytics 3+1

THIRD YEAR — Fall Semester
- ☐ CSC 106 Introduction to Data Science — 3
- ☐ CIS 300 Applied Database Technologies — 3
- ☐ CIS 110 Fundamentals of Programming — 4
- ☐ CIS 200 Principles of Information Security — 3
- ☐ MAT 103 Statistics — 3

Spring Semester
- ☐ CIS 207 Management Information Systems — 3
- ☐ CSC 225 Programming in R — 2
- ☐ MAT 203 Statistics II — 3
- ☐ DATA 301 Research Methods & Ethical Issues in Data Analysis — 3
- ☐ SPE 101 Oral Communication — 3
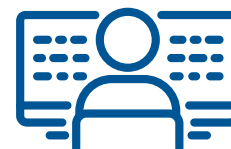
Industry & Employment Opportunities

Bachelor
Business Analyst, Disaster Recovery Mitigation Analyst, Data Analyst – Business Intelligence

Master
Financial Data Analyst, Data Scientist

Questions?

About 3+1:
Stephen Sweeney, 3+1 Assistant Director, *ssweene1@rcsj.edu*

About the program:
Karen Durkin, Asst. Dean, STEM Division, *kdurkin@rcsj.edu*

RCSJ.edu/3plus1