Computer Science, A.S.

3+1 option in Data Analytics

[COMPGAS; 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 area

Program Learning Outcomes

Students who have completed the program should 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
- Identify, formulate and solve problems and learn to adapt to evolving computer

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

FIRST YEAR — Fall Semester	
❑ CSCI 205 Programming in C++	4
❑ ENGL 101 English Composition I ***or*** ENGL 101E Enhanced English Composition I	3–4
❑ MATH 130 Calculus I	4
❑ ____ ____ General Education Humanities Elective	3
❑ ____ ____ General Education Social Science Elective	3
	17–18
Spring Semester	
❑ CSCI 210 Object Oriented Programming in Java	4
❑ ENGL 102 English Composition II	3
❑ MATH 140 Calculus II	4
❑ PHYS 201 Physics with Calculus I	4
	15
SECOND YEAR — Fall Semester	
❑ CSCI 207 Assembly Language and Computer Organization	4
❑ CSCI 216 Objects and Data Abstraction using Java	4
❑ MATH ____ Mathematics Elective Linear Algebra (MATH 212)[1] ***or*** Calculus III (MATH 216)	4
❑ ____ ____ General Education Humanities ***or*** Social Science Elective	3
	15
Spring Semester	
❑ CSCI 220 Data Structures and Algorithms	4
❑ MATH 201 Discrete Mathematics	3
❑ PHYS 202 Physics with Calculus II	4
❑ ____ ____ Health and Physical Education ***or*** Free Elective	2–4
	13–15
TOTAL MINIMUM CREDITS: 60	

Program 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 Counseling Office.

Mathematics: Linear Algebra (MATH 212) or Calculus III (MATH 216)

[1] Students planning to transfer to Rowan University should take Linear Algebra MATH 212 as their Mathematics elective.

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

The 3+1 Program 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 Program

THIRD YEAR — Fall Semester

❑ CSCI 125 Introduction to Data Science	3
❑ CISM 300 Applied Database Technologies	3
❑ CISM 114 Fundamentals of Programming	4
❑ CISM 200 Principles of Information Security	3
❑ MATH 103 Statistics I	3
	16

Spring Semester

❑ CISM 207 Management Information Systems	3
❑ CSCI 225 Programming in R	2
❑ MATH 203 Statistics II	3
❑ DATA 301 Research Methods & Ethical Issues in Data Analysis	3
❑ SPEH 101 Effective Speech	3
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STEP 1

START AT RCSJ
COMPUTER SCIENCE (A.S.)

STEP 2

END AT ROWAN UNIVERSITY
DATA ANALYTICS (B.S.)

FOURTH YEAR — After completing the third year at RCSJ, students will seamlessly transfer to Rowan University for their senior year. 3+1 Program team members at both institutions work closely with students to guide them through the process.

Industry & Employment Opportunities

Bachelor's

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

Master's

Financial Data Analyst, Data Scientist

Questions

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

About the program:
Karen Durkin, Assistant Dean, STEM Division | Assistant Professor, Mathematics, *kdurkin@rcsj.edu*

RCSJ.edu/3plus1