The Bridge Program

Students who we deem require additional exposure to Computer Science or Mathematics course work in order to be successful in graduate level CS course work will be assigned courses from the Bridge Program. Bridge courses will be noted on your Program of Study.

Students who require Bridge Courses are “conditionally” admitted to the MS program and are required to successfully complete all assigned bridge courses in addition to the 30 credits constituting the MS program. Each bridge course must be passed with a grade of ‘B’ or better. If you repeat a Bridge Course more than once without achieving at least a grade of ‘B’, you will not be admitted into the MS program. The Graduate Coordinator may waive bridge courses if the student passes the related bridge course exam given during Orientation the first term the student is admitted. Exams in each subject area can only be taken once during orientation. The decision of the Graduate Coordinator is final. Graduate students will be charged graduate tuition for any courses they take at RIT. This includes all bridge courses – even if they are at the undergraduate level.

Computer Programming

This generally consists of a sequence of three courses. The Computer Science MS program involves a large amount of computer programming. Students need to be proficient in a modern, object-oriented programming language, specifically Java and C++. The first course is an advanced course in Java, covering Java basics, threads, collection framework, and network programming.

The second course focuses on the C++ programming language and design. Topics cover the basic syntax language, how it supports the object-oriented programming paradigm, templates and input/output. The second part of the course explores advanced data structures such as graphs and B-trees.

The third course focuses on the theory of computation including formal languages, grammars, automata theory, computability, and complexity

Typical Courses from the RIT Computer Science Department:

CSCI 661 Foundations of Computer Theory
CSCI 607 Advanced C++ and Program Design
CSCI 603 Advanced Java Programming

Calculus

We require a standard, one-year sequence in differential and integral calculus.

Suggested courses from the RIT Mathematics Department:

MATH 181 Project-Based Calculus 1
MATH 182 Project-Based Calculus 2

Probability Theory

This should be a calculus-based course.

Suggested course from the RIT Mathematics Department:

MATH 251 Probability & Statistics

Discrete Mathematics

Abstract mathematics course that give computer scientists some of the analytical tools needed to reason about algorithms and programs. Topics include symbolic logic, elementary set theory, functions and relations, permutations and combinations, and introductory graph theory. An important topic is the principle of mathematical induction.

Suggested courses from the RIT Mathematics Department:

MATH 190 Discrete Mathematics for Computing