

# APPLIED MATHEMATICS BS

## OVERVIEW FOR EMPLOYERS

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School of Mathematical Sciences website: <http://math.rit.edu>

Employers need people who are able to use powerful mathematics to solve challenging real-world problems. RIT's Applied Mathematics program combines mathematics and computer science with a chosen **program concentration** in a related application field. Some of the many program concentrations that are available include actuarial science, biology, biostatistics, business, chemistry, economics, engineering, imaging science, operations research, physics, and premedical studies. Graduates of the Applied Mathematics program work in high-technology industry, business, federal agencies, and medical research laboratories. Many earn advanced degrees in mathematics or a related field.

### Degree(s) Awarded

Bachelor of Science in Applied Mathematics

Bachelor of Science in Applied Mathematics & MBA  
(dual degree program)

Bachelor of Science in Applied Mathematics &  
Master of Science in Applied Mathematics  
(dual degree program)

### Enrollment

Approximately 110 students are enrolled.

### Cooperative Education Component

Students are eligible to participate in an optional co-op program upon completion of 2<sup>nd</sup> year courses. Participation is strongly encouraged.

### Salary Information (Avg/Range)

Co-op:	\$16.72	\$10.00-21.50
*BS:	\$62,932	\$55,000-70,000

\*Statistics from the Nat'l Assn. Of Colleges & Employers (NACE) for 2010-2011 graduates

### Equipment & Facilities

Students have access to programming, statistical and simulation languages, graphics software and design tools on a variety of platforms. Symbolic computation and statistical laboratories are also available.

### Student Skills & Capabilities

- Formulating, modeling and solving problems; data analysis
- Computing Skills:
  - Software: Mathematica, MATLAB, Maple, Minitab
  - Programming Languages: Python, C
  - Operating systems: UNIX, VMS, Mac OS, Windows
- Communication; working in teams
- Students have a focus in the principal areas of analysis including calculus, differential equations, real variables, probability, and statistics, along with significant coursework in the discrete areas of mathematics including matrix, linear, and abstract algebra. In addition, students have many opportunities to pursue independent study or undergraduate research under the guidance of faculty members.

# Applied Mathematics

## Course Sequence BS degree

### First Year:

Project-Based Calculus I – III  
Discrete Math I  
Principles of Computer Science OR  
Problem-Based Intro to Computer Science  
Data Structures for Problem Solving (Python)  
Science Electives  
Liberal Arts

### Third Year:

Numerical Analysis OR  
Numerical Linear Algebra  
Linear Algebra II  
Mathematical Modeling  
Mathematics Electives  
Liberal Arts  
General Education Electives

### Second Year:

Multivariable Calculus  
Differential Equations I  
Probability  
Applied Statistics  
Linear Algebra I  
Vector Calculus  
Mathematics Elective  
Technical Writing  
University-wide Electives

### Fourth/Fifth Years\*:

Real Variables I, II  
Abstract Algebra I, II  
Mathematics Electives  
Program Concentration Courses\*\*  
General Education Electives

\* Program can typically be completed in four years.

### \*\* Specialization in program concentration:

Each student must select one **program concentration**. The most commonly selected program concentrations include:

- Actuarial Science
- Applied Statistics
- Biology/Biostatistics
- Business/Finance
- Chemistry
- Economics
- Engineering
- Imaging Science
- Operations Research
- Pure Mathematics
- Physics

### Employers of Applied Mathematics Co-op and Graduating Students:

Blue Cross/Blue Shield, Center for Army Analysis, CIGNA Healthcare, Citigroup Inc., Cognigen Corp., Eastman Kodak, Epic, Global Crossing Telecommunications Inc., Harbridge Consulting Group, Harris Interactive Inc., Institute for Defense Analyses, KJT Group, LMI, NASA, National Geospatial-Intelligence Agency, National Security Agency, Ortho-Clinical Diagnostics, Sigma Marketing, U.S. Census Bureau, Xerox Corp.

### Contact Us:

We appreciate your interest in RIT co-op, graduating students or alumni. We will make every effort to make your recruiting endeavor a success. Feel free to contact Kara Leonard and Lisa Monette, the program coordinators who work with the Applied Mathematics program. For your convenience, you can access information and services through our web site at <http://www.rit.edu/recruit>.

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