

## MATHEMATICS

<http://cos.gmu.edu/academics/undergraduate/majors/mathematics>

### Name and description of the field.

Mathematics is one of the oldest of intellectual human endeavors. Without mathematics, and a lot of it, chemistry, physics, engineering, and computer science would be pale versions of what they are. Mathematics is studied on its own for its ability to organize, abstract, symbolize, simplify, and explain. A Math major learns not only how mathematics is applied in a range of disciplines, but, more generally, how to reason, form abstractions, give good arguments, see patterns, ask the "right" next questions, and attack problems.

### What special skills or abilities are needed to succeed in this major?

Prospective Math majors should have a strong background in high school mathematics, particularly algebra, geometry, trigonometry, and functions.

### If both B.A. and B.S. degrees are offered, what are the differences in career/graduate school opportunities?

Students may choose a B.A. or a B.S. degree as well as either a pure or applied track. Students interested in going to graduate school in Mathematics or a mathematically-related field should choose the B.S. degree. The list of courses required for the B.A. or B.S. degrees may be obtained from the Mathematics Department.

### Is it possible to minor in Mathematics?

Yes, a student must take 21 hours of specific courses to obtain a minor. See the catalog.

### What are recent graduates doing?

Most graduates find employment in local industry and government such as one student who got a position at Cheiron, Inc. Much of their work involves the use or the development of software. Many graduates seek advanced degrees in Mathematics. At George Mason, students may seek an M.S. or a Ph.D. degree in Mathematics. Other students will take post-baccalaureate courses in order to teach in public schools. Students seeking teaching certification should consult with the Undergraduate Coordinator, like one graduate who works in GMU math department as a tutor.

According to recent surveys, GMU Mathematics undergraduates have found employment in a variety of fields, including: computer science, banking, accounting, insurance, engineering, teaching, business management and other science related fields.

### Specific job titles include:

Actuary	Math Teacher	Computer Programmer
Operations Research Analyst	Accountant	Statistician
Software Developer	Financial Analyst	Engineer
Contract Specialist	Web Developer	Market Researcher
Business Tech Assoc.	Consultant	Research Assistant

### Organizations that typically hire Mathematics graduates include:

U.S. Census Bureau	Vanguard Research, Inc.	Fairfax County Public Schools
SAIC	CIGNA	Hunter Labs
U.S. Army Concepts Analysis Agency	TRW, Inc.	Performance Engineering Corp.
National Inst. For Standards & Technology	ANSER, Inc.	CGI, Inc.
Electric Data Systems	Freddie Mac	Booz Allen Hamilton
The Bridges Financial Group, Inc.	Penske Truck Leasing	NC State University

### Resources for further information:

A key element in effective decision making is having sufficient information about the major or career being explored. Sources of information include people in the field, professional associations relating to the field, faculty and your career services counselor. Below are additional resources to aid in exploration:

**Printed Resources:** (Career Services Library, 348 SUB1)

<http://careers.gmu.edu/careerlibrary/wheretostart/math.pdf>

**Online Resources:** <http://careers.gmu.edu/onlineresources/math.htm>

**Science Related Job/Internship Postings:** <http://cos.gmu.edu/students/careerservices> & <http://www.aaas.org/careercenter/>

**Networking Resource:** <http://www.mentornet.net/>

**Pre-Health Resources:** <http://prehealth.gmu.edu/> & <http://explorehealthcareers.org/en/index.aspx#> & <http://www.pubinfo.vcu.edu/ahec/>

**Teaching Resources:** <http://www.nctm.org/> & <http://cehd.gmu.edu/admissions/infoessions/teacher/>

### Professional Associations:

- American Association for the Advancement of Science- <http://www.aaas.org/>
- The Mathematical Association of America - <http://www.maa.org/>
- The American Mathematical Society - <http://www.ams.org/>
- Be an Actuary - <http://www.beanactuary.org/>
- Mason Student Clubs/Orgs/Societies Science and Technology Umbrella - [http://sa.gmu.edu/student\\_orgs/orgs.php#stu](http://sa.gmu.edu/student_orgs/orgs.php#stu)

### Whom should students contact for further information?

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Academic Advising Center  
304 SUB I  
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