

# What Can I Do With a Major in **MATH**?

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Learning mathematics is similar to learning a language. Just as we speak and write using symbols filled with meaning, math majors become fluent in the language of numbers, translating complex, real-world problems into mathematical equations, concepts, and principles that can then be solved. While the skills learned in an undergraduate mathematics program can run the gamut in terms of applicability in professional institutions, they all involve learning to problem-solve and think analytically. In short, every business needs someone who knows mathematics, whether or not mathematics are the directly related to the chief function of that business. Our world today runs just as much on the basis of numbers as words, and as such those who are proficient in speaking the language of numbers can find great opportunities for entry-level positions and successful careers beyond.

## **Typical Coursework**

|                        |                        |
|------------------------|------------------------|
| Abstract Algebra       | Mathematical Reasoning |
| Calculus               | Multivariate Calculus  |
| Computer Science       | Physics                |
| Differential Equations | Probability            |
| Discrete Mathematics   | Real Analysis          |
| Geometry               | Statistics             |
| History of Mathematics | Vector Analysis        |
| Linear Algebra         |                        |

## **Related Major Skills**

|                    |                                     |
|--------------------|-------------------------------------|
| Problem solving    | Organizational skills               |
| Critical thinking  | Ability to analyze & interpret data |
| Logical thinking   | Team skills                         |
| Systemizing skills | Advanced quantitative skills        |

## **Related Occupations (some may require advanced education)**

|                            |                                 |
|----------------------------|---------------------------------|
| Actuaries                  | High School Math Teachers       |
| Auditor                    | Insurance Sales                 |
| Cost Estimators            | Market Research Analysts        |
| Pricing Analyst            | Underwriter                     |
| Investment Banking         | Purchasing/Inventory Control    |
| Computer Engineers         | Mathematicians                  |
| Computer Programmers       | Meteorologists                  |
| Computer Systems Analysts  | Natural Sciences Managers       |
| Elementary School Teachers | Operations Research Analysts    |
| Risk Assessment            | Energy Auditors                 |
| Statisticians              | Loan Officers                   |
| Financial Analysts         | University and College Teachers |

## **Who Hires for this Occupation?**

Banks & financial institutions, chemical product companies, government agencies, health care organizations, investment companies, insurance agencies, IT industry, energy systems firms, and research & development firms.

## **Minnesota Colleges & Universities with a major in MATH**

|                                |                                       |
|--------------------------------|---------------------------------------|
| Augsburg College               | Minnesota State Univ., Moorhead       |
| Bemidji State University       | North Central University              |
| Bethany Lutheran College       | St. John's University                 |
| Bethel University              | Saint Mary's University of MN, Winona |
| Carleton College               | Southwest Minnesota State University  |
| College of Saint Benedict      | St. Catherine University              |
| College of St. Scholastica     | St. Cloud State University            |
| Concordia College              | St. Olaf College                      |
| Concordia University           | University of MN, Duluth              |
| Gustavus Adolphus College      | University of MN, Morris              |
| Hamline University             | University of MN, Twin Cities         |
| Macalester College             | University of St. Thomas              |
| Minnesota State Univ., Mankato | Winona State University               |

## **Professional Association Links**

American Mathematical Society, <http://www.ams.org/>  
Association of Women in Math,  
<https://sites.google.com/site/awmmath/awm-resources/career/awm-job-ads>  
National Council of Teachers of Mathematics, <http://www.nctm.org/>  
American Statistical Association, <http://www.amstat.org/>  
Mathematical Association of America, <http://www.maa.org/>  
Society for Industrial and Applied Mathematics, <http://www.siam.org/>  
IEEE Computer Society, <http://www.computer.org/portal/web/guest/home>  
Intelligent Information Systems, <http://www.cis.cornell.edu/iisi/>

## **For More Information**

Contact ARCC Career Counseling: (763) 433-1240 (CR campus), (763) 433-1840 (Cambridge campus)  
or stop by the campus Information Desk