



What Can I Do With a Major in

Mathematics



Resource created by the University of Idaho Career Services office utilizing information from the following resources: What Can I Do With This Major, Career Finder (EMSI), & Salary Survey (National Association of Colleges & Employers).

GENERAL TIPS for Mathematics Majors:

- Math can be found in almost every sector of the world of work. Students majoring in math should consider if they want to use math skills directly or indirectly in the work place. This may determine the types of experiences and further education necessary to prepare for an area of interest.
- Seek experience in an area of interest through internships, part-time jobs, or research programs (such as those sponsored by the National Science Foundation).
- Supplement curriculum with courses in business, economics, computers, or statistics for increased opportunities.
- Consider earning a graduate degree in mathematics or in a related area such as statistics, computer science, science, or engineering. Some examples of specialties that utilize a background in math combined with study in another field include bioinformatics, computer animation and digital imaging, climatology, or financial mathematics. Plan to earn a doctoral degree to work as a “mathematician.”
- Some entry-level jobs in industry and government may be available at the bachelor’s level.
- Join relevant organizations and seek leadership roles. Learn to work well in a team environment with people from diverse backgrounds and differing specialties.
- Conduct informational interviews or job shadows with professionals in areas of interest to enhance knowledge and make contacts.
- Stay informed of new developments and current trends in the field.
- Develop substantial knowledge of computer programming and software administration. Seek experience with relevant software packages.
- Maintain a high grade point average and secure strong faculty recommendations to gain graduate school admittance.
- Research government hiring processes and internship opportunities if the public sector appeals to you.

SKILLS: Math majors develop many transferable skills worth highlighting: critical thinking, problem diagnosis & solving, computer skills, quantitative skills, good reasoning & judgement, persistence, an attention to detail/precision, identifying patterns, and communication (both verbal and written).

CAREER AREAS:

- **Research:** Theoretical or Applied
- **Specialties & Functional Areas:**

Modeling & simulation	Computer programming
Numerical methods & analysis	Computer systems
Statistics & probability	Analysis operations
Engineering analysis	Quality Assurance/Control
Differential equations	Actuarial science
Operations research	Analysis & control of processes
Discrete mathematics	Optimization & scheduling
Accounting & finance	Sales & marketing management

The average starting salary in Fall 2017:

Bachelor's Degree:
 Mathematics | **\$53,604**
 Applied Mathematics | **\$57,745**
 Mathematics & Computer Science | **\$67,748**

Master's Degree:
 Applied Mathematics | **\$101,519**

-NACE Salary Survey



POSSIBLE EMPLOYERS:

- State government agencies
- Federal government: National Security Agency, Department of Defense, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, Social Security Administration, Department of Homeland Security, Department of Energy, Military, Government laboratories
- Scientific research and development services
- Consulting firms
- Computer services companies and software publishers
- Electronics and computer manufacturers
- Engineering firms
- Insurance companies & financial services firms
- Chemical and pharmaceutical companies
- Aerospace and transportation equipment manufacturers
- Airlines and airports
- Communications firms
- Energy companies and petroleum producers
- International government agencies
- Nonprofit organizations (e.g., American Institute of Mathematics, Mathematical Association of America, American Mathematical Society)

SAMPLE JOB TITLES:

- Financial /Investment Analyst
- Software developer
- Data Analyst
- Math Teacher/Lecturer/Professor
- Mathematician
- Web Marketing Specialist
- Software Engineer
- Actuary
- Tax Accountant
- Researcher
- Operations Research Analyst
- Business Analyst
- Market Research Analyst
- Insurance Underwriter
- Digital Analyst
- Video Game Developer
- Cryptographer
- Purchasing Agent
- Cost Estimator
- Fraud Investigator
- Energy Analyst
- Database Administrator
- Economist
- Statistician
- Logistician
- Bookkeeper



GET INVOLVED:

- On-campus Research: College Departments, Office of Undergraduate Research, Center for Modeling Complex Interactions (CMCI), Idaho Network of Biomedical Research Excellence (INBRE)
- Club Involvement: Calculus Club, UI Math Club, more...
- Polya Math Lab
- Math Colloquia
- Volunteer with local organizations: Idaho Regional Mathematics Centers, STEM Action Center
- Campus Involvement: Academic Tutoring, Resident Assistants, Academic Peer Mentors, Sustainability Center, Student Government (ASUI), Idaho Pitch, Center for Volunteerism & Social Action...

ADDITIONAL RESOURCES:

- American Mathematical Society (AMS)
- Mathematical Association of America (MAA)
- Society for Industrial and Applied Mathematics (SIAM)
- American Institute of Mathematics (AIM)
- American Association for the Advancement of Science (AAAS)
- Association for Women in Mathematics (AWM)
- National Council of Teachers in Mathematics (NCTM)
- Jobs & Internships: Hire A Vandal (powered by Handshake), Research Exchange for Undergraduates (REUs), National Laboratories, Federal Opportunities (USAJobs), www.math-jobs.com, www.actuary.com...



Want to learn more? Meet with your Career Advisor!

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