What Can I Do With A Major In Math?

Industry
Areas
Research
Development
Design
Data Processing
Testing
Operations
Quality Control
Statistical Processing Control
Environmental Analysis
Consulting

Employers
Industries including:
Manufacturing
Transportation
Aerospace
Communications
Machinery
Electrical equipment
Pharmaceuticals
Other private industries
Consulting firms

Strategies
• Note that greatest demand is for applied mathematicians with skills in computer science, electronics design and theory, statistics and probability.
• Develop computer and research skills. Learn to use relevant software packages.
• Earn a master's degree in math, business, or related field for advanced positions or for consulting jobs.
Maintain excellent G.P.A. for graduate/professional school admission.

- Gain relevant experience through internships, volunteering, summer, or part-time jobs.
- Develop good oral and written communication skills.
- Learn to work well in teams.

**Government**

**Areas**
Research
Administration

**Employers**
State agencies involving research and problem solving teams

**Strategies**
- Become familiar with government hiring procedures.
- Make contacts through involvement in campus, local, or state politics.
- Obtain internship with local, state, or federal government.
- Join related professional organizations.
- Maintain a high grade point average.

**Market Research**

**Areas**
Data Collection
Information Analysis

**Employers**
Market research firms
Consumer goods manufacturing firms

**Strategies**
- Develop good oral and written communication skills.
- Acquire a business minor.
- Volunteer to assist a professor with research.
- Become a student member of the American Marketing Association.
- Assist with canvassing/phone interviewing for charities or political campaigns.
- Complete a market research internship.

**Computers**

**Areas**
Programming
Systems
Applications
Systems Analysis
Data Processing
Information Systems
Software Development
Networking
Hardware
Training

**Employers**
Computer hardware and software firms
Service companies
Manufacturing firms
Government (federal, state, and local)
Financial institutions
Wholesale and retail trade firms
Custom software builders
Service companies
Specialized training organizations
Educational publishers
Consulting firms
Strategies
- Develop advanced computer skills.
- Gain knowledge of computer languages and programming.
- Take classes and earn relevant certifications.
- Gain relevant experience through internships, part-time, or summer jobs.
- Learn effective listening and verbal communication skills.
- Stay abreast of the latest developments in computer technology.
- Develop good interpersonal and communication skills.
- Obtain experience with public speaking/teaching and learn to develop curriculums for training positions.
- Master technical writing skills.
- Some areas may require a graduate degree.

Insurance
Areas
Actuarial
Underwriting
Claims
Risk Management
Sales

Employers
Insurance firms

Strategies
- Become familiar with exams and/or certifications required for actuarial positions.

Securities
Areas
Sales
Research
Operations

Employers
National and regional brokerage firms
Discount brokerage houses
Commercial banks
Financial organizations

Strategies
- Obtain a business minor or supplement curriculum with courses in finance and/or economics.
- Plan on acquiring an MBA.
- Gain relevant experience through part-time or summer sales positions. Complete an internship with a related organization.
- Join finance-related student organizations.
- Be geographically flexible when job searching.

Banking
Areas
Branch Management
Credit Lending
Operations
Systems
Trusts

Employers
Commercial banks
Regional banks
Savings and loan associations
Credit unions

Strategies
- Complete an internship in a financial institution.
- Develop good interpersonal skills.
- Obtain a business minor.
- Develop excellent computer skills.
- Demonstrate attention to detail.
- Become the financial officer or treasurer of a campus organization.

Education
Areas

Employers
Public schools
Private schools
Colleges and universities

Strategies
- Obtain appropriate state licensure and/or certification for public school teaching positions.
- Volunteer to teach, supervise, or tutor with organizations such as Big Brother/Sister, YMCA, or churches.
- Develop excellent written and oral communication skills.
- Acquire a master's degree or Ph.D. for teaching positions at the college or university level.

General Information
- Math majors develop transferable skills including critical thinking, problem diagnosis and solving, computer skills, and quantitative skills.
- A bachelor's degree is often sufficient for entry-level positions, but an advanced degree may open the door to more upper-level opportunities. Pair a strong background in mathematics with another technical discipline such as computer science or engineering.
- Gain experience through volunteering, internships, and part-time or summer jobs.
- Develop competencies in a specific area of interest.
- Supplement curriculum with courses in business, economics, computers, or statistics for increased job opportunities.
- Maintain a high grade point average. Demonstrate attention to detail and commitment to accuracy.
- Build relationships with faculty for career information, contacts, and letters of recommendation.
- Join related student professional associations and seek leadership positions.
- Develop the ability to work well in teams.
- Conduct informational interviews with professionals in areas of interest to enhance knowledge and make contacts.
- Stay informed about new developments and current trends in the field.

Prepared by the Career Planning staff of Career Services at The University of Tennessee, Knoxville.

Career Exploration

About.com
http://math.about.com/cs/careers/index.htm

Purdue University
http://www.math.purdue.edu/jobs/careers/
Careers in Math from Coolmath.com
www.coolmath.com/careers.htm

Mathematicians from the OOH
http://stats.bls.gov/oco/ocos043.htm

Mathematics Careers
www.ams.org/careers/mcbb.html

The Princeton Review, Mathematician.
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=94

The Princeton Review, Statistician.
www.princetonreview.com/cte/profiles/dayInLife.asp?careerID=149

Statisticians from the OOH
http://stats.bls.gov/oco/ocos045.htm

What can you do with a Math Degree?
www.math.purdue.edu/jobs/career.php?p=career

Be an Actuary
www.beanactuary.org/

Career Profiles in Math
http://www.maa.org/careers/profiles.html

Exploring Majoring In Mathematics

What Can I Do With This Major?
http://bi.cppc.ksu.edu/majors/default.html

What Can I do with a Major in...
www.umanitoba.ca/counselling/careers.html

Major Resource Kits
www.udel.edu/CSC/mrk.html

Job Postings

SMC Student Job Search - www.stmarys-ca.edu/studentjobs

Campus Career Center
www.campuscareercenter.com

Wetfeet.com- (lots of categories & locations)
www.wetfeet.com

Abbott Laboratories - www.abbott.com

Aerospace Corp. - www.aero.org

Applied Materials-(Santa Clara)
www.appliedmaterials.com

AT& T
www.att.com

Boeing Math, CA
www.boeing.com

CIA- Wash DC
https://www.cia.gov/careers/jobs/index.html

Citibank
www.citigroup.com

Level 3 (Genuity) CA
www.level3.com/

MathWorks
www.mathworks.com
Professional Associations

Professional associations can be a good resource for finding career information and jobs. Follow the links! Participating in associations can be a valuable avenue for learning about an occupation or field. Associations are an excellent resource for networking, and their websites often have information about careers.

Yahoo! Professional Organizations
www.yahoo.com/Economy/Organizations/Professional

American Mathematical Society
www.ams.org/
American Mathematical Association of Two-Year Colleges (AMATYC)
www.amatyc.org/

American Statistical Association (ASA)
www.amstat.org/

Association for Symbolic Logic (ASL)
www.aslonline.org/

Association for Women in Mathematics (AWM)
www.awm-math.org/

International Association of Mathematical Physics (IAMP)
www.iamp.org/

Mathematical Association of America
www.maa.org/

Society for Industrial and Applied Mathematics (SIAM)
www.siam.org/

Society of Actuaries
www.soa.org/