



**Mathematics**

# **Education**

**Teaching**

**Research**

**Higher education  
administration**

**Education  
Employers**

**Public and private  
K-12 schools**

**Universities and  
colleges**

# Education Strategies

Gain experience working with age group of interest through volunteering and tutoring.

Acquire appropriate state teacher certification for K-12 teaching opportunities. Math majors may be eligible for alternative certification programs in certain public school systems.

Some private schools may hire candidates with degrees in mathematics who don't hold certification.

Earn a doctoral degree in math to teach at four-year institutions. A master's degree may be sufficient for two-year colleges.

Maintain a high grade point average and secure strong faculty recommendations to prepare for graduate school. Assist a professor with research.

Seek appropriate graduate degree to enter higher education administration. Gain experience on campus in student leadership roles such as Resident Assistant or Orientation Leader.

# Computers

Programming

Systems development

Systems analysis

Software development

Network administration

Web administration

Technical support

Training

# Computers Employers

Computer services companies

Software publishers

Internet related companies

Financial institutions

Insurance companies

Consulting firms

Manufacturers

Telecommunications companies

Retailers

Healthcare organizations

Hotels and restaurants

Entertainment companies

Environmental management firms

Education institutions

City, state, and federal government

# Computer Strategies

Develop substantial knowledge of computer programming and software administration.

Work in a campus computer lab or volunteer to maintain the website for a student organization.

Be up-to-date of the latest developments in computer technology through reading journals and participating in professional associations.

Consider earning an advanced degree in computer science or management information systems. Research degree requirements.

Double patience and creativity for designing programs.

Learn to effectively manage multiple projects and to meet deadlines.

# **Insurance**

**Actuarial Science**

**Risk  
management/Assessment**

**Loss management/Control**

**Underwriting**



# **Insurance Employers**

**Insurance carriers**

**Insurance agents and  
brokers**

**Professional, scientific, and  
technical consulting firms**

**Government agencies**

# Insurance Strategies

Take additional courses in statistics and finance.

Complete an internship with an insurance agency to gain relevant experience.

Actuarial science is a good career path for those who want to extensively use math on the job. Areas such as claims, underwriting, and risk management are less math-intensive. Talk to professionals in the industry to learn more about various positions.

Develop strong communication skills, as many positions require interaction with others and the ability to explain information clearly and concisely.

Learn how to use statistical analysis software and various computer programming languages. Plan to take a series of actuarial exams to gain licensure from either the Society of Actuaries or the Casualty Actuarial Society. The type of insurance you deal with will determine which path to pursue. Most actuaries take these exams while working full-time, and the process takes several years.

More than half of actuaries work for insurance carriers.

# Banking and Finance

Corporate and consumer credit analysis

Commercial lending

Trust management

Capital services and mergers and acquisitions

Mortgage loans

Originations and packaging

Branch management

Operations

Cash management

Credit scoring and risk management

Private banking

Financial analysis

Investment banking

# Banking and Finance Employers

Commercial banks

Credit unions

Savings and loan associations

Savings banks

Mortgage banks

Captive finance companies

Regulatory agencies:

- Federal Reserve
- Federal Deposit Insurance Corporation (FDIC)
- Office of the Comptroller of the Currency (OCC)
- Office of Thrift Supervision (OTS)

Brokerage firms

# **Banking and Finance Strategies**

Double major or minor in business to build a solid background in marketing, finance, and accounting.

Gain experience through part-time, summer or internship positions in a financial services firm.

Develop strong interpersonal and communication skills in order to work well with a diverse clientele.

Serve as the financial officer or treasurer of a student organization.

Plan to earn an MBA to enter investment banking.

Be geographically flexible when job searching.

# **Business**

**Buying**

**Purchasing**

**Sales:**

- **Industrial sales**
- **Consumer product sales**
- **Financial services sales**
- **Services sales**
- **Advertising sales**
- **E-commerce**
- **Customer service**
- **Sales management: District, regional, and higher**

# **Business Employers**

Retailers

Wholesalers

Hospitals

Universities and schools

Local, state, and federal government

For-profit and nonprofit organizations

Product and service organizations

Manufacturers

Financial companies

Insurance companies

Print and electronic media outlets

Software and technology companies

Internet companies

# Business Strategies

Obtain experience through internships or summer and part-time jobs.

Seek leadership positions in campus organizations.

Become highly motivated and well-organized.

Develop strong analytical skills and the ability to communicate effectively with a wide range of people. Take additional courses in interpersonal communication and public speaking.

To prepare for a buying position, work in a retail store to learn about the industry.

Research certification options within the purchasing field.

For sales:

- Work for the campus newspaper, directory, or radio station selling advertisements.
- Learn to work well under pressure and to be comfortable in a competitive environment.
- Prepare to work independently and to be self-motivated.
- Plan to work irregular and/or long hours.



# General Mathematics Information

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 area of interest.

People with math backgrounds may work in jobs with titles such as analyst, research associate, technical consultant, computer scientist, or systems engineer to name a few.

Math majors develop many transferable skills: critical thinking, problem diagnosis and solving, computer skills, and quantitative skills. Other important skills to develop include good reasoning, persistence, and communication, both verbal and written.

Seek relevant experiences through internships or part-time jobs.

Supplement curriculum with courses in business, economics, computers, or statistics for increased opportunities.

Consider earning a graduate degree 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.

Research the Professional Science Master's degree as an option to earn an interdisciplinary graduate degree and prepare for a job in industry.