Careers in the Mathematical Sciences

Positions in Business, Government, and Industry
Mathematical Science positions in business, government, and industry require a B.S. in mathematics, computer science, statistics, or a related field. An M.S. or a Ph.D. will command a higher starting rank and salary and ensure faster advancement. A background that includes courses in computer science is essential. Knowledge of statistics and other sciences may be necessary. A background that includes courses in accounting, economics, and finance may be very valuable.

Types of Jobs Available
- Actuaries
- Computer and Information Research Scientists
- Computer Programmers
- Computer Systems Analysts
- Database Administrators
- Financial Analysts
- Mathematicians (including Cryptologists, Numerical Analysts, and Risk Analysts)
- Operations Research Analysts
- Statisticians

Positions at Universities
Mathematical Science positions at Universities require a Ph.D. in mathematics, computer science, statistics, or a related field. The duties include:
- Research: create mathematical and statistical models and systems, solve equations, prove theorems, design programs, and author journal articles and books.
- Service: direct theses and dissertations, obtain grants, serve on committees, give public lectures, attend professional meetings, and administrate.
- Teaching: teach service courses, courses for majors and graduate students, and seminars for graduate students and faculty.

The general fields of specialization in mathematics are:
- Algebra: the study of operations and symmetry.
- Analysis: the study of functions.
- Applied Math: the study of models.
- Topology: the study of surfaces.

The Occupational Outlook Handbook published by the Bureau of Labor Statistics contains more information about: Postsecondary Teachers

Positions at Colleges
Teaching positions at Junior Colleges require an M.S. in mathematics or a related field. Positions at four year Colleges require a Ph.D. in mathematics or a related field. A background that includes courses in computer science and statistics will be very valuable. The duties include teaching service courses and courses for majors and performing service work. The Occupational Outlook Handbook published by the Bureau of Labor Statistics contains more information about: Postsecondary Teachers

Positions at High Schools
Teaching positions at High Schools require a Bachelors Degree in mathematics or mathematics education and teacher licensure. A background that includes courses in computer science is necessary. Duties include teaching mathematics, statistics, and computer science courses and performing service work. The Occupational Outlook Handbook published by the Bureau of Labor Statistics contains more information about: High School Teachers.