

## NATURE OF WORK

One of the oldest and most fundamental of the sciences is mathematics. Using mathematical theory, computational techniques, algorithms, and the latest computer technology mathematicians solve economic, scientific, engineering, physics, and business problems. There are two broad classes of work that mathematicians are divided into – theoretical (pure) mathematics and applied mathematics. Theoretical mathematics involves advancing mathematical knowledge by developing new principles and recognizing previously unknown relationships between existing principles of mathematics. Applied mathematics uses theories and techniques, such as mathematical modeling and computational methods to solve everyday problems in the world around us. These types of mathematical sciences can overlap.

## WORKING CONDITIONS

Mathematicians usually work in offices and are often a part of an interdisciplinary team that can include economists, engineers, computer scientists, physicists, technicians, and others. They attend seminars or conferences as a part of their job. Deadlines, overtime work, and special requests for information or analysis can make for a longer than forty hour a week job.

## TRAINING & QUALIFICATIONS

In the Federal Government entry-level job candidates must usually have a 4-year degree with a major in mathematics which includes 24 semester hours of mathematics courses. Candidates for mathematician jobs, in private industry typically need a master's or a Ph.D. degree.

## OUTLOOK

It is projected that mathematicians is expected to increase by 22% through 2018. More workers with knowledge of mathematics will be needed in the future due to the advancements in technology. Mathematicians are commonly found in career areas such as computer science and software development, physics, engineering, and operations research.

## CAREER OPTIONS

Mathematician

## ESTIMATED SALARY RANGE

New Mexico—\$40,025—\$70,114

Nationally— \$71,430—\$119,480

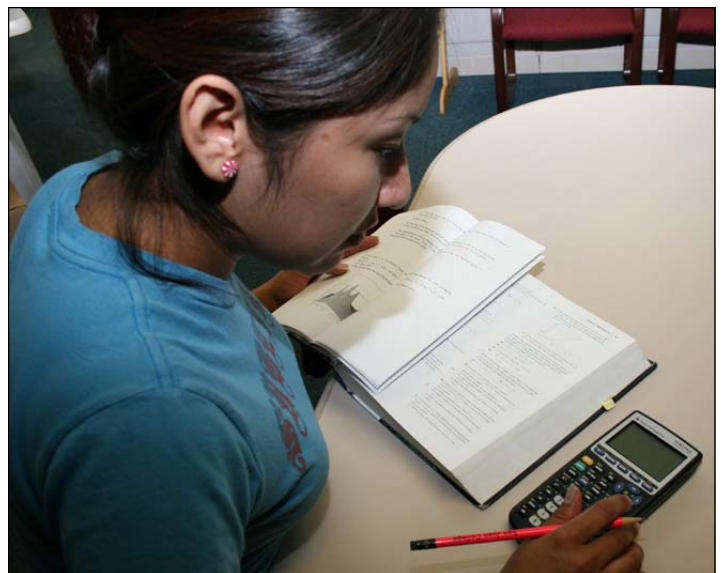
(depending on skill, experience and responsibility)

## RELATED OCCUPATIONS

Actuaries, statistician, computer programmer, computer systems analysts, database administrator, computer scientists, computer software engineer, operations research analysts.

## SJC Basic Program Information

This program is designed for students who will be transferring to other colleges or universities to acquire advanced degrees. Check with your advisor to see if all classes transfer.

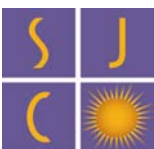


### For further information go to:

[www.sanjuacollege.edu/pages/158.asp](http://www.sanjuacollege.edu/pages/158.asp)

[www.sanjuacollege.edu/pages/4475.asp](http://www.sanjuacollege.edu/pages/4475.asp)

[www.bls.gov/oco/ocos043.htm](http://www.bls.gov/oco/ocos043.htm)



\*Most of this information is from the Occupational Outlook Handbook, 2010-2011

Reviewed on July 28, 2010