

# MATHEMATICS AND STATISTICAL SCIENCE

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The need for persons with quantitative skills is increasing dramatically as the world grows more complex. Mathematicians and statisticians have employment opportunities in business, industry, government, and teaching. Training in these fields, with their emphasis on problem solving, analysis, and critical thinking, is excellent preparation for graduate programs in engineering, science, business, or law. In fact, persons planning careers in almost any field will find their opportunities enhanced by the study of mathematics and statistics. The programs are intended to provide students just such enhancement. It is generally the case that the person who develops their quantitative skills has increased ability to attack many of the complex problems of society. Advances in science, technology, the social sciences, business, industry, and government become more and more dependent on precise analysis and the extraction of information from large quantities of data. Environmental problems, for example, require careful analysis by persons (or teams of persons) with skills in mathematics, statistics, and computer science as well as in biology, geology, physics, and many other fields.

## Undergraduate Programs

The B.S. degree in Mathematics has four options: the general option, the applied computation option, the applied mathematical biology option, and the applied modeling and data science option.

The B.S. degree in statistics has two options: the general option and the actuarial science and finance option.

Minors are available in both Mathematics and Statistics.

## Graduate Programs

Graduate degrees in mathematics include the M.S., M.A.T., and Ph.D. degrees. Graduate training in mathematics prepares students for careers in teaching or research and development. Employment opportunities include universities, colleges, industries, and government agencies. The Ph.D. is generally required for teaching and research at the university level. The M.S. qualifies students to teach at junior colleges, some four-year colleges, and for many positions in industry. The M.A.T. prepares students for secondary teaching and for some junior college positions. A baccalaureate degree in mathematics is generally required for admission to the graduate program; however, many students of science and technology can be admitted to the program with few undergraduate deficiencies.

In statistics, there is the master of science degree. Graduate study in statistics is designed for two types of students. Students whose undergraduate degrees are in subject matter disciplines will prepare for a career involving the application of statistical methods to their particular area of interest. Students with degrees in mathematics, computer science, or similar areas will prepare for a career in data analysis, statistical computing, teaching of introductory-level statistics, or to pursue a Ph.D. degree. Graduate certificate programs are also available in both statistical science and data science.

The M.A.T. in mathematics, M.S. in statistical science, and the certificate in statistical science are offered both on campus and online.

Faculty members in the Department of Mathematics and Statistical Science will be happy to answer questions about specific programs and courses. Such questions can also be addressed to the department chair.

## Majors

- Mathematics (B.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/mathematics-bs/>)
- Statistics (B.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/statistics-bs/>)

## Minors

- Mathematics Minor (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/mathematics-minor/>)
- Statistics Minor (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/statistics-minor/>)

## Department of Mathematics and Statistical Science Graduate Program

- Mathematics (M.A.T.) (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/mathematics-mat/>)
- Mathematics (M.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/mathematics-ms/>)
- Mathematics (Ph.D.) (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/mathematics-phd/>)
- Statistical Science (M.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/statistical-science-ms/>)

## Certificates

- Data Science Graduate Academic Certificate (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/data-science-graduate-academic-certificate/>)
- Statistics Graduate Academic Certificate (<https://catalog.uidaho.edu/colleges-related-units/science/mathematics-statistics/statistics-graduate-academic-certificate/>)