

Mathematics

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To find faculty & staff phone numbers and email addresses, please consult the University Directory (<http://www.dixie.edu/directory/directory.php>).

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Program Description

The Dixie State University Mathematics Department helps students to achieve their academic, career, and life goals; including those related to basic computational skills, mathematical processes, and knowledge that develops real-life applications, modeling, and problem solving. The Department's comprehensive and integrated offerings help students master mathematical competencies for future career and educational endeavors.

As part of an open-admissions institution, the Department offers a broad spectrum of Mathematics classes that are useful for skill levels from developmental to selected four-year degree requirements. The Mathematics faculty is dedicated to providing opportunities that promote student success.

Students may enroll in Bachelor of Arts in Mathematics, Bachelor of Science in Mathematics, Bachelor of Arts in Mathematics Education, or Bachelor of Science in Mathematics Education degrees. In addition, students can select Mathematics as an emphasis in the Integrated Studies Bachelor of Art or Bachelor of Science programs. The DSU Mathematics Department also offers all coursework necessary to obtain a Utah Secondary Education Math Endorsement. Dixie State University also offers the **Math Endorsement for Secondary Education**. The following are help links for endorsement students:

Endorsement Levels (<https://math.dixie.edu/wp-content/uploads/sites/10/2015/06/ENDORSEMENT-LEVELS.pdf>)

Endorsement Checklist (<https://math.dixie.edu/wp-content/uploads/sites/10/2015/06/NewEndorsementChecklist.pdf>)

Course Prefixes:

- MATH

Degrees, Minors & Suggested Courses

- Bachelor of Arts / Science in Mathematics (catalog.dixie.edu/programs/mathematics/bachelor_of_artsscience_in_mathematics)
- Bachelor of Arts / Science in Mathematics Education (catalog.dixie.edu/programs/mathematics/bachelor_of_artssciences_in_mathematics_education)
- Bachelor of Arts/ Science in Integrated Studies - Mathematical Sciences Emphasis (catalog.dixie.edu/programs/interdisciplinaryartsandsciences/bachelor_of_sciencebachelor_of_arts_in_integrated_studies__mathematical_sciences_emphasis)
- Minor in Mathematics (catalog.dixie.edu/programs/mathematics/minor_in_mathematics)
- Minor in Mathematics Education (catalog.dixie.edu/programs/mathematics/minor_in_mathematics_education)
- Suggested Courses Leading to Utah Mathematics Endorsements (catalog.dixie.edu/programs/mathematics/suggested_courses_leading_to_utah_mathematics_endorsements)

Learning Outcomes

1. Employ mathematical techniques in computational problems.
2. Students will interpret mathematical models.
3. Construct quantitative, logical arguments.
4. Students will apply mathematical knowledge to real world problems.

5. Communicate in the mathematical language through the use of proper notation and terminology.
6. Students will explore and analyze mathematical concepts, using technology as appropriate.

The level of sophistication and maturity of thinking expected of university students in the area of mathematics must extend their aptitude for quantitative reasoning beyond routine problem solving. This reasoning will allow the student to handle problem situations of greater complexity and diversity and lead them to an ability to mathematically analyze ideas both within and outside of mathematics.

Mathematics Career Information

Career Opportunities*

With a bachelor's degree in mathematics, careers as operations research analysts and actuaries are among the post-graduation options available. Operations research analysts use advanced mathematical and analytical methods to investigate, identify, and solve problems, and actuaries analyze the financial costs of risk and uncertainty for businesses and clients. They use mathematics, statistics, and financial theory to assess the risk that an event will occur, and help clients minimize the cost of that risk.

With a master's degree, the option to become a mathematician or a statistician becomes available.

Job Outlook*

Employment for operations research analysts is projected to increase by 30% between 2014 and 2024, much faster than average. In the same decade, employment for actuaries should grow 18%, also faster than average for all occupations.

Salary Range*

The median annual wage for operations research analysts was \$78,630 in May 2015. The lowest 10 percent earned less than \$43,520, and the highest 10 percent earned more than \$132,500. For actuaries, the median annual wage was \$97,070. The lowest 10 percent earned less than \$58,290, and the highest 10 percent earned more than \$180,500.

Mathematics Education

Job Outlook*

Employment of middle school and high school teachers is expected to grow 6% from 2014 to 2024, about as fast as average for all occupations.

Salary Range*

In 2015, the median annual wage for middle school teachers was \$55,860. The lowest 10 percent earned less than \$37,350, with the highest 10 percent earning more than \$87,060. For high school teachers, the median annual wage was \$57,200. The lowest 10 percent earned less than \$37,800, and the highest earned more than \$91,190.

* Derived from the Occupational Outlook Handbook