USM

Department of Mathematics and Statistics

MATHEMATICS

Program Objectives

The Department of Mathematics and Statistics offers a Bachelor of Arts Degree in Mathematics. The program is designed to provide students with a broad background in mathematics and statistics.

Students may select one of four concentrations: pure mathematics, applied mathematics/operations research, statistics, or mathematics education. The Department also offers a Master of Science degree in Statistics. By carefully selecting the appropriate courses, one can complete both the Bachelor of Arts degree in mathematics and the Master of Science degree in Statistics in five years.

A certificate program in applied statistics is also offered for students who wish to pursue a career in the areas of business, industry, government, or education.

The Master of Science degree in statistics offers concentrations in applied statistics, applied mathematics. operations research, and biostatistics.

Students learn to use computer software packages such as Mathematica, MATLAB, Minitab, and SAS in their mathematics and statistics courses. Collaborative and active learning are encouraged throughout the curriculum.

Degrees & Concentrations Offered

Graduation Planner: usm.maine.edu/advising/degreeplanning

Degree Offered: Bachelors of Arts, Master of Science in Statistics

Majors Offered: Mathematics, Mathematics: Secondary Education

Minors Offered: Applied Mathematics, Mathematics, Statistics

Concentrations Offered: Applied Mathematics/Operations Research, Pure Mathematics, Statistics

Certificates Offered: Applied Statistics, Graduate Study in Statistics

Department of Mathematics and Statistics

Portland Campus, 302 Payson Smith
(207) 780-4246

Gorham Campus, 115 Bailey Hall
(207) 780-5360

Web Address: usm.maine.edu/math

Career Possibilities*

Actuary
Bank Manager
Computer Programmer
Engineer
Financial Analyst
Higher Education Administrator
Mathematicians
Network Administrator
Operations Research Analyst
Physicist
Researcher
Risk Manager
Software Developer
Statistical Assistant
Statistician
Teacher/Professor
Underwriter
Web Administrator

* Additional education, training or experience may be required.

Acquired Transferable Skills

Analyzing and interpreting data
Collaborating as a team
Critical thinking
Designing experiments
Efficiency
Logical thinking
Organizing information
Perseverance
Problem solving
Trouble shooting

For more information on transferable skills go to: usm.maine.edu/community-engagement-career-development/career-tools

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What can I do with this major?*

AREA	EMPLOYERS	INFORMATION/STRATEGIES
MATHEMATICS/ COMPUTATIONAL SCIENCE	Federal and state government agencies, Consulting firms, Computer service companies, Engineering firms, Insurance companies, Airlines & airports	• Plan to earn a doctoral degree to work as a mathematician. • To work in applied mathematics, consider earning a double major in a scientific or technical area. • Develop substantial knowledge of computer programming and software administration. Seek experience with relevant software packages.
EDUCATION	Public and private K-12 schools, Universities and colleges	• Develop excellent communication skills, verbal and written. • 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.
COMPUTERS	Computer services companies, Software publishers, Internet related companies, Financial institutions, Insurance companies, Consulting firms, Manufacturers,	• Develop substantial knowledge of computer programming and software administration. • Take classes to earn relevant certifications. • Gain related experience through internships, part-time positions, or summer jobs. • Work in a campus computer lab or volunteer to maintain the website for a student organization.
INSURANCE	Insurance carriers, Insurance agents and brokers, Professional, scientific, and technical consulting firms, Government agencies	• 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.

*To learn about these areas and much more visit: whatcanidowiththismajor.com/major •

Enrichment Opportunities

Internships
For more information contact the Department of Mathematics.
usm.maine.edu/cecd

Study Abroad
For more information contact the USM Office of International Programs.
usm.maine.edu/international/study-abroad

Clubs & Organizations
Math Club
For a complete list of student organizations:
webapp.usm.maine.edu/pathways/list

USM Corporate Partners
The USM Corporate Partners are over 350 business people, from nearly 100 companies. usm.maine.edu/corporatepartners

Helpful Career Links

USMCareerConnections:

USM's career network for job and internship searches. usm.maine.edu/community-engagement-career-development/usmcareerconnections

O*NET OnLine:

Learn more about a career opportunity by researching it with O*NET. onetonline.org

Occupational Outlook Handbook:

Learn more about a career opportunity by researching it with OOH. bls.gov/ooh

PROFESSIONAL ASSOCIATIONS To name a few...

Society for Industrial and Applied Mathematics
American Mathematical Society
National Council of Teachers of Mathematics

UNIVERSITY OF SOUTHERN MAINE
PORTLAND • GORHAM • LEWISTON • ONLINE

Office of Community Engagement and Career Development • usm.maine.edu/cecd
(207) 228-8091
usmcareers@maine.edu
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100 Payson Smith Hall, 96 Falmouth St., Portland Campus