



The **Bachelor of Science** in

Mathematics, Emphasis in Fiscal Mathematics

Fiscal mathematicians solve financial problems.

Fiscal mathematics is the applied mathematics field concerned with mathematical modeling of financial markets. It draws on tools from probability, statistics, stochastic processes and economic theory. Investment banks, commercial banks, hedge funds, insurance companies, corporate treasuries and regulatory agencies apply the methods of fiscal mathematics to such problems as derivative securities valuation, portfolio structuring, risk management and scenario simulation. Industries like energy and manufacturing that rely on commodities also use fiscal mathematics. Quantitative analysis has brought efficiency and rigor to financial markets and to the investment process and is becoming increasingly important in regulatory concerns.

The Bachelor of Science in Mathematics, Emphasis in Fiscal Mathematics

The Bachelor of Science in Mathematics with an Emphasis in Fiscal Mathematics provides a sufficient background in mathematics, statistics and (to some extent) computer science, to produce graduates who can work in areas requiring applied mathematical techniques and tools. This degree is structured to allow additional optional courses that enable the student to focus on a variety of further areas of interest.

Students seeking to major in mathematics are first designated as “pre-mathematics majors” until they have completed both MATH 1900 and MATH 2000 or equivalent courses with grades of C or better.

Upon completion of the BS in Mathematics with an Emphasis in Fiscal Mathematics, graduates will be able to write clear, logically consistent proofs; read, understand and assess the veracity of logical arguments or mathematical proofs; reformulate problems or questions in relevant mathematical terms; solve problems which involve analysis, algebra or linear algebra, elementary number theory; interpret, formulate and solve applied problems in probability and statistics; interpret, formulate and solve applied problems in mathematics relating to annuities, bonds and derivative investments.

2+3 BS/MA Dual Degree Program

The Master of Arts in Mathematics is also offered in the 2+3 program format. This unique 2+3 dual degree program provides a pathway for students to earn both a bachelor’s and a master’s degree in Mathematics with fewer total credit hours than would be required to complete each degree independently. Once all requirements have been met, students will be awarded both a BS and an MA and are able to enter the job market with a competitive edge.

Transforming Lives

The Bachelor of Science in Mathematics with an Emphasis in Fiscal Mathematics at UMSL is earned through our College of Arts and Sciences, the academic core of the University of Missouri–St. Louis. Through academic programs offered on- and off- campus, traditional and nontraditional students gain knowledge, skills and intellectual leadership for a variety of career paths, advanced study and research in many academic disciplines.

Graduates are known for their professionalism on the job and their strong sense of civic responsibility. Students in our programs engage in creative and critical thinking, learn to analyze evidence, to appreciate patterns of complexity and to reflect on important issues that impact our daily lives. Students gain skill sets to prepare for a changing workplace that requires flexible, dynamic, and well-educated employees.

The Department of Mathematics and Statistics conducts pivotal research in areas such as data science, computational mathematics, topology, probability and statistics. Many faculty members have received international recognition for contributions to their fields. The Math Academic Center provides free individual assistance to all students. The Math Technology Learning Center (MTLC) is a resource dedicated to our math students where they can access study space, do homework online, take advantage of various resource materials or get help from an instructor or student teacher.

Serious education. Serious value.

The Bachelor of Science in Mathematics with an Emphasis in Fiscal Mathematics is designed to provide specialized knowledge, skills and training in a flexible format, with classes available in person, online and in a hybrid format. You'll learn from highly qualified educators and researchers who hold terminal degrees from some of the world's most prestigious academic institutions.

The University of Missouri–St. Louis provides the knowledge, resources, tools, skills and support students need to be successful in our programs. Our comprehensive student support services include workshops, tutoring and career services to help you develop skills and strategies to be successful in the classroom and beyond. UMSL welcomes transfer students and our transfer specialists will assist you with getting the most transfer credits possible. We're also committed to increasing access to higher education, which is why UMSL is consistently ranked number one in affordability in the St. Louis region.

Learn more at umsl.edu/mathstats

The University of Missouri–St. Louis is the largest public research university located in Missouri's most populous and economically important region. UMSL provides high-quality, affordable education to one of the most diverse student bodies in the state. No university is better connected to the surrounding region than UMSL. Seventy-three percent of our graduates stay in St. Louis. The region needs a well-equipped workforce with strong analytical skills and UMSL is prepared to help you meet those needs. Choose the University of Missouri–St. Louis for fiscal mathematics.

Career Opportunities

Accountant
Actuary
Computer Systems Analyst
Data Scientist
Financial Analyst
Market Research Analyst
Math Teacher
Mathematician
Statistician

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