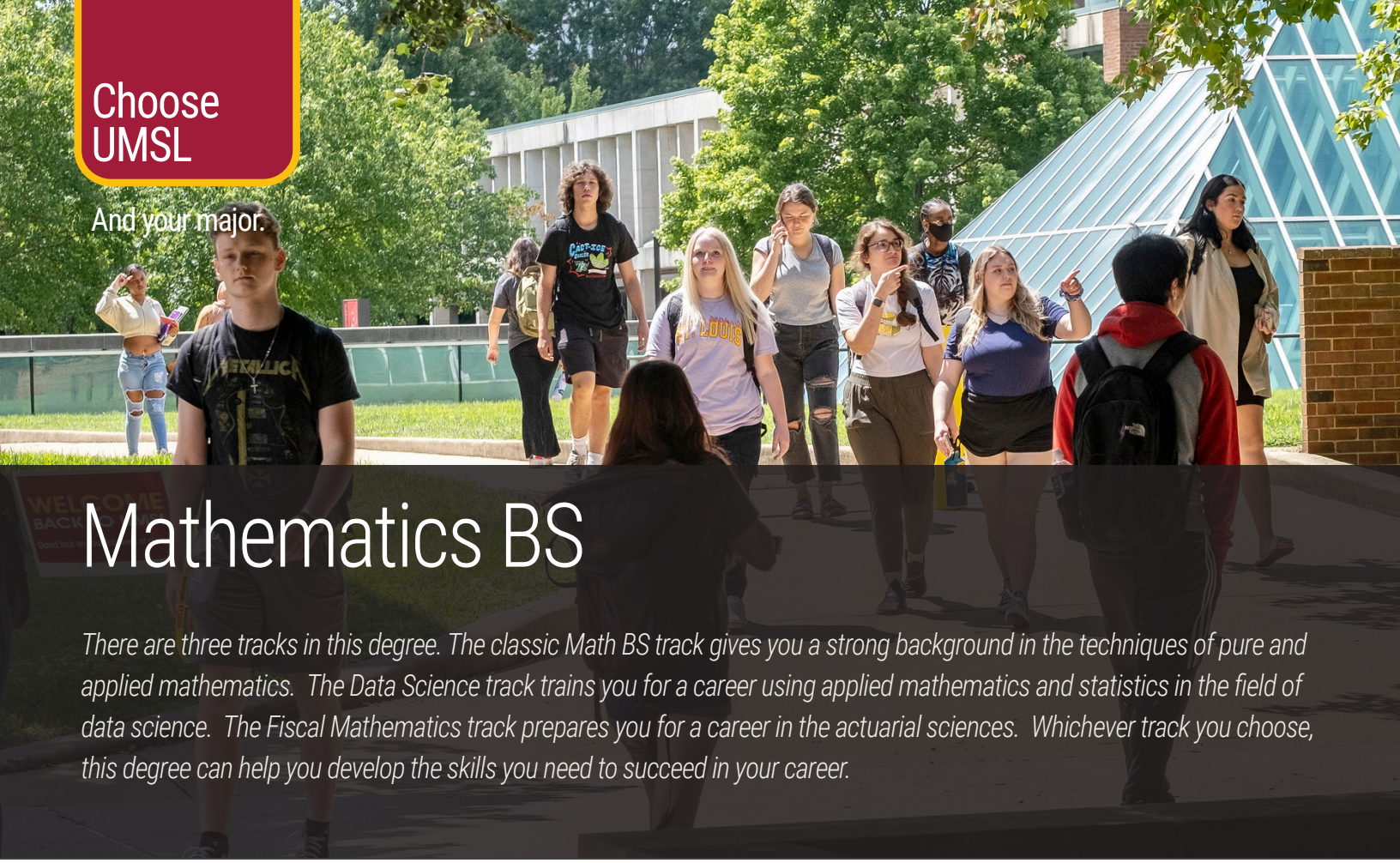

Choose UMSL

And your major.

Mathematics BS

There are three tracks in this degree. The classic Math BS track gives you a strong background in the techniques of pure and applied mathematics. The Data Science track trains you for a career using applied mathematics and statistics in the field of data science. The Fiscal Mathematics track prepares you for a career in the actuarial sciences. Whichever track you choose, this degree can help you develop the skills you need to succeed in your career.

Career Outlook

Mathematicians and statisticians solve real-world problems by applying mathematical and statistical models in industry, academia, and government. Careers in mathematics and statistics are consistently among the top-rated careers in terms of job satisfaction, and job prospects are projected to be very good over the next decade.

Our graduates have gone on to be educators, to work for governmental agencies like the NGA and NSA, to work in the insurance industry in companies like RGA, and to work at top local companies like Boeing, Ameren, Centene, and Anheuser-Busch.

Future Career Options

- Data Scientist
- Statistician
- Data Analyst
- Actuary
- High School Teacher
- College Professor
- Industrial Mathematician
- Cryptographer
- Geospatial Analyst
- Financial Analyst
- Business Analyst
- Biomedical Researcher
- Mathematical Researcher
- Mathematical Consultant

Skills Developed by Degree Completion

- Apply critical-thinking and problem-solving skills to real-world problems
- Analyze data to make well-informed decisions
- Apply mathematical or statistical models to make decisions
- Clearly communicate technical ideas
- Read, understand, and assess the veracity of mathematical arguments and proofs

4-YEAR ACADEMIC MAP

Successful alumni have gone on to fulfill many of the opportunities above. Additional possibilities are taken from the Bureau of Labor Statistics.
Contact an advisor to discuss additional future career options.

UMSL | Arts & Sciences
University of Missouri–St. Louis

College of Arts and Sciences
Department of Mathematics and Statistics
311 Express Scripts Hall
314-516-6355
umsl.edu/mathstats

Academic Advising
303 Lucas Hall
314-516-5501
artscience@umsl.edu
umsl.edu/cas/advising

Bachelor of Science in Mathematics

Year 1

FALL SEMESTER *(15 credit hours)*

- MATH 1800: Analytical Geometry and Calculus I (5)
- ENGL 1100: First-Year Writing (3)
- GEN ED EXPLORE: Humanities & Fine Arts (3)
- GEN ED EXPLORE: Social Sciences (3)
- INTDSC 1003: University Studies (1)

SPRING SEMESTER *(17 credit hours)*

- MATH 1320: Introductory Probability and Statistics (3)
- MATH 1900: Analytic Geometry and Calculus II (5)
- GEN ED EXPLORE: Humanities & Fine Arts (3)
- GEN ED EXPLORE: Social Sciences (3)
- GEN ED CORE: US History & Government (3)

Year 2

FALL SEMESTER *(17 credit hours)*

- MATH 2000: Analytic Geometry and Calculus III (5)
- MATH 2450: Elementary Linear Algebra (3)
- CMP SCI 1250: Introduction to Computing (3)
- GEN ED CORE: Communication Proficiency (3)
- GEN ED EXPLORE: Humanities & Fine Arts (3)

SPRING SEMESTER *(15 credit hours)*

- MATH 2020: Introduction to Differential Equations (3)
- MATH 3250: Foundations of Mathematics (3)
- GEN ED EXPLORE: Social Sciences (3)
- Cultural Diversity (3)
- Elective (3)

Year 3

FALL SEMESTER *(15 credit hours)*

- MATH 4160: Complex Analysis I (3)
- MATH 4400: Introduction to Abstract Algebra (3)
- ENGL 3100: Junior-Level Writing (3)
- Elective (3)
- Related Area Requirement (3)

SPRING SEMESTER *(15 credit hours)*

- MATH 4100: Real Analysis I (3)
- MATH 4450: Linear Algebra (3)
- Elective (3)
- Elective (3)
- Related Area Requirement (3)

Year 4

FALL SEMESTER *(14 credit hours)*

- MATH/CMP SCI 4000-Level Course (3)
- MATH 4000-Level Course (3)
- Elective (2)
- Related Area Requirement (3)
- Related Area Requirement (3)

SPRING SEMESTER *(12 credit hours)*

- MATH/CMP SCI 4000-Level Course (3)
- Elective (3)
- Elective (3)
- Elective (3)

Degree completed!

Last Updated May 2023

2023-2024

4-YEAR ACADEMIC MAP

This is a sample academic map for the courses to take each academic semester/session. ***This map is not a substitute for academic advisement.*** Contact your advisor when making final selections.

– University Studies is required for all first-year students and those with less than 24 credit hours.

– Milestone courses should be taken in the order shown to ensure you stay on a timely and accurate path toward graduation.

– Summer and Intersession courses Don't forget that summers and winter breaks are a way to fast-track your route to degree completion – and lighten your load during fall and spring!

Ready to be an UMSL Triton? Apply today.

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