Mathematics

The mission and goal of the Department of Mathematics is to cultivate in our students the careful logic, deep thinking, and creative ideas that characterize mathematical thought and contribute to responsible citizenship. By providing high-quality instruction in mathematical content, skills and reasoning, the Department will contribute to the broad education of all students and will prepare its majors for advanced degree programs and/or careers requiring training in mathematics.

Major Requirements

MTH 151 Calculus I

MTH 152 Calculus II

MTH 205 Statistics (Calculus-based)

MTH 208 Multivariable Calculus

MTH 211 Foundations of Higher Math

MTH 217 Linear Algebra

At least three 300-level courses
Some examples of 300-level courses include:

- MTH 301 Geometry & History of Math
- MTH 305 Mathematical Statistics
- MTH 308 Differential Equations
- MTH 311 Introduction to Number Theory
- MTH 330 Introduction to Graph Theory

Capstone Experience

MTH 320 Junior MathTalk

MTH 420 Senior MathTalk

Elect at least one of the following:

- MTH 412 Algebraic Structures
- MTH 415 Real Analysis

Minor Requirements

At least six mathematics courses:

MTH 151 Calculus I

MTH 152 Calculus II

MTH 170 or MTH 217 Linear Algebra

Elect one of the following:

- MTH 211 Foundations of Higher Math
- MTH 301 Geometry & History of Math

Elect one course in applied mathematics

Elect one additional course at the 300-level

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Program Website

washjeff.edu/mathematics

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Beyond the Classroom

Students have many opportunities for research, internships, conferences, and networking beyond the classroom that give them an advantage to prepare for life after W&J.

Research and Opportunities

- Department-funded travel to national and regional mathematics conferences
- Summer independent research opportunities with W&J mathematics faculty
- Guidance and mentoring for summer Research Experience for Undergraduate programs
- Opportunities to present original work and capstone projects at professional meetings

Math Life after W&J

- Banking, Finance, and Actuary Science
- Data Analytics, Computer Science, AI
- Graduate programs in Mathematics
- Graduate programs in Economics & Statistics
- 3+2 Programs in Biostatistics or Engineering

Alumni Achievements

- Ph.D., Middlebury College, Mathematics Professor
- University of Pittsburgh, Biostatistician
- U.S. Navy, Hydrographer
- PNC Bank, Financial Analyst
- IBM, Data Scientist
- Cleveland Clinic, Physician (Vascular Medicine)

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