A successful study of mathematics delivers a powerful approach to solving problems through organization, simplification, and abstraction. This process often leads to solutions and techniques of great beauty independent of their application. It is the aim of the mathematics faculty at Illinois Wesleyan University to give students an understanding of theories and methods of mathematics, as well as an appreciation of their beauty.

**Why Mathematics at Illinois Wesleyan?**

A major in Mathematics:
- Responds to today’s job market, in which individuals with highly developed analytical and problem-solving skills are in great demand.
- Provides a sound educational foundation for careers in top-rated professions such as actuary, statistician, computer systems analyst, pricing analyst or computer programmer.
- Offers a foundation for diverse career paths, including high-tech industries, business, medical sciences, communication and education.
- Gives students the ability to tackle increasingly complex problems encountered in such fields as engineering, management science, economics, biology, agriculture, finance, cryptography, military science, insurance and transportation.
- Works well with other departments and programs on campus, such as teacher certification and 3-2 dual-degree pre-engineering.
- Addresses through course offerings the great demand for people educated in computational mathematics (e.g., operations research, statistics and numerical analysis), as well as in traditional mathematics.

**Learning from a Quality Faculty**

- **Santiago Camacho, Visiting Professor of Mathematics**
  Ph.D. — University of Illinois Urbana-Champaign
  Research interests include Model Theory and Logic with a focus on o-minimality, differential asymptotic algebra, and generalized series fields.

- **Zahia Drici, Chair and Professor of Mathematics**
  Ph.D. — Florida Institute of Technology
  Research interests include ordinary differential equations and dynamical systems, difference and functional equations and electromagnetic theory and its applications.

- **Tian-Xiao He, Professor of Mathematics**
  Ph.D. — Dalian University of Technology and Texas A&M University
  Research interests include spline functions, approximation theory, wavelet analysis, numerical analysis, enumerative combinatorics and some topics in computational mathematics.

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**A Sampling of Courses Offered by Mathematics**

- Applied Analysis I, II, III
- Combinatorics and Graph Theory
- Complex Analysis
- Combinational Designs
- Differential Equations
- Directed Study
- Finite Mathematics
- Introduction of Real Analysis
- Linear Algebra
- Linear Programming
- Mathematical Modeling
- Mathematical Statistics
- Modern Algebra
- Probability
- Regression and Time Series
- Research/Thesis
- Techniques of Mathematical Proof
- Topics in Geometry
- Topics in Logic
- Topology
- Wavelet Analysis

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The thing that is unique about the Illinois Wesleyan Mathematics Department is that students have contact with active professionals from day one as first-year math students. At other universities, you often do not work closely with professors until you are a junior or senior. Here at IWU, we encourage our students to work with us, both in class and through independent research projects under our guidance.”

Dr. Zahia Drici
Chair and Professor of Mathematics

Putting Learning into Practice

- The opportunity exists for capstone independent scholarly projects. Recent projects have been done in the areas of linear algebra, operations research, number theory, NP completeness, stability theory of ordinary differential equations combinatorics, graph theory and wavelet analysis.
- Team communication and problem solving are stressed in Mathematical Modeling, where students work together to model and solve problems of practical interest. The math modeling team often competes in the national COMAP math modeling competition.
- Some job titles that math alumni have held include: actuary, senior analyst, math instructor, software engineer, systems consultant, financial advisor, research scientist, product analyst, and many more.
- In the 19th annual math challenge — a regional math competition — an IWU team made up of three students placed first out of 60 schools.
- Many math majors take an active role in student math clubs as well as the Illinois Wesleyan Mathematics Society and Phi Mu Epsilon, the national mathematics honor society.
- Illinois Wesleyan mathematics majors have won several prestigious awards based on the quality of their research, including a Sigma Xi Research Award, Barry M. Goldwater Scholarship, All-USA College Academic Team Award and Phi Kappa Phi Graduate Fellowship Award.