

Mathematics is at its heart the search for pattern or structure. It is an essential component of the liberal arts: A mathematician finds a structure and develops a vocabulary or theory for describing, exploring, and extending it further. Study in mathematics engages students in the search and in the articulation of the consequences. The study of mathematics requires both creativity and rigorous, logical thinking.

THE PROGRAM

The mission of the mathematics department is to provide an opportunity for all students to gain computational dexterity, to understand the value of mathematics as a human and social endeavor, and to develop the power of mathematical reasoning, while promoting the rigorous reasoning skills that allow students to investigate the interplay between the abstract and the concrete.

THE MAJOR

The Department of Mathematics offers a major in mathematics leading either to the B.A. degree or the B.S. degree. Each program provides a broad education in the fundamentals and problem-solving strategies. Mathematics courses are designed to meet two goals: (1) to introduce some of the most influential ideas and techniques in mathematics; and (2) to develop problem-solving ability by teaching students to combine creative mathematical searching with rigorous reasoning.

THE MINOR

The Department of Mathematics offers two minors—a minor in mathematics, and jointly with the Department of Computer Science, a minor in Data Science. Data Science is an emerging field that combines computer science and statistics. The minor in Data Science teaches programming skills, programming languages Java and R, data analytics, models and visualizations. Minors in mathematics and data science complement majors in many fields.

THE COURSES

Classes at Virginia Wesleyan are small and interactive. Some of the courses within the mathematics program include: Modern Geometries, Multivariable Calculus, Algebraic Structures, Number Theory, Cryptography, Probability and Foundations of Logic and Proof. The Department of Mathematics also offers courses to support secondary teacher certification in cooperation with the Department of Education through the MAEd.

INTERNSHIPS/RESEARCH

Independent or guided research projects are encouraged and pursued by many students in these programs. Students are offered the opportunity to conduct original research in an area of interest. Students work closely with one or more members of the natural science faculty to develop and conduct a research project, and then present their findings during the semester's undergraduate research symposium or at PORT day. Students are also encouraged to present their findings at a conference. Qualified students assist mathematics instructors in the classroom. Enrollment as a teaching assistant is by invitation of the Department of Mathematics. Although the course is required for students seeking certification in secondary education, enrollment is not limited to such students.

BEYOND THE CLASSROOM

Career options in mathematics include actuary, operations research, cryptanalyst, cost estimator, national security analyst, statistician, and education.

CONTACT INFORMATION

Dr. Lydia Kennedy

Chair of the Department of Mathematics/Computer Science

Associate Professor of Mathematics

lkennedy@vwu.edu

