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EKU

MASTER OF ARTS IN
**APPLIED
MATHEMATICS**

Department of Mathematics & Statistics



The Department of Mathematics and Statistics offers the Master of Arts degree in Applied Mathematics. Students may select a concentration in Secondary Mathematics or Applied Mathematics and Statistics.

All students will take the following courses: **Mathematical Statistics, Applied Linear Algebra, Combinatorial Optimization, and Applied Mathematics Capstone.**

Students will also take either Technology for Teaching & Research or Statistical Methods Using SAS. Introductory courses in both Computer Science and Statistics are offered to graduate students who need additional preparation in order to pursue elective courses in those areas.

Full admission requires acceptable scores on the GRE as well as a baccalaureate degree from an accredited institution with an acceptable undergraduate grade point average.

Applicants with cumulative undergraduate GPAs of 3.0 or higher are exempt from the GRE requirement. In addition, applicants must have an undergraduate preparation in mathematics sufficient to satisfy the prerequisites of the core courses in mathematics (for example, six hours of calculus and courses in linear algebra and statistics would be sufficient). Applicants who do not have this preparation may be admitted provisionally and take the undergraduate courses needed to strengthen their backgrounds.

Concentration in Secondary Mathematics

In addition to the core courses, students take Principles of Geometry and 6 hours selected from Teaching Mathematics in the Secondary School, Mathematics Intervention Strategies, Trends and Materials in the Teaching of Mathematics, and Mathematics in the Curriculum. The remainder of the program consists of two additional advisor approved courses in the mathematical sciences.

Concentration in Applied Mathematics and Statistics

In addition to the core courses, students take 9 hours selected from Number Theory, Cryptology, Applications of Partial Differential Equations, Applications of Complex Analysis, Graph Theory, Mathematics of Structural Bioinformatics, Introduction to Algebraic Coding Theory, Ordinary Differential Equations, Applied Mathematics, Numerical Analysis, Seminar in Mathematics, Quality Control & Reliability, Statistical Methods Using SAS, R and Introductory Data Mining, Experimental Design, Linear Models, Applied Multivariate Statistical Analysis, and Seminar in Statistics. To complete the program, students choose two advisor-approved elective courses in the mathematical sciences.

Various mathematical and statistical packages, including Mathematica, Geogebra, SAS, R, and Minitab, are available on campus. We offer convenient course meeting times for practicing teachers and others with full-time jobs (typically 3 Saturday meetings per semester with the hybrid format). We also offer some daytime and evening face-to-face classes.

Financial Assistance

Graduate assistantships are available for qualified students. The assistantship includes a stipend and a partial tuition waiver of six semester hours of graduate credit per semester on a full-time appointment (20 hours per week). Duties may include teaching, tutoring, grading, research, or service related to the student's program of study.

For more information:

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