Doctor of Philosophy in Mathematics

at Central Michigan University

Welcome

The Central Michigan University Department of Mathematics offers a doctoral program designed to prepare individuals for a career of research and college teaching, as well as other careers that require the knowledge of advanced mathematics. The program consists of course work, qualifying examinations, a teaching internship, and a dissertation.

The required course work is distributed across various mathematical areas. A complete listing and descriptions of graduate courses is available on the department’s website: www.mth.cmich.edu.

A professional pedagogical component to the program allows the student to examine problems and methods of college-level mathematics instruction. In the internship, the student will teach two upper-level courses under a graduate faculty member’s supervision.

The doctoral dissertation consists of original work and combines scholarly, analytical, creative, and expository skills. Faculty research interests include algebra, algebraic geometry, applied mathematics, approximation theory, combinatorics and graph theory, differential geometry, functional analysis and operator theory, mathematics education, number theory, and statistics. A final oral examination in defense of the dissertation is required.

Mathematics graduate program classes are small, and many doctoral courses are offered in the evening. Mathematics student computer facilities include Macintosh and PC laboratories.

Admission Requirements

To be admitted to the mathematics doctoral program, a candidate must meet the requirements for regular admission to the College of Graduate Studies. Applicants with a bachelor’s degree must have successfully completed 20 hours of mathematics including MTH 233 (Multivariate Calculus) or its equivalent and courses equivalent to MTH 523 (Abstract Algebra) and MTH 532 (Advanced Calculus). A minimum 3.0 grade point average in mathematics is also required.

The department will use the nature of previous course work, reference letters, grades, and Graduate Record Examination (GRE) scores to evaluate candidates for admission. Applicants must submit GRE scores; however, the department may waive this requirement in exceptional cases.

To be considered for regular admission, applicants from non-English speaking countries must submit a minimum TOEFL score of 79 (ibt) or 550 (pbt), or a minimum IELTS score of 6.5, or a minimum Pearson Test score of 53, or a minimum MELAB score of 77. Successful completion of a bachelor’s degree at an English speaking college or university is also accepted. Other English proficiency standards and conditional admission may be considered on a case-by-case basis.

About the College of Graduate Studies

The CMU College of Graduate Studies provides more than 70 graduate degree programs at the master’s, specialist, and doctoral levels.

The university’s on-campus graduate programs serve approximately 2,000 students, many of whom are working professionals who commute to evening and weekend classes.

Fellowships and Assistantships

Graduate fellowships and graduate teaching assistantships are available. Also, a limited number of graduate research assistantships may be available, depending on current grant funding. Additional support may be available for graduate students who support diversity in higher education.

Completed applications for fellowships and assistantships are due February 15, although late applications may be considered if positions are available.

Additional information and applications for these and other types of graduate student financial assistance are available from the College of Graduate Studies website: www.grad.cmich.edu.
Graduate Program Faculty

The department’s faculty is active with research strengths in approximation theory, combinatorics and graph theory, number theory, functional analysis and operator theory, statistics, mathematics education, algebra, algebraic geometry, and differential geometry.

An active colloquium program features speakers who have varied research interests. There also is an applied mathematics group involved in research in polymer fluid dynamics and computational fluid mechanics. This group has links with other CMU science and engineering departments and with local industries.

Graduate Faculty

Mohamed Amezziane, Associate Professor, Ph.D., University of Central Florida, statistics.

James Angelos, Professor, Ph.D., Montana State University, approximation theory.

Ahmed Assaf, Professor, Ph.D., Technion University, combinatorics.

Debraj Chakrabarti, Assistant Professor, Ph.D., University of Wisconsin - Madison, analysis.

Chin-Yi Chan, Associate Professor, Ph.D., University of Utah, commutative algebra and algebraic geometry.

Chin-I Cheng, Assistant Professor, Ph.D., University of Missouri- Columbia, statistics.

Kahadawala Cooray, Associate Professor, Ph.D., University of Nevada at Las Vegas, statistics.

John Daniels, Associate Professor, Ph.D., Western Michigan University, statistics.

Lisa DeMeyer, Professor, Ph.D., University of North Carolina at Chapel Hill, differential geometry.

Ana Dias, Associate Professor, Ph.D., Indiana University, mathematics education.

Donna ErickSEN, Professor, Ph.D., Michigan State University, mathematics education.

Felix Famoye, Professor, Ph.D., University of Calgary, statistics.

Martha Frank, Associate Professor, Ph.D., Purdue University, mathematics education.

Sidney W. Graham, Professor, Ph.D., University of Michigan, number theory.

George Grossman, Associate Professor, Ph.D., University of Windsor, applied mathematics.

Yeonhyang Kim, Associate Professor, Ph.D., University of Wisconsin - Madison, analysis and approximation theory.

Douglas Lapp, Professor, Ph.D., The Ohio State University, mathematics education.

Carl Moun-Shen Lee, Professor, Ph.D., Iowa State University, statistics.

En-Bing Lin, Professor, Ph.D., John Hopkins University, applied and computational math and mathematical physics. (Chair)

Meera Mainkar, Assistant Professor, Ph.D., Tata Institute of Fundamental Research, differential geometry.

Tibor Marcinek, Associate Professor, Ph.D., Comenius University, mathematics education.

Sivaram K. Narayan, Professor, Ph.D., Purdue University, operator theory.

Sing-Cheong Ong, Professor, Ph.D., Dalhousie University, operator theory.

Christine M. Phelps, Associate Professor, Ph.D., University of Delaware, mathematics education.

Apply Online

www.grad.cmich.edu

For More Information

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