DePAUL UNIVERSITY

MASTER OF SCIENCE IN PURE MATHEMATICS

PROGRAM DESCRIPTION

The Master of Science in pure mathematics is one of the few evening programs of its type offered in the Chicago area. It provides students with rigorous training in pure mathematics as well as a solid foundation for pursuing a PhD degree in mathematics.

The program can be completed in one year (including summer term) by taking three classes per quarter or in two years by taking two classes per quarter. The program also can be completed entirely in the evenings by those who satisfy admission criteria.

The program is designed for students who would like to pursue a PhD degree in mathematics or to teach mathematics at the college level. The program also is intended for students whose career goals will be furthered by graduate-level training in mathematics.

PROGRAM FEATURES

Unique curriculum. The program offers two courses in problem-solving. The first course serves as a review of undergraduate mathematics curriculum through problem-solving and helps the students prepare for the GRE Subject Test in mathematics. The second course reviews material in the first-year graduate courses in algebra and analysis. This prepares students for the final comprehensive exams at DePaul as well as PhD qualifying or preliminary exams.

Distinguished faculty. Classes are taught by dedicated faculty members who are professionally active and involved in research in such areas as algebra, analysis, combinatorics, dynamical systems, number theory, probability and statistics.

Continuous advising. The graduate director and professors are available to assist and counsel students throughout their study at DePaul with questions about their program of study and possible career routes after graduation.

Flexibility. All courses are offered one evening each week at the Lincoln Park Campus.

A STEM designated program. The Master of Science in pure mathematics is a STEM program. International students who earn degrees from STEM designated programs can qualify to extend their post-graduation stay in the U.S. for Optional Practical Training (OPT).

Career opportunities. One hundred percent of our recent pure mathematics graduates were employed, pursuing advanced degrees or seeking neither after degree completion. Graduates of the program will be well prepared to pursue a PhD degree in mathematics. Recent graduates have gone on to programs at UIC, University of Rochester, University of Iowa, CUNY, University of Victoria, UIUC, University of Nebraska, Lincoln and University of Nevada, Las Vegas. Others have continued their graduate work, pursuing MS degrees at institutions like Northwestern and the University of Chicago. Additionally, graduates will be able to teach mathematics at two- and four-year colleges or work at various government agencies. MS in pure mathematics graduates have taught at colleges such as CCC (Truman) and Moraine Valley Community College or work at various organizations such as American Institutes for Research, National Security Agency, Wolfra, and Allstate.

DEGREE REQUIREMENTS
(12 courses, 48 quarter hours)

Students must complete 48 quarter hours (12 courses) and pass two comprehensive final exams in algebra and analysis. All students must take eight core courses and four electives.

Core courses
(eight courses, 32 quarter hours)

MAT 470	Advanced Linear Algebra
MAT 471	Group Theory
MAT 472	Fields and Galois Theory
MAT 473	Rings and Modules
MAT 434	Topology
MAT 435	Measure Theory
MAT 436	Functional Analysis
MAT 437	Complex Analysis

Electives
Choose 16 quarter hours from the following:

MAT 451	Probability and Statistics I
MAT 452	Probability and Statistics II
MAT 453	Probability and Statistics III
MAT 481	Fourier Analysis and Special Functions
MAT 482	Partial Differential Equations
MAT 484	Mathematical Modeling
MAT 485	Numerical Analysis I
MAT 486	Numerical Analysis II
MAT 494	Graph Theory
MAT 498	Problem Solving in Mathematics
MAT 596	Advanced Topics in Algebra
MAT 597	Advanced Topics in Analysis
MAT 598	Advanced Problem Solving in Algebra and Analysis
MAT 595	Graduate Thesis Research

With program director's approval two of the elective courses can be substituted with graduate courses in allied fields, such as Computer Science, Physics or Mathematical Education.

GRADUATE ASSISTANTSHIPS

The Department of Mathematical Sciences hires graduate students as teaching assistants to conduct recitation sessions in algebra and calculus. These teaching assistantships provide our graduate students with invaluable experience of teaching mathematics at the college level.

ADMISSION REQUIREMENTS

To be eligible for the pure mathematics program, students must hold a bachelor's degree in mathematics or a related field from a regionally accredited college or university.

Students applying from other academic fields should have the following minimum prerequisites: one year of calculus; one semester (or two quarters) of multivariable calculus; a course in linear algebra; a course in logic and proofs; a course in abstract algebra; a course in real analysis.

Applicants who have not taken undergraduate courses in abstract algebra or real analysis should contact the graduate program director to discuss their options. Applicants who have not taken other prerequisite courses are advised to take those courses at DePaul as non-degree seeking students while applying for the program.

To apply, please submit the following:
- A completed online application
- One official transcript from all colleges and/or universities attended

Students educated outside of the U.S. must provide a credit evaluation and proof of English proficiency by submitting a TOEFL or IELTS score. Visit the program website or **go.depaul.edu/cshinternational** *for more information.*

HOW TO APPLY

Online applications can be submitted at **go.depaul.edu/apply**. Application credentials can be submitted through the online application or by email to graddepaul@depaul.edu. Additionally, official electronic transcripts can be emailed to graddepaul@depaul.edu directly by the issuing institution. Please make sure your name is on all documents.

Transcripts and other required credentials also can be mailed to:

The Office of Graduate Admission
College of Science and Health
DePaul University
2400 N. Sheffield Ave.
Chicago, Illinois 60614

FOR MORE INFORMATION

Web: go.depaul.edu/puremath
Visit: go.depaul.edu/gradopenhouse
Email: graddepaul@depaul.edu
Phone: (773) 325-7315

Please note the information provided is current as of November 2020 and is subject to change.