

Mathematics Education (Mathematics and Statistics Dept - Grades 9-20), PhD

LAMTEPHD

Are you able to convey the mysteries of mathematics in such a way that complex equations become clearly understandable? When you learn how teachers teach and learners learn, and discover the most effective and innovative ways to teach mathematics, the next educator who inspires students to love learning math may be you.

Program description

Degree awarded: PHD Mathematics Education

This transdisciplinary PhD program in mathematics education accommodates students from a variety of academic backgrounds. It provides students with a solid foundation in graduate-level mathematics as well as research skills and perspectives that enable them to incorporate mathematics into such core educational areas as:

- curriculum
- learning
- teaching
- technology

Conducting individual and collaborative research in the learning and teaching of mathematics is an integral part of the program.

At a glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)

Degree requirements

84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

Required Core (12 credit hours)

MTE 501 Research in Undergraduate Mathematics Education I (3)

MTE 502 Research in Undergraduate Mathematics Education II (3)

MTE 503 Research in Undergraduate Mathematics Education III (3)

MTE 504 Research in Undergraduate Mathematics Education IV (3)

Electives (42 credit hours)

Area Courses (12 credit hours)

Research (6 credit hours)

MTE 792 Research (6)

Culminating Experience (12 credit hours)

MTE 799 Dissertation (12)

Additional Curriculum Information

Four to five graduate-level (500 and above) elective courses from mathematics, cognitive science, psychology, educational technology, philosophy or research should be taken as approved by the advisor.

For the area courses, students are required to take four graduate-level courses from the following areas of interest: mathematics, applied mathematics or statistics. Students should see the academic unit for the approved course list.

Students should see the school's website for information about qualifier and comprehensive examinations based on math coursework.

The doctoral dissertation culminating experience consists of a dissertation prospectus, oral dissertation defense and the submission of a final revised, formatted dissertation document to the Graduate College. Dissertations are composed under chair- and committee-supervised research, including literature review, research, data collection and analysis, and writing.

When approved by the student's supervisory committee and the Graduate College, up to 30 credit hours from a previously awarded master's degree may be used for this program. If students do not have a previously awarded master's degree, the remaining coursework is made up of electives and research.

Admission requirements

Applicants must fulfill the requirements of both the Graduate College and The College of Liberal Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in mathematics or a closely related area, with exceptionally high grades in advanced coursework in mathematics, from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. statement of education and career goals
4. writing sample
5. three letters of recommendation
6. proof of English proficiency

Additional Application Information

An applicant whose native language is not English must provide proof of [English proficiency](#) regardless of their current residency.

At least two of the letters of recommendation must be from faculty.

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Application deadlines

Summer

[expand](#)

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Able to incorporate mathematical concepts into novel teaching methods.
- Address an original research question in mathematics education.
- Able to complete original research in applied mathematics.

Career opportunities

Graduates of the doctoral program in mathematics education have opportunities in Arizona, the U.S. and internationally. Opportunities are typically at research universities and liberal arts colleges, community colleges, and education consulting firms and in roles such as:

- faculty-track academic
- education consultant or analyst
- mathematics professor, instructor or researcher

Contact information

[School of Mathematical and Statistical Sciences](#) | WXL R A213
grad.math@asu.edu | 480-965-3951