

Ph.D. in Curriculum and Instruction-Specialization in Mathematics Education

Conduct original research on mathematics-related topics, such as how to assess student performance in mathematics, experiential studies of how professionals use math compared to the techniques they were taught in middle and high school, or how technology can be used to enhance mathematics learning.

Program focuses on K-12 mathematics teaching and learning.

Degree Requirements (90 cr.)

Major Requirements (36 cr.)

The credits in the major are chosen in consultation with the student's advisor and program advisory committee and divided into three areas.

Specialization (918 cr.)

The area of specialization must have a clearly identifiable focus and consist of graduate level courses (or the equivalent) and may include courses outside the program specialization area. All courses are subject to approval by the student's doctoral advisory committee.

Department Seminars (2112 cr.)

N716 Topical Seminar in Mathematics Education (3 cr., taken for a total of 12 cr.)

[N717 Contemporary Issues in Mathematics Education \(taken as 1-2 cr. per semester in student's first 3 years for a total of 9 cr.\)](#)

Early Inquiry Experience and Inquiry Linkage Requirements (6 cr.)

J605 Independent Research Experience in Curriculum and Instruction (3 cr.)

J705 Seminar: Inquiry in Curriculum and Instruction (3 cr.)

Inquiry Requirements (9 cr.)

Select one course from the following (3 cr.):

Y520 Strategies for Educational Inquiry (3 cr.)

Y521 Methodological Approaches to Educational Inquiry (3 cr.)*

Although either Y520 or Y521 can meet this requirement, Y521 is highly recommended because it is intended for doctoral students.

An additional minimum of six credits must be selected from those approved as Core Inquiry courses. A list of approved inquiry courses may be found at http://education.indiana.edu/students/graduates/_docs/ApprovedInquiryCoreCourses.pdf.

Minor Requirements (12 cr.)

The minor must have integrity in its own right and must complement the major. The minor field must demonstrate wholeness within itself and contribute to the student's overall doctoral program. Minors are normally formulated within a single program area. However, an interdisciplinary or individualized minor is also possible. Interdisciplinary or individualized minors require a written description of the minor's underlying theme along with a rationale for each course's contribution to that theme through the Minor Justification form. This form should be submitted and approved by the Graduate Studies Office prior to enrolling in the minor courses.

Elective Requirements (6-18 cr.)

A minimum of 6 elective credits must be taken outside the major and the minor. An additional elective may be selected from within the major, the minor, inquiry, or any broad field of study.

Dissertation Requirements (15 cr.)

J795 Dissertation Proposal Preparation (3 cr.)

J799 Dissertation-Curriculum/Instruction (12 cr.)