

Come study with...

Dr. Debra Johanning, assistant professor of mathematics education. Her teaching focus is on early childhood and middle grades education. Her research explores student learning and the development of middle grades mathematics curriculum. She also is interested in mathematics teachers' efforts to build on and improve their practices.



Dr. William B. Weber Jr., associate professor of mathematics education. His research is on students' mental computational and estimation abilities and the relationship to mathematical conceptual knowledge. He also has worked extensively with INTASC on the development of performance-based assessment for beginning mathematics teachers and for teacher education institutions.



MATHEMATICS EDUCATION GRADUATE PROGRAMS

For more information about the mathematics education graduate program, contact:

Dr. Debra Johanning
Phone: 419.530.5275
E-mail: debra.johanning@utoledo.edu

Dr. William B. Weber Jr.
Phone: 419.530.4336
E-mail: william.weber@utoledo.edu

Visit the department Web site
at www.education.utoledo.edu.



Individuals
at the center of their own
learning within a rich
**intellectual
environment**
characterized by choice



**Judith Herb
College of Education**

Master's Degree in Mathematics Education (M.Ed.)

The master's degree with a specialization in mathematics education is designed to facilitate the professional and personal growth of experienced K-12 educators who are committed to developing and improving their mathematics teaching practice. The primary focus is on developing deeper understanding of mathematical content and the role of assessment in teaching and learning. Students also will explore innovative curricula and the use of technology in mathematics education. Because teaching is a complex intellectual endeavor, master's students will work closely with faculty to engage in inquiry or research as part of their work to develop their own practice.

The master's degree consists of 30 credit hours in a program of study planned with a faculty adviser.

Master's Degree (M.Ed.) Program Outline

- A. College Core12 hours
- EDP Educational Psychological core course selected with adviser (3 hours)
 - RESM Research core course selected with adviser (3 hours)
 - TSOC Social core course selected with adviser (3 hours)
 - CI Curriculum core course selected with adviser (3 hours)
- B. Mathematics Education.....12 hours
(Select from the following courses)
- CI 5540 Teaching and Learning Algebra (3 hours)
 - CI 5530 Teaching and Learning Geometry and Measurement (3 hours)
 - CI 5580 Teaching and Learning Number, Data and Probability (3 hours)
 - CI 5560 Assessment in Mathematics Education (3 hours)
 - CI 5590 Topics in Mathematics Education (3 hours)
- C. Theory and Research3 hours
- CI 6590 Theory and Research in Mathematics Education (3 hours)
- D. Master's Seminar, Project or Thesis3 hours
- CI 6900 Master's Seminar (3 hours)
 - CI 6920 Master's Project (3 hours)
 - CI 6960 Master's Thesis (3 hours)
- One to be selected with adviser



Doctoral Degrees in Mathematics Education (Ph.D. and Ed.D.)

The doctoral specialization in mathematics education prepares scholars to work as researchers, university faculty, policy professionals and expert practitioners with a special focus on the teaching and learning of mathematics. Doctoral students in mathematics education may focus their study on any grade level from early childhood through college. Students will take courses that focus on curriculum, assessment, technology integration, teaching and learning – with the intent being to blend theory and practice. Students will also conduct original research while working closely with mathematics education faculty. Such research centers on important questions that impact the teaching and learning of mathematics.

Doctoral Program Outline

- A. Foundations of Education 6 hours
Areas include educational psychology, educational sociology, philosophy of education and history of education.
- B. Research Tools 6-9 hours
Coursework focused on research methodology, taking into consideration the student's background and professional expectations. Comprehensive knowledge of educational statistics and research design is required.
- C. Areas of Specialization and Study51-54 hours
OPTION 1: Mathematics education major (minimum of 36 hours) and one minor (minimum of 15 hours)
OPTION 2: Mathematics education major (minimum of 24 hours) and two minors (minimum of 15 hours each)
- D. DissertationTBD
Under the guidance of the major adviser, students research and report on an original problem in mathematics education. The dissertation should evolve from the candidate's analysis of the field and from the selection and refinement of the problem.