Graduate Program Area

Mathematics Education

EDCI 617: Early Childhood Mathematics
Development of mathematical concepts in young children from developmental and mathematical perspectives.
Prerequisite: Graduate classification.

EDCI 619: Teaching and Learning Number and Quantity Concepts
Examination of the content, pedagogy, technology and research on teaching and learning concepts on number and quantity concepts; discussion of contemporary issues in K-12, standards and assessment.

EDCI 620: Science, Technology, Engineering and Mathematics (STEM) Teaching and Learning
Examination of integrated and multidisciplinary practice-based pedagogies; building of interdisciplinary bridges among content areas; melding sociocultural and cognitive factors influencing STEM education across K-12 levels; discussion of underrepresented groups binding best practices; development and evaluation of STEM project-based learning.
Prerequisite: Graduate classification.

EDCI 621: Teaching and Learning Space, Dimension and Measurement Concepts
Examination of the content, pedagogy, technology and research on teaching and learning concepts on space, dimension and measurement concepts. Discussion of contemporary issues in K-12, standards and assessments.

EDCI 622: Theories of Learning and Teaching Mathematics
Theoretical bases of the learning and teaching of mathematics, including an examination of the research which supports the theoretical bases.

EDCI 623: Teaching and Learning Pattern and Change Concepts
Examination of the content, pedagogy, technology and research on teaching and learning concepts on skills in algebra, functions and calculus. Discussion of contemporary issues in K-12, standards and assessment.

EDCI 627: Teaching and Learning Data Analysis and Uncertainty Concepts
Examination of the content, pedagogy, technology and research on teaching and student learning of concepts and skills in probability, statistics and discrete mathematics; discussion of contemporary issues and K–12 curriculum, standards and assessment.
Prerequisite: Graduate classification

EDCI 628: Analyzing and Reporting Field Based Research
Analyze data from classroom observation, empirical tests and interviews; link theoretical and practical mathematics education to analysis of qualitative and quantitative data; equip teacher-leaders and researchers with the resources to interpret classroom phenomena from the research perspective using research-based theories of reaching and learning.
Prerequisite: Graduate classification