Possible Courses in a Doctoral Program of Study

Mathematics Education

Instruction:
EMAT 7050 – Teaching Secondary School Mathematics
EMAT 8020 – Advanced Study of Mathematics Teaching and Teacher Education

Curriculum:
EMAT 7080 – Curriculum in Mathematics Education
EMAT 8010 – Advanced Study of Mathematics Curriculum

Learning
EMAT 8030 – Advanced Study of Mathematics Learning
EMAT 8040 – Critical Issues in Mathematics Education

Technology:
EMAT 6680 – Technology and Secondary School Mathematics
EMAT 6690 – Technology Enhanced Instruction in Secondary School Mathematics
EMAT 6700 – Advanced Explorations with Technology in Mathematics Instruction

Research:
EMAT 8990 – Research Seminar in Mathematics Education
EMAT 9630 – Critique of Educational Literature in Mathematics Education
EMAT 9640 – Analysis and Critique of Research in Mathematics Education
EMAT 9600 – Educational Research in Mathematics Education
EMAT 9000 – Doctoral Research
EMAT 9300 – Doctoral Dissertation

Other
EMAT 6600 – Problem Solving in Mathematics
EMAT 6650 – Historical and Cultural Foundations of Mathematics

Mathematics

The Mathematics Department offers a wide range of both applied and theoretical mathematics course at the masters and doctoral level. For course descriptions click here.

Research Methods

Courses in research methodologies could include the following:

ERSH 6300 – Applied Statistical Methods in Education, or STAT 6310 – Statistical Analysis I
ERSH 8310 – Applied Analysis of Variance Methods in Education or STAT 6320 – Statistical Analysis II
ERSH 8320 – Applied Correlation and Regression Methods in Education
QUAL 8400 – Qualitative Research Traditions
QUAL 8410 – Qualitative Data Collection in Education
QUAL 8420 – Qualitative Data Analysis in Education
ESSE/QUAL/ERSH 7500 Action Research
ERSH/QUAL 8575 Mixed Methods Approaches to Research

Other Supporting Fields as Appropriate, e.g. Statistics, Applied Cognition and Development, Learning Design and Technology, Elementary or Middle Grades Education, Psychology, Sociology, Linguistics

Teacher Education Apprenticeship

Participation in various aspects of the teacher education program in mathematics, gradually moving to a role of instructor of record.

Research Apprenticeship

Participation in research activities, gradually moving to a role of self-directed research and scholarship, is expected.