CATO COLLEGE OF EDUCATION
MIDDLE, SECONDARY AND K-12 EDUCATION

Doctor of Philosophy in Curriculum and Instruction
Mathematics Education: ADVANCED STANDING

Program Director: Dr. Tina Heafner (theafner@charlotte.edu)
Concentration Coordinator: Dr. Allison McCulloch (allison.mcculloch@charlotte.edu)

Course #	Title	Credit Hours
Urban Foundations Core Courses		**12**
EDCI 8620	**Pro-Seminar in Curriculum, Instruction, and Educational Leadership**	**3**
Urban Core Courses		**9**
Select from the following.		
EDCI 8126	**Comparative Education**	**3**
EDCI 8180	**Critical Issues and Perspectives in Urban Education**	**3**
EDCI 8182	**Power, Privilege and Education**	**3**
EDCI 8184	**Social Theory and Education**	**3**
EDCI 8186	**Globalization, Urbanization and Urban Schools**	**3**
EDCI 8201	**Perspectives in Immigration and Urban Education**	**3**
EDCI 8206	**Globalization, Communities, and Schools**	**3**
EDCI 8330	**History of Urbanization and Its Impact on Schooling**	**3**

Students may enroll in 3 credit hours of courses outside of this list with approval of the Program Advisor and Program Director.

Research Methodology Courses		**9**
Required Courses:		**6**
RSCH 8110	**Descriptive and Inferential Statistics**	**3**
RSCH 8210	**Applied Research Methods**	**3**

If an equivalent research course was completed in an approved mathematics master's degree, Advanced Standing students should work with their Program Advisor to identify an additional elective research course from the list below and submit an academic petition for approval. Consultation with the program director prior to submitting the academic petition is required.

GRAD 8990	**Academic Integrity**	**0**

All Ph.D. students are required to register for GRAD 8990 Academic Integrity in the first semester.

Choose one of the following:		**3**

Concentration Coordinator consultation is required to enroll in the below courses. *Selection of 1 research course elective with approval of Program Advisor. Course selection should align with dissertation plans.*

RSCH 8111	**Qualitative Research Methods**	**3**
RSCH 8112	**Survey Research Methods**	**3**

RSCH 8113	**Single-Case Research**	**3**
RSCH 8120	**Advanced Statistics**	**3**
RSCH 8121	**Advanced Qualitative Methods**	**3**
RSCH 8131	**Interviewing as Qualitative Inquiry**	**3**
RSCH 8140	**Multivariate Statistics**	**3**
RSCH 8150	**Structural Equation Modeling**	**3**
RSCH 8160	**Hierarchical Linear Models in Education**	**3**
RSCH 8196	**Program Evaluation Methods**	**3**
RSCH 8197	**Design and Analysis of Experimental and Quasi-Experimental Evaluations**	**3**
RSCH 8220	**Educational and Psychological Measurement**	**3**
RSCH 8230	**Theory and Applications of Measurement**	**3**
RSCH 8410	**Internship in Educational Research**	**3**
RSCH 8890	**Special Topics in Research**	**3**

Additional courses not listed require program director approval.

Mathematics Specialization Courses		**18**
Required Courses: In consultation with Concentration Coordinator or Program Advisor, select from the following courses.		**15**
EDCI 8112	**Theoretical Foundations of Learning Mathematics**	**3**
EDCI 8113	**Research in Mathematics Education**	**3**
EDCI 8114	**Advanced Topics in Mathematics Education**	**3**
EDCI 8115	**Issues in the Teaching of Secondary School Mathematics Education**	**3**
EDCI 8160	**Readings in Mathematics Education**	**3**
Concentration Elective Courses (3 credit hours): Students may select from the following, in consultation with the Program Advisor.		
EDCI 8004	**Topics in Analysis**	**3**
EDCI 8008	**Topics in Geometry and Topology**	**3**
EDCI 8010	**Topics in Mathematics Education**	**3**
EDCI 8101	**Foundations of Mathematics**	**3**
EDCI 8102	**Real Analysis for Secondary Mathematics Teachers**	**3**
EDCI 8103	**Computer Techniques and Numerical Methods**	**3**
EDCI 8106	**Modern Algebra for Secondary Mathematics Teachers**	**3**
EDCI 8107	**Linear Algebra for Secondary Mathematics Teachers**	**3**
EDCI 8108	**Statistics and Data Literacy in K-12 Education**	
EDCI 8118	**Non-Euclidean Geometry**	**3**
EDCI 8860	**Independent Study in Mathematics Education**	**3**

For Advanced Standing, courses taken at the master's 5000 or 6000-level cannot be repeated at the doctoral 8000-level to meet concentration requirements. No transfer credit hours are allowed in Advanced Standing. Students may enroll in graduate-level credit outside of the above list with approval of the program director.

Required for Dissertation		**9**
EDCI 8699*	**Dissertation Proposal Seminar**	**3**
EDCI 8999**	**Dissertation Research**	**6**

**Contact the Program Director for approval to enroll in EDCI 8699 and EDCI 8999. To be taken after successful completion of the comprehensive examinations, appointment of the dissertation committee, and pre-proposal meeting with committee members.*

***Students must be admitted to candidacy to enroll in EDCI 8999. A minimum of 6 credit hours of dissertation research is required. Additional hours may be taken to complete the dissertation process.*

Advanced Standing Minimum Total Credits	**48**

A minimum of 48 hours is required but not necessarily sufficient. Additional courses may be recommended by Program Advisor for the Ph.D. in Curriculum and Instruction.