REQUIRED:

- Complete a minimum of 36 credits of approved course work (beyond the master’s level) and a minimum of 12 credits of dissertation work with a cumulative grade of B (3.0) or better.
- Pass a comprehensive examination.
- Pass a qualifying paper.
- Defend a dissertation proposal.
- Defend a dissertation as approved by the student’s dissertation committee within (8) years from the date of admission.

**Foundations of Education**  
(6 credits)

- 01.645 Perspectives and Visions of Schooling I  
  (3)
- 01.646 Perspectives and Visions of Schooling II  
  (3)

**Research and Evaluation**  
(12 credits)

- 07.640 Pre-requisite or equivalent graduate level research course*  
  (3)
- 07.700 Introduction to Research Design and Methods  
  (3)
- 07.701 Data Analysis  
  (3)
- 07.704 Qualitative Research Methods  
  (3)
- 07.7XX One further research course with approval of advisor  
  (3)

**Specialization Requirements**  
(12 credits)

- 04.622 Math, Science & the Educated Mind  
  (3)
- 04.623 Policy and Practice in Science, Technology, Engineering, & Mathematics  
  (3)
- 04.630 Reasoning and Problem Solving: Math/Science  
  (3)
- 04.XXX New Course  
  (3)

**Electives**  
(6 credits)

- 04.728 Research in Mathematics and Science Education  
  (Qualifying Paper candidates only)  
  (3)
- 04.XXX Another Elective Course  
  (3)

**Dissertation Planning**  
(12 credits)

*Note: 07.640 “Introduction to Research Methods” is recommended as a prerequisite for candidates who lack a prior course in statistics. This course does not count as the fourth research course nor does it count towards the 48 credit hours for the degree.