

**University of Massachusetts Lowell
Graduate School of Education
Mathematics and Science Education (Ed.D.)**

Requirements:

- 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 examination.
- 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 (min. 6 credits) 6

- 01.645 Perspectives and Visions of Schooling I
01.646 Perspectives and Visions of Schooling II

Research and Evaluation (min. 9 credits) 9

07.640 (*Pre-Requisite or Equivalent Graduate Level Research Course*)

- 07.701 Seminar in Data Analysis
07.702 Seminar in Research Methodology and Design
07.Xxx One Additional Approved Research Course

Specialization Requirements (min. 12 credits) 12

- 04.622 Science, Math and the Educated Mind
04.626 Development of Concepts in Science
OR 04.627 Development of Concepts in Math
04.630 Reasoning and Problem Solving: Math/Sci
04.614 Constructivist Perspectives: Math/Sci

Electives (min. 9 credits) 9

- Two directed studies are allowed.

Dissertation Planning (12 credits min) 12

Total: 48

