

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 Course Approved by Advisor

Specialization (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
04.634 Constructivism

Electives (min. 9 credits) **9**

Two directed studies are allowed.

Dissertation Planning** (min. 12 credits) **12**

Total: **48**

Notes:

In cases where students have a choice of courses to fulfill the requirement, the decision as to the most appropriate selection should be made in consultation with the student's advisor, in light of the student's previous academic program.

*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 third research course or as part of the 48 requirement.

**In order to defend the dissertation, candidates must be enrolled for at least ONE credit (05.760) with permission of the chair.