**MATHEMATICS EDUCATION (PH.D.)**

https://ceps.unh.edu/mathematics-statistics/program/phd/mathematics-education

**Description**

The program is designed to provide students with depth and breadth in the fields of both mathematics education and mathematics, preparing students for educational and research leadership. The program is designed to advance forefront knowledge in mathematics education.

**Admission Requirement**

Applicants to the Ph.D. in Mathematics Education degree must have BA or BS from an accredited college or university. Successful candidates typically have a bachelor’s degree in mathematics or mathematics education and/or advanced coursework in mathematics.

**Applying**

Please visit the Graduate School website for detailed instructions about applying to the program.

**Requirements**

Students are advanced to candidacy after meeting the following requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 951</td>
<td>Algebra I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 952</td>
<td>Algebra II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 953</td>
<td>Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 954</td>
<td>Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 955</td>
<td>Topology I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 958</td>
<td>Foundations of Math Education</td>
<td>1</td>
</tr>
<tr>
<td>MATH 959</td>
<td>Introduction to Research Design in STEM Education</td>
<td>3</td>
</tr>
<tr>
<td>MATH 968</td>
<td>Topics in Mathematics Education I (A)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 968</td>
<td>Topics in Mathematics Education I (B)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 978</td>
<td>Topics in Mathematics Education II (at least two semesters)</td>
<td>6</td>
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</tbody>
</table>

Two additional courses in research methods (one qualitative, one quantitative), typically:

- EDUC 904 Qualitative Inquiry in Research
- MATH 835 Statistical Methods for Research

Successful completion of written comprehensive examinations in algebra, analysis, mathematics education and an elective subject.

Successful completion of a minor program of study (usually a related one, such as educational psychology or research methodology, but possibly in an area of mathematics) followed by the minor presentation.

Successful completion of a dissertation proposal defense in the major field of mathematics education.

Experience in teaching equivalent to at least half-time for one year typically through assistantship assignments.

**Dissertation**

Students must complete and submit a dissertation that involves original research in mathematics education.

**Student Learning Outcomes**

- Demonstrate deep knowledge of graduate level mathematics content: algebra, analysis, topology.
- Demonstrate competency in the minor field of study different from, but related to mathematics education (e.g., mathematics, statistics, linguistics, research methods, other sciences, STEM disciplines).
- Demonstrate the ability to conduct and communicate foundations of mathematics education research, theories of mathematics teaching and learning, and mathematics curriculum.