

# EDUCATION: MATHEMATICS EDUCATION, PHD

**Requirements for Students Matriculating in or before Academic Year 2024-2025.** Learn more about Graduate College Academic Regulation 7.0 (<http://catalog.okstate.edu/graduate-college/#70>).

**Total Hours:** 69 (Beyond the Master's Degree)

| Code  | Title   | Hours     |
|---|---|-----------|
| <b>Common Program Core</b>  |   |           |
| SCFD 6983   | Diversity and Equity Issues in Education                      | 3         |
| SCFD 6113   | Theoretical Foundations of Inquiry                            | 3         |
| CIED 6503   | Doctoral Seminar  | 3         |
| <b>Hours Subtotal</b>   |   | <b>9</b>  |
| <b>Extended Inquiry</b>   |   |           |
| At least six of these hours, selected from courses such as those listed below, should be comprised of the same type of research method (i.e., quantitative, qualitative, historical, etc.). Students should work with their advisory committee to select the appropriate 12 hours for their program of study. |   | 12        |
| CIED 6073   | Advanced Pedagogical Research                                 |           |
| CIED 6253   | Designing and Conducting Mixed Methods Research               |           |
| REMS 6003   | Analyses of Variance  |           |
| REMS 6013   | Multiple Regression Analysis in Behavioral Studies            |           |
| REMS 6023   | Psychometric Theory   |           |
| REMS 6033   | Factor Analysis in Behavioral Research                        |           |
| REMS 6663   | Applied Multivariate Research in Behavioral Studies           |           |
| REMS 5963   | Computer Applications in Nonparametric Data Analyses          |           |
| SCFD 6123   | Qualitative Research I  |           |
| SCFD 6190   | Qualitative Research: Selected Methods                        |           |
| SCFD 6193   | Qualitative Research II                                       |           |
| MATH 5913   | Introduction to Research in Mathematics Education             |           |
| MATH 6923   | Research in Undergraduate Mathematics Education               |           |
| <b>Hours Subtotal</b>   |   | <b>12</b> |
| <b>Cognate Area</b>   |   |           |
| The doctoral advisory committee will work with individual students to select the most appropriate courses to enhance their knowledge within their specializations.  |   | 9         |
| <b>Hours Subtotal</b>   |   | <b>9</b>  |
| <b>Independent Research</b>   |   |           |
| CIED 6000   | Doctoral Dissertation   | 15        |
| <b>Hours Subtotal</b>   |   | <b>15</b> |
| <b>Specialization - Mathematics Education</b>   |   |           |
| <i>Required Courses</i>   |   |           |
| SMED 6223   | Instruction and Learning in Science and Mathematics Education | 3         |

|                                     |   |           |
|-------------------------------------|---|-----------|
| SMED 6233                           | Affective Issues in Teaching Mathematics and Sciences                                 | 3         |
| SMED 6753                           | Research in Mathematics and Science Education   | 3         |
| <i>Elective Courses</i>             |   |           |
| Select 15 hours from the following: |   | 15        |
| CIED 5850                           | Directed Study  |           |
| CIED 6910                           | Practicum   |           |
| CIED 6850                           | Directed Reading  |           |
| SMED 5253                           | Teaching Rational Number Concepts, Proportional Reasoning, and Classroom Interactions |           |
| SMED 5263                           | Assessment and Evaluation in School Mathematics                                       |           |
| SMED 5270                           | Practicum in School Mathematics   |           |
| SMED 5273                           | Number Concepts and Assessment at the Elementary Level (PK-6)                         |           |
| SMED 5283                           | Problem-Centered Learning in Mathematics  |           |
| SMED 5293                           | Teaching and Learning Mathematics in Technology                                       |           |
| SMED 5613                           | Effective Teaching of Mathematics in the Secondary School                             |           |
| SMED 5750                           | Seminar in Mathematics Education  |           |
| SMED 5913                           | Teaching Geometry and Spatial Visualization   |           |
| SMED 5923                           | Teaching Algebra and Mathematical Tasks   |           |
| SMED 5933                           | Teaching Data and Probability in Schools  |           |
| SMED 5943                           | Mathematics Leadership and Coaching   |           |
| <b>Hours Subtotal</b>               |   | <b>24</b> |
| <b>Total Hours</b>                  |   | <b>69</b> |

## Graduate College Doctor of Philosophy (PhD) Requirements

Learn more about Graduate College 2024-2025 Doctor of Philosophy (PhD) Degree Program Requirements (<http://catalog.okstate.edu/graduate-college/>). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.