



Michigan State University: Three Pathways to Mathematics Education

Jill Newton



Ph.D. Curriculum, Teaching, and Educational Policy
Emphasis Area: Mathematics Education
 College of Education
 Department of Teacher Education

Ph.D. Mathematics Education
 College of Natural Science, College of Education
 Division of Science and Mathematics Education

Ph.D. Educational Psychology and Education and Technology
Area of Concentration: Mathematics Education
 College of Education
 Department of Counseling, Educational Psychology and Special Education

TE 901 Proseminar in Curriculum, Teaching and Educational Policy I
 TE 902 Proseminar in Curriculum, Teaching and Educational Policy II

At least three courses about educational inquiry and research, including
 CEP 930 Educational Inquiry
 CEP 931 Qualitative Methods in Educational Research
 OR
 CEP 932 Quantitative Methods in Educational Research

At least three courses from a "selective pool" that provides the student with broad and diverse perspectives on education. This pool includes courses numbered TE 915 to TE 925.

At least six additional elective courses selected to form an area of concentration (e.g., Mathematics Education) as approved by the student's guidance committee

SME 926 Proseminar in Mathematics Education I
 SME 927 Proseminar in Mathematics Education II

SME 954 Design and Methods in Mathematics Education Research

Two of the following courses:
 CEP 931 Qualitative Methods in Educational Research
 CEP 932 Quantitative Methods in Educational Research I
 CEP 933 Quantitative Methods in Educational Research II
 EAD 955B Field Research Methods in Educational Administration
 STT 801 Design of Experiments
 STT 825 Sample Surveys
 STT 842 Categorical Data Analysis
 STT 843 Multivariate Analysis

Two of the following courses:
 CEP 913 Psychology and Pedagogy of Mathematics
 SME 903 Topics in Mathematics Education Research
 SME 997 Special Topics in Mathematics Education
 TE 950 Mathematical Ways of Knowing

One of the following courses:
 SME 840 Critical Content of School Mathematics: Number & Operations
 SME 841 Critical Content of School Mathematics: Algebra
 SME 842 Critical Content of School Mathematics: Geometry

One of the following courses:
 SME 879 Teaching College Mathematics
 TE 994 Laboratory and Field Experience in Curriculum, Teaching, and Educational Policy

One course in general education foundations, policy, teacher education, or learning and development

Three courses in a cognate selected in consultation with the guidance committee

Four courses in the Department of Mathematics appropriate to the student's program of study and career goals, at the 400 level or above

CEP 900 Proseminar in Educational Psychology and Educational Technology
 TE 901A Proseminar in Educational Psychology
 OR
 TE 901B Proseminar in Educational Technology

CEP 930 Educational Inquiry
 CEP 932 Quantitative Methods in Educational Research I
 CEP 933 Quantitative Methods in Educational Research II

Three required selective courses that provide breadth of understanding in educational issues (chosen from separate lists for Educational Psychology and Educational Technology)

At least five additional courses in an area of concentration (e.g., Mathematics Education)

Research Practicum
Comprehensive Examinations
Dissertation

Proseminar
 Research/Inquiry
 Education
 Cognate
 Mathematics