



STUDENT LEARNING OUTCOMES
B.S.Ed. in Mathematics Education



Upon completion of the B.S.Ed. degree in Mathematics Education, students will:

- know, understand and apply the process of mathematical problem solving.
- reason, construct, and evaluate mathematical arguments and develop an appreciation for mathematical rigor and inquiry.
- communicate their mathematical thinking orally and in writing to peers, faculty and others.
- recognize, use, and make connections between and among mathematical ideas and in contexts outside mathematics to build mathematical understanding.
- use varied representations of mathematical ideas to support and deepen students' mathematical understanding.
- embrace technology as an essential tool for teaching and learning mathematics.
- possess a deep understanding of how students learn mathematics and of the pedagogical knowledge specific to mathematics teaching and learning.
- demonstrate computational proficiency, including a conceptual understanding of numbers, ways of representing number, relationships among number and number systems, and the meaning of operations.
- emphasize relationships among quantities including functions, ways of representing mathematical relationships, and the analysis of change.
- use spatial visualization and geometric modeling to explore and analyze geometric shapes, structures, and their properties.
- demonstrate a conceptual understanding of limit, continuity, differentiation, and integration and a thorough background in techniques and application of the calculus.
- apply the fundamental ideas of discrete mathematics in the formulation and solution of problems.
- demonstrate an understanding of concepts and practices related to data analysis, statistics, and probability.
- apply and use measurement concepts and tools.