2024-2025 ASSESSMENT PLAN

Department of Mathematics

The following Program Learning Objectives will apply to majors in all five mathematics concentrations: Pure Mathematics, Applied Mathematics, Data Science and Statistics, Secondary Education, Elementary Education		
(1) Learning Objectives	**(2) Justification for Learning Objective**	**(3) Courses in which students engage with the Objective**
(Know / Comprehend) **Conceptual Mathematical Core** Students who graduate with a BA degree in Mathematics will have a conceptual understanding of the core mathematical content from their required coursework.	Students need to understand key mathematical ideas before they can apply them.	MATH 201 Multivariable Calculus MATH 231 Linear Algebra MATH 241 Probability
(Decode / Apply) **Problem-Solving Skills** Students who graduate with a BA degree in Mathematics will be able to explore an open-ended problem, organize and analyze data and information, and gain insight by applying an appropriate mathematical framework.	Students who know a variety of mathematical ideas need to know which concepts apply in which situations, and how they apply.	MATH 245 Mathematical Modeling MATH 247 Linear Optimization MATH 301 Abstract Algebra MATH 310 Real Analysis
(Reason / Validate) **Logical Reasoning** Students who graduate with a BA degree in Mathematics will be able to construct a logically rigorous proof as well as evaluate a logical argument for correctness.	Students need to be able to justify why their solutions are correct and to understand the assumptions that underlie their reasoning.	MATH 220 Introduction to Mathematical Reasoning MATH 301 Abstract Algebra MATH 310 Real Analysis
(Communicate) **Oral and Written Communication** Students who graduate with a BA degree in Mathematics will be able to communicate mathematics effectively both orally and in writing.	Students need to be able to communicate their ideas and reasoning with their peers and supervisors.	MATH 250 Mathematical Computing MATH 301 Abstract Algebra MATH 310 Real Analysis