

MATHEMATICS, B.A.

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Learning Objectives

- Students will demonstrate technical expertise within major areas of mathematics, recognizing connections between different branches of mathematics, and understanding and appreciating the relationship of mathematics to other disciplines and fields.
- Students will demonstrate a breadth and depth of knowledge within mathematics, linking applications and theory, applying mathematics in a wide variety of settings, and demonstrating the ability to use mathematics as a tool to solve problems in disciplinary and interdisciplinary settings.
- Students will demonstrate an understanding and appreciation for the integration of technology in mathematical settings to explore mathematical problems and interpret the results.
- Students will demonstrate an ability to communicate mathematics effectively, presenting full and cogent solutions that include appropriate justification for their reasoning, describing mathematical ideas from multiple perspectives, and writing/presenting explanations clearly and precisely to an audience of peers and faculty.
- Students will demonstrate an ability for assessing and interpreting complex situations, choosing among several potentially appropriate mathematical methods of solution, understanding the differences between proofs and other less formal arguments, and making vague ideas precise by formulating them in mathematical language.