

CONTENT KNOWLEDGE. Students graduating with a B.A. or B.S. degree in mathematics will demonstrate knowledge in three core areas of mathematics: algebra, analysis, and probability and statistics.

All undergraduate mathematics majors are required to complete the capstone courses Modern Algebra (MAS 4301), Modern Analysis (MAA 4200), and Probability and Statistics 1 (STA 4442). In these courses, students submit solutions to homework problems and take examinations designed to assess their understanding of the basic concepts in the three core areas.

COMMUNICATION. Students graduating with a B.A. or B.S. degree in mathematics will produce writing that is well organized and grammatically correct, and they will express mathematical ideas clearly and concisely.

All undergraduate mathematics majors are required to complete Mathematical Problem Solving (MAT 4937). In this course, students write up and submit detailed solutions to a wide variety of mathematical problems and present solutions orally in class.

CRITICAL THINKING. Students graduating with a B.A. or B.S. degree in mathematics will correctly analyze and determine the validity of mathematical arguments. They will apply abstract mathematical concepts to solve concrete problems.

Students in Modern Algebra (MAS 4301) and Modern Analysis (MAA 4200) are exposed to mathematical arguments and produce their own proofs of simple mathematical propositions, both on submitted homework and in-class examinations. Students in Probability and Statistics 1 (STA 4442) and Mathematical Problem Solving (MAT 4937) use their mathematical knowledge to solve numerous applied problems, both on submitted homework and in-class examinations.