Mathematics Program

Purpose Statement

The purpose of the mathematics program is to develop students who understand mathematics as an academic discipline, who can use mathematics as a problem-solving tool in other disciplines, and who are skilled in mathematical reasoning, problem solving, critical thinking and communication.

The mathematics program achieves this purpose when its students

- have received a coherent, broad-based coverage of the discipline of mathematics;
- demonstrate conceptual and procedural understanding of mathematics;
- can apply their knowledge to specific, constrained problems and produce solutions;
- possess a foundation of theory that will enable lifelong learning and development;
- meet State Department of Education standards for licensure in the area of mathematics (applies to education majors in mathematics only).

The department offers a major and minor in mathematics. Mathematics is a discipline essential to all facets of the employment world and an excellent background for a variety of specific professions. Secondary teaching licensure is available. Mathematics is also an excellent background for graduate studies in diverse fields.

Mathematics Major

Requirements (51 hours of MA courses) including the following:

G-MA111 Calculus I (4 hours)
MA112 Calculus II (4 hours)
G-MA123 Discrete Mathematics (3 hours)
MA211 Linear Algebra (3 hours)
MA212 Calculus III (4 hours)
G-MA221 Elementary Applied Statistics (4 hours)
MA311 Advanced Analysis (4 hours)
MA366 Differential Equations (4 hours)
MA411 Introduction to Algebraic Structures (4 hours)
MA342 Modern Geometry (4 hours)
MA375 Junior Seminar (1 hour)
*MA475 Senior Project (2 hours)

Required Supporting courses (all mathematics majors)

PH205 College Physics I (5 hours)
PH206 College Physics II (5 hours)

Mathematics Major for Teacher Licensure

Requirements (40 hours of MA courses) including the following:

G-MA111 Calculus I (4 hours)
MA112 Calculus II (4 hours)
G-MA123 Discrete Mathematics (3 hours)
G-MA153 Principles of Geometry (3 hours)
MA211 Linear Algebra (3 hours)
MA212 Calculus III (4 hours)
G-MA221 Elementary Applied Statistics (4 hours)
MA366 Differential Equations (4 hours)
MA411 Introduction to Algebraic Structures (4 hours)
MA342 Modern Geometry (4 hours)
MA375 Junior Seminar (1 hour)
*MA475 Senior Project (2 hours)

Required Supporting Courses:

PH205 College Physics I (5 hours)
See Teacher Education Handbook for Curriculum and Instruction course requirements.

Mathematics Minor

Requirements (19 hours of MA courses)

G-MA 111 Calculus I (4 hours)
MA 112 Calculus II (4 hours)
G-MA 221 Elementary Applied Statistics (4 hours)

Plus one course from the following list
G-MA123 Discrete Math (3 hours)
G-MA153 Principles of Geometry (3 hours)
G-MA201 Survey of Mathematics (3 hours)
MA211 Linear Algebra (3 hours)

Plus one course from the following list
MA212 Calculus III (4 hours)
MA366 Differential Equations (4 hours)
MA342 Modern Geometry (4 hours)
MA411 Algebraic Structures (4 hours)