Course Outline
Department of Mathematics and Statistics
Minnesota State University, Mankato

Math 492  Mathematics Capstone Experience (3 semester hours)

Course Description:

This course is designed to allow undergraduate students an opportunity to integrate their undergraduate mathematics experiences by engaging each student in working on a problem in applied or theoretical mathematics. In doing so, students will see connections between the various topics found in the undergraduate mathematics curriculum. Content will vary by semester. An important component of this course will be the preparation and presentation of a research paper describing the student's progress toward a solution of the problem under consideration. Problems will arise from the course content and materials as presented by the instructor. Because of the breadth of mathematical topics needed for successful completion of the course, students need to have senior standing.

Prerequisites: Two of the following: MATH 316, MATH 321, MATH 345, MATH 375 and senior standing (or permission of the instructor). Course can also be taken independent study with permission of a cooperating faculty member.

Learning Outcomes:

Students will be able to:

1. Learn standard material from a subject chosen by instructor.
2. Choose a research topic related to the common core theme.
3. Complete a research paper on chosen topics.
4. Give a presentation on the research project.

Content Outline:

Vary by semester.

Course Requirements:

The use of mathematical editing software, such as Latex, is strongly recommended.

Textbook/Related Readings/Materials:

Vary by semester.