Description
A study of the interconnections among mathematics, other disciplines, ethics, careers, and society.

Learning Goals
The student will
1. Describe the interplay between axiomatic and construction approaches to understanding the natural, rational, real, and complex numbers;
2. Describe the connections between geometry and algebra illustrated by the conic sections, angle trisection, polyhedrons, and map coloring;
3. Describe applications of mathematics to other disciplines;
4. Describe careers in which mathematical knowledge and skills are used and opportunities for further study of mathematics;
5. Describe ethical questions that arise out of mathematics;
6. Learn mathematics by reading, listening, exploring, and conversing in an effective manner;
7. Explain and critique mathematical reasoning through speaking and writing in a precise and articulate manner in both informal and formal settings;
8. Exhibit curiosity, playfulness, creativity, confidence, perseverance, interest in multiple perspectives, and a collaborative spirit.

Prerequisites
Math 205, 212, and two upper level Math courses.

Activities
Students will complete assignments in preparation for a seminar discussion. Students are expected to constructively engage in the discussion. After the discussion, students will have an opportunity to correct and refine their responses to the assignment before it is graded.

Instructor
David Housman, SC 117, dhousman@goshen.edu, 535-7405, 875-0339 (home)
Office hours posted on office door and on Moodle.

Class Time
To be arranged in SC 117.

Grade
Based on participation in seminar discussions (30%) and completion of assignments (70%).

Tutoring and Disabilities
Goshen College wants to help all students be as academically successful as possible. If you have a disability and require accommodations, please contact Lois Martin, the Director of the Academic Resource & Writing Center early in the semester. In order to receive accommodations, documentation concerning your disability must be on file with the Academic Resource & Writing Center, Good Library 112, x7576, lmartin@goshen.edu. All information will be held in the strictest confidence. The Academic Resource & Writing Center offers tutoring and writing assistance for all students. For further information please see http://www.goshen.edu/campuslife/arwc/.

Collaboration and Academic Integrity
You are encouraged to use all available resources in order to learn the concepts and techniques discussed in this course. However, simply copying someone else's work subverts the learning process. For assignments, you may look at and discuss another student's work; however, you must give written acknowledgement to people and written materials that were used.
Failure to observe the above rules will result in a zero on the assignment. Any violation of academic integrity will be reported to the Academic Dean. Observation of the above rules will help you learn the material well and give you the satisfaction of knowing that you have earned your grade.

Due Date Policy
Class participation and assignments can only be excused or made up if (1) there is a serious medical problem, a death in the immediate family, or an irreconcilable conflict with another official Goshen College activity; (2) there is written documentation signed by proper authorities; and (3) the instructor is notified prior to the due date or as soon as possible afterwards.