

1. Introduce traditional mathematical concepts, constructs, systems, algorithms, and methods of inquiry and analysis;
2. Provide an environment where students can construct, investigate, learn, and/or apply those attributes described in Course Requirement 1.

Class Structure: As noted in the course title, we will be exploring mathematics. Mathematics cannot be learned passively, so every attempt has been made to structure this course in a way that provides a supportive, active learning environment. The materials and topics that we will create and use have been designed to guide your discovery and exploration of mathematics in a variant of the Socratic teaching style. That is, these materials provide you with a series of leading questions that allow you to (re)discover and explore specific mathematical topics for yourself. The majority of class time will be devoted to cooperative group work on the questions posed in these materials.

Assignments: There will be three major types of assignments in this course: solution sets to the questions/problems posed in the course materials, journals, and a poster presentation.

Your solution sets to the questions/problems posed in the texts and supplements are the most critical part of the course. (See "Grading" below for the weights of the various components.) Your solution sets will be assessed in a variety of ways, including: complete written solution sets, notebook quizzes, multiple-choice notebook quizzes, and oral quizzes. Your *complete solution sets* must provide detailed, complete, coherent, mathematically correct, and well written solutions to each of the problems from the lesson in question. Your work in class in groups and individually at home on these problems should only serve as rough drafts for your final solution sets. The solution sets you hand in should be *final drafts*. My expectations in regard to your solution sets are detailed in "Format and Grading of Solution Sets" which will be distributed. Assignments submitted more than 12 hours after their due date will be considered late. More than one late assignment per semester will result in heavy penalties. Certain lessons will be assessed via *notebook quizzes*. We will work through the lesson in class as usual. When there has been ample time to complete the lesson I will hand out a quiz that asks you to answer, by number only, several questions from the lesson under consideration. These quizzes will be open notebook but will be closed book. Therefore, it is imperative that your progress through these problems is complete and well documented in your notebooks. Similarly, *multiple-choice notebook quizzes* will be *open note* but will be *closed book*. Missed quizzes can only be made up within the span of three school days following their scheduled date and no student will be allowed to make up more than two missed quizzes. Occasionally I may choose to assess your work on specific lessons via *oral quizzes*. These will be completed outside of class. Like the other means of assessment, this assessment will be open notebook.

Depending on the pace of the development of materials, alternative written assignments may be used to assess your mathematical progress on the course topics. I will provide ample warning and description if we deviate from the description above.

There will be one project. This project will be described in detail later in the course.

You will be responsible for giving one *poster presentation*. These presentations will be described in detail later. These posters will be assessed by the class as a whole and then will be displayed in Wilson Hall.

Student Responsibilities: More about student responsibilities will be distributed in a subsequent handout. What follows is a summary. Each class day you must come prepared for class and must work faithfully during class. In part this means that your work must be up to date, excluding questions that you have specific difficulties with; you must bring your notebook; and you must have your text or the supplemental materials. Because you will generally be unable to complete all of the lessons during class time, you should expect to spend about one hour working on problems outside of class for every hour of class time. (This is

a Federal Guideline and is stated explicitly in the 2013-14 WSU Bulletin; see the section "Credit Hour" in <http://catalog.westfield.ma.edu/content.php?catoid=8&navoid=356> .) All of your work must be recorded in your notebook. Work not included directly in your notebook cannot be utilized for quizzes. Most days I will call on people by name to share their solutions to specific problems with the class. You must be prepared to provide not only mathematically correct solutions with justification, but to provide clear and concisely written solutions as well. Students who are not participating actively in class will be asked to leave so they are not detrimental to their group's progress.

Attendance is required. **If you are absent for more than three classes during the semester, each class you miss beyond the limit of three will reduce your final course grade by one-third of a letter grade.** This course ends when your final work is submitted on the day of the regularly scheduled final exam period, *not* on the last day of classes.

Grading: As noted above, absenteeism will adversely affect your grade in this course. Final grades will be based on the following:

- Written Assignments (70%)
 - Projects (10%)
 - Poster (10%)
- Class Participation (10%)

Final grades will not be determined by an absolute scale, but rather a curve that will be determined at the end of the course at the discretion of the instructor.

There will likely be several opportunities for extra credit. These will be attendance at Department of Mathematics seminars, regional conferences, and college-sponsored events. Appropriate events will be announced in class. You will receive 5 points of extra credit for each of these events that you attend.

Academic Honesty: While we will work cooperatively in groups during class, and while I invite people to work together outside of class, *your final solutions sets must be made up of your own work which is written in your own words. Assignments that have been copied from another student or another source will result in failing grades for all students involved. Moreover, such dishonesty will be considered a violation of the college policy on academic honesty and will be dealt with severely.*

Final Remarks: Exceptions to rules on absences, late papers, and make-up quizzes will be granted at the teacher's discretion and then only under exceptional circumstances which have been documented in writing.

Every effort has been made for this course to be a positive, constructive learning experience. If there are any questions or difficulties, I would appreciate it if you would speak with me as soon as they arise.