

## **Syllabus for MAE 501 - Foundations of the Secondary School Mathematics Curriculum - Fall 2005**

This course has several goals. First, to ensure that you have fully mastered the secondary school curriculum. Second, to develop an understanding of the interconnections among the different branches of secondary school mathematics. Third, to develop an understanding of the connections between the secondary school curriculum and your college level mathematics curriculum. Fourth, to enhance your problem solving abilities, and to develop an understanding of the processes involved in mathematical problem solving.

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**Office hours:** TBA and by appointment

**Text:** Usiskin, Peresini, Marchisotto and Stanley, Mathematics for High School Teachers, An Advanced Perspective (2003)

**Course Outline:** We will cover most of the material in the text. The approximate schedule is as follows:

Week of 09/29: Chapter 1

Week of 09/05: First Exam

Week of 09/12: Chapter 2

Week of 09/19: Chapter 3

Week of 09/26: Units 4.1 and 4.2

Week of 10/3: No classes

Week of 10/10: Units 4.3 and 5.1

Week of 10/17: Units 5.2 and 6.1

Week of 10/24: Units 6.2 and 7.1

Week of 10/31: Units 7.2 and 7.3

Week of 11/7: Unit 7.4 and review

Week of 11/14: Midterm exam

Week of 11/21: Chapter 8

Week of 11/28: Chapter 9

Week of 12/5: Chapter 10

Week of 12/12: Review

**Final Exam:** Wednesday, 12/21/05, 5:00--7:30 p.m.

**Exams:** There will be a first exam, a midterm exam and a final, as follows.

The first exam will be on Wednesday, 09/07. This exam will consist of questions culled from recent Math A and Math B regents exams. If necessary, there will be at most two make-up exams later in the semester. In order to pass this course, you must pass this exam with a grade of 90 or higher.

The midterm exam will be on Monday, 11/14. It will cover the material in Chapters 1 to 6.

The final exam will be held on Wednesday, 12/21, 5:00--7:30 p.m.

**Grading:** The final grade has two components.

**Component 1.**

Final exam: 40%

Midterm exam: 25%

First exam: 05%

Quizzes and Classwork: 10%

Homework: 10%

Project: 10%

**Component 2.** If you do not achieve a grade of at least 90% on the First exam (or on a make-up exam), you will not pass this course.

**Homework:** Homework will be assigned each Wednesday, and is due at the beginning of class the following Monday. In computing the final homework grade, the lowest three grades for each student will be dropped.

**Project (For graduate students only):** Each student will complete a short (6-8 page) paper on an application of mathematics that is related to one of the topics covered in class. Each topic must be approved by the instructor.

**Note:** If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, you are urged to contact the staff in the Disabled Student Services office (DSS). They will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. Note that we cannot make special arrangements for students with disabilities except for those determined by DSS.