

## Math 509 Spring 2010

Instructor: Dr. R. Nemirovsky

Office Hours: Monday, 3-5pm

Office: GMCS 503

Telephone: 594-6806

Class: Monday and Wednesday 12-1.50 (AH 1112).

On January 27th and April 5th there won't be classes due to the furlough

Email: nemirovsky@sciences.sdsu.edu

A primary goal of the course is for students to develop experiences for the use of technology tools in the teaching of mathematics. The mathematical content of the course is divided in two parts: Complex Functions and Conics. The activities include the following components:

1. Sketchpad Portfolio. Each student will develop throughout the course a portfolio of "sketches" (in Geometry Sketchpad) for the learning and teaching of different aspects of Complex Functions and Conics.
2. Scratch Portfolio. Each student will develop throughout the course a portfolio of "scratches" (in Scratch programming language) for the learning and teaching of different aspects of complex functions and conics
3. Cabri 3D Portfolio. Each student will develop throughout the course a portfolio of 3D constructions for the learning and teaching of different aspects of Conics
4. Craft Projects. Each student will develop two craft projects: 1) A string-art piece on the transformation of complex functions, and 2) An embroidery design on conics to be incorporated into a quilting project
5. Math Exhibit Project. Each student will develop a math exhibit/activity related to the topics of Complex Functions or Conics. Toward the end of the course high school students will come for a field visit and take turns at the different math exhibits.

### Materials:

Each student must always bring to class a USB memory stick to save portfolios and assignments.

### Course format

Class meetings will involve working in small groups on challenging problems or individually on projects and portfolios. There will be a midterm on Complex Functions. As with other mathematics courses, it is extremely important that your schedule allows you to keep up-to-date on the work. If you are over-committed, something must suffer. Every theory of learning assumes that the learner is engaged, and not just a passive onlooker or a conscientious secretary. When you do not understand something, try to get it cleared up as soon as possible.

### Attendance Policy

Regular attendance is required. Each student is permitted to miss one class on Tuesday and one class on Thursday without penalty. For each additional absence two percentage points will be subtracted from your course total.

## Homework

Homework will consist of the updated Sketchpad and Cabri 3D portfolios. They will be submitted every two weeks. Late homework is not accepted. Homework grading will reflect an assessment of the work and creativity reflected on the newer versions of the portfolios.

## Evaluation

Midterm	15%
Homework Portfolio	20%
Math Exhibit Project	25%
String Art	10%
Quilt Project	20%
Creativity	10%

## To be assured the following grades, you need to earn

92% - 100% = A	83%-87% = B	73% - 77% = C	63%-67% = D
90%-91% = A-	80%-82% = B-	70%-72% = C-	60%-62%=D-
88%-89% = B+	78%-79% = C+	68%-69%=D+	59% and below = F

## Academic Integrity

Many students find that studying with others is helpful to them, and I encourage that since it gives you extra practice at explaining your thinking. Presenting the work of others as one's own, however, is called **plagiarism**. Plagiarism is unacceptable in an environment devoted to learning. The penalty for plagiarism ranges from failing the piece with the plagiarism, to lowering the course grade, to failing the course, to expulsion from the university. Hence, you should not copy someone else's homework or make minor alterations and hand it in as your own- this is plagiarism.