Polynomials-Math 4444/6444 Section 5, CRN-87518/87519
Fall 2010

Instructor: Florian Enescu

Classroom: GCB 623   **Class timings:** Tu Th 2:30 – 3:45 pm

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Office Hours: Monday 11:30-12:30pm Wednesday 1:00-2:00 pm and by appointment.

Textbook: Lectures notes will be distributed weekly and they will represent our textbook.
They are loosely based on chapters from *Polynomials*

      by Victor V. Prasolov, Springer-Verlag ISBN 3-540-40714-6.

but there is not need to buy this book.

Webpage: `http://ww2.gsu.edu/~matfxe/currentclasses`

Course content/outcome: Polynomials are likely the most often studied concept in mathematics and they are used in a form or another in virtually every area of mathematics. This course will present the theory of polynomials from various points of view using techniques from analysis as well as algebra. The course will expose students to an array of classical results on polynomials (many of them a couple of hundred years old) that should be part of the general mathematical background of a mathematics major as well as touch upon current research questions that can be understood and appreciated at this educational level. This course will offer a bridge between the general fields of algebra and analysis and offer a concrete example of how modern mathematics, often perceived as too abstract, grows out of the classical mathematics.

Prerequisites: MATH 3000 with a grade of C or higher. During the first two weeks of the semester the Department of Mathematics and Statistics checks the computer records to determine whether or not each student has met the prerequisites for this course. If you do not have the prerequisites please so inform your instructor and change to another course right away. If our computer search finds that you do not have the prerequisite, you must drop the course or you will be dropped automatically. If you do not attend class during the first two weeks you will be administratively dropped.

Homework: Every ten days or so, there will be a homework assignment that will be graded. No late homework will be accepted. You can discuss the problems among yourselves, but the write-up of the solutions has to be done individually according to your own understanding. Identical assignments will not be graded. The assignments as well as the exams for Math 6444 will be more involved than the ones for Math 4444.

Grading scheme for Math 4444/6444:

Homework:	30 %	
Exam 1:	20 %	Thursday, October 7
Exam 2:	20 %	Tuesday, November 16
Final exam:	30 %	Tuesday, Decmber 9 13:30pm

Exams: There will be two midterm exams and one final. The final exam is comprehensive and required. Also, the final exam grade will replace the lowest grade of one (and only one) midterm exam in case the final exam grade is higher. No midterm exam grade will replace the final exam grade. Make-up exams will only be allowed for extreme emergencies that must be documented, such as medical emergencies. It is the instructor's role to determine if a specific emergency is a valid one.

Using the above weights, letter grades will be assigned (roughly) as follows:

97–100 = A+,   93–96 = A,   90–92 = A-,   87–89 = B+,   83–86 = B,   82–80= B-, 77–79 =C+,   70–76 = C   60–69= D

less than 60 = F.

Attendance: You are expected to attend regularly for the entire period of the class. That is, you are expected to arrive on time and stay for the duration of the class. Attendance will be taken periodically. After four or more absences a student can be dropped from this class. In case of an absence, the student is responsible for knowing all the material covered.

Important dates: Last day to drop a class: August 27, on GoSolar. A student that does not attend the first two weeks can be dropped by the instructor.

Last day to withdraw from term length classes and possibly receive a W: October 8, 2010.

Disruptive behavior: Any disruptive behavior will be handled according to the University's policy on disruptive behavior (http://www.gsu.edu/∼wwwsen/minutes/2002-2003/disrupt.html). This includes the possibility of withdrawing the student from the class.

Academic honesty: Academic honesty is expected from any student. Cheating will not be tolerated and handles according to the University's policy on academic honesty (http://www.gsu.edu/∼wwwdos/codeofconduct_conpol.html) which includes academic as well as disciplinary penalties.

Changes: Any changes to the above syllabus will be announced in class. The course syllabus provides a general plan for the course; deviations might be necessary.