

## Syllabus for Graph Theory, MAD 3305, Class Number 10690, Spring 2011

**Book:** "Introduction to Graph Theory" by G. Chartrand and P.Zhang (ISBN 0-07-294862-0).  
(The book is out of print, but copies can be found on-line.)

**Synopsis:** The language of graphs is with no doubt very useful in modeling different situations both in Science and in Mathematics. To study those models, one needs specific methods and tools developed in the branch of Mathematics called Graph Theory. Statements about graphs, although easily stated and understood, are often very difficult to prove. In order one to be efficient when dealing with graphs, they need sufficient knowledge and proficiency in using those methods and tools. The aim of this course on Graph Theory is to lay a firm foundation of the theory, presenting its most basic notions, techniques, and results in a rigorous way with as many as possible examples.

The sections to be covered are:

1.1 through 1.4; 2.1 through 2.4; 3.1, 3.2; 4.1 through 4.3; 5.1 through 5.4;  
6.1, 6.2; 7.1, 7.2; 8.1; 9.1; 10.1, 10.2; 12.1, 12.2.

The work of the students will be assessed on the basis of Quizzes, two Midterm Tests, and a Final Exam.

**Homework:** Homework Assignments will be posted regularly to the web page of the class. Some of the exercises from these assignments will be graded – each assignment will specify the problems which have to be turned in as well as the due date for that.

**Quizzes:** There will be 15 minutes Quizzes in the end of selected lectures. Information about that will be posted in due time.

**Grading policy:** The overall grade of the students will be formed by taking  
10% of the HW grades  
20% of the Quizzes' grades  
30% of the average of the Midterms' grades  
40% of the Final Exam grade.

The overall grade of the student above is determined now by the scale:

$0.92 < S$	: A	$0.89 < S < 0.92$	: A-	$0.87 < S < 0.89$	: B+
$0.82 < S < 0.87$	: B	$0.79 < S < 0.82$	: B-	$0.77 < S < 0.79$	: C+
$0.67 < S < 0.77$	: C	$0.65 < S < 0.67$	: C-	$0.62 < S < 0.65$	: D+
$0.57 < S < 0.62$	: D	$0.55 < S < 0.57$	: D-	$S < 0.55$	: F

**Make-up exams:** No make-up exams will be given.

**Important note:** The Instructor reserves the right to make any changes he considers academically advisable. Any such changes will be announced in advanced in class or by posting them to the e-mail accounts of the students. The students are responsible to be aware of the changes announced this way.