

# Graph Theory MATH 4350

## Syllabus

### Fall 2008

**Instructor:** Dr. Christian Barrientos  
**Office:** UC 407  
**Office Hours:** Monday 15:30 – 17:30 hrs. and Tuesday 11:00 – 13:00 hrs.

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#### Course Description

This course is a study of the fundamental concepts of graphs, trees, connectivity, Eulerian and Hamiltonian graphs, planar graphs, graph colorings, network flows, matching theory and applications.

**Prerequisites:** MATH 3005, A Transition to Advanced Mathematics, or both (MATH 2020, Introductory Discrete Mathematics, and MATH 2140, Introductory Linear Algebra) with a minimum grade of C or better.

**Textbook:** Introduction to Graph Theory 4<sup>th</sup> Edition by Robin J. Wilson, Prentice Hall 1996.

**Topics:** Basic Definitions, Paths and Cycles, Trees, Planarity, Coloring Graphs, Digraphs, Matching, Marriage and Menger's Theorem, Matroids.

**Exams:** There will be three (3) in-class tests (see schedule below) and a comprehensive final exam.

**Homework:** Homework assignments consist of exercises from the text, corresponding to the sections covered in class. These assignments will be collected and graded.

**Quizzes:** Every week, on Wednesday, a short in-class quiz will be given on the homework material. These quizzes will cover definitions, short answers, computations and simple proof techniques.

**Grades:** The final grade will be determined as follows:

The 3 tests	30%
Graded Homework	20%
Quizzes	20%
Final Exam	30%

**Grading Scale:** A (100-90), B (89-80), C (79-70), D (69-60), F (<60)

**Important Dates for the Semester:**

August 8	Classes begin
September 1	Labor Day (no classes)
September 17	Test #1
October 10	Last day to withdraw and receive a W grade
October 22	Test #2
November 26	Thanksgiving weekend (no classes)
December 3	Test #3
December 5	Last day of classes
December 6-12	Final exams (see CSU schedule)