

Math 5483: Graph Theory

MW 5:30 – 6:45 IN BOYD 306

Instructor: Dr. David Leach (cleach@westga.edu)

1 Topics

graphs, digraphs, isomorphisms, automorphisms, matchings, planarity, paths, cycles, euler circuits, hamilton cycles, graph decompositions, colorings, trees, network algorithms, heuristics, combinatorial designs

2 Objectives

Upon completion of this course, the student should have the following:

- A thorough knowledge of the different basic types of graphs. (L10)
- Proficiency with proofs involving graphs. (L2, L10)
- A knowledge of the major theorems of graph theory, and the ability to prove many of them. (L2, L7, L10)
- The ability to use graphs models. (L9, L10)
- An introduction to combinatorial designs and their applications. (L10)

3 Prerequisites

MATH 3003 (you may take MATH 3003 as a corequisite with the permission of the instructor)

4 Text

Applied Combinatorics, 4th Edition, by Alan Tucker.

5 Evaluation

Test Average	45%
Assignments	30%
Final Exam	25%

5.1 Homework

We will have homework from each section. Homework will not be graded. You are allowed to work together on the homework assignments.

5.2 Assignments

There will be several assignments throughout the semester that will account for 20% of your grade.

5.3 Tests

There will be three in-class tests that make up 50% of your grade.

5.4 Final Exam

The final exam will be comprehensive.

6 Attendance

If you miss a class, you are responsible for obtaining any information that you missed. If you miss a test, you must have a university-approved excuse in order to take a make-up test.

7 Office Hours & Math Lab

Monday	10:00-11:00; 1:30-2:30 ; 4:00-5:30
Wednesday	10:00-11:00; 2:00-3:00 ; 4:00-5:30
Friday	10:00-11:30

The times listed in **bold** are my Math Lab hours. Math Lab is held in room 302. I'm also frequently in the office on Tuesdays and Thursdays. Office hours are also available by appointment.

8 Website

My web site (<http://www.westga.edu/~cleach/>) contains useful stuff like my schedule and contact information, and useless stuff like GPS maps, Lego art, and a big picture of an iceberg.

9 Other Useful Information

- The Final Exam is Monday, May 3, 5:30-7:30 pm.
- MLK Day is Monday, January 19.
- The last day to withdraw is Friday, Feb 27.
- Spring Break is March 22-26.