

## Math 325 – Graph Theory

### Block 6 2005

### Course Procedures

**Professor:** Josh Laison, Tutt 201, x6544, [jlaison@coloradocollege.edu](mailto:jlaison@coloradocollege.edu)

**Class Meetings:**

**Weeks 1 and 2:** Quiz time: 9:00-9:30

Class time: 9:30-12:00 with a break, Monday–Friday, Tutt 108

**Week 3:** Conference attendance, approximately 8:30-4:30 Monday–Friday

Two short class meetings during the day

**Textbook:** Graph Theory with Applications, J. A. Bondy and U. S. R. Murty

**Course Web Page:** [http://faculty1.coloradocollege.edu/~jlaison/graph\\_fall05.htm](http://faculty1.coloradocollege.edu/~jlaison/graph_fall05.htm)

**Grading:**

|                                   |     |
|-----------------------------------|-----|
| Written problems (5)              | 15% |
| Quizzes (9)                       | 15% |
| Midterm exams (2)                 | 15% |
| Final exam                        | 20% |
| Group presentation                | 10% |
| Conference oral presentations (2) | 10% |
| Conference written reports (15)   | 10% |
| Conference participation          | 5%  |

**Homework Problems:** You will have written homework due approximately every two days for the first two weeks of class. You are encouraged to work together on these problems; in fact, you may have the opportunity to work on them in class. However, please write your solutions to these problems in your own words.

**Quizzes:** There are many vocabulary words you will need to learn to talk about graph theory and understand presentations about it, probably more than in other areas of mathematics. The quizzes are designed to help you study this vocabulary. Each quiz will ask you to define a small number of words which have been defined in class. Note that the quiz will not necessarily test you on the vocabulary of the day before; you will need to remember all the definitions so far.

The quiz will be available starting at 9:00 each day, and will be due at 9:30 (there is no quiz on the first day of class). You will not need an entire

half hour for the quiz, and you may pick it up at any time during the half hour, as long as you can complete it by 9:30. The last quiz will be on Friday, March 4.

**The Exams:** All exams will be take-home exams, and you may use your notes and textbook as sources. No living source other than your professor is permitted. The exam schedule is as follows:

| Exam      | given out    | due             |
|-----------|--------------|-----------------|
| Midterm 1 | Friday, 2/25 | Tuesday, 3/1    |
| Midterm 2 | Friday, 3/4  | Tuesday, 3/8    |
| Final     | Friday, 3/11 | Wednesday, 3/16 |

**Group Presentations:** In preparation for attending the conference, you will read one or more articles published in the conference proceedings from previous years, and present your findings to the class on Friday, March 4. The groups will consist of 2 or 3 students. Your presentation should be roughly 5 minutes per student, divided evenly among the group, and may use powerpoint, overhead transparencies, chalkboard, handouts, hand puppets, or all or none of the above.

You need to order your article(s) from interlibrary loan during the first week of class so that they will arrive in time. I encourage you to play it safe and order lots of extra articles, so that you will definitely have at least one you like. The information about how to order your articles is available on the class website.

**Conference Reports and Presentations:** During the conference, we will not cover additional material in the text, and you will not have homework problems or quizzes. Instead, we will work to get the most out of our time at the conference as possible. Each day, we will meet and talk about the schedule for the following day. You will read the abstracts for the talks and plan which talks to attend. If there are portions of the abstracts that you do not understand, we will discuss them as a class. Based on which talks people are interested in attending, we will schedule two class meetings during the day (we should have a classroom available for our use).

While you do not need to be attending talks every minute of the day, you should take this opportunity to participate fully in the conference, and make a good-faith effort to attend as many talks as you can. I will ask you to select three of the talks you attend each day, and write a short one or

two-paragraph report summarizing the main or interesting parts. You may include statements and/or proofs of theorems, open questions, examples, your own ideas, or anything else that strikes you as interesting about the talk. Note that your report should go beyond the abstract, although you may use the abstract as a source.

You will also select a total of two of the talks you write up to present to the rest of the class. Your presentation should be similar in content to your group presentation from the second week of class, although you will probably only be able to use a blackboard. You should talk to the other members of the class to make sure that two people don't plan on presenting the same talk, although if there's multiple presentations on related topics, that's okay. I will have a few resources available if you need to do a little extra research.

Note that there may be topics talked about at the conference that are slightly different than the ones covered in class. Feel free to explore the wonderful world of graph theory and combinatorics! The best way to decide if you'll like a talk is to go to it.

#### **Honor Code:**

**on the homework:** You may, and are encouraged to, discuss the homework with anyone, get help from your textbook, notes, computer algebra systems, etc. However, your submitted written work should be your own.

**on the exams:** You may consult your text and notes. You may not discuss the exams with anyone other than me.

**on the quizzes:** You may not consult any source other than me.

**Conference Decorum:** Although you will be in Florida and far away from Colorado College, remember that you are not on a trip by yourself. You are a representative of Colorado College and I am responsible for your well-being during the week we are together. If you put yourself at risk, you put your classmates, myself, my department chair, and the dean at risk as well. Please be considerate of us in your behavior.