MA/STA 515 — LINEAR AND COMBINATORIAL OPTIMIZATION
MWF 11:00–11:50 — CB345

COURSE WEBPAGE: www.ms.uky.edu/~lee/ma515fa04/ma515fa04.html

INSTRUCTOR: Carl Lee, 967 POT, 257-1405, lee@ms.uky.edu, www.ms.uky.edu/~lee

OFFICE HOURS: MWF 10:00–10:50 and by appointment, since I realize that some of you will be unable to come at these times. Also, I will need to schedule some additional formal teams for the class to meet, since there are some class days when I will be out of town.

TEXT: Jon Lee, *A First Course in Combinatorial Optimization*, Cambridge, 2004. I will also prepare some course notes.

TOPICS:

1. Chapter 0: Polytopes and Linear Programming

2. Chapter 1: Matroids and the Greedy Algorithm

3. Chapter 2: Minimum-Weight Dipaths

4. Chapter 3: Matroid Intersection

5. Chapter 4: Matching

6. Chapter 5: Flows and Cuts

7. Various miscellaneous topics as time permits

GRADING:

Homework: 50%
Exams: 30%
Final: 20%

HOMEWORK: Usually collected weekly, but some problems may be collected more frequently. From time to time I will give additional homework assignments for the graduate students enrolled in the course that will not be required of the undergraduate students. Problems are assigned to be solved. Searching the textbooks or the library for solutions is not permitted. On regular assignments you may discuss the problems with other current

class members and with me. However, when it comes time for you to write up the solutions, I expect you to do this on your own. If you receive assistance from someone else, include a written acknowledgment. Such an acknowledgment is a professional courtesy and will not affect your grade.

EXAMS: There will be two or three exams (tentative dates: September 22, October 20, and November 17) and a final exam (December 13).

IMPORTANT DATES:

Wednesday, August 25, First day of classes
Tuesday, August 31, Last day to add a class
Monday, September 6, Labor Day holiday—no class
Wednesday, September 15, Last day to drop a class without a grade
Friday, October 1, October break—no class
Saturday–Sunday, October 2–3, Math graduate "cease-fire" weekend
Friday, October 22, Last day to withdraw from a class
Thursday–Friday, November 25–26, Thanksgiving holiday—no class
Friday, December 10, Last day of classes
Monday, December 13, 10:30 a.m., Final exam.

CHEATING AND PLAGIARISM: The *minimum University penalty* for cheating and/or plagiarism is *a grade of E for the entire course.* It's not worth it and it is damaging to your self-integrity, so don't do it.