

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

COURSE WEBPAGE: www.ms.uky.edu/~lee/ma515fa05/ma515fa05.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 times 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 16, October 10, and November 18) and a final exam (December 14).

IMPORTANT DATES:

Wednesday, August 24, First day of classes

Tuesday, August 30, Last day to add a class

Monday, September 5, Labor Day holiday—no class

Wednesday, September 14, Last day to drop a class without a grade

Friday, October 7, October break—no class

Saturday–Sunday, October 8–9, Tentative math graduate “cease-fire” weekend

Friday, October 21, Last day to withdraw from a class

Thursday–Friday, November 24–25, Thanksgiving holiday—no class

Friday, December 9, Last day of classes

Wednesday, December 14, 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.