Institut for Matematik & Datalogi
Syddansk Universitet

March 14, 2003
JBJ

DM69 — Weekly note 6

Exam date

The oral exam date is now fixed to be June 11, 2003.

Handed out material Friday March 14, 2003

Chapter 13 of the book Combinatorial Optimization by Korte and Vygen, Springer Verlag.

Material covered in the lecture on March 13

Greedy algorithms and matroids. Cormen chapter 16.1-16.2, 16.4-16.5. I focussed on 16.1 and 16.4, you should read the rest yourself.

Exercises March 20, 2003

- Bang-Jensen and Gutin: 3.28, 3.74, 3.76, 3.79, 3.80, 3.83
- Read section 16.5 in Cormen and be prepared to present the material.
- 16.1-2, 16.1-3 and 16.1-4 in Cormen.
- Read page 382-383 in Cormen and be prepared to present the material.
- Exercise 16.2-1 in Cormen,

Lecture on March 21, 2003

More on matroids (based on Chapter 13 in Korte and Vygen.

Exam questions

We will start compiling a list of possible exam questions. For the stuff we have covered until now, the following are the possible questions (main questions).

1. Shortest paths in digraphs.
2. The maximum (s,t)-flow problem and the minimum (s,t)-flow problem.
3. Polynomial algorithms for maximum flows.
4. Minimum cost flows.
5. The assignment problem and the transportation problem.
6. Matchings: characterizations and algorithms.
7. Matroids and the greedy algorithm.