Institut for Matematik & Datalogi
Syddansk Universitet

26. januar 2007
JBJ

DM85 Networks and Integer Programming — Ugeseddel 1

Course starts on February 2nd, 2007

"Weekly notes" The weekly notes will only be available from the home page of DM85. The notes are in English, because we (may) have non-Danish participant(s). If this causes problems, do not hesitate to ask for clarification if you do not understand what I write!

Literature

1. Laurence Wolsey, Integer Programming, Wiley 1998. This is the main text. The book is available from the bookstore.
2. J. Bang-Jensen and G. Gutin, Digraphs: Theory, Algorithms and Applications, Springer Verlag London 2001. Chapter 3. This chapter will either be handed out or made available on the course page.
3. Possibly some material from other books. This will be made available from the home page or handed out at lectures.
4. A few research papers and copies from other books. These will be handed out or made available from the home page of the course.
5. G.L. Nemhauser and L.A. Wolsey, Integer and Combinatorial optimization, Wiley Interscience 1988. This will only be supplementary literature which you can use to read more about the various techniques we cover. You can find it in the library on the shelf next to Tove and Bente.

Evaluation The course is evaluated according to the 13 point scale there will be an external censor for the oral exam. There will be two (fairly small) graded projects during the course and an oral exam at the end. The projects count 25 % each in the final grade (and the oral exam 50 %). The oral exam takes place on June 23.

Format: There will be 4 hours confrontation each week. The classes are monday 10-12 and friday 12-14 in the seminarroom.

Lecture on February 2, 2007: I will give a short outline of the course and then cover pages 1-12 approximately.

Lecture on February 5, 2007: I will cover the rest of Chapter 1 and we discuss the exercises below.

Exercises for February 5, 2007: 1.9.1, 1.9.4, 1.9.8, 1.9.9, if time allows it we will also look at 1.9.5. This is a good example of what is involed in modelling. You must introduce various variables (such as one which indicates that John takes the i'th section of a course) and also model that there are five days in a weekly schedule).

Industrial projects

As some of you may know, IMADA has recently started a collaboration with industrial partners in order to increase the knowledge transfer in both directions. The leader of this project is your humble teacher, Jrgen Bang-Jensen. This collaboration will result in much better possibilities for students to work on projects which are relevant for industry and thereby preparing themselves well for working on similar problems in a company. There will be projects at all levels, from normal (course like) projects via bachelor projects and master thesis (specialer) to phd projects. DM85 is extremely relevant in this connection, since many of the projects will involve solving some optimization problem via methods from mathematical programming.

Those of you who are interested in such projects are hereby encouraged to contact me at anytime during the spring!