Please refer to last year's Kurs-PM for further information.

Course literature

(Obligatory !!) Norman L. Biggs, Discrete Mathematics, Oxford Science Publications.

OBS! In previous years, purchase of the book has been optional. However, this year I intend to use it considerably more than before, so it is highly recommended that you buy it. Something like 100 copies have been ordered for the bookstore.

There are several editions of this book. In the most recent edition (the one in the bookstore), seven chapters of background material have been added at the beginning of the book. However, the rest of the book is exactly the same as previous editions, so if you fail to get the latest edition, I would recommend that you try to get your hands on an earlier one.

Course content

The term 'Discrete Mathematics' covers a broad spectrum of mathematics. In this course I will give an introduction to several topics which I hope represent a good cross-section of this spectrum - time permitting. Topics to be covered include :

1. Counting techniques (enumerative combinatorics) - chapters 9,10,11,12,19,25 in Biggs.
2. Graph theory - chapters 15,16,17,18.
3. Relations, modular arithmetic, RSA encryption - this material is only partly covered in Biggs, mostly chapters 8 and 13. Otherwise, refer to your lecture notes
4 (If we have time, which is unlikely !). Error correcting codes - chapter 24.

Note that the chapter numbers refer to the latest edition of the book. To convert to the previous edition subtract 7 from each chapter number.

Examination

The examination will consist of three homework exercises and a final written exam. Approximately one-third of the course points will be given for the homework and two-thirds for the exam. Each homework exercise will also

include one or two, perhaps more difficult, 'bonus problems', which give bonus points amounting to about 10 percent of the total.

In order to pass the course, you need to achieve (i) a minimum overall grade of 50 percent (ii) a minimum grade of 40 percent on the exam.

The exam will consist of a number of problems to solve - you will not be asked to recite proofs of theorems in the lecture notes or the text book. These problems will be of a similar nature to material covered in the lektioner and in the easier homework exercises.

OBS! The material on the home page for last year's course gives a good indication of what you can also expect this time round.