

DM867 – Spring 2022 – Weekly Note 8

Exam problems

They have been posted and must be handed in on April 8 at 15.00. The second set of exam problems will be posted around May 4th with a deadline for handing in at May 23th (the dates may change a bit).

Exam date

The exam date will be June 1st

Stuff covered in week 11, 2022

- Minimum cost flows and circulations. BJG Section 3.10 (watch DM817 video on BJG Section 3.10)
- The directed Chinese postman problem. BJG Section 3.11.2 (watch DM817 video on BJG Section 3.11)
- Finding subdigraphs with prescribed in- and out-degrees. BJG Section 3.11.3 (watch DM817 video on BJG Section 3.11)
- The Chinese postman problem and shortest paths in undirected graphs. We will use Sections 14.5 and 14.6 from the book 'Graphs, Networks and algorithms' by D. Jungnickel, Springer Verlag.
- Certificates for k -strong connectivity of digraphs. BJG Section 7.16
- Approximation algorithms for the travelling salesman problem (TSP). Khuller chapter 43.1-43.2. See also PS 17.1-17.2. and Theorem 17.10 in PS.

Classes in Week 12

The monday class is cancelled!

- Matroid intersection and union. Korte and Vygen Sections 13.5 and 13.6. See also Schrijver 10.4-10.5.
- The Steiner tree problem. We will use Chapter 42 in the notes by Khuller on the home page