Graph Theory 1MA170: Course information

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> This file is intended to contain all the practical information you may need about the course – when is the exam, what is the assignment, when are the lectures, and so on.[2]

[2] If you notice some information is missing, please do tell me and I will add it.

The course literature for this course is Reinhard Diestel's *Graph Theory*[3] and "notes from the lecturer". The course will of course be closer to the notes than to the book, but the book should still be a useful reference or alternative perspective – though I do not guarantee that everything the lecture notes cover will be in the book. Since the course has a new lecturer this year[4], "notes" could really refer both to the old notes and the new ones. Update this bit closer to the beginning of the course to reflect the state of the notes.

[3] Which is available in a free pdf format from the university library. Add link to the book. Add citation to the book.

[4] The previous one defended his PhD and is no longer at Uppsala.

Lecture plan

There will be a total of twenty scheduled sessions, of which how many will be lectures, and the rest will be exercise sessions. The exercise sessions are important – we will use them to introduce new concepts, and I *will* assume in the lectures that you have been at the exercise sessions as well.[5]

The exact planning of the content of the lectures is still subject to change. Update this to reflect the state of the notes nearer to the start of the course. Add in reminder to register for the exam.

[5] Of course, we all sometimes have to miss a lecture or exercise session. Attendance is, as always, voluntary. However, just as you would read the lecture notes to catch up on a missed lecture, you should attempt the exercises to catch up on a missed exercise session!

The exam

The ordinary exam for the course is on when – remember to register at least twelve days in advance, i.e. by the when, in order to get to write it. Studying for an exam and then not getting to write it is pretty dispiriting.[6] The exam corresponds to 2hp out of the total of 5hp that the course consists of.

There will be reexams for the course when and when.

[6] This may or may not have happened to me once or twice during my undergrad and master's...

The hand-in assignment

The course has a *mandatory* hand-in assignment, which corresponds to three out of the total of five hp of the course.

Referenser

L#	Date & Time	Content
1	???	E1: Introduction – what is graph theory?
2	???	L2: Simple graphs and subgraphs
3	???	L3: Trees
4	???	L4: Counting spanning trees
5	???	L5: Weights and distances
6	???	L6: Hamilton cycles
7	???	L7: ???
8	???	L8: The max-flow min-cut theorem
9	???	L9: Matchings
10	???	L10: Connectivity
11	???	L11: Planarity
12	???	L12: Vertex colourings
13	???	L13: More on colourings
14	???	L14: Edge-colourings and Ramsey theory
15	???	L15: ???
16	???	L16: Szemerédi's regularity lemma
17	???	L17: The Rado graph
18	???	L18: The Erdős-Rényi random graph
19	???	L19: More on random graphs
20	???	L20: ???