MSMP15b Graph Theory

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(the example sheets can be found there)

This course comprises of twenty-two lectures and five back-up sessions. It is a natural continuation of the first half of the module and builds on it.

Syllabus

- Hamilton cycles
- Colourings
- Planar graphs
- Extremal Graph Theory

Assessment:

The course is assessed both continually and by final examination. The continuous part of the assessment will be based on your performance on the work handed in from the five example sheets. The best four out of these five example sheets will count and in total they will contribute 10% to your final grade for this half of the module. The final examination will take three hours and contribute 90% to your final grade.

Additional task for MSci, MSc and PhD students:

MSci, MSc and PhD students will be asked to investigate a topic beyond the taught syllabus. Details of this assignment will be on the example sheets. The assignment will be examined by questions on the final examination in June and as part of the continuous assessment.

Books

The recommended book for in this course is

- Introduction to Graph Theory, by Douglas B. West, Prentice Hall, 2nd edition 2001.

Apart from this, there are many other books which cover (most of) the material, the most suitable ones are:

- Modern Graph Theory, by B. Bollobás, Springer Verlag 1997.
- Graph Theory, by J.A. Bondy & U.S.R. Murty, Springer, 2007.
- Graph Theory, by R. Diestel, Springer Verlag, 3rd edition 2005.
  A non-printable online version is available at
  `http://diestel-graph-theory.com/index.html`