MSMP15a Graph Theory

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This course comprises of twenty-two lectures and five back-up sessions and gives an introduction to Graph Theory.

Syllabus

- Basics Concepts (e.g. vertex degrees, Euler tours, bipartite graphs)
- Matchings (e.g. Hall's marriage theorem, vertex and edge covers)
- Connectivity (e.g. Menger's theorem)

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 example sheets and will contribute 20% to your final grade. The final examination will take three hours and contribute 80% to your final grade.

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 with Applications, by J.A. Bondy & U.S.R. Murty, Elsevier/MacMillan 1976.
  The version is no longer in press, a printable online version is available at
  `http://www.ecp6.jussieu.fr/pageperso/bondy/books/gtwa/gtwa.html`
- Graph Theory, by R. Diestel, Springer Verlag, 3rd edition 2005.
  A non-printable online version is available at
  `http://www.math.uni-hamburg.de/home/diestel/books/graph.theory/index.html`