School of Mathematics

Course 2S2 Mathematics for Science Students [http://www.maths.tcd.ie/~saram/2S2/] 2005-06
( SF Students of Mathematics as a whole subject within the Natural Science Moderatorships )

Lecturer: Dr. S. McMurry

Requirements/prerequisites: none (except 1S)

Duration: 24 weeks

Number of lectures per week: 2.5, including tutorials

Assessment: Corrected exercises contribute 10% of the final mark.

End-of-year Examination: A three hour final examination held in June covers the entire course. A 3 hour supplemental examination also covers the entire course.

Description:

- Fourier Analysis
  Kreysig: Chapter 10 (Fourier Series and Fourier Transforms)

- Ordinary Differential Equations with Applications, Special Functions, Introduction to Partial Differential Equations
  Kreysig: from Chapters 1-4 (excluding parts already covered in 1S2); Chapter 11, 11.1–11.3.

- Linear Algebra with Applications
  Anton & Rorres: Review of Chapter 1 (systems of Linear Equations and Matrices); Chapter 4 (Euclidean vector spaces); Chapter 5 (General vector spaces — simple treatment) Chapter 7 (Eigenvalues and eigenvectors).

Textbooks:

Essential References


Recommended references
1. S. Lipschutz, Linear Algebra (Schaum’s Outline Series).


October 13, 2005