School of Mathematics

Course 2S1 — Mathematics for Science Students 2001-02
( SF Mathematics as a whole subject within the Natural Science Moderatorships )

Lecturer: Dr. A. Dougall

Requirements/prerequisites: Course 1S

Duration: 24 weeks

Number of lectures per week: 3

Assessment: None

End-of-year Examination: One 3-hour annual examination

Description:

• Functions of several variables. Vector calculus. Differential operator and its properties.
  Anton (Calculus): Chapter 15.

• Probability and Statistics
  Kreysig: from Chapter 22-23 (excluding topics covered in 1S).

• Multiple integrals, change of variables, Jacobians. Line, surface and volume integrals.
  Gauss’s theorem and Stokes’ theorem.
  Anton (Calculus): Chapters 16–17.

Textbooks:

Essential References


Recommended references

1. S. Wolfram, Mathematica a system for doing mathematics by computer, Addison-Wesley, published by Wolfram Media and Cambridge University Press.


March 24, 2003