School of Mathematics

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

Lecturer: Dr. J. Stalker

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: See http://www.maths.tcd.ie/~stalker/2s1/ for more detailed information.

• 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.

   Wesley.

March 3, 2006