School of Mathematics

Course 121 - Introduction to Analysis 2005-06
(JF Mathematics, JF Theoretical Physics, JF Two-Subject Moderatorship (for Mathematics + Economics), SF Two-Subject Moderatorship)

Lecturer: Dr. J. Stalker

Requirements/prerequisites: Some mathematical intuition

Duration: Full year

Number of lectures per week: 3 + tutorial

Assessment:

End-of-year Examination: A 3-hour paper.

Description: See `http://www.maths.tcd.ie/~stalker/121/` for more complete information.
The following topics will be covered among others:-

1. numbers and sets; the Least Upper Bound Axiom;
2. convergence of sequences;
3. limits and continuity;
4. differentiation;
5. integration;
6. analysis in the complex plane;
7. infinite series;
8. open and closed sets.

Textbooks
No text book will be followed slavishly.
For those who wish to see a text book the following may appeal (this is a highly personal matter).

1. W. Rudin *Principles of Mathematical Analysis*.
2. D.G. Bell *An Introduction to Real Analysis*.
3. M. Spivak *Calculus*.

March 3, 2006