School of Mathematics

Course 1S1 — Calculus I with applications for Scientists 2007–08
(JF Mathematics as a whole subject within the Science Moderatorships. JF Human Genetics. JF Computational Chemistry. JF Medicinal Chemistry. JF Physics & Chemistry of Advanced Materials.)

Lecturer: Dr. F. Jaeck

Requirements/prerequisites: None

Duration: 24 weeks

Number of lectures per week: 4 hours per week, 3 lectures and 1 tutorial.

Assessment: Practical work, assignments, tutorial work and computer lab assignment results will count for 20% of the marks. There will be an examination at the end of the first term for 20% of the marks and a final examination in June counting for the remaining 60%.

End-of-year Examination: Three hour exam. Result is combined with results of 1S2.

Description:
The textbook in 2007–8 will be [Anton]. The syllabus will be Chapters 1-11 of [Anton] plus a brief introduction to partial derivatives (sections 14.1, 14.3 of [Anton]).

Chapter headings are Functions; Limits and Continuity; The Derivative; The Derivative in Graphing and Applications; Integration; Exponential, Logarithmic and Inverse Trigonometric Functions; Applications of the definite integral in geometry, science, and engineering; Principles of integral evaluation; Mathematical modelling with differential equations; Infinite series; Analytic geometry in calculus.

Essential Reference


Recommended references


August 31, 2007