School of Mathematics

Course 212 — Topology 2002-03
(Option for SF Mathematics, JS Mathematics, JS & SS Two-subject Moderatorship)

Lecturer: Dr Jonathan Bennett

Requirements/prerequisites: 121

Duration: 24 weeks

Number of lectures per week: 3

Assessment:

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

Description: The course will begin by introducing concepts of convergence and continuity, first in the contexts of subsets of Euclidean spaces, then in the context of metric spaces, and finally in the context of topological spaces. Topological properties such as compactness and connectedness will be investigated. The course will conclude with an introduction to algebraic topology, including the concepts of homotopy and the fundamental group. Applications will be given to the topology of the plane, including the two-dimensional case of Brouwer's Fixed Point Theorem.

March 27, 2003