

Department of Mathematics
Faculty of Mathematics & Computer Science
M.Sc. (Applied Mathematics), 3rd Semester

Course Code	AM 304(a)
Course Title	Topology
Course Credits	04

Course Objectives:

Topology is the mathematical study of shapes, or topological spaces. This first course will cover the basics of point-set topology.

Minimum pre-requisites:

AM 104 Complex Analysis

Course structure:

Review of metric spaces, Topological spaces, continuous maps, and convergence, Weak Topology, Constructions of topological spaces: products, subspaces, and quotient spaces, Connectedness and path connectedness, Separation axioms: Hausdorff, regular, and normal topological spaces, Urysohn's lemma and Urysohn's metrization theorem, Compactness and Tychonoff's theorem. Compactification of topological spaces.

Reading suggestions:

- J.R. Munkres, Topology: A First Course, Prentice-Hall, 2000.
- G F Simmons, Introduction to Topology and modern analysis: Tata Mcgraw Hill education Pvt. Ltd. New Delhi, 2004.

Evaluation and weightage:

- 2-Quiz (10marks) each
- Mid Sem + Final Sem (40marks)each