



## PURE MATHEMATICS 505 "TOPOLOGY I"

**Calendar Description:** H(3-0)  
Metric spaces. Introduction to general topology.

**Prerequisite:** Pure Mathematics 435 or 455 or consent of the Division.

**Text:** "Topology," by J.R. Munkres, 2nd edition, Prentice Hall, 2000.

### *Syllabus*

#### **Topics**

Set theory

Metric spaces and topological spaces

Connectedness, compactness

Separation axioms, the Urysohn metrization theorem

The Tychonoff product theorem, compactifications

Further topics such as complete metric spaces, Baire spaces, dimension theory

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