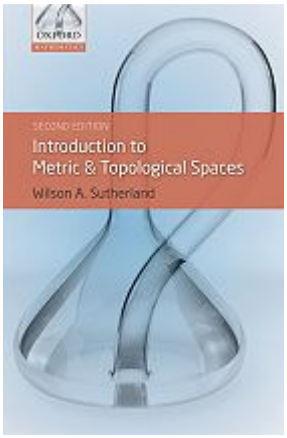
Mathematics 145A
Introduction to Topology – I

This is a first course on general properties involving the notions of **(1)** distance between two points**, (2)** regions in the plane or 3 – dimensional space**.** The material is fundamental to nearly all branches of mathematics**,** and it is an abstraction of material from both calculus and classical geometry**.**

Course Text: W. Sutherland**,** ***Introduction to Metric and Topological Spaces*** (Second Ed.)**,** Oxford University Press**,** 2009**.**



The following chapters are to be covered in the course**:**

2: Notation and terminology
3: More on sets and functions
4: Review of some real analysis
5: Metric spaces
6: More concepts in metric spaces
7: Topological spaces
8: Continuity in topological spaces**;** bases
9: Some concepts in topological spaces
10: Subspaces and product spaces
11: The Hausdorff condition
12: Connected spaces
13: Compact spaces
14: Sequential compactness

There is also a companion website for the course

http://www.oup.com/uk/booksites/content/9780199563081/

which contains supplementary material and solutions to the odd – numbered exercises in the book**.** Remarks on solutions to some even – numbered exercises are given in the document **http://akhtarmath.files.wordpress.com/2008/05/sutherland_metricandtopologicalspaces_05052008.pdf.**