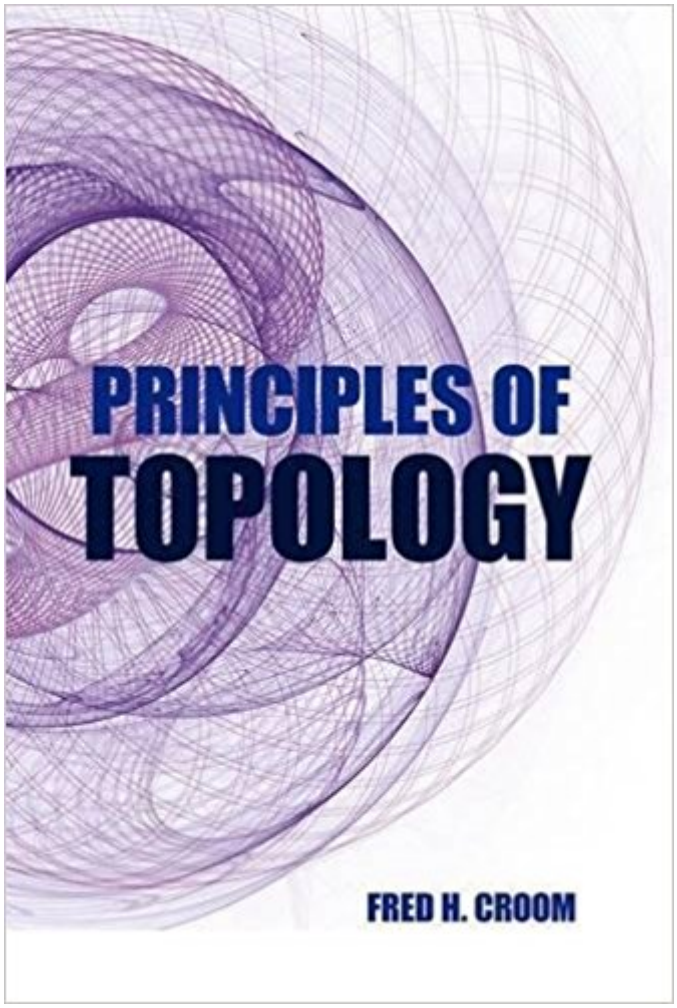
Principles Of Topology (Dover Books On Mathematics)



Synopsis

Topology is a natural, geometric, and intuitively appealing branch of mathematics that can be understood and appreciated by students as they begin their study of advanced mathematical topics. Designed for a one-semester introduction to topology at the undergraduate and beginning graduate levels, this text is accessible to students familiar with multivariable calculus. Rigorous but not abstract, the treatment emphasizes the geometric nature of the subject and the applications of topological ideas to geometry and mathematical analysis.Customary topics of point-set topology include metric spaces, general topological spaces, continuity, topological equivalence, basis, subbasis, connectedness, compactness, separation properties, metrization, subspaces, product spaces, and quotient spaces. In addition, the text introduces geometric, differential, and algebraic topology. Each chapter includes historical notes to put important developments into their historical framework. Exercises of varying degrees of difficulty form an essential part of the text.

Book Information

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Customer Reviews

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I am a freshman undergraduate student and I have liked topology since high school. As soon as I got into college I knew I will take the topology course whenever they offer one. So my second semester, there was a topology course offered and since I did not have all the prereqs for it I talked to the teacher to get approved for the course.Though I really liked the course and every class I

found something fascinating, it was a bit hard to get my formal proofs done 100% correct. So I was looking for an additional aid to my textbook, which did not have too many proofs written on it. I came across this one and decided to order it together with some other ones.The book is a nice introduction to point set topology for undergraduate level, however it did not satisfy my needs much, since the main purpose of my purchase was getting to see more formal proofs.Overall, it is very engaging and well written and I would certainly recommend it to beginner topologists.

This book is for the senior undergraduate, beginning graduate student or the enthusiastic high schooler.I found it to be written in a very clear lucid style. The book engaged me and drew me in.It is about the same level as Munkres' text but more down to earth with no compromise on rigor.It covers metric and topological spaces; connected sets and metrizable spaces (Urysohn's lemma).I really like this text and at this level is probably the best book on topology(and I have read a fair number of books on this subject).

I'm an adult, self-study student, with a background in calculus, physics. I've now gone through several books on topology, and I find that even many of the undergraduate texts tend to be a bit "dense," in that they introduce too much, too fast. Croom's textbook takes a very step-by-step, hand-holding approach to introducing topology, focusing on concrete examples, yet still having a reasonable amount of rigor. (Of nine chapters, he doesn't even formally get to topology until Chapter 4. The first three chapters are a general intro, open and closed sets, and metric spaces.) The last chapter offers a basic introduction to algebraic topology. This is an excellent book for self-study, and also good for undergraduates with a physics or engineering orientation who want to get the intuitive principles, and also some sense for the formal math. Students (including undergrads) who are really strong on abstract math might benefit from the more intensive and detailed treatments found in other texts; but even they might find Croom's book useful to fall back on when they get stuck on some basic concept. Croom includes historical discussions of the foundations of topology, which is also helpful. He also includes a glossary of mathematical symbols up front, which is very helpful for trying to keep track of all the new notations involved. There are lots of solved problems, and also problems for students to work out, although solutions for those would be helpful in some future edition.

I taught a one semester course on basic point set topology out of this book. The emphasis in the first half is on metric spaces, which provide the most natural class of examples for the basic

principles of point set topology that any student taking a course in topology must know about. There is little extraneous material, and I found that the students thought the book was very good. This was a group of students at a regional campus of a large state university, and I would recommend the book for a beginning course at a comparable campus. Those teaching at research institutions will want more.

This book will teach you topology. It does an excellent job of rigorously covering the major topics while being very readable. I can tell you that I've downloaded pdf's of pretty much every topology textbook available and have still found this one to be the best. It's just a coincidence that it happens to be cheap and a nice paperback (it's nothing like dover's collection of terrible cheap translated textbooks). I would recommend Croom and Munkres to be the standard 2-book combination for topology from the undergraduate to graduate level.

I was very disappointed to see that this text is out of print. I would like to use this text for our topology topics course at USAFA. It pitches the subject at just the right level for the beginner in topolgy! Fabulous First Text! Does anyone know how I could get my hands on about 30 copies. OR know of one similar to this text which is still in print?

As many math educators agree, there are many textbooks not written for beginners. This textbook is outstanding for any level of beginner. I wish it can be picked up by Dover. I highly recommend it to any reader who wants to know the subject: Topology.

I really like this book for a first course in topology. It has the right level and balance of subjects. The book has been very hard to find for a number of years but has now been republished by Thomson Learning in Singapore. The new ISBN is 981-243-288-4.

Mathematics) Differential Topology (Graduate Texts in Mathematics) Topology and Geometry (Graduate Texts in Mathematics) Essential Topology (Springer Undergraduate Mathematics Series) Algebraic Topology: An Introduction (Graduate Texts in Mathematics) (v. 56) Simplicial Objects in Algebraic Topology (Chicago Lectures in Mathematics) Basic Topology (Undergraduate Texts in Mathematics) READING ORDER: TAMI HOAG: BOOKS LIST OF THE BITTER SEASON, KOVAC/LISKA BOOKS, HENNESSY BOOKS, QUAID HORSES, DOUCET BOOKS, DEER LAKE BOOKS, ELENA ESTES BOOKS, OAK KNOLL BOOKS BY TAMI HOAG Mathematics and the Imagination (Dover Books on Mathematics) One Hundred Problems in Elementary Mathematics (Dover Books on Mathematics) Mathematics for Quantum Mechanics: An Introductory Survey of Operators, Eigenvalues, and Linear Vector Spaces (Dover Books on Mathematics)