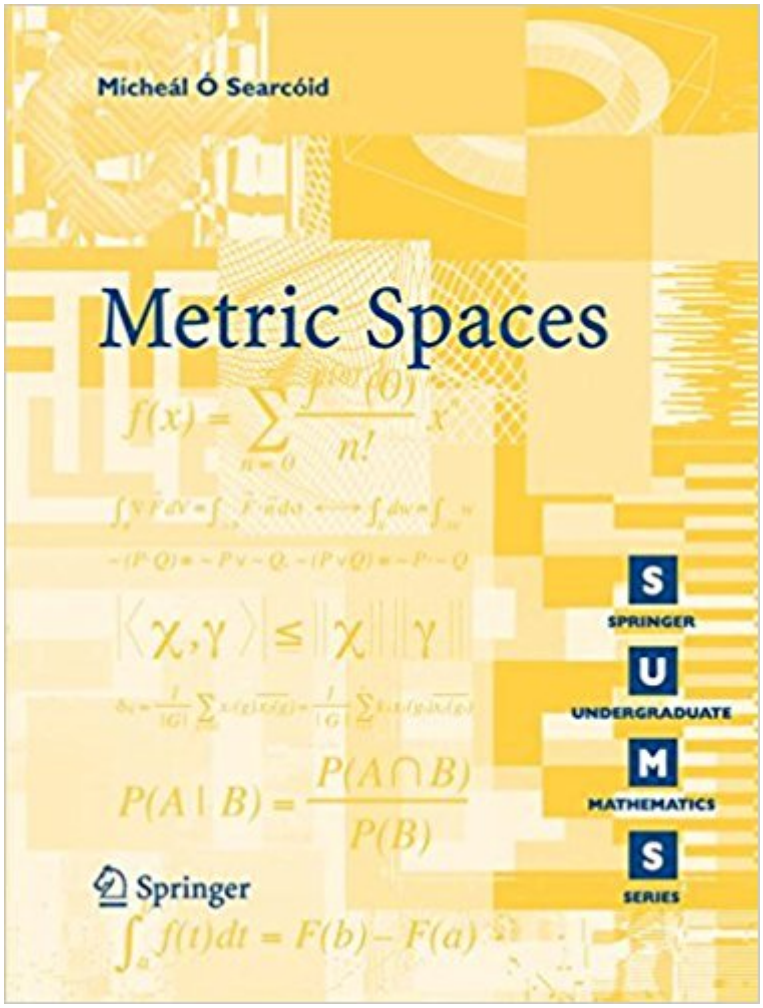
Metric Spaces (Springer Undergraduate Mathematics Series)



Synopsis

The abstract concepts of metric spaces are often perceived as difficult. This book offers a unique approach to the subject which gives readers the advantage of a new perspective on ideas familiar from the analysis of a real line. Rather than passing quickly from the definition of a metric to the more abstract concepts of convergence and continuity, the author takes the concrete notion of distance as far as possible, illustrating the text with examples and naturally arising questions. Attention to detail at this stage is designed to prepare the reader to understand the more abstract ideas with relative ease.

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Customer Reviews

From the reviews: "This book is truly about metric spaces. Ã¢â ¬Â¦ The book is packed full of material which does not often appear in comparable books. Ã¢â ¬Â¦ His use of questions to increase understanding and to move on to the next topic are also to be appreciated. Ã¢â ¬Â¦ this is a great book and suitable Ã¢â ¬Â¦ for third-and fourth-year under-graduates and beginning graduate students." (Marion Cohen, MathDL, January, 2007) "The book is very readable. It includes appendixes on the necessary mathematical logic and set theory, and has a substantial number of exercisesÃ¢â ¬Â¦ Every concept is demonstrated via a large number of examples, starting with commonplace ones and expanding the readerÃ¢â ¬â„¢s horizon with the more abstruse ones, to give a sense of the scope of the conceptsÃ¢â ¬Â¦ A useful addition to any library supporting an

undergraduate mathematics major." (D. Z. Spicer, CHOICE, March, 2007)

The abstract concepts of metric ces are often perceived as difficult. This book offers a unique approach to the subject which gives readers the advantage of a new perspective familiar from the analysis of a real line. Rather than passing quickly from the definition of a metric to the more abstract concepts of convergence and continuity, the author takes the concrete notion of distance as far as possible, illustrating the text with examples and naturally arising questions. Attention to detail at this stage is designed to prepare the reader to understand the more abstract ideas with relative ease. The book goes on to provide a thorough exposition of all the standard necessary results of the theory and, in addition, includes selected topics not normally found in introductory books, such as: the Tietze Extension Theorem; the Hausdorff metric and its completeness; and the existence of curves of minimum length. Other features include: end-of-chapter summaries and numerous exercises to reinforce what has been learnt; extensive cross-referencing to help the reader follow arguments; a Cumulative Reference Chart, showing the dependencies throughout the book on a section-by-section basis as an aid to course design. The book is designed for third- and fourth-year undergraduates and beginning graduates. Readers should have some practical knowledge of differential and integral calculus and have completed a first course in real analysis. With its many examples, careful illustrations, and full solutions to selected exercises, this book provides a gentle introduction that is ideal for self-study and an excellent preparation for applications.

This book provides a wonderful introduction to metric spaces, highly suitable for self-study. The book is logically organized and the exposition is clear. The pace is leisurely, including ample discussion, complete proofs and a great many examples (so many that I skipped quite a few of them). (More mathematically mature readers might find the pace too slow.) The coverage is quite thorough with individual chapters devoted to key topics such as convergence, continuity, completeness, compactness and metric equivalence. Solutions to various problems are included. Prerequisites are calculus and elementary real analysis.

This may be a good book, but that doesn’t matter if you can’t read it. Both copies that I received (the second as a replacement for the first) had print that was too light. Apparently this is a print-on-demand book, printed by rather than by the publisher Springer. To guarantee the usual high Springer quality, Springer told me in an email, I should buy from them directly.

Although the typography is unconventional, I like the modern feel to this book and the diagrams, and I felt clever by reading it. I didn’t read only a dozen pages. SearcÃƒÂ id focuses on balls in this book about Metric Spaces, as opposed to sequences, explains conserving metrics, and explains product spaces.

Everything - and I mean everything - that you want to know about metric spaces written in a very good style.

This a great "in between" book. Once you’ve had your first analysis class this is definitely the way to go. Usually there are so many things in your first analysis class that you don’t get a complete introduction to metric spaces. Like others have said this is a great self-study type of book. It only has 250 pages of material so it will not take you long to read. My suggestion is read it after your first analysis course to get a good understanding of metric spaces before you take more advanced mathematics.

This is a great introduction on Metric Spaces. There are many exercises at the end of each chapter and many of them are solved. For someone like me who wants to go deeper into the field, this book is a good introduction, but requires you to read a second book.

Have you ever wanted to do math and feel like a bamf at the same time? I repeat myself. Get this book, increase your coital actives.

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