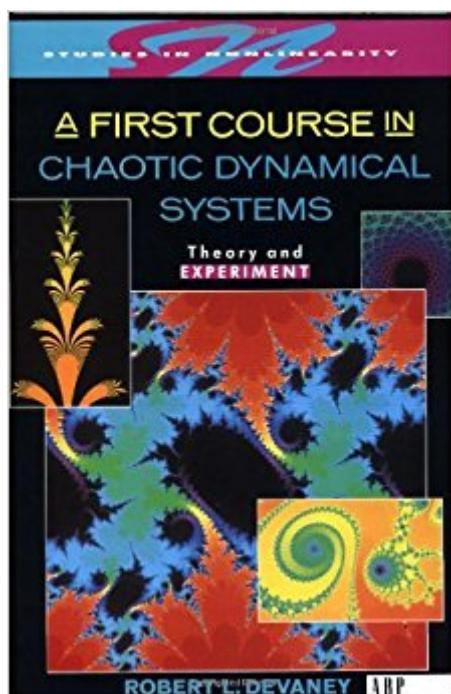


The book was found

# A First Course In Chaotic Dynamical Systems: Theory And Experiment (Studies In Nonlinearity)



## Synopsis

A First Course in Chaotic Dynamical Systems: Theory and Experiment is the first book to introduce modern topics in dynamical systems at the undergraduate level. Accessible to readers with only a background in calculus, the book integrates both theory and computer experiments into its coverage of contemporary ideas in dynamics. It is designed as a gradual introduction to the basic mathematical ideas behind such topics as chaos, fractals, Newton's method, symbolic dynamics, the Julia set, and the Mandelbrot set, and includes biographies of some of the leading researchers in the field of dynamical systems. Mathematical and computer experiments are integrated throughout the text to help illustrate the meaning of the theorems presented. Chaotic Dynamical Systems Software, Labs 1-6 is a supplementary laboratory software package, available separately, that allows a more intuitive understanding of the mathematics behind dynamical systems theory. Combined with A First Course in Chaotic Dynamical Systems, it leads to a rich understanding of this emerging field.

## Book Information

Series: Studies in Nonlinearity

Hardcover: 320 pages

Publisher: Westview Press (October 21, 1992)

Language: English

ISBN-10: 0201554062

ISBN-13: 978-0201554069

Product Dimensions: 6 x 0.7 x 9 inches

Shipping Weight: 1.5 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars 12 customer reviews

Best Sellers Rank: #93,318 in Books (See Top 100 in Books) #61 in Books > Science & Math > Mathematics > Applied > Differential Equations #239 in Books > Textbooks > Science & Mathematics > Mathematics > Calculus #338 in Books > Science & Math > Mathematics > Pure Mathematics > Calculus

## Customer Reviews

Professor Robert L. Devaney received his A.B. from Holy Cross College and his Ph.D. from the University of California at Berkeley in 1973. He taught at Northwestern University, Tufts University, and the University of Maryland before coming to Boston University in 1980. He served there as chairman of the Department of Mathematics from 1983 to 1986. His main area of research is

dynamical systems, including Hamiltonian systems, complex analytic dynamics, and computer experiments in dynamics. He is the author of *An Introduction to Chaotic Dynamical Systems*, and *Chaos, Fractals, and Dynamics: Computer Experiments in Modern Mathematics*, which aims to explain the beauty of chaotic dynamics to high school students and teachers.

This is a fine text, and I was able to follow it fairly easily. However, it is rather dated (1992) and there have been improvements in the subject in several areas. I found Steven Strogatz's "Nonlinear Dynamics And Chaos" (2001) a significantly better book for both content and readability.

I would recommend this book to anyone who wishes to learn about nonlinear systems. As a physicist, this is a good mathematical intro to nonlinear phenomena. For a more in depth look, check out a mechanics book.

Great Intro to chaotic dynamics even if you only have Calculus as a background. I used this book with a class, though, so it may be hard to understand without an instructor.

This text is a great beginners guide to chaotic systems, it provides very clear explanations and proofs as well as some examples to help you along.

Good

I bought this for my 16-year-old who is doing an undergraduate independent study in dynamics. His professor had him go through the material to the Feigenbaum limit. Lots of good exercises and a well-written exposition of the material. Additionally, he got the book signed by Dr. Devaney!

Nicely written

Excellent Book!

[Download to continue reading...](#)

A First Course In Chaotic Dynamical Systems: Theory And Experiment (Studies in Nonlinearity) [ Differential Equations, Dynamical Systems, and an Introduction to Chaos [ DIFFERENTIAL EQUATIONS, DYNAMICAL SYSTEMS, AND AN INTRODUCTION TO CHAOS BY Hirsch, Morris W. ( Author ) Mar-26-2012 ] By Hirsch, Morris W. ( Author ) [ 2012 ) [ Paperback ] Nonlinear

Dynamics And Chaos: With Applications To Physics, Biology, Chemistry And Engineering (Studies in Nonlinearity) A First Course in Discrete Dynamical Systems (Universitext) Mathematical Theory of Nonequilibrium Steady States: On the Frontier of Probability and Dynamical Systems (Lecture Notes in Mathematics) Extremes and Recurrence in Dynamical Systems (Pure and Applied Mathematics: A Wiley Series of Texts, Monographs and Tracts) Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics I: Fractals in Pure Mathematics (Contemporary Mathematics) Differential Equations, Dynamical Systems, and an Introduction to Chaos, Second Edition (Pure and Applied Mathematics) Differential Equations and Dynamical Systems (Texts in Applied Mathematics) Differential Equations, Dynamical Systems, and an Introduction to Chaos, Third Edition Lectures on Fractal Geometry and Dynamical Systems (Student Mathematical Library) Differential Equations, Dynamical Systems, and an Introduction to Chaos In the Wake of Chaos: Unpredictable Order in Dynamical Systems (Science and Its Conceptual Foundations series) Dynamical Systems: A Differential Geometric Approach to Symmetry and Reduction Ordinary Differential Equations: From Calculus to Dynamical Systems (Maa Textbooks) Introduction to Differential Equations with Dynamical Systems Dynamical Systems (Dover Books on Mathematics) Dynamical Systems: An Introduction (Universitext) Introduction to Dynamical Systems Chaos: An Introduction to Dynamical Systems (Textbooks in Mathematical Sciences)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)