A Course in Mathematical Modeling (Mathematical Association of America Textbooks)

By Douglas D. Mooney, Randall Swift

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift

The emphasis of this book lies on the teaching of mathematical modeling rather than simply presenting models. To this end the book starts with the simple discrete exponential growth model as a building block, and successively refines it. This involves adding variable growth rates, multiple variables, fitting growth rates to data, including random elements, testing exactness of fit, using computer simulations and moving to a continuous setting. No advanced knowledge is assumed of the reader, making this book suitable for elementary modeling courses. The book can also be used to supplement courses in linear algebra, differential equations, probability theory and statistics.

A Course in Mathematical Modeling (Mathematical Association of America Textbooks)

By Douglas D. Mooney, Randall Swift

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift

The emphasis of this book lies on the teaching of mathematical modeling rather than simply presenting models. To this end the book starts with the simple discrete exponential growth model as a building block, and successively refines it. This involves adding variable growth rates, multiple variables, fitting growth rates to data, including random elements, testing exactness of fit, using computer simulations and moving to a continuous setting. No advanced knowledge is assumed of the reader, making this book suitable for elementary modeling courses. The book can also be used to supplement courses in linear algebra, differential equations, probability theory and statistics.

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift Bibliography

- Sales Rank: #879183 in Books
- Brand: Brand: The Mathematical Association of America
- Published on: 1999-03
- Original language: English
- Number of items: 1
- Dimensions: 6.97" h x 1.10" w x 10.00" l, 1.80 pounds
- Binding: Paperback
- 400 pages

⬇ **Download** A Course in Mathematical Modeling (Mathematical As ...pdf

📄 **Read Online** A Course in Mathematical Modeling (Mathematical ...pdf

Download and Read Free Online A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift

Editorial Review

From the Publisher
Students taking a course based on this book should have some mathematical maturity, but will need little advanced knowledge. The book presents more advanced topics on an as-needed basis and serves to show how the different topics of undergraduate mathematics can be used together to solve problems. The course presents elements of discrete dynamical systems, basic probability theory, differential equations, matrix algebra, stochastic processes, curve fitting, statistical testing, and regression analysis. Computer analysis is extensively used in conjunction with these topics. You can also use this book if you are seeking applications to supplement a course in linear algebra, differential equations, difference equations, probability theory, or statistics.

About the Author
Douglas Mooney's interest in how the physical world works led him to study physics as an undergraduate, and his interest in the mathematics behind physics led him to obtain his MA and PhD degrees in mathematics from the University of Kansas. A 1993 NSF-sponsored workshop in modeling biological resource issues at the University of Montana ignited Mooney's interest in applications and sparked an interest in biological modeling. It also led him to team up with colleague Randall Swift to develop the modeling course at Western Kentucky University that is the basis of this textbook. Douglas Mooney has also published a number of refereed papers on extensions and ordered extensions of topological spaces. He currently works at The Center for Healthcare Industry Performance Studies in Columbus, Ohio.

Randall Swift earned his PhD from the University of California, Riverside, and is currently associate professor of mathematics at Western Kentucky University in Bowling Green, Kentucky. He has published many refereed papers on harmonizable and other nonstationary processes, appled mathematics, and modeling. In 1997 he received the Western Kentucky University Ogden College of Science, Technology, and Health award for outstanding faculty research. One of his goals as a teacher has been to develop relevant applications of technology for use in the mathematics courses he teaches. This textbook is the result of that continuing effort.

Users Review

From reader reviews:

Martin Phair:

Book is to be different for every grade. Book for children right up until adult are different content. We all know that that book is very important usually. The book A Course in Mathematical Modeling (Mathematical Association of America Textbooks) was making you to know about other understanding and of course you can take more information. It is extremely advantages for you. The guide A Course in Mathematical Modeling (Mathematical Association of America Textbooks) is not only giving you far more new information but also to become your friend when you truly feel bored. You can spend your own spend time to read your guide. Try to make relationship with all the book A Course in Mathematical Modeling (Mathematical Association of America Textbooks). You never sense lose out for everything should you read some books.

Marcus Laws:

As people who live in the particular modest era should be change about what going on or details even knowledge to make all of them keep up with the era which is always change and progress. Some of you maybe will update themselves by studying books. It is a good choice for yourself but the problems coming to anyone is you don't know what kind you should start with. This A Course in Mathematical Modeling (Mathematical Association of America Textbooks) is our recommendation to make you keep up with the world. Why, because book serves what you want and want in this era.

Charles Felton:

Playing with family inside a park, coming to see the marine world or hanging out with close friends is thing that usually you will have done when you have spare time, and then why you don't try issue that really opposite from that. One activity that make you not sensation tired but still relaxing, trilling like on roller coaster you already been ride on and with addition info. Even you love A Course in Mathematical Modeling (Mathematical Association of America Textbooks), it is possible to enjoy both. It is great combination right, you still wish to miss it? What kind of hang type is it? Oh come on its mind hangout people. What? Still don't buy it, oh come on its known as reading friends.

Roberta Anglin:

Reading a book to get new life style in this calendar year; every people loves to read a book. When you learn a book you can get a large amount of benefit. When you read books, you can improve your knowledge, since book has a lot of information onto it. The information that you will get depend on what types of book that you have read. In order to get information about your review, you can read education books, but if you want to entertain yourself read a fiction books, this sort of us novel, comics, as well as soon. The A Course in Mathematical Modeling (Mathematical Association of America Textbooks) provide you with a new experience in reading through a book.

Download and Read Online A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift #AZFKSPE6BCQ

Read A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift for online ebook

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift books to read online.

Online A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift ebook PDF download

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift Doc

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift Mobipocket

A Course in Mathematical Modeling (Mathematical Association of America Textbooks) By Douglas D. Mooney, Randall Swift EPub