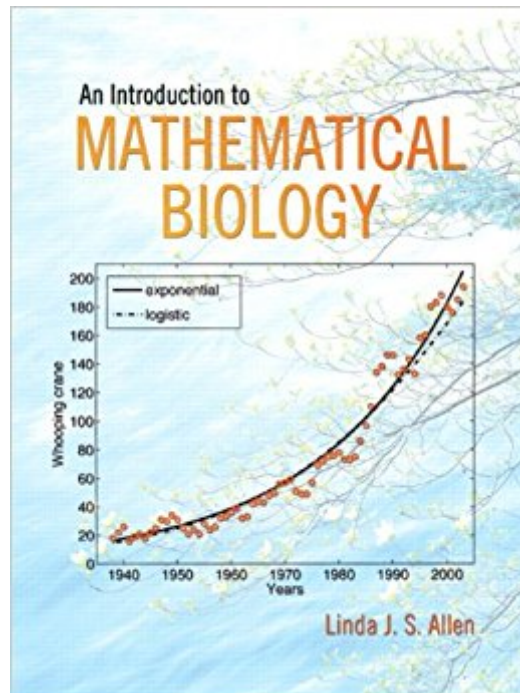




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# An Introduction To Mathematical Biology



## Synopsis

**KEY BENEFIT:** This reference introduces a variety of mathematical models for biological systems, and presents the mathematical theory and techniques useful in analyzing those models. Material is organized according to the mathematical theory rather than the biological application. Contains applications of mathematical theory to biological examples in each chapter. Focuses on deterministic mathematical models with an emphasis on predicting the qualitative solution behavior over time. Discusses classical mathematical models from population , including the Leslie matrix model, the Nicholson-Bailey model, and the Lotka-Volterra predator-prey model. Also discusses more recent models, such as a model for the Human Immunodeficiency Virus - HIV and a model for flour beetles. **KEY MARKET:** ReadersÂ seeking a solid background in the mathematics behind modeling in biology and exposure to a wide variety of mathematical models in biology.

## Book Information

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## Customer Reviews

This is a very nice book for who has some previous knowledge about college math and wants to apply it to modeling some biological problems. Actually, biomath has become more and more popular in the recent years and this book provides a clear and thorough review for some most interesting topics out there. The book serves well as both textbook and reference book. It is very well written, organized, full of examples and the proofs were given in details whenever necessary. Nothing comes out in a sudden and this is very important for a math book. One feature I particularly like is at the beginning of each chapter, some brief review involving the key math technique is given,

which saves a lot of time for people like me who almost completely forgot how to solve ODE. BTW, some of the exercises after each chapter are quite challenging but interesting too. Overall, it is a great book and I would recommend it to anyone who want to gain an overall view of biomathematics.

This is a wonderful book for anyone who wants to know how to do the math needed for Mathematical Biology topics. I use it as a reference mainly, but it looks like a good textbook for a class as well.

This book is concise yet includes all the major approaches to studying mathematical biology. It has plenty of exercises and examples for honing the particular skills needed to study different mathematical model of biological systems. I used it as a reference to help write my thesis.

I have used this book (along with my own notes) to teach second year university students, and every time the students complain that the book is inaccessible. Only after they've gone through the course they find it usable in the sense that they can go back and look things up. My personal feeling about the book is that it doesn't know which leg to stand on. In some aspects it is quite rigorous, but not in an inviting way, whereas in other places it attempts to speak to the intuition but comes up short. I think a cross between this book and the book by Strogatz would be a great compromise.

Great book. No highlights and torn.

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