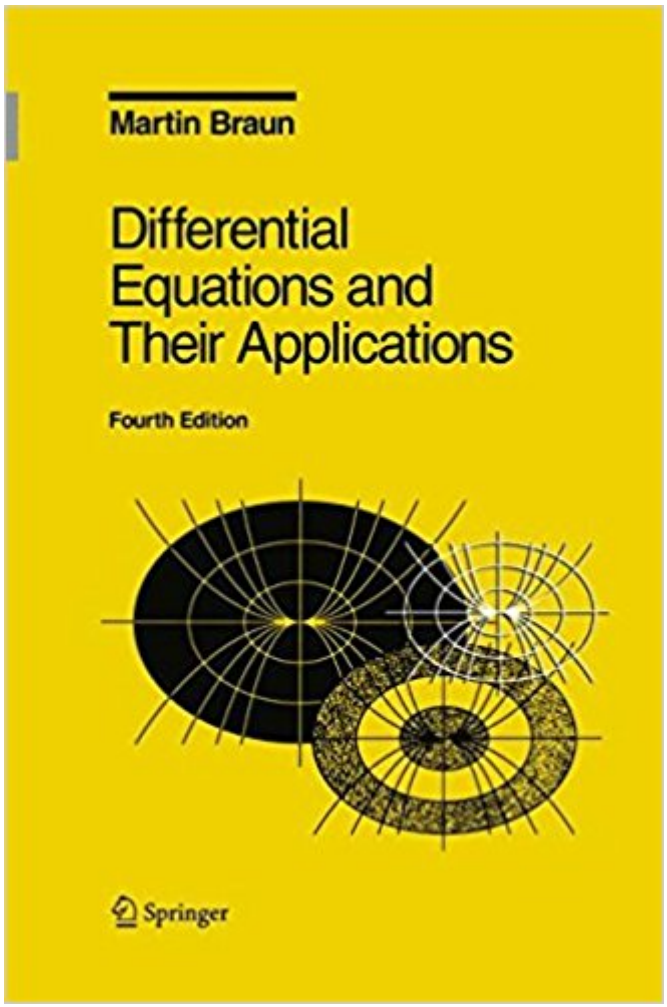
Differential Equations And Their Applications: An Introduction To Applied Mathematics (Texts In Applied Mathematics) (v. 11)



Synopsis

Used in undergraduate classrooms across the USA, this is a clearly written, rigorous introduction to differential equations and their applications. Fully understandable to students who have had one year of calculus, this book distinguishes itself from other differential equations texts through its engaging application of the subject matter to interesting scenarios. This fourth edition incorporates earlier introductory material on bifurcation theory and adds a new chapter on Sturm-Liouville boundary value problems. Computer programs in C, Pascal, and Fortran are presented throughout the text to show readers how to apply differential equations towards quantitative problems.

Book Information

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Customer Reviews

"…this book is the most attractive, motivated, and well-written work of its kind known to me..." -- AMERICAN SCIENTIST

Martin Braun is Professor of Differential Equations at Queen’s College, The City University of New York, USA.Ã Â

Great book, however the book seems to think you’re smarter than what you are so use beware. There are no "easy" steps outlined in this text.

Thorough but dry.

This textbook would have cost me $74.95 (plus tax) from my university store, so I really saved some money. It came intact, and only took 9 days to get to Austin, TX. Looks exactly like the picture with crisp white pages.

The textbook had clear texts and pictures. Only issue was that when I got the textbook, the front cover page ripped.

Great textbook!

This is a difficult book. Actually, all of the springer-verlag texts in bright lemon yellow are often referred to, by math heads...as opposed to us "show-us-the-crank-and-we'll-give-you-the-answer engineers...in a rather politically incorrect manner as the "yellow peril." Having said that, if you have the background, this is an excellent text, almost good enough for self study. It has interesting stories (the Van Meergeren forgeries as an example) and the mathematical style does not, as is often the case with these advanced texts, leave out all of the intermediary steps. But like I said this is not for the faint of heart or "c" students...an example for me would be the Picard Iteration....12 or 13 pages I didn't need to study...and study and study....if you want a text for a second go beyond the first course in diff eq, I would recommend this....btw, the Hubbard and West volumes are also excellent...perhaps a bit more difficult...

This book is extraordinarily clear as well as being concise (but never too much so) in the mathematical parts. Discussion of applications is verbose, but is kept in separate sections; this material can be omitted entirely or read later without any detrimental effect to the flow of the book. However, the discussion of the applications is interesting and deep, and would be useful (and fun) for motivated students to read.The book begins with a no-nonsense discussion of how to solve differential equations analytically. Unlike many books, it gives clear instructions to the reader as to how to know which techniques are applicable. Also, it does not introduce qualitative or numerical methods until it has already developed a number of analytic techniques, and in my opinion, this results in greater clarity than the path most books take of integrating (or should I say jumbling?) the material together. The book gradually and logically covers the ground between analytic and numerical, moving towards actually writing algorithms, which are included in the text. The emphasis is always on understanding. Exercises are straightforward and useful.My only complaint is that, in

this modern age, the C programs should be included in the text and the Pascal and FORTRAN ones relegated to the index. (It is the other way around, alas.)This book is simply wonderful for anyone studying differential equations for the first time. I do not understand why undergraduate institutions use the more commercialized texts instead of ones like this. This is a great book; it would be excellent for a textbook or for self-study.

i am enrolled in a financial engineering masters program and we constantly come across a differential equations problem. Having never taken a class on odes or pdes, i thought i should get a good book to study on my own. and wow, this book is so well written that i feel pretty confident in my differential equations ability. good book and highly recommended..

Finite Difference Methods for Ordinary and Partial Differential Equations: Steady-State and Time-Dependent Problems (Classics in Applied Mathematics) Numerical Solution of Partial Differential Equations: Finite Difference Methods (Oxford Applied Mathematics and Computing Science Series) Introduction to the Foundations of Applied Mathematics (Texts in Applied Mathematics)