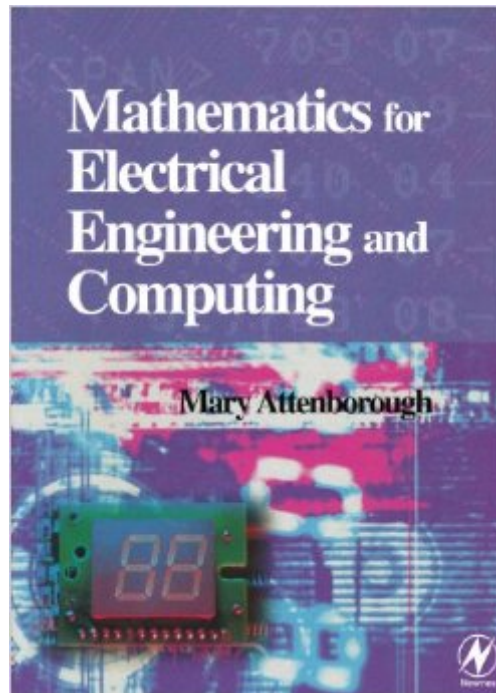# Mathematics For Electrical Engineering And Computing

Synopsis

Mathematics for Electrical Engineering and Computing embraces many applications of modern mathematics, such as Boolean Algebra and Sets and Functions, and also teaches both discrete and continuous systems - particularly vital for Digital Signal Processing (DSP). In addition, as most modern engineers are required to study software, material suitable for Software Engineering - set theory, predicate and prepositional calculus, language and graph theory - is fully integrated into the book.Excessive technical detail and language are avoided, recognising that the real requirement for practising engineers is the need to understand the applications of mathematics in everyday engineering contexts. Emphasis is given to an appreciation of the fundamental concepts behind the mathematics, for problem solving and undertaking critical analysis of results, whether using a calculator or a computer.The text is backed up by numerous exercises and worked examples throughout, firmly rooted in engineering practice, ensuring that all mathematical theory introduced is directly relevant to real-world engineering. The book includes introductions to advanced topics such as Fourier analysis, vector calculus and random processes, also making this a suitable introductory text for second year undergraduates of electrical, electronic and computer engineering, undertaking engineering mathematics courses.The book is supported with a number of free online resources. On the companion website readers will find:* over 60 pages of "Background Mathematics" reinforcing introductory material for revision purposes in advance of your first year course* plotXpose software (for equation solving, and drawing graphs of simple functions, their derivatives, integrals and Fourier transforms)* problems and projects (linking directly to the software)In addition, for lecturers only, http://textbooks.elsevier.com features a complete worked solutions manual for the exercises in the book.Dr Attenborough is a former Senior Lecturer in the School of Electrical, Electronic and Information Engineering at South Bank University. She is currently Technical Director of The Webbery - Internet development company, Co. Donegal, Ireland. * Fundamental principles of mathematics introduced and applied in engineering practice, reinforced through over 300 examples directly relevant to real-world engineering* Over 60 pages of basic revision material available to download in advance of embarking on a first year course* Free website support, featuring complete solutions manual, background mathematics, plotXpose software, and further problems and projects enabling students to build on the concepts introduced, and put the theory into practice

Book Information

Paperback: 576 pages

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Customer Reviews

I am a computer geek with an occasional need for a math reference and have found this book perfect for that purpose. It is as brief as it could possibly be, explaining the smallest set of things necessary to understand a topic, skipping formal definitions in most cases. Each concept provides incremental examples free of hand waving, focusing on the steps necessary to go from concept to use. It is a very dense book and covers a wide array of subjects with clear examples.The previous reviewer makes a reasonable point. The URL on the book takes you to a defunct site that forwards you to the home of Elsevier publishing. Posting URLs in printed books creates a perpetual obligation difficult to maintain. A quick google for "Mathematics for Electrical Engineering and Computing errata" produces (in 2012):[...]The site includes the errata (less than 20 corrections in a 532 page book) along with an 88 page mathematics backgrounder (great for your kids), a projects doc and plotting software. The plotting software is circa 2003 and does not run on my 64bit Windows 7 machine under any compatibility mode.Web site foibles aside, given the narrow focus and ponderous nature of many math books, this books is a great fit for an engineer looking for a desk reference to a broad array of practical math. I have not read Stroud or Bird but from browsing bits online my take is that they are great but spend more time teaching a shorter list of topics. If you have been through the subject matter but just need a reference, I think this may be the better book. If you are interested in learning material for the first time others may be a better fit. As far as this book is concerned, you will be hard pressed to find more topics covered in a smaller number of pages (532).

I just started reading and studying "Mathematics for Electrical Engineering and Computing". So far it is pretty good. You can tell that Mary P Attenborough has worked hard to explain mathematics. I need to get further into the book to give a more accurate report. Like any other mathematics book, this book is not easy reading. Be prepared to work hard at understanding the material. You might need to look at other references. One of the most impressive things about Ms. Attenborough's work is how she has a web site. Although, I have not looked at the web site yet. I recommend her book.

Early in my review of this book I attempted to access the advertised associated online resource. Listed only on the back cover of the paperback as [...]. This URL is immediately coverted to [...]. Has the online resource been discontinued or is there a new URL address? I understand there are multiple errors in the later chapters of the book, listed in Errata on the web site. The utility of the book is degrade if the online site is no longer available.

Thank you

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