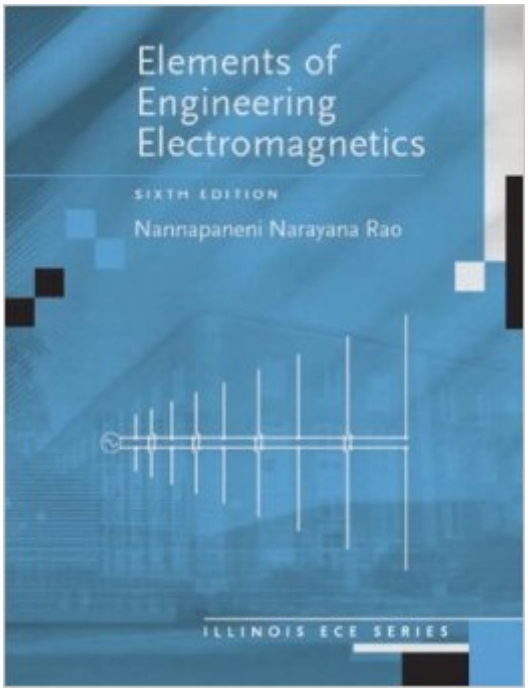
Elements Of Engineering Electromagnetics (6th Edition)



Synopsis

This book, with its versatile approach, includes thorough coverage of statics with an emphasis on the dynamics of engineering electromagnetics. It integrates practical applications, numerical details, and completely covers all relevant principles. Topics include vectors and fields, Maxwell's Equations, fields and waves, electromagnetic potentials, devices, circuits, and systems, and transmission-line essentials for digital electronics. The second part of the book covers communications, guided wave principles, electronics and photonics, and radiation and antennae. A valuable resource for computer engineering and electrical engineering professionals.

Book Information

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Average Customer Review: 2.5 out of 5 starsÂ Â See all reviewsÂ (15 customer reviews)

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Customer Reviews

Rao covers several advanced topics in a simple tutorial manner. Of course, if one is looking at E&M for the first time, his condensed style of the more elementary topics may not be as appreciated as if one is looking at E&M for the second (or third) time. However, Rao does cover most of the traditional first E&M course topics in an understandable way. In my opinion, where he excels is in taking more difficult but very useful topics that are unusual in an elementary course and presenting them in an understandable way, such as using the method-of-moments to calculate fringing fields of a capacitor, or outlining the basics of the finite element method, or calculating quasistatic expansions of distributed structures so they can be modeled as lumped element circuits, thereby illustrating the transition (as well as the frequency limitations) of the zero-dimensional circuit approach to the fields approach. If you are taking E&M for the first time, this book may be a bit more

difficult than many out there, but if you familiarize yourself with it, I believe you will wind up using it even when your course is over to help you answer some real life problems. Below are the chapter headings for the sixth edition from the publisher's website. I have owned the second and fifth edition, and they were really not very different.I. ESSENTIAL ELEMENTS FOR ELECTRICAL AND COMPUTER ENGINEERING. 1. Vectors and Fields. 2. Maxwell's Equations in Integral Forms. 3. Maxwell's Equations in Differential Form and Uniform Plane Waves in Free Space. 4. Fields and Waves in Material Media. 5. Electromagnetic Potentials and Topics for Devices, Circuits, and Systems. 6. Transmission-Line Essentials for Digital Electronics.II. ESSENTIAL/ELECTIVE ELEMENTS. 7.