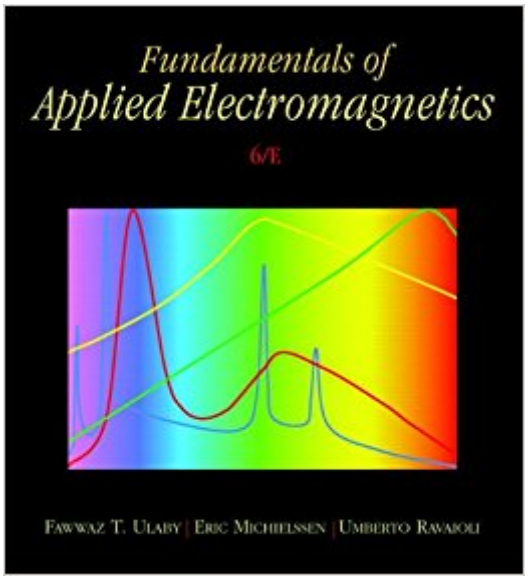
Fundamentals Of Applied Electromagnetics (6th Edition)



Synopsis

KEY BENEFIT: Widely acclaimed both in the U.S. and abroad, this reader-friendly yet authoritative volume bridges the gap between circuits and new electromagnetics material. Ulaby begins coverage with transmission lines, leading readers from familiar concepts into more advanced topics and applications. KEY TOPICS: Introduction: Waves and Phasors; Transmission Lines; Vector Analysis; Electrostatics; Magnetostatics; Maxwell's Equations for Time-Varying Fields; Plane-Wave Propagation; Reflection, Transmission, and Waveguides; Radiation and Antennas; Satellite Communication Systems and Radar Sensors. MARKET: A useful reference for engineers.

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Customer Reviews

I got this book for a semester, and as it turned out the professor wanted to use a different one, and I think that was a good choice, I think the other explained things more clearly in English before jumping into equations. I would sometimes check back to see what this book had to say, and some things helped, but for the most part this book wasn't as helpful.

I've been using this book for most of the semester now and it lacks... a lot. It'll give you tons of equations and theory, but no ways (or very few ways) to actually apply either. It's quite frustrating to have to rely solely on my professor for suitable examples, especially for a class that is as difficult as this (Electromagnetics). I wish we were using a better book for this class!

I am fortunate enough to have taken classes with Dr. Ulbay. He is without a doubt the finest professor anywhere. While I didn't get to take the course for this book with him, I found having his book very helpful. It does a great job explaining concepts and providing examples. Also the applets which are available online now that go with the book are fantastic and really help illustrate the concepts.

Don't buy it, it's a waste of time if you are just starting out. Awkward notation, too many pictures, not enough explanation... just don't buy it, even if it's required. I ended up going with the tried and true David K. Cheng - Field and Wave Electromagnetics. That one is excellent!

Electromagnetics bookThe lightest textbook in my backpack, but certainly not the emptiest. This high information-density volume contains a wealth of knowledge, examples, and fairly readable text about the subject - and the CD is actually helpful!At the beginning of the semester I had no idea what material the electromagnetics class consisted of, but now at the end I can look back and see a large number of topics presented in a fairly logical progression. The book's modus operandi is: teach/review the underlying math concept, then use that math to tackle an electromagnetics problem. I enjoyed this approach a lot, though I agree with my professor that the order of presentation is a little questionable. We shuffled between chapters 3 and 4 so as not to dwell on pure math as much and instead deal with physical, practical problems. For example, instead of learning both divergence and curl simultaneously, we first learned divergence and then used it solve some problems involving Electric fields. Then we went back, learned curl, and applied it to different problems.I was overwhelmed with the sheer variety of topics covered in this course. There seemed to be too many ways to do problems, and I couldn't get a good feel for when to use which method. The book's examples and explanations helped for homework sets, but come test time I usually knew three ways to solve it but wasn't sure which way would produce the proper result. In an hour testing situation, I don't have time to try out all three ways on every problem!There must be a way to teach these concepts in a more targeted method, but I don't know how. I feel I have a good knowledge of the material from the book, though, and the CD's examples were very good. The CD showed step-by-step work for problems from the text, and had its own examples not in the book that did a good job demonstrating a concept. Don't throw away the CD!The svelte size of this book impresses me, because it shows the author cared enough to trim his wordage to a reasonable level. This should keep students happy, both in their backpacks and their studying.

I bought this book as a reference book so that I could refresh my memory on wave electromagnetics. It is a good book for that.It is very well laid out and easy to find the section that you need.

I've had this book for an undergraduate Electrical and Computer Engineering course in waves and transmission lines. In general, I would say that the book is a mess - it doesn't explain things coherently, jumps between unrelated subjects within the chapter, and fails to link equations in meaningful ways. Our homework problems for the class were assigned directly out of the book, and the students quickly began to describe them as "scavenger hunts" - when you found the equations you needed from the chapter text, the problems were quite easy, but you'd spend more than half the time looking for them and trying to deduce from the text whether they were contextually the right ones to use. Many students would give up on using the text at all and would skip straight to online solution manuals, not to copy answers but simply to find comprehensive lists of the correct equations.This problem is exacerbated by a near total lack of useful examples, which is a must have for engineering classes. Proper example problems that use the equations and concepts of a chapter are the cornerstone of teaching difficult mathematics and design techniques, but such practical uses are few and far between in Ulaby's text, and tend to be difficult to follow if not entirely incomprehensible. I found the chapter on basic electrostatics to be especially shocking - most physics texts cover the same material in half the space, and include extensive examples of the equations in use, but this text takes almost 30 pages of redundant equations and tangential explanations with almost no useful examples on potential or derivational technique.In general, if you have a choice, I'd say avoid this text. If not, be prepared to make the most out of online resources, and keep another physics textbook on hand for reference. All the essentials are there, but some major revisions will have to be done to make future editions accessible and useful to students of engineering and the applied sciences.

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