A Modern Short Course In Engineering Electromagnetics (Oxford Engineering Science Series)

Synopsis

This unique text serves two key needs in the current teaching of engineering electromagnetics in undergraduate electrical engineering curricula. First, in response to the ever expanding scope of the field, it presents the basics in a concise form, and can be used to teach students the fundamentals in one semester, enabling them to pursue other areas of interest and specialization. These basic concepts will prepare students to read and absorb new material with full understanding, throughout their professional lives. Secondly, unlike other texts serving this course market, the book introduces the use of computer-based numerical methods of electromagnetic field analysis, which today are essential for a thorough knowledge of the subject. These new computer methods are extremely powerful problem solvers. Yet, while most universities require a course in programming for their electrical engineering students, most never really benefit from the experience of using this training in upper level courses. The approach presented here makes full use of this background, opening up new insights and vistas in electromagnetics. A disk with programs for actual applications is included with each book, and problems are available at the end of each chapter. Numerous illustrations graphically depict the concepts discussed, including images of fields. This is a truly unique text for a popular course.

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Customer Reviews

"An excellent intermediate treatment of electromagnetics with extensive use of numerical methods

(principally, finite difference and finite element techniques). It should be well-suited to advanced undergraduate and beginning graduate students in electromagnetics."--Walter M. Nunn, Jr.,Florida Institute of Technology"A very modern and practical approach to teaching Introductory Electromagnetics. The explanations, particularly of the importance and meaning of numerical methods, are excellent. This is an outstanding attempt to bring practical computer solutions of electromagnetic problems to undergraduateelectrical engineers."--Dr. Walter M. Nunn, Jr., Florida Institute of Technology

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