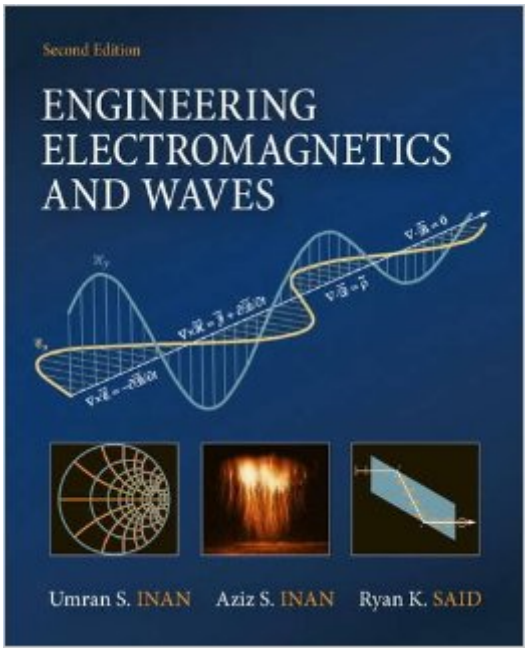
Engineering Electromagnetics And Waves (2nd Edition)



Synopsis

Engineering Electromagnetics and Waves is designed for upper-division college and university engineering students, for those who wish to learn the subject through self-study, and for practicing engineers who need an up-to-date reference text. The student using this text is assumed to have completed typical lower-division courses in physics and mathematics as well as a first course on electrical engineering circuits. Â This book provides engineering students with a solid grasp of electromagnetic fundamentals and electromagnetic waves by emphasizing physical understanding and practical applications. The topical organization of the text starts with an initial exposure to transmission lines and transients on high-speed distributed circuits, naturally bridging electrical circuits and electromagnetics. Teaching and Learning Experience This program will provide a better teaching and learning experienceâ “for you and your students. It provides: Modern Chapter Organization Emphasis on Physical Understanding Detailed Examples, Selected Application Examples, and Abundant Illustrations Numerous End-of-chapter Problems, Emphasizing Selected Practical Applications Historical Notes on the Great Scientific Pioneers Emphasis on Clarity without Sacrificing Rigor and Completeness Hundreds of Footnotes Providing Physical Insight, Leads for Further Reading, and Discussion of Subtle and Interesting Concepts and Applications

Book Information

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Customer Reviews

Integration of authors earlier two books on Engineering Electromagnetics (which did not do transmission and reflections vs arbitrary incident angle) and Electromagnetic Waves (which had

general transmission and reflection case, but not electro and magneto statics). If you have the earlier two books, you have just about everything and more that is included in this single volume with the exception of some newer examples. Very nice descriptions of distributed vs lumped components and time delay. Nice examples abound, for example, dielectric waveguides using InGaAs and InP semiconductors and use of forces on capacitor in MEMs, and an introduction to metamaterials. A bit wordy, but generally interesting reading. Gives nice phase plots in addition to magnitude when talking about reflection and transmission, which seems a rarity in most books. Antenna theory not covered at all, which is a bit of a disappointment if one is looking for a complete volume for the undergraduate EE. No numerical or variational methods and nothing on coplanar or microstrip lines. Wish some author somewhere would explain how size of hole in Faraday cage affects shielding effectiveness and include enough of a discussion of variational methods so undergrads would realize that the capacitance of a pair of conductors of an odd shape is always smaller than the capacitance of some known configuration that would enclose them, such as parallel wires enclosing rectangular wires (i.e. how to set useful upper and lower bounds for capacitance, resistance, inductance without detailed calculation) but you still need to find such usefuls facts in Jackson or Collin end of chapter problems.

needed it for a class so it’s okay i guess