Classical Field Theory (Dover Books On Physics)
Synopsis

This text concerns continuum mechanics, electrodynamics and the mechanics of electrically polarized media, and gravity. Geared toward advanced undergraduates and graduate students, it offers an accessible approach that formulates theories according to the principle of least action. The chief advantage of this formulation is its simplicity and ease, making the physical content of classical subjects available to students of physics in a concise form. Author Davison E. Soper, a Professor of Physics at the University of Oregon, intended this treatment as a primary text for courses in classical field theory as well as a supplement for courses in classical mechanics or classical electrodynamics. Topics include fields and transformation laws, the principle of stationary action, general features of classical field theory, the mechanics of fluids and elastic solids, special types of solids, nonrelativistic approximations, and the electromagnetic field. Additional subjects include electromagnetically polarized materials, gravity, momentum conservation in general relativity, and dissipative processes.

Book Information

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Customer Reviews

Nice

Extremely well written and formulated treatment of classical field theory. In particular his field theoretic treatment of fluids is very enlightening.
This is a well written book on Classical Field Theory. Not for undergraduates, because a good knowledge on tensor calculus is required for being read without any difficulties. The subjects are given compactly, with the minimum and necessary formulations. Along the whole book the author gives the adequate physical view on the subjects, which is always very much appreciated.

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