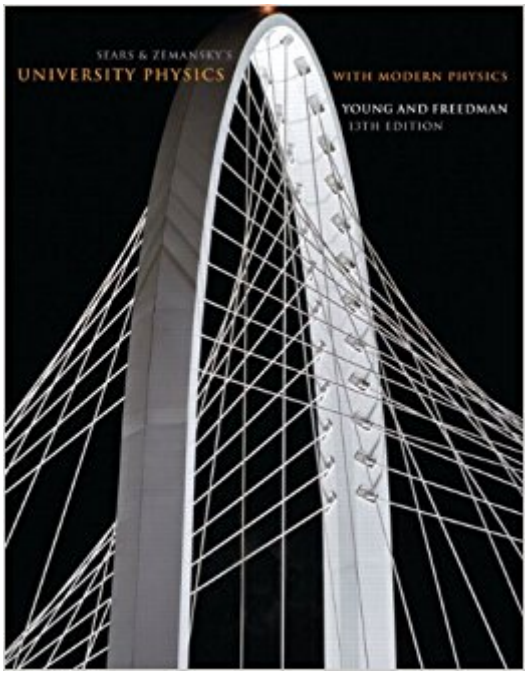
Sears And Zemansky's University Physics With Modern Physics, 13th Edition



Synopsis

University Physics with Modern Physics , Thirteenth Edition continues to set the benchmark for clarity and rigor combined with effective teaching and research-based innovation. Ã Â Ã Â University Physics is known for its uniquely broad, deep, and thoughtful set of worked examplesÃ¢â ¬â œkey tools for developing both physical understanding and problem-solving skills. The Thirteenth Edition revises all the Examples and Problem-Solving Strategies to be more concise and direct while maintaining the Twelfth Edition's consistent, structured approach and strong focus on modeling as well as math. To help students tackle challenging as well as routine problems, the Thirteenth Edition adds Bridging Problems to each chapter, which pose a difficult, multiconcept problem and provide a skeleton solution guide in the form of questions and hints. Ã Â The text's rich problem setsÃ¢â ¬â œdeveloped and refined over six decadesÃ¢â ¬â œare upgraded to include larger numbers of problems that are biomedically oriented or require calculus. The problem-set revision is driven by detailed student-performance data gathered nationally through MasteringPhysicsÃ Â®, making it possible to fine-tune the reliability, effectiveness, and difficulty of individual problems. Ã Â Complementing the clear and accessible text, the figures use a simple graphic style that focuses on the physics. They also incorporate explanatory annotationsÃ¢â ¬â œa technique demonstrated to enhance learning. Ã Â This package contains: University Physics with Modern Physics, Thirteenth Edition

Book Information

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Customer Reviews

Hugh D. Young is Emeritus Professor of Physics at Carnegie Mellon University in Pittsburgh, PA.

He attended Carnegie Mellon for both undergraduate and graduate study and earned his Ph.D. in fundamental particle theory under the direction of the late Richard Cutkosky. He joined the faculty of Carnegie Mellon in 1956 and has also spent two years as a Visiting Professor at the University of California at Berkeley. Ã Â Professor YoungÃ¢â ¬â„¢s career has centered entirely on undergraduate education. He has written several undergraduate-level textbooks, and in 1973 he became a co-author with Francis Sears and Mark Zemansky for their well-known introductory texts. With their deaths, he assumed full responsibility for new editions of these books until joined by Prof. Freedman for University Physics. Ã Â Professor Young is an enthusiastic skier, climber, and hiker. He also served for several years as Associate Organist at St. PaulÃ¢â ¬â„¢s Cathedral in Pittsburgh, and has played numerous organ recitals in the Pittsburgh area. Prof. Young and his wife Alice usually travel extensively in the summer, especially in Europe and in the desert canyon country of southern Utah. Ã Â Roger A. Freedman is a Lecturer in Physics at the University of California, Santa Barbara. Dr. Freedman was an undergraduate at the University of California campuses in San Diego and Los Angeles, and did his doctoral research in nuclear theory at Stanford University under the direction of Professor J. Dirk Walecka. He came to UCSB in 1981 after three years teaching and doing research at the University of Washington. Ã Â At UCSB, Dr. Freedman has taught in both the Department of Physics and the College of Creative Studies, a branch of the university intended for highly gifted and motivated undergraduates. He has published research in nuclear physics, elementary particle physics, and laser physics. In recent years, he has helped to develop computer-based tools for learning introductory physics and astronomy. When not in the classroom or slaving over a computer, Dr. Freedman can be found either flying (he holds a commercial pilotÃ¢â ¬â„¢s license) or driving with his wife, Caroline, in their 1960 Nash Metropolitan convertible. Ã Â A. Lewis Ford is Professor of Physics at Texas A&M University. He received a B.A. from Rice University in 1968 and a Ph.D. in chemical physics from the University of Texas at Austin in 1972. After a one-year postdoc at Harvard University, he joined the Texas A&M physics faculty in 1973 and has been there ever since. Professor FordÃ¢â ¬â„¢s research area is theoretical atomic physics, with a specialization in atomic collisions. At Texas A&M he has taught a variety of undergraduate and graduate courses, but primarily introductory physics. --This text refers to the Paperback edition.

This book has clear explanations, nice pictures and good exercise problems. Interesting applications of physics like swiping of an ATM card and working of touchscreen devices are also mentioned. Exercise problems are categorized by section. Knowledge of differential and integral

calculus is recommended, although you can learn a great deal even without it. Overall, this is simply the best introductory physics textbook out there!The following is the table of contents:MECHANICS1. Units, Physical Quantities, and Vectors2. Motion Along a Straight Line3. Motion in Two or Three Dimensions4. Newton's Laws of Motion5. Applying Newton's Laws6. Work and Kinetic Energy7. Potential Energy and Energy Conservation8. Momentum, Impulse, and Collisions9. Rotation of Rigid Bodies10. Dynamics of Rotational Motion11. Equilibrium and Elasticity12. Fluid Mechanics13. Gravitation14. Periodic MotionWAVES/ACOUSTICS15. Mechanical Waves16. Sound and HearingTHERMODYNAMICS17. Temperature and Heat18. Thermal Properties of Matter19. The First Law of Thermodynamics20. The Second Law of ThermodynamicsELECTROMAGNETISM21. Electric Charge and Electric Field22. Gauss's Law23. Electric Potential24. Capacitance and Dielectrics25. Current, Resistance, and Electromotive Force26. Direct-Current Circuits27. Magnetic Field and Magnetic Forces28. Sources of Magnetic Field29. Electromagnetic Induction30. Inductance31. Alternating Current32. Electromagnetic WavesOPTICS33. The Nature and Propagation of Light34. Geometric Optics and Optical Instruments35. Interference36. DiffractionMODERN PHYSICS37. Relativity38. Photons: Light Waves Behaving as Particles39. Particles Behaving as Waves40. Quantum Mechanics41. Atomic Structure42. Molecules and Condensed Matter43. Nuclear Physics44. Particle Physics and Cosmology

The University Physics book has the distinction from the College physics series to be complicated by calculus. This isn't the case. Calculus is a prominent topic when one studies kinematics and from then on, calculus isn't really a big deal. This book is the biggest book I have, for the simple fact, that there is an immense amount of material and also because they really take up a lot of space to discuss ideas. The highlight of this book is the modern physics portion, in which quantum mechanics, atomic physics, particle physics, relativity and cosmology is discussed. To me, the weakness of this book is fluid mechanics. However, there is quite enough on fluids if you want to take the MCAT, for example. There are a rich variety of problems that, when solved, allow you to pick up on certain tricks and learn different tools for attacking problems. Therefore, it is advised to pick up the solutions manual if you can. This is the only book I have in which the problem sets are just as valuable as the text.

I am very happy with this textbook.The set up and flow of each chapter is pretty much what I would hope for. Explanations range from adequate to excellent. The diagrams and graphics are very good

and clear - excellent help for visualizing what is going on. My favorite part: the chapter summaries include distilled, categorized recaps of the mathematical relationships introduced during the chapter. Chapter reviews that are excellent for reviewing the chapter.The one thing I find myself not loving is how often examples and chapter questions require the reader to flip pages back & forth, referring the reader back to a previous example, sometimes in a previous chapter, in order to obtain the given information and/or picture required for the current example/question. In all fairness, I can understand why the author did it. The book is already mammoth. I just prefer examples & questions to be self-contained, is all. A minor nuisance: not enough for me to downrate the book.(The solutions manuals are an entirely different story, but-)This textbook is outstanding.

This is actually a pretty good physics book if you're just starting out. It has a ton of material and it goes fairly in-depth with most of the topics. My professor wasn't very good, and i so i was glad i was able to learn from the book alone. The practice problems are extremely useful and i really liked how they showed how to work them out in the textbook rather than trying to sell a separate solutions manual like so many publishers do. It's a good book and nice introduction to physics.

All of the mechanics explanations are great but not for the light of heart. Some of the concepts get very hard very fast and make you feel like you missed some sort of a transition step in which you tackle and medium problem before a hard one. Its explanations of magnetism concepts needed to be fleshed out a bit better but I would say that overall the book performed decently in teaching me what I needed it to.

If you are looking for a single book containing all of college level physics, this is it. Being a single volume it does not contain the depth of each subject which more specialized physics texts contain. For the purpose of having an overview of nearly all general areas of physics, this is a great book. Recommended as a supplement for physics majors, with many problems to study for standardized exams.

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