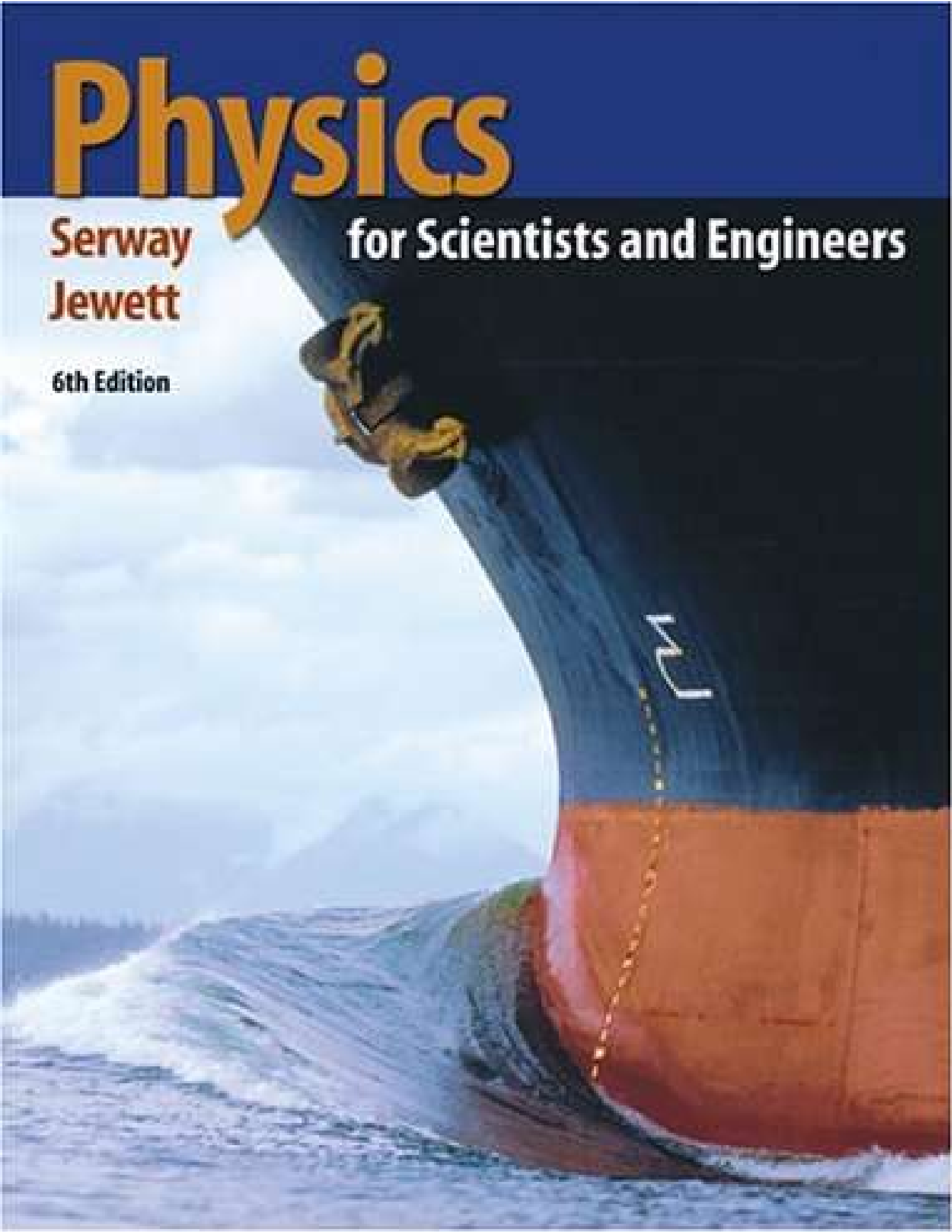
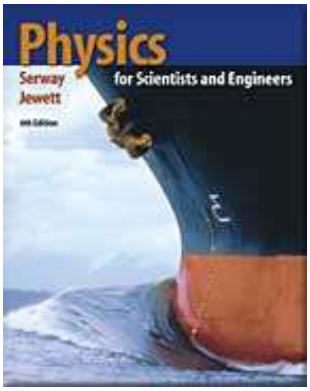
Physics

for Scientists and Engineers

Serway
Jewett

6th Edition





Physics for Scientists and Engineers (with PhysicsNOW and InfoTrac)

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This best-selling, calculus-based text is recognized for its carefully crafted, logical presentation of the basic concepts and principles of physics. PHYSICS FOR SCIENTISTS AND ENGINEERS, Sixth Edition, maintains the Serway traditions of concise writing for the students, carefully thought-out problem sets and worked examples, and evolving educational pedagogy. This edition introduces a new co-author, Dr. John Jewett, at Cal Poly – Pomona, known best for his teaching awards and his role in the recently published PRINCIPLES OF PHYSICS, Third Edition, also written with Ray Serway. Providing students with the tools they need to succeed in introductory physics, the Sixth Edition of this authoritative text features unparalleled media integration and a newly enhanced supplemental package for instructors and students!

Features

A GENERAL PROBLEM-SOLVING STRATEGY is outlined early in the text. This strategy provides a series of steps similar to those taken by professional physicists in solving problems. This problem solving strategy is integrated into the Coached Problems (within PhysicsNow) to reinforce this key skill.

A large number of authoritative and highly realistic WORKED EXAMPLES promote interactivity and reinforce student understanding of problem-solving techniques. In many cases, these examples serve as models for solving end-of-chapter problems. The examples are set off from the text for ease of location and are given titles to describe their content. Many examples include specific references to the GENERAL PROBLEM-SOLVING STRATEGY to illustrate the underlying concepts and methodology used in arriving at a correct solution. This will help students understand the logic behind the solution and the advantage of using a particular approach to solve the problem. About one-third of the WORKED EXAMPLES include new WHAT IF? extensions.

CONCEPTUAL EXAMPLES include detailed reasoning statements to help students learn how to think through physical situations. A concerted effort was made to place more emphasis on critical thinking and teaching physical concepts in this new edition.

Both PROBLEM-SOLVING STRATEGIES and HINTS help students approach homework assignments with greater confidence. General strategies and suggestions are included for solving the types of problems featured in the worked examples, end-of-chapter problems, and PhysicsNow. This feature helps students identify the essential steps in solving problems and increases their skills as problem solvers.

END-OF-CHAPTER PROBLEMS – An extensive set of problems is included at the end of each chapter. Answers to odd-numbered problems are given at the end of the book. For the convenience of both the student and instructor, about two thirds of the problems are keyed to specific sections of the chapter. All problems have been carefully worded and have been checked for clarity and accuracy. Solutions to approximately 20 percent of the end-of-chapter problems are included in the Student Solutions Manual and Study Guide. These problems are identified with a box around the problem number.

Serway and Jewett have a clear, relaxed writing style in which they carefully define new terms and avoid jargon whenever possible. The presentation is accurate and precise.

The International System of units (SI) is used throughout the book. The U.S. customary system of units is used only to a limited extent in the problem sets of the early chapters on mechanics.

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