Affordable Textbooks for an Affordable Education

Physics for Scientists and Engineers

6th Edition - 2004
Published by Thomson Learning

Current Edition Produced in **2004**
Previous Edition Produced in **2000**

Cost of New Copy of Edition 6 to American students: **$134.96**
Cost to British/African/Middle Eastern students: **$72.43**

Cost of Used Copy of Edition 5 to American students: **Unavailable in bookstores surveyed.**

76% of faculty surveyed say that new editions are justified "half the time" or less.

* All information taken from the Thomson Learning online consumer catalog: www.thomson.com/learning and a PIRG survey of 153 faculty members from 13 Universities in California and Oregon who teach the most commonly purchased textbooks on those campuses. The report can be found at www.MakeTextbooksAffordable.org. Dollar to Pound comparison based on an exchange rate of $1.8795 per British pound, current as of January 24, 2005.

Thomson Learning Says This About Their New Edition*

JOHN W. JEWETT (Cal Poly – Pomona) is introduced as a co-author on this edition of the text. He was instrumental on the preceding edition as a contributing author, and now brings his expertise in physics education and teaching to bear as co-author.

PIN code access to PhysicsNow is automatically packaged FREE with every new copy of the Sixth Edition. PhysicsNow, the first assessment-driven and student-centered learning system created for the physics market, provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program featuring conceptually linked components gives students a Personalized Learning Plan to help meet learning goals. PhysicsNow is completely flexible and can be used in any order, but features a default three-step mastery learning process. PhysicsNow is accessible via the Companion Web Site at http://www.pse6.com.

An additional fee-based online homework option, PhysicsNow PLUS, is also available. This algorithmically-driven assessment system contains more than 5,000 text-specific problems for an instructor to choose from. PhysicsNow PLUS also offers course management tools that allow instructors to manage class rosters, assign readings, tutorials, homework, courseware and quizzes, track students' progress on assignments and tests, and calculate grades automatically.

PITFALL PREVENTIONS are NEW marginal notes that point out common student misconceptions so that they can be corrected before the student proceeds to apply those misconceptions to new material.

WHAT IF? sections serve as an extension of many worked examples. The authors change some of the data or assumptions in an example that's just been worked out, and then explore the consequences. This allows students to apply concepts and problem-solving skills to new situations as well as test the final result for reasonable behavior.

This edition features more QUICK QUIZZES in every chapter, and all are revised in an objective format. QUICK QUIZZES give students an opportunity to test their conceptual understanding while also making the chapters more interactive. Answers to all QUICK QUIZ questions are found at the end of each chapter. A supplementary set of QUICK QUIZZES is available for download in PowerPoint® format from the Companion Web Site for use in class in the "Choose your answer and defend it" mode, using small groups of students (sometimes known as "peer instruction"). Additionally, QUICK QUIZZES can be repurposed for personal response systems.

Seventeen percent of all problems are new to this edition.

The chapter on "Oscillatory Motion" (Chapter 15) has been moved from its former position to lead off the wave mechanics unit (Chapter 16).

Selective editing and revision of information throughout Part II (Chapters 15-18) lays a new conceptual foundation for quantum mechanics in Part VI.

Chapters 40 ("Introduction to Quantum Physics") and 41 ("Quantum Mechanics") have been significantly rewritten to include a more contemporary conceptual foundation. The material in Part VI explores current and future applications, such as resonant tunneling devices and the use of quantum dots in quantum computers.

The Companion Web Site (http://www.pse6.com), newly revised for this edition, features student access to Quizzes, Web Links, Internet Exercises, Learning Objectives, and Chapter Outlines. In addition, instructors have password-protected access to a downloadable file of the Instructor's Manual, a Mulitmedia Manager demo, and PowerPoint® files of QUICK QUIZZES.

* All information from Brooks/Cole website: www.brookscole.com. Brooks/Cole is a division of Thomson Learning.

But Do These Changes Really Warrant An Entirely New Edition?

Changes to reflect new teaching techniques should be encouraged. However, do these changes really warrant a new edition after just four years?

Look closely at the changes described by Thomson Learning.

Nearly all of these changes are either:

- CD-ROMs or web-based tutorials
- New problem sets
- Tweaks in the wording or arrangement of some chapters

A visual inspection of this book confirms that none of the changes reflect any substantively new content in the field.

Couldn't these changes simply be taken care of with an optional supplement that faculty could choose to order?

87% of faculty surveyed in Fall 2003 supported including some new information in a supplement instead of producing a new textbook edition.

"I have noticed during my tenure as the Chair of the Undergraduate Committee that textbooks come out with new editions for introductory physics courses surprisingly frequently, and often without making substantial changes to the book. There are of course good reasons for writing a new edition of a textbook. Three such reasons are: there is new material to be taught, there is a new understanding of how to present the material, or there is a new audience for the book. In introductory physics, the nature of the subject is such that new material almost never occurs at the level that can justify an entire new textbook, and the audience is relatively stable. This leaves only substantial educational improvements, which also don't occur that often. In my role as one of the people selecting textbooks, I have often raised this issue with publishers. Many of them admit that one of their main reasons for publishing new editions is to counteract losses to the used book market."

Dr. Michael Dennin
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