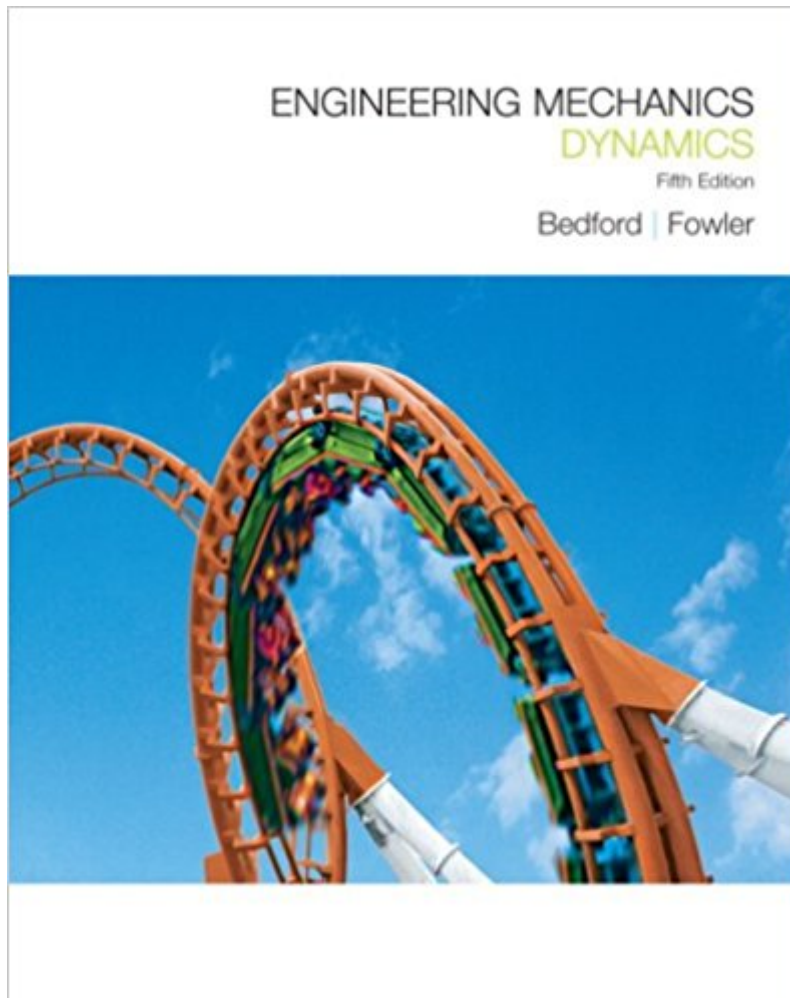




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Engineering Mechanics: Dynamics (5th Edition)



Synopsis

While covering the basic principles of mechanics in an example-driven format, this innovative book emphasizes critical thinking by presenting the reader with engineering situations. Compelling photorealistic art, and a robust photograph program helps readers to connect visually to the topics discussed. Features strong coverage of FBDs and important ABET topics. For professionals in mechanical, civil, aeronautical, or engineering mechanics fields.

Book Information

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Customer Reviews

This text presents the foundations and applications of statics by emphasizing the importance of visual analysis of topics-especially through the use of free body diagrams. This text also promotes a problem-solving approach to solving examples through its strategy, solution, discussion format in examples. Bedford/Fowler further includes design and computational examples that help instructors integrate these ABET 2000 requirements. FEATURES/BENEFITS * NEW;Strategy-Solution-Discussion;Most examples follow this format. * Promotes students thinking critically about the example vs. rote memorization. * NEW;Engineering Design;Includes "Application to Engineering" examples that provide discussions of the uses of dynamics in engineering design. * NEW;Emphasizes Application;Text places dynamics within the context of engineering practice by including applications from many fields of engineering. * NEW;Optional Student Software;Working Model-based Simulation Software specifically for Bedford/Fowler. * NEW;Computational Mechanics Examples;Provide optional self-contained examples

designed to introduce students to the use of computers in engineering. Professors can use any programming language, or math solver of their choice. * NEW#151;Extended discussion of normal and tangential components (Ch. 2)#151;Includes 3D motion. * NEW#151;A revised discussion of reference frames#151;Throughout the text, especially in Chs. 2 and 6. *

NEW#151;Expanded/improved discussion of several topics#151;e.g., impulsive forces, 2D rigid-body kinematics, D'Alembert's principle, and angular impulse and momentum. *

NEW#151;Expanded discussion of 3D rigid body dynamics (Ch. 9)#151;Includes new examples and problems. * NEW#151;More than 20% new and revised chapter-end problems. Engineering

Mechanics: Dynamics, Second Edition. This book has quickly earned a place in Engineering schools across the country because it teaches engineering mechanics the way a good instructor would Problem Solving * Uses a "Strategy-Solution-Discussion" problem-solving methodology that explains how to approach problems, solve them, and critically judge the results * Contains "Computational Mechanics" feature with examples and problems that introduce the reader to computer applications in engineering mechanics Visualization * Stresses the importance of visual analysis, especially the use of free-body diagrams * Develops figures gradually and employs "ghosting" techniques to clarify and emphasize concepts-- emulating the way an instructor teaches Applications * Places engineering mechanics within the context of engineering practice by including applications from many fields of engineering * Introduces design principles with the "Application to Engineering" feature using concepts developed in preceding sections of the chapter New Features Visualization * Provides more free-body diagrams to many of the worked examples * Separates most of the diagrams showing velocities, accelerations, and forces into a free-body diagram showing the forces and a kinematic diagram showing the accelerations Content * Extends the discussion of normal and tangential components in Chapter 2 to include three- dimensional motion Includes a revised discussion of reference frames throughout the text, especially in Chapters 2 and 6 * Improves the discussion of impulsive forces in Chapter 5 * Improves the discussion of 2D rigid-body kinematics in Chapter 6 * Expands and improves the discussion of D'Alembert's principle in Chapter 7 * Provides a revised and improved discussion of angular impulse and momentum in Chapter 8 * Expands the discussion of 3D rigid body dynamics in Chapter 9 and provides new examples and problems * Offers several new examples throughout the text including more of the popular feature, "Application to Engineering" * Includes more than 20% new and revised end-of-chapter problems Organization * Presents section on Orbital Mechanics in Chapter 3 --This text refers to an out of print or unavailable edition of this title.

Wallace Fowler is Paul D. and Betty Robertson Meek Professor of Engineering in the Department of Aerospace Engineering and Engineering Mechanics at the University of Texas at Austin. Dr. Fowler received his B.S., M.S., and Ph.D. degrees at the University of Texas at Austin, and has been on the faculty since 1966. During 1976 he was on the staff of the United States Air Force Test Pilot School, Edwards Air Force Base, California, and in 1981-82 he was a visiting professor at the United States Air Force Academy. Since 1991 he has been Associate Director of the Texas Space Grant Consortium. Dr. Fowler's areas of teaching and research are dynamics, orbital mechanics, and spacecraft mission design. He is author or coauthor of many technical papers on trajectory optimization and attitude dynamics, and has also published many papers on the theory and practice of engineering teaching. He has received numerous teaching awards, including the Chancellor's Council Outstanding Teaching Award, the General Dynamics Teaching Excellence Award, the Halliburton Education Foundation Award of Excellence, and the AIAA-ASEE Distinguished Aerospace Educator Award. He is a licensed professional engineer, a member of many technical societies, and a fellow of the American Institute of Aeronautics and Astronautics and the American Society for Engineering Education. --This text refers to an out of print or unavailable edition of this title.

Changing from 4 to 1: Chapter 13 and 14 are essential for this topic, however, the book has little explanation of the idea. To make the situation worse, there are few example questions, and those are not related to the practice problems later on. Prepare the need of many other resources if you have this book. I don't recommend having this book if you are on your own. Find another one!--- SEP 7, 2016 ---The book has lots of diagrams in color, and explains the concept and major principles in Dynamics in a concise and well-organized way (as told by my professor). However, it has only a few working examples for each chapter, (usually 1-2) which is not enough. It is a bit expensive for this book, as it was written in 2007 (And no updated version as of today). It starts with Chapter 12, to 21, (Chapter 1-11 is in Statics book) I ordered the hard covered book, which comes rigid, like new conditions. As this is used book, don't expect to come with a MasteringEngineering Code, you can buy one at \$60.95 on Pearson's website.

As an introduction, I am an undergraduate Engineering student, and used this text in a 200-level Statics of Solids course. The authors evidently attempted to innovate statics texts by relying on examples and exercises to comprise a bulk of the learning process. However, it seems that they took this theme a bit to far. There is no effective narrative in the text, and numerous vital details are

omitted, with students left to their own devices to glean them from the examples. The example solutions skip steps haphazardly and are difficult for even high-achieving students to follow. Worse yet, several standard formulae, which are crucial for a bulk of the exercises, are relegated to an appendix which is rarely mentioned. The authors note that some basic calculus is required for the course, which is true. However, their handling of it is one of the text's (many) low points.

Descriptions of formulae and their purpose are lacking at best, and variables are inconsistent even within the same chapter. Overall, using this text was not a pleasant experience, and I would not recommend it to anybody, unless they were looking for a book of exercises. Even in that category, there are far better (and less costly) options on the market. The bundled "Study Guide" authored by Mr. Schiavone, was of little utility. My instructor suggested that we purchase it, and it did provide a serviceable review of basic concepts. Its extended review of free body diagrams was limited to the most basic of items and conventions, but could be useful in a course where the instructor neglects this area. Otherwise, the chapter reviews offered minimal, if any, problem-solving support, and thus the use of this supplement as a study guide was minimal. I guess for a student who understood the methods but not representation it could be helpful. Overall, I would not recommend the supplement either.

A++

Used it for a class. Had plenty of examples and problems.

This book is not very easy to follow. The Hibbeler book is much better.

it's a text book. buy it. use it. resell it.

The book arrived in poor quality. It's about to fall apart. I am not satisfied with my book rental.

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