



strategy helps students build a strong set of habits for successful completion and execution of the course's many problems.

This compact and easy-to-read text provides a clear analysis of the principles of equilibrium of rigid bodies in statics and dynamics when they are subjected to external mechanical loads. The book also introduces the readers to the effects of force or displacements so as to give an overall picture of the behaviour of an engineering system. Divided into two parts—statics and dynamics—the book has a structured format, with a gradual development of the subject from simple concepts to advanced topics so that the beginning undergraduate is able to comprehend the subject with ease. Example problems are chosen from engineering practice and all the steps involved in the solution of a problem are explained in detail. The book also covers advanced topics such as the use of virtual work principle for finite element analysis; introduction of Castigliano's theorem for elementary indeterminate analysis; use of Lagrange's equations for obtaining equilibrium relations for multibody system; principles of gyroscopic motion and their applications; and the response of structures due to ground motion and its use in earthquake engineering. The book has plenty of exercise problems—which are arranged in a graded level of difficulty—, worked-out examples and numerous diagrams that illustrate the principles discussed. These features along with the clear exposition of principles make the text suitable for the first year undergraduate students in engineering.

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New Page 1 Vector Mechanics for Engineers: Dynamics and its companion volume, Vector Mechanics for Engineers: Statics, are designed to develop in first-year engineering students the ability to analyze any problem in a simple and logical manner, and to apply basic engineering principles to its solution. Each chapter begins with an introduction and a set of learning objectives, and ends with a chapter review and summary. The body of the text is divided into units, each consisting of one or several theory sections, one or several sample problems, and a large number of problems to be assigned during the class or as homework. The sample problems serve the double purpose of amplifying the text and demonstrating the type of neat, orderly work that students should cultivate in their own solutions. This allows students to organize in their minds the theories and solution methods learnt before they tackle the assigned problems. Each unit corresponds to a well-defined topic and can generally be covered in one lesson. Key features include; Practical applications are introduced early. iquest; New concepts are introduced in simple terms. iquest; Fundamental principles are placed in the context of simple applications. iquest; The presentation of the principles of kinetics is unified. iquest; Free-body diagrams are used both to solve equilibrium problems and to express the equivalence of force systems. iquest; A four-color presentation uses color to distinguish vectors. iquest; Optional sections offer advanced or speciality topics. iquest; A wide range of problems develops application skills: Sample problems Problems for students to solve on their own Homework problems sets Review problems Problems to be solved using computational software

This textbook covers dynamics for undergraduate engineering mechanics. It is written by Beer and Johnston, authors renowned for over 40 years for their significant theoretical pedagogical innovations in statics and dynamics, careful presentation of content and attention to detail.

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The first book published in the Beer and Johnston Series, Mechanics for Engineers: Statics is a scalar-based introductory statics text, ideally suited for engineering technology programs, providing first-rate treatment of rigid bodies without vector mechanics. This new edition provides an extensive selection of new problems and end-of-chapter summaries. The text brings the careful presentation of content, unmatched levels of accuracy, and attention to detail that have made Beer and Johnston texts the standard for excellence in engineering mechanics education.

Continuing in the spirit of its successful previous editions, the tenth edition of Beer, Johnston, Mazurek, and Cornwell's Vector Mechanics for Engineers provides conceptually accurate and thorough coverage together with a significant refreshment of the exercise sets and online delivery of homework problems to your students. Nearly forty percent of the problems in the text are changed from the previous edition. The Beer/Johnston textbooks introduced significant pedagogical innovations into engineering mechanics teaching. The consistent, accurate problem-solving methodology gives your students the best opportunity to learn statics and dynamics. At the same time, the careful presentation of content, unmatched levels of accuracy, and attention to detail have made these texts the standard for excellence.

Never HIGHLIGHT a Book Again! Virtually all of the testable terms, concepts, persons, places, and events from the textbook are included. Cram101 Just the FACTS101 studyguides give all of the outlines, highlights, notes, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. Accompany: 9780072931105 .

Now accompanied by a New Media CD package, the 3rd SI edition has undergone substantial change and revision. Ferdinand Beer and Russell Johnston have retained their clear writing style as well as the wealth of problems and logical presentation of the theory. The accuracy of the theory, the problems and the artwork ensures that undergraduates grasp the concepts essential for the remainder of their student and

professional careers. The 3rd SI edition contains a new four-colour design, and the software that accompanies the text is completely new, containing interactive modules with animations of free-body diagrams, and quizzes to accompany every subject.

Since their publication nearly 40 years ago, Beer and Johnston's Vector Mechanics for Engineers books have set the standard for presenting statics and dynamics to beginning engineering students. The New Media Versions of these classic books combine the power of cutting-edge software and multimedia with Beer and Johnston's unsurpassed text coverage. The package is also enhanced by a new problems supplement. For more details about the new media and problems supplement package components, see the "New to this Edition" section below.

Continuing in the spirit of its successful previous editions, the ninth edition of Beer, Johnston, Mazurek, and Cornwell's Vector Mechanics for Engineers provides conceptually accurate and thorough coverage together with a significant refreshment of the exercise sets and online delivery of homework problems to your students. Nearly forty percent of the problems in the text are changed from the previous edition. The Beer/Johnston textbooks introduced significant pedagogical innovations into engineering mechanics teaching. The consistent, accurate problem-solving methodology gives your students the best opportunity to learn statics and dynamics. At the same time, the careful presentation of content, unmatched levels of accuracy, and attention to detail have made these texts the standard for excellence.

Provides sample problems dealing with force analysis, plane trusses, friction, centroids of plane areas, distribution of forces, and moments and products of inertia

\*\*\*Book is published and available as of 6/03!!! For the past forty years Beer and Johnston have been the uncontested leaders in the teaching of undergraduate engineering mechanics. Over the years their textbooks have introduced significant theoretical and pedagogical innovations in statics, dynamics, and mechanics of materials education. At the same time, their careful presentation of content, unmatched levels of accuracy, and attention to detail have made their texts the standard for excellence. The new Seventh Edition of Vector Mechanics for Engineers: Statics continues this tradition.

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