

Thermal Fluid Sciences Fourth Edition Solution Manual

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Mechanics of Fluids - John Ward-Smith 2005-01-05

This solutions manual accompanies the 8th edition of Massey's Mechanics of Fluids, the long-standing and best-selling textbook. It provides a series of carefully worked solutions to problems in the main textbook, suitable for use by lecturers guiding stud.

EBOOK: Fundamentals of Thermal-Fluid Sciences (SI units) - Yunus Cengel 2012-01-16

THE FOURTH EDITION IN SI UNITS of Fundamentals of Thermal-Fluid Sciences presents a balanced coverage of thermodynamics, fluid mechanics, and heat transfer packaged in a manner suitable for use in introductory thermal sciences courses. By emphasizing the physics and underlying physical phenomena involved, the text gives students practical examples that allow development of an understanding of the theoretical underpinnings of thermal sciences. All the popular features of the previous edition are retained in this edition while new ones are added. THIS EDITION FEATURES: A New Chapter on Power and Refrigeration Cycles The new Chapter 9 exposes students to the foundations of power generation and refrigeration in a well-ordered and compact manner. An Early Introduction to the First Law of Thermodynamics (Chapter 3) This chapter establishes a general understanding of energy, mechanisms of energy transfer, and the concept of energy balance, thermo-economics, and conversion efficiency. Learning Objectives Each chapter begins with an overview of the material to be covered and chapter-specific learning objectives to introduce the material and to set goals. Developing Physical Intuition A special effort is made to help students develop an intuitive feel for underlying physical mechanisms of natural phenomena and to gain a mastery of solving practical problems that an engineer is likely to face in the real world. New Problems A large number of problems in the text are modified and many problems are replaced by new ones. Some of the solved examples are also replaced by new ones. Upgraded Artwork Much of the line artwork in the text is upgraded to figures that appear more three-dimensional and realistic. MEDIA RESOURCES: Limited Academic Version of EES with selected text solutions packaged with the text on the Student DVD. The Online Learning Center (www.mheducation.asia/olc/cengelFTFS4e) offers online resources for instructors including PowerPoint® lecture slides, and complete solutions to homework problems. McGraw-Hill's Complete Online Solutions Manual Organization System (<http://cosmos.mhhe.com/>) allows instructors to streamline the creation of assignments, quizzes, and tests by using problems and solutions from the textbook, as well as their own custom material.

Internal Combustion Engines - Colin R. Ferguson 2015-07-01

Since the publication of the Second Edition in 2001, there have been considerable advances and developments in the field of internal combustion engines. These include the increased importance of biofuels, new internal combustion processes, more stringent emissions requirements and characterization, and more detailed engine performance modeling, instrumentation, and control. There have also been changes in the instructional methodologies used in the applied thermal sciences that require inclusion in a new edition. These methodologies suggest that an increased focus on applications, examples, problem-based learning, and computation will have a positive effect on learning of the material, both at the novice student, and practicing engineer level. This Third Edition mirrors its predecessor with additional tables, illustrations, photographs, examples, and problems/solutions. All of the software is 'open source', so that readers can see how the computations are performed. In addition to additional java applets, there is companion Matlab code, which has become a default computational tool in most mechanical engineering programs.

Aulton's Pharmaceuticals - Michael E. Aulton 2013

"Pharmaceutics is the art of pharmaceutical preparations. It

encompasses design of drugs, their manufacture and the elimination of micro-organisms from the products. This book encompasses all of these areas."--Provided by publisher.

Rules of Thumb for Chemical Engineers - Carl Branan 2002

The most complete guide of its kind, this is the standard handbook for chemical and process engineers. All new material on fluid flow, long pipe, fractionators, separators and accumulators, cooling towers, gas treating, blending, troubleshooting field cases, gas solubility, and density of irregular solids. This substantial addition of material will also include conversion tables and a new appendix, "Shortcut Equipment Design Methods." This convenient volume helps solve field engineering problems with its hundreds of common sense techniques, shortcuts, and calculations. Here, in a compact, easy-to-use format, are practical tips, handy formulas, correlations, curves, charts, tables, and shortcut methods that will save engineers valuable time and effort. Hundreds of common sense techniques and calculations help users quickly and accurately solve day-to-day design, operations, and equipment problems.

Convective Heat and Mass Transfer - S. Mostafa Ghiaasiaan 2018-06-12

Convective Heat and Mass Transfer, Second Edition, is ideal for the graduate level study of convection heat and mass transfer, with coverage of well-established theory and practice as well as trending topics, such as nanoscale heat transfer and CFD. It is appropriate for both Mechanical and Chemical Engineering courses/modules.

Unit Operations of Chemical Engineering - Warren Lee McCabe 1967

Solar Engineering of Thermal Processes, Photovoltaics and Wind - John A. Duffie 2020-03-24

The bible of solar engineering that translates solar energy theory to practice, revised and updated The updated Fifth Edition of Solar Engineering of Thermal Processes, Photovoltaics and Wind contains the fundamentals of solar energy and explains how we get energy from the sun. The authors—noted experts on the topic—provide an introduction to the technologies that harvest, store, and deliver solar energy, such as photovoltaics, solar heaters, and cells. The book also explores the applications of solar technologies and shows how they are applied in various sectors of the marketplace. The revised Fifth Edition offers guidance for using two key engineering software applications, Engineering Equation Solver (EES) and System Advisor Model (SAM). These applications aid in solving complex equations quickly and help with performing long-term or annual simulations. The new edition includes all-new examples, performance data, and photos of current solar energy applications. In addition, the chapter on concentrating solar power is updated and expanded. The practice problems in the Appendix are also updated, and instructors have access to an updated print Solutions Manual. This important book: • Covers all aspects of solar engineering from basic theory to the design of solar technology • Offers in-depth guidance and demonstrations of Engineering Equation Solver (EES) and System Advisor Model (SAM) software • Contains all-new examples, performance data, and photos of solar energy systems today • Includes updated simulation problems and a solutions manual for instructors Written for students and practicing professionals in power and energy industries as well as those in research and government labs, Solar Engineering of Thermal Processes, Fifth Edition continues to be the leading solar engineering text and reference.

Elements of Chemical Reaction Engineering - H. Scott Fogler 1999

"The fourth edition of Elements of Chemical Reaction Engineering is a completely revised version of the book. It combines authoritative coverage of the principles of chemical reaction engineering with an unsurpassed focus on critical thinking and creative problem solving, employing open-ended questions and stressing the Socratic method. Clear and organized, it integrates text, visuals, and computer simulations

to help readers solve even the most challenging problems through reasoning, rather than by memorizing equations."--BOOK JACKET.
Fundamentals of Momentum, Heat, and Mass Transfer - James R. Welty 1976

Geothermal Power Plants - Ronald DiPippo 2011-04-08

Ron DiPippo, Professor Emeritus at the University of Massachusetts Dartmouth, is a world-regarded geothermal expert. This single resource covers all aspects of the utilization of geothermal energy for power generation from fundamental scientific and engineering principles. The thermodynamic basis for the design of geothermal power plants is at the heart of the book and readers are clearly guided on the process of designing and analysing the key types of geothermal energy conversion systems. Its practical emphasis is enhanced by the use of case studies from real plants that increase the reader's understanding of geothermal energy conversion and provide a unique compilation of hard-to-obtain data and experience. An important new chapter covers Environmental Impact and Abatement Technologies, including gaseous and solid emissions; water, noise and thermal pollutions; land usage; disturbance of natural hydrothermal manifestations, habitats and vegetation; minimisation of CO₂ emissions and environmental impact assessment. The book is illustrated with over 240 photographs and drawings. Nine chapters include practice problems, with solutions, which enable the book to be used as a course text. Also includes a definitive worldwide compilation of every geothermal power plant that has operated, unit by unit, plus a concise primer on the applicable thermodynamics. * Engineering principles are at the heart of the book, with complete coverage of the thermodynamic basis for the design of geothermal power systems * Practical applications are backed up by an extensive selection of case studies that show how geothermal energy conversion systems have been designed, applied and exploited in practice * World renowned geothermal expert DiPippo has including a new chapter on Environmental Impact and Abatement Technology in this new edition
Fundamentals of Fluid Mechanics - Bruce Roy Munson 1999

Fluid Mechanics - Pijush K. Kundu 2012

Suitable for both a first or second course in fluid mechanics at the graduate or advanced undergraduate level, this book presents the study of how fluids behave and interact under various forces and in various applied situations - whether in the liquid or gaseous state or both.

A HEAT TRANSFER TEXTBOOK - John H. Lienhard 2004

Introduction to Probability and Statistics for Engineers and Scientists - Sheldon M. Ross 1987

Elements of probability; Random variables and expectation; Special; random variables; Sampling; Parameter estimation; Hypothesis testing; Regression; Analysis of variance; Goodness of fit and nonparametric testing; Life testing; Quality control; Simulation.

Field and Wave Electromagnetics - Cheng 1989-09

Materials - Michael F. Ashby 2013-10-09

Materials, Third Edition, is the essential materials engineering text and resource for students developing skills and understanding of materials properties and selection for engineering applications. This new edition retains its design-led focus and strong emphasis on visual communication while expanding its inclusion of the underlying science of materials to fully meet the needs of instructors teaching an introductory course in materials. A design-led approach motivates and engages students in the study of materials science and engineering through real-life case studies and illustrative applications. Highly visual full color graphics facilitate understanding of materials concepts and properties. For instructors, a solutions manual, lecture slides, online image bank, and materials selection charts for use in class handouts or lecture presentations are available at <http://textbooks.elsevier.com>. The number of worked examples has been increased by 50% while the number of standard end-of-chapter exercises in the text has been doubled. Coverage of materials and the environment has been updated with a new section on Sustainability and Sustainable Technology. The text meets the curriculum needs of a wide variety of courses in the materials and design field, including introduction to materials science and engineering, engineering materials, materials selection and processing, and materials in design. Design-led approach motivates and engages students in the study of materials science and engineering through real-life case studies and illustrative applications Highly visual full color graphics facilitate understanding of materials concepts and properties Chapters on

materials selection and design are integrated with chapters on materials fundamentals, enabling students to see how specific fundamentals can be important to the design process For instructors, a solutions manual, lecture slides, online image bank and materials selection charts for use in class handouts or lecture presentations are available at <http://textbooks.elsevier.com> Links with the Cambridge Engineering Selector (CES EduPack), the powerful materials selection software. See www.grantadesign.com for information NEW TO THIS EDITION: Text and figures have been revised and updated throughout The number of worked examples has been increased by 50% The number of standard end-of-chapter exercises in the text has been doubled Coverage of materials and the environment has been updated with a new section on Sustainability and Sustainable Technology

Fundamentals of Thermal-fluid Sciences - Yunus A. Çengel 2021

"This text is an abbreviated version of standard thermodynamics, fluid mechanics, and heat transfer texts, covering topics that engineering students are most likely to need in their professional lives"--

Solar Engineering of Thermal Processes - John A. Duffie 2006-08-25

The updated, cornerstone engineering resource of solar energy theory and applications. Solar technologies already provide energy for heat, light, hot water, electricity, and cooling for homes, businesses, and industry. Because solar energy only accounts for one-tenth of a percent of primary energy demand, relatively small increases in market penetration can lead to very rapid growth rates in the industry???which is exactly what has been projected for coming years as the world moves away from carbon-based energy production. Solar Engineering of Thermal Processes, Third Edition provides the latest thinking and practices for engineering solar technologies and using them in various markets. This Third Edition of the acknowledged leading book on solar engineering features: Complete coverage of basic theory, systems design, and applications Updated material on such cutting-edge topics as photovoltaics and wind power systems New homework problems and exercises

The Properties of Gases and Liquids - Bruce Poling 2000-11-27

Must-have reference for processes involving liquids, gases, and mixtures Reap the time-saving, mistake-avoiding benefits enjoyed by thousands of chemical and process design engineers, research scientists, and educators. Properties of Gases and Liquids, Fifth Edition, is an all-inclusive, critical survey of the most reliable estimating methods in use today --now completely rewritten and reorganized by Bruce Poling, John Prausnitz, and John O'Connell to reflect every late-breaking development. You get on-the-spot information for estimating both physical and thermodynamic properties in the absence of experimental data with this property data bank of 600+ compound constants. Bridge the gap between theory and practice with this trusted, irreplaceable, and expert-authored expert guide -- the only book that includes a critical analysis of existing methods as well as hands-on practical recommendations. Areas covered include pure component constants; thermodynamic properties of ideal gases, pure components and mixtures; pressure-volume-temperature relationships; vapor pressures and enthalpies of vaporization of pure fluids; fluid phase equilibria in multicomponent systems; viscosity; thermal conductivity; diffusion coefficients; and surface tension.

Fundamental Mechanics of Fluids, Third Edition - Iain G. Currie 2002-12-12

Retaining the features that made previous editions perennial favorites, Fundamental Mechanics of Fluids, Third Edition illustrates basic equations and strategies used to analyze fluid dynamics, mechanisms, and behavior, and offers solutions to fluid flow dilemmas encountered in common engineering applications. The new edition contains completely reworked line drawings, revised problems, and extended end-of-chapter questions for clarification and expansion of key concepts. Includes appendices summarizing vectors, tensors, complex variables, and governing equations in common coordinate systems Comprehensive in scope and breadth, the Third Edition of Fundamental Mechanics of Fluids discusses: Continuity, mass, momentum, and energy One-, two-, and three-dimensional flows Low Reynolds number solutions Buoyancy-driven flows Boundary layer theory Flow measurement Surface waves Shock waves

Fluid Mechanics: Fundamentals and Applications - Yunus A. Çengel, Dr. 2017-02-27

Çengel and Cimbala's Fluid Mechanics Fundamentals and Applications, communicates directly with tomorrow's engineers in a simple yet precise manner, while covering the basic principles and equations of fluid mechanics in the context of numerous and diverse real-world

engineering examples. The text helps students develop an intuitive understanding of fluid mechanics by emphasizing the physics, using figures, numerous photographs and visual aids to reinforce the physics. The highly visual approach enhances the learning of fluid mechanics by students. This text distinguishes itself from others by the way the material is presented - in a progressive order from simple to more difficult, building each chapter upon foundations laid down in previous chapters. In this way, even the traditionally challenging aspects of fluid mechanics can be learned effectively. McGraw-Hill's Connect, is also available as an optional, add on item. Connect is the only integrated learning system that empowers students by continuously adapting to deliver precisely what they need, when they need it, how they need it, so that class time is more effective. Connect allows the professor to assign homework, quizzes, and tests easily and automatically grades and records the scores of the student's work. Problems are randomized to prevent sharing of answers and may also have a "multi-step solution" which helps move the students' learning along if they experience difficulty.

Fluid Mechanics - Yunus A. Çengel 2006

Covers the basic principles and equations of fluid mechanics in the context of several real-world engineering examples. This book helps students develop an intuitive understanding of fluid mechanics by emphasizing the physics, and by supplying figures, numerous photographs and visual aids to reinforce the physics.

Computational Fluid Mechanics and Heat Transfer, Second Edition - Richard H. Pletcher 1997-04-01

This comprehensive text provides basic fundamentals of computational theory and computational methods. The book is divided into two parts. The first part covers material fundamental to the understanding and application of finite-difference methods. The second part illustrates the use of such methods in solving different types of complex problems encountered in fluid mechanics and heat transfer. The book is replete with worked examples and problems provided at the end of each chapter.

Fluid Catalytic Cracking Handbook - Reza Sadeghbeigi 2000-06-08

This thoroughly updated edition of Fluid Catalytic Cracking Handbook provides practical information on the design, operation, troubleshooting, and optimization of fluid catalytic cracking (FCC) facilities. Based on the author's years of field experience, this expanded, second edition covers the latest technologies to improve the profitability and reliability of the FCC units, and provides several "no-to-low-cost" practical recommendations. A new chapter supplies valuable recommendations for debottlenecking and optimizing the performance of cat cracker operations.

Introduction to Food Engineering - R. Paul Singh 2001-06-29

Food engineering is a required class in food science programs, as outlined by the Institute for Food Technologists (IFT). The concepts and applications are also required for professionals in food processing and manufacturing to attain the highest standards of food safety and quality. The third edition of this successful textbook succinctly presents the engineering concepts and unit operations used in food processing, in a unique blend of principles with applications. The authors use their many years of teaching to present food engineering concepts in a logical progression that covers the standard course curriculum. Each chapter describes the application of a particular principle followed by the quantitative relationships that define the related processes, solved examples, and problems to test understanding. The subjects the authors have selected to illustrate engineering principles demonstrate the relationship of engineering to the chemistry, microbiology, nutrition and processing of foods. Topics incorporate both traditional and contemporary food processing operations.

The Brain That Changes Itself - Norman Doidge 2007-03-15

"Fascinating. Doidge's book is a remarkable and hopeful portrait of the endless adaptability of the human brain."—Oliver Sacks, MD, author of *The Man Who Mistook His Wife for a Hat* What is neuroplasticity? Is it possible to change your brain? Norman Doidge's inspiring guide to the new brain science explains all of this and more. An astonishing new science called neuroplasticity is overthrowing the centuries-old notion that the human brain is immutable, and proving that it is, in fact, possible to change your brain. Psychoanalyst, Norman Doidge, M.D., traveled the country to meet both the brilliant scientists championing neuroplasticity, its healing powers, and the people whose lives they've transformed—people whose mental limitations, brain damage or brain trauma were seen as unalterable. We see a woman born with half a brain that rewired itself to work as a whole, blind people who learn to see, learning disorders cured, IQs raised, aging brains rejuvenated, stroke

patients learning to speak, children with cerebral palsy learning to move with more grace, depression and anxiety disorders successfully treated, and lifelong character traits changed. Using these marvelous stories to probe mysteries of the body, emotion, love, sex, culture, and education, Dr. Doidge has written an immensely moving, inspiring book that will permanently alter the way we look at our brains, human nature, and human potential.

Biology - Mariëlle Hoefnagels 2012

Enger/Ross/Bailey: Concepts in Biology is a relatively brief introductory general biology text written for students with no previous science background. The authors strive to use the most accessible vocabulary and writing style possible while still maintaining scientific accuracy. The text covers all the main areas of study in biology from cells through ecosystems. Evolution and ecology coverage are combined in Part Four to emphasize the relationship between these two main subject areas. The new, 13th edition is the latest and most exciting revision of a respected introductory biology text written by authors who know how to reach students through engaging writing, interesting issues and applications, and accessible level. Instructors will appreciate the book's scientific accuracy, complete coverage and extensive supplement package.

Differential Equations for Engineers and Scientists - Yunus A. Çengel 2013

Differential Equations for Engineers and Scientists is intended to be used in a first course on differential equations taken by science and engineering students. It covers the standard topics on differential equations with a wealth of applications drawn from engineering and science—with more engineering-specific examples than any other similar text. The text is the outcome of the lecture notes developed by the authors over the years in teaching differential equations to engineering students.

Heat Transfer - Yunus A. Çengel 2002-10

CD-ROM contains: the limited academic version of Engineering equation solver (EES) with homework problems.

Design of Fluid Thermal Systems - William S. Janna 2009

This book is designed to serve senior-level engineering students taking a capstone design course in fluid and thermal systems design. It is built from the ground up with the needs and interests of practicing engineers in mind; the emphasis is on practical applications. The book begins with a discussion of design methodology, including the process of bidding to obtain a project, and project management techniques. The text continues with an introductory overview of fluid thermal systems (a pump and pumping system, a household air conditioner, a baseboard heater, a water slide, and a vacuum cleaner are among the examples given), and a review of the properties of fluids and the equations of fluid mechanics. The text then offers an in-depth discussion of piping systems, including the economics of pipe size selection. Janna examines pumps (including net positive suction head considerations) and piping systems. He provides the reader with the ability to design an entire system for moving fluids that is efficient and cost-effective. Next, the book provides a review of basic heat transfer principles, and the analysis of heat exchangers, including double pipe, shell and tube, plate and frame cross flow heat exchangers. Design considerations for these exchangers are also discussed. The text concludes with a chapter of term projects that may be undertaken by teams of students.

Fundamentals of Thermal-fluid Sciences - Yunus A. Çengel 2004

The Second Edition of "Fundamentals of Thermal-Fluid Sciences" presents up-to-date, balanced coverage of the three major subject areas comprising introductory thermal-fluid engineering: thermodynamics, fluid mechanics, and heat transfer. By emphasizing the physics and underlying physical phenomena involved, the text encourages creative thinking, development of a deeper understanding of the subject matter, and is read with enthusiasm and interest by both students and professors.

Convection Heat Transfer - Vedat S. Arpaci 1984

Mechanics of Fluids - Merle C. Potter 2011-01-05

MECHANICS OF FLUIDS presents fluid mechanics in a manner that helps students gain both an understanding of, and an ability to analyze the important phenomena encountered by practicing engineers. The authors succeed in this through the use of several pedagogical tools that help students visualize the many difficult-to-understand phenomena of fluid mechanics. Explanations are based on basic physical concepts as well as mathematics which are accessible to undergraduate engineering students. This fourth edition includes a Multimedia Fluid Mechanics DVD-ROM which harnesses the interactivity of multimedia to improve the teaching and learning of fluid mechanics by illustrating fundamental

phenomena and conveying fascinating fluid flows. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Fundamentals of Thermal-Fluid Sciences - Robert Turner 2016-03-04

Materials Selection in Mechanical Design - M. F. Ashby 1992-01-01

New materials enable advances in engineering design. This book describes a procedure for material selection in mechanical design, allowing the most suitable materials for a given application to be identified from the full range of materials and section shapes available. A novel approach is adopted not found elsewhere. Materials are introduced through their properties; materials selection charts (a new development) capture the important features of all materials, allowing rapid retrieval of information and application of selection techniques. Merit indices, combined with charts, allow optimisation of the materials selection process. Sources of material property data are reviewed and approaches to their use are given. Material processing and its influence on the design are discussed. The book closes with chapters on aesthetics and industrial design. Case studies are developed as a method of illustrating the procedure and as a way of developing the ideas further.

Probability & Statistics with R for Engineers and Scientists -

Michael Akritas 2018-03-21

This title is part of the Pearson Modern Classics series. Pearson Modern Classics are acclaimed titles at a value price. Please visit

www.pearsonhighered.com/math-classics-series for a complete list of titles. This text grew out of the author's notes for a course that he has taught for many years to a diverse group of undergraduates. The early introduction to the major concepts engages students immediately, which helps them see the big picture, and sets an appropriate tone for the course. In subsequent chapters, these topics are revisited, developed, and formalized, but the early introduction helps students build a true understanding of the concepts. The text utilizes the statistical software R, which is both widely used and freely available (thanks to the Free Software Foundation). However, in contrast with other books for the intended audience, this book by Akritas emphasizes not only the interpretation of software output, but also the generation of this output. Applications are diverse and relevant, and come from a variety of fields.

Religion and Popular Culture in America, Third Edition - Bruce David Forbes 2017-03-01

The connection between popular culture and religion is an enduring part of American life. With seventy-five percent new content, the third edition of this multifaceted and popular collection has been revised and updated throughout to provide greater religious diversity in its topics and address

critical developments in the study of religion and popular culture. Ideal for classroom use, this expanded volume gives increased attention to the implications of digital culture and the increasingly interactive quality of popular culture provides a framework to help students understand and appreciate the work in diverse fields, methods, and perspectives contains an updated introduction, discussion questions, and other instructional tools

Engineering Thermodynamics - M. David Burghardt 1993

Here is a comprehensive and comprehensible treatment of engineering thermodynamics from its theoretical foundations to its applications in real situations. The thermodynamics presented will prepare students for later courses in fluid mechanics and heat transfer, and practicing engineers will find the applications helpful in their professional work. The book is appropriate for an introductory undergraduate course in thermodynamics and for a subsequent course in thermodynamic applications. The chapters dealing with steam power plants, internal combustion engines, and HVAC are unmatched. The introductory chapter on turbomachinery is also unique. A thorough development of the second law of thermodynamics is provided in chapters 7-9. The ramifications of the second law receive thorough discussion; the student not only performs calculations, but understands the implications of the calculated results. Computer models created in TK Solver accompany each chapter and are particularly useful in the application areas. The TK Solver files provided with the book can be used as written or modified and merged into models developed to analyze new problems. The book has two particularly important strengths: its readability and the depth of its treatment of applications. The readability will make the content understandable to the average students; the depth in applications will make the book suitable for applied upper-level courses as well.

Introduction to Continuum Mechanics - David Rubin 2012-12-02

Continuum mechanics studies the response of materials to different loading conditions. The concept of tensors is introduced through the idea of linear transformation in a self-contained chapter, and the interrelation of direct notation, indicial notation and matrix operations is clearly presented. A wide range of idealized materials are considered through simple static and dynamic problems, and the book contains an abundance of illustrative examples and problems, many with solutions. Through the addition of more advanced material (solution of classical elasticity problems, constitutive equations for viscoelastic fluids, and finite deformation theory), this popular introduction to modern continuum mechanics has been fully revised to serve a dual purpose: for introductory courses in undergraduate engineering curricula, and for beginning graduate courses.