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Industrial Technology

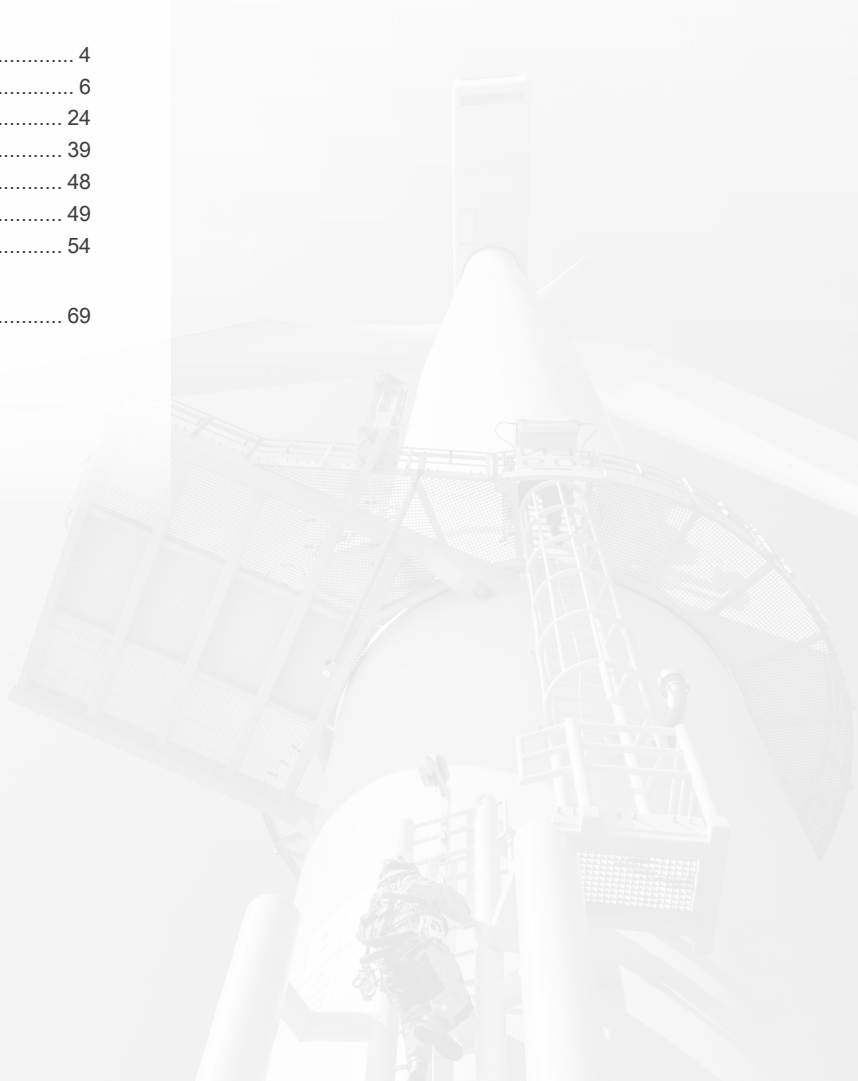
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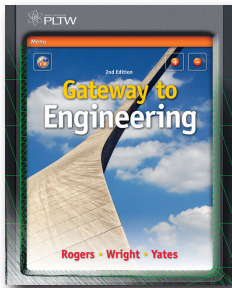
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George E. Rogers, Purdue University; Michael D. Wright, University of Central Missouri; Ben Yates, Missouri University of Science and Technology

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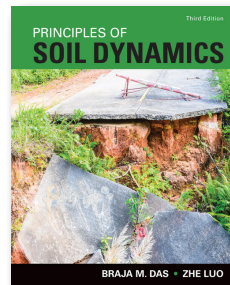
FOUNDATION ENGINEERING

PRINCIPLES OF SOIL DYNAMICS, 3E

Braja M. Das, California State University, Sacramento; Zhe Luo, University of Akron, Akron, Ohio

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Discover the principles and applications of soil dynamics with the leading introductory textbook -- PRINCIPLES OF SOIL DYNAMICS. Written by one of today's best-selling authorities in geotechnical engineering, Braja M. Das, and Zhe Luo, Assistant Professor of Civil

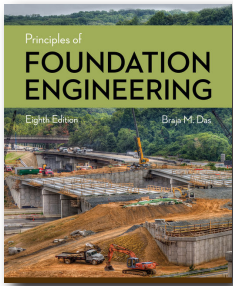
Engineering at the University of Akron, the latest edition of this well-established text addresses today's most recent developments and refinements in the field. This book focuses primarily on the applications of soil dynamics to prepare you for success on the job. You will find thorough coverage of the fundamentals of soil dynamics, dynamic soil properties, foundation vibration, soil liquefaction, pile foundation, and slope stability. New discussions, methods, and procedures ensure you are mastering the latest processes.

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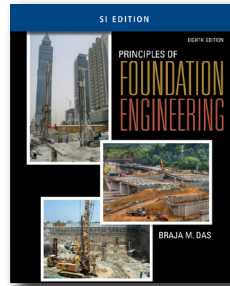
engineering students to the fundamental concepts of foundation analysis design.

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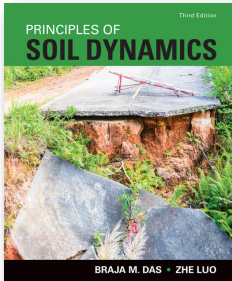
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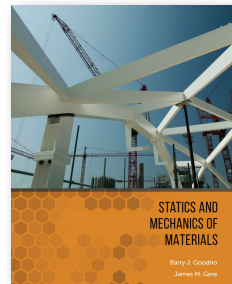
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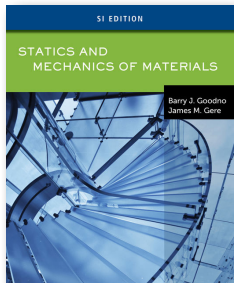
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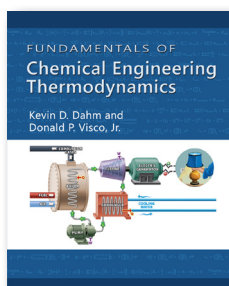
CHEMICAL ENGINEERING

FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS

Kevin D. Dahm, *Rowan University*; Donald P. Visco, Jr., *Associate Dean, The University of Akron*

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A brand new book, **FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS** makes the abstract subject of chemical engineering thermodynamics more accessible to undergraduate students. The subject is presented through a

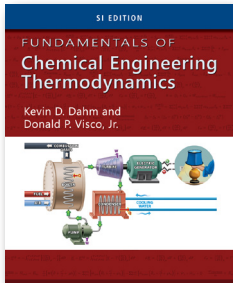
problem-solving inductive (from specific to general) learning approach, written in a conversational and approachable manner. Suitable for either a one-semester course or two-semester sequence in the subject, this book covers thermodynamics in a complete and mathematically rigorous manner, with an emphasis on solving practical engineering problems. The approach taken stresses problem-solving, and draws from “best practice” engineering teaching strategies. **FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS** uses examples to frame the importance of the material. Each topic begins with a motivational example that is investigated in context to that topic. This framing of the material is helpful to all readers, particularly to global learners who require “big picture” insights, and hands-on learners who struggle with abstractions. Each worked example is fully annotated with sketches and comments on the thought process behind the solved problems. Common errors are presented and explained. Extensive margin notes add to the book accessibility as well as presenting opportunities for investigation.

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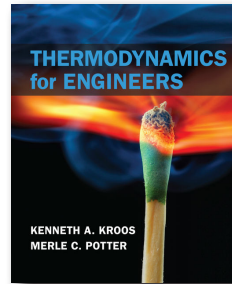
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THERMODYNAMICS FOR ENGINEERS

Kenneth A. Kroos, Villanova University; Merle C. Potter, Professor Emeritus, Michigan State University

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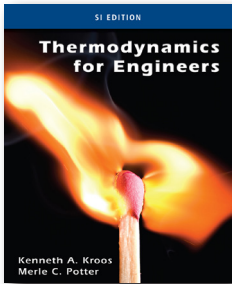
relevant places in the text, followed by a summary at the end of each chapter. Authors Kenneth Kroos and Merle Potter bring decades of teaching experience to a clear writing style that describes key concepts without straying from the course. The language of thermodynamics is explained in careful detail so that students can quickly understand the concepts presented and the analysis techniques used. Extensive use of practical examples demonstrates the proper set-up and solution of problems. These skills are then further developed using a wide variety of homework problems. Some homework problems are presented with an increased degree of complexity to allow the instructor to challenge the more accomplished. THERMODYNAMICS FOR ENGINEERS focuses on clearly outlining the role of thermodynamics in “real” engineering. It takes students through clear explanations of concepts, followed by mathematical techniques of analysis and applications of these in solving engineering problems.

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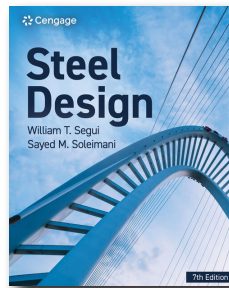
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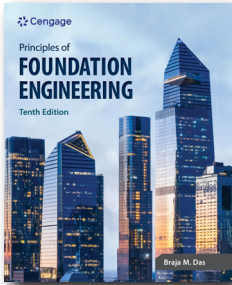
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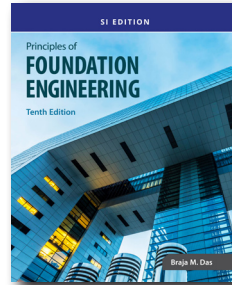
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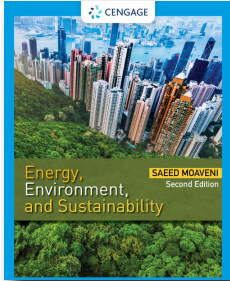
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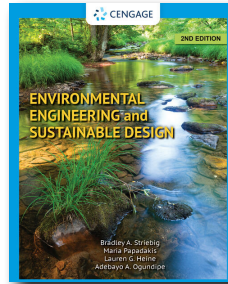
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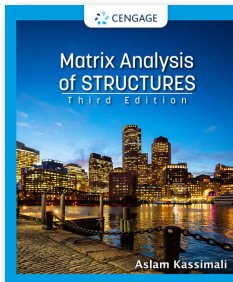
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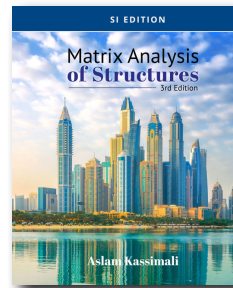
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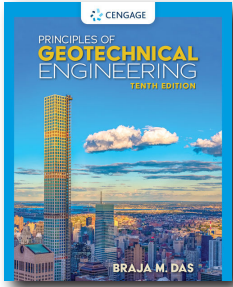
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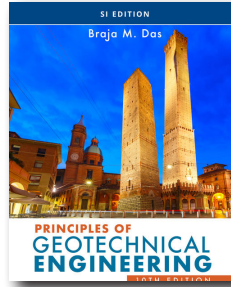
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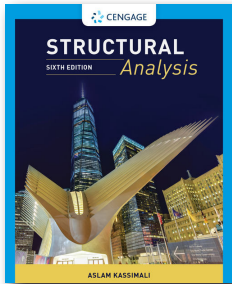
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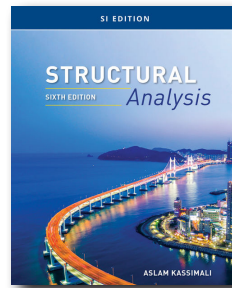
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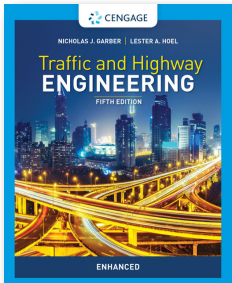
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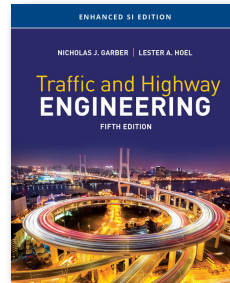
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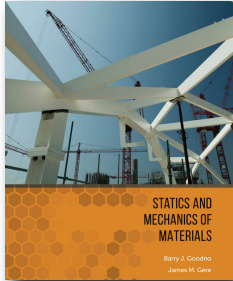
transportation plays in today's society. You examine employment opportunities that transportation creates, study its historical impact and explore the influences of transportation on modern daily life. This comprehensive approach offers an accurate understanding of the field with emphasis on some of transportation's distinctive challenges. Later chapters focus on specific issues facing transportation engineers to prepare you for common obstacles you may need to overcome in the field. Worked problems, diagrams and tables, reference materials and meaningful examples clearly demonstrate how to apply the transportation engineering principles you have learned.

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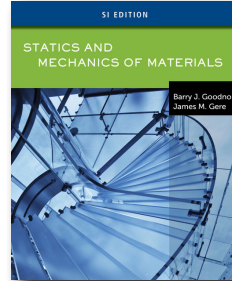
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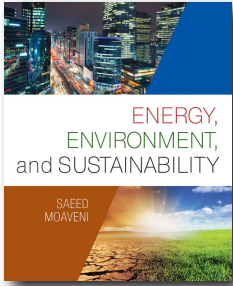
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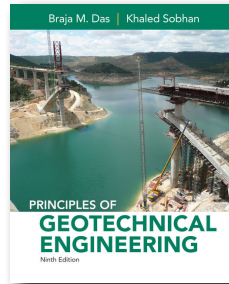
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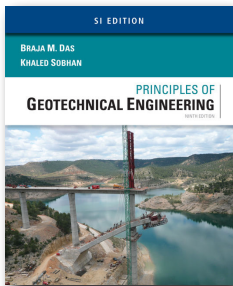
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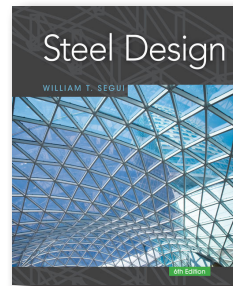
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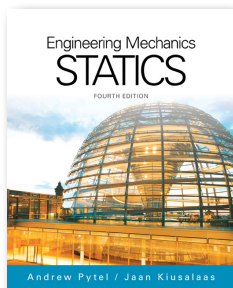
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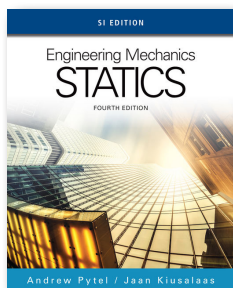
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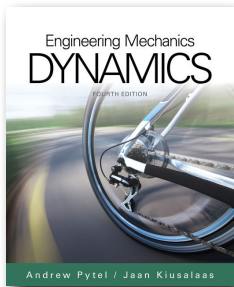
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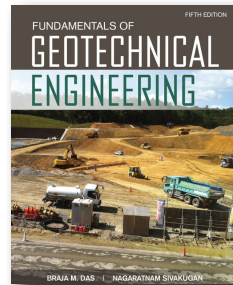
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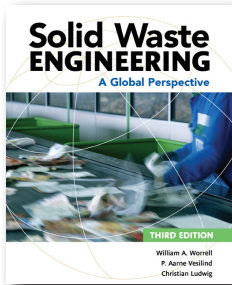
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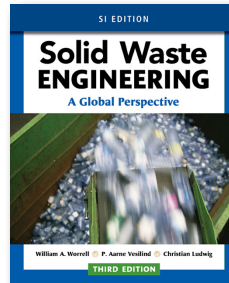
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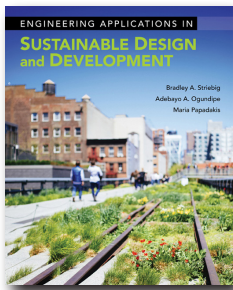
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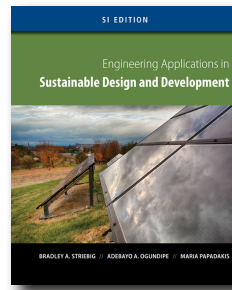
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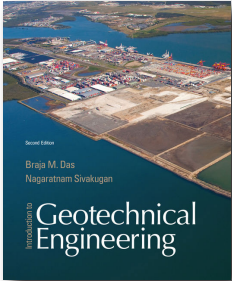
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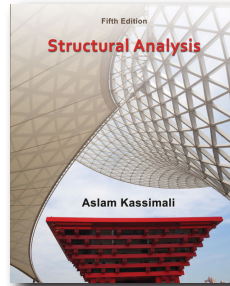
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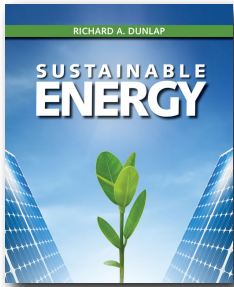
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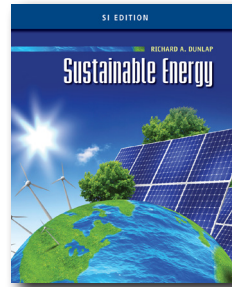
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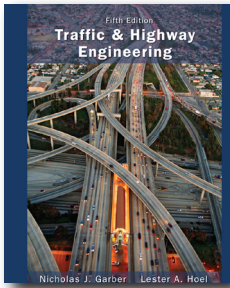
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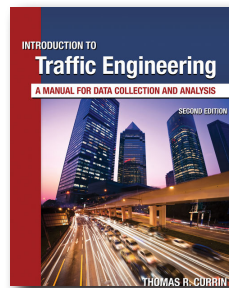
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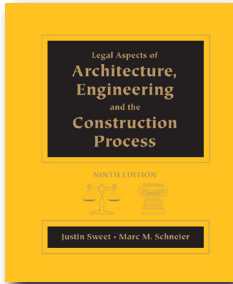
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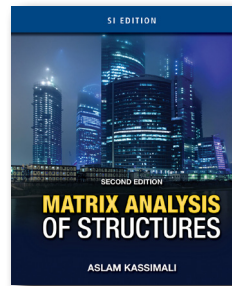
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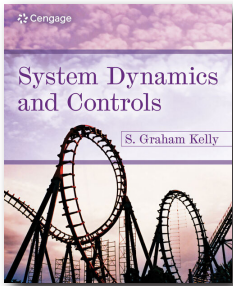
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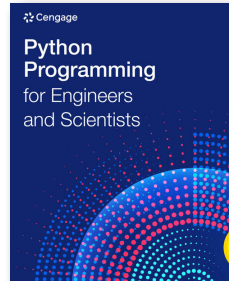
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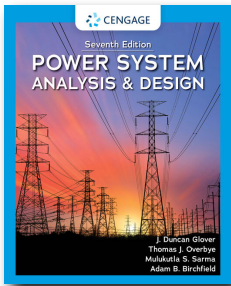
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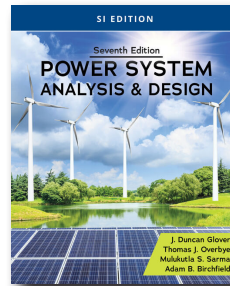
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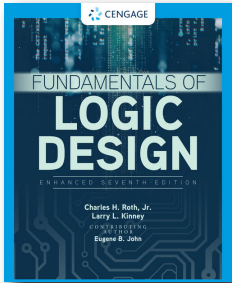
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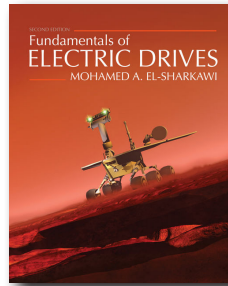
The authors have carefully developed a clear presentation that introduces the fundamental concepts of logic design without overwhelming you with the mathematics of switching theory. Twenty engaging, easy-to-follow study units present basic concepts, such as Boolean algebra, logic gate design, flip-flops and state machines. You learn to design counters, adders, sequence detectors and simple digital systems. After mastering the basics, you progress to modern design techniques using programmable logic devices as well as VHDL hardware description language.

FUNDAMENTALS OF ELECTRIC DRIVES, 2E

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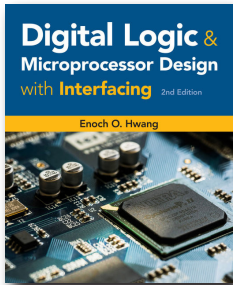
concentrate on converters and waveform analysis and ignore mechanical load dynamics or emphasize motor characteristics with little analysis of converters and controllers, this unique approach provides a complete overview of the subject at a level that's ideal for full comprehension. You follow the analysis and design of a complete electric drive system with coverage of mechanical loads, motors, converters, sensing, and controllers. The author clearly presents drive applications to electric traction, robotics, and wind energy using real examples from industry throughout. With its practical content, this book even serves as a useful reference for professional electric drive engineers.

DIGITAL LOGIC AND MICROPROCESSOR DESIGN WITH INTERFACING, 2E

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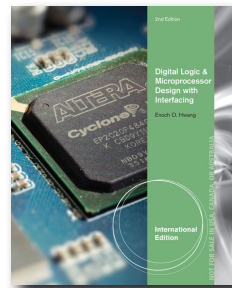
put these two types of circuits together to form both dedicated and general-purpose microprocessors. This book's unique approach combines the use of logic principles with the building of individual components to create data paths and control units. With this book you are able to design simple microprocessors, implement them in real hardware, and interface them to real-world devices. Watch the exciting process as your own microprocessor comes to life in real hardware using the knowledge and skills you gain from DIGITAL LOGIC AND MICROPROCESSOR DESIGN WITH INTERFACING, 2E.

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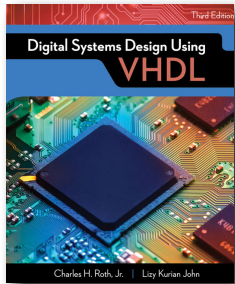
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DIGITAL SYSTEMS DESIGN USING VHDL, 3E

Charles H. Roth, Jr., *University of Texas, Austin*; Lizy Kurian John, *University of Texas, Austin*

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Learn how to effectively use the industry-standard hardware description language, VHDL, as DIGITAL SYSTEMS DESIGN USING VHDL, 3E integrates VHDL into the digital design process. The book begins with a valuable review of basic logic design

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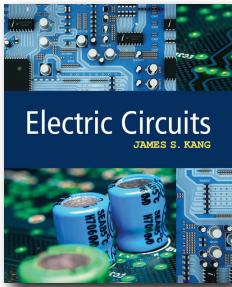
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Dr. James S. Kang, *California State Polytechnic University, Pomona*

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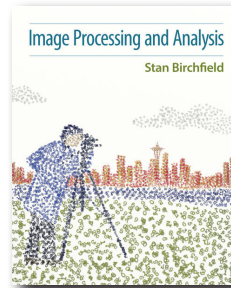
includes several examples and problems related to circuit design with answers for odd-numbered questions so you can further prepare yourself with self-guided study and practice. **ELECTRIC CIRCUITS** covers everything from DC circuits and AC circuits to Laplace transformed circuits. **MATLAB**® scripts for certain examples give you an alternate method to solve circuit problems, check answers, and reduce laborious derivations and calculations. This edition also provides **PSpice**® and **Simulink**® examples to demonstrate electric circuit simulations.

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Stan Birchfield, *Clemson University, Clemson, South Carolina; Microsoft Corporation, Redmond, Washington*

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Gain a firm understanding of image processing as you cover the major topics of the field using a balanced approach that progresses from simple explanations to more detailed descriptions within **IMAGE PROCESSING AND ANALYSIS**. This easy-to-

follow, accessible book emphasizes a basic, fundamental understanding of the classic algorithms in the field while also highlighting recent research results. You can grasp the subtle tradeoffs among different approaches as well as understand them in context with the latest developments in the field. Numerous full-color illustrations and detailed pseudocode bridge the gap between mathematical equations underlying the important concepts and real-world application of those concepts. This understanding makes it easier for you to program your own implementations of these algorithms. In addition, consistent notation throughout this edition makes it easier to follow the various concepts.

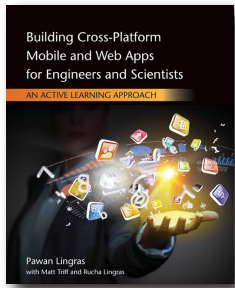
BUILDING CROSS-PLATFORM MOBILE AND WEB APPS FOR ENGINEERS AND SCIENTISTS

An Active Learning Approach

Pawan Lingras, Saint Mary's University, Halifax; Matt Triff; Rucha Lingras

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This powerful new book introduces cross-platform app design as an excellent starting point for mastering app development. The book contains numerous applications that you can adapt to different projects. You can use this book for independent study or for

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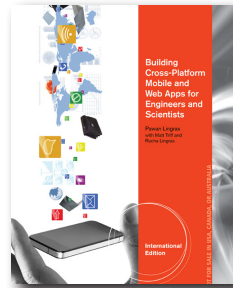
BUILDING CROSS-PLATFORM MOBILE AND WEB APPS FOR ENGINEERS AND SCIENTISTS

An Active Learning Approach, International Edition

Pawan Lingras, Saint Mary's University, Halifax; Matt Triff; Rucha Lingras

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This powerful new book introduces cross-platform app design as an excellent starting point for mastering app development. The book contains numerous applications that you can adapt to different projects. You can use this book for independent study or for

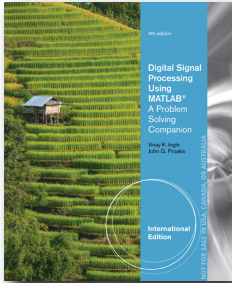
your project courses. The book introduces HTML5, CSS3, JavaScript, jQuery Mobile, Node.js, JSON, localStorage, sessionStorage, NoSQL using MongoDB, SQL using MySQL, templating using handlebars, and maps. A strong app-centric view emphasizes appropriate subsets of these technologies to help you develop non-trivial apps. While apps continue to evolve and change, the technologies presented form the backbone of future cross-platform app development. You will learn to work with all major mobile and web platforms using the book's active learning approach that has you typing code in parallel as the apps are developed. Exercises further encourage you to make changes to the code and evaluate resulting app behavior.

DIGITAL SIGNAL PROCESSING USING MATLAB®, 4E

A Problem Solving Companion, International Edition
Vinay K. Ingle, Northeastern University; John G. Proakis, Northeastern University

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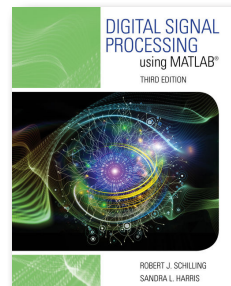
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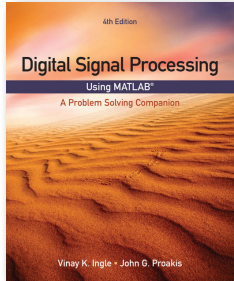
DIGITAL SIGNAL PROCESSING USING MATLAB®, 4E

A Problem Solving Companion

Vinay K. Ingle, *Northeastern University*; John G. Proakis, *Northeastern University*

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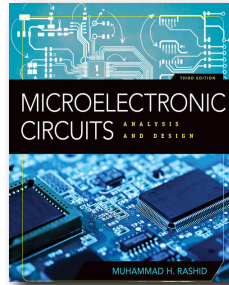
MICROELECTRONIC CIRCUITS, 3E

Analysis and Design

Muhammad H. Rashid, *University of West Florida*

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Take a “breadth-first” approach to learning electronics with a strong emphasis on design and simulation in MICROELECTRONIC CIRCUITS: ANALYSIS AND DESIGN, 3E. This book introduces the general characteristics of circuits

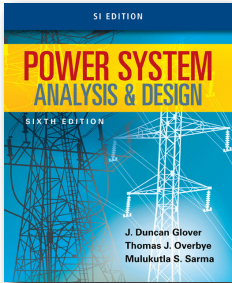
(ICs) to prepare you to effectively use circuit design and analysis techniques. The author then offers a more detailed study of devices and circuits and how they operate within ICs. Important circuits are analyzed in worked-out examples to introduce basic techniques and emphasize the effects of parameter variations. More than half of the problems and examples concentrate on design and use software tools extensively. You learn to apply theory to real-world design problems as you master computer simulations for testing and verifying your designs.

POWER SYSTEM ANALYSIS AND DESIGN, SI EDITION, 6E

J. Duncan Glover, Failure Electrical LLC; Thomas Overbye, Texas A&M University; Mulukutla S. Sarma, Northeastern University (Emeritus)

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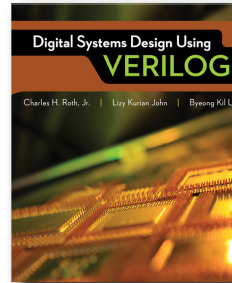
mathematical techniques. The authors develop both theory and modeling from simple beginnings so that you can readily extend these principles to new and complex situations. Software tools, including PowerWorld® Simulation, and the latest content throughout this edition aid you with design issues while introducing you to the most recent trends in the field today.

DIGITAL SYSTEMS DESIGN USING VERILOG

Charles Roth, University of Texas, Austin; Lizy Kurian John, University of Texas, Austin; Byeong Kil Lee, University of Texas, San Antonio

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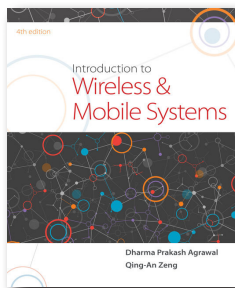
implementation. The authors present Verilog constructs side-by-side with hardware, encouraging you to think in terms of desired hardware while writing synthesizable Verilog. Following a review of the basic concepts of logic design, the authors introduce the basics of Verilog using simple combinational circuit examples, followed by models for simple sequential circuits. Subsequent chapters ask you to tackle more and more complex designs.

INTRODUCTION TO WIRELESS AND MOBILE SYSTEMS, 4E

Dharma P. Agrawal, University of Cincinnati; Qing-An Zeng

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Learn how wireless systems work, how mobility is supported, what the underlying infrastructure is and what interactions are needed among different functional components with **INTRODUCTION TO WIRELESS AND MOBILE SYSTEMS, 4e**. Focusing on

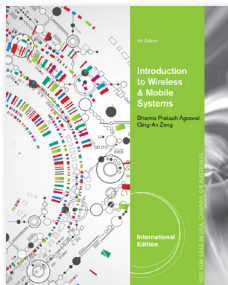
qualitative descriptions and the realistic explanations of relationships between wireless systems and performance parameters, this user-friendly book helps you learn this exciting technology through relevant examples, such as understanding how a cell phone starts working as soon as they get out of an airplane.

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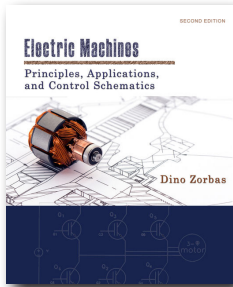


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ELECTRIC MACHINES, 2E
 Principles, Applications, and Control Schematics
 Dino Zorbas, *McGill University, Montreal, Quebec, Canada*
 © 2015, 704pp, Hardback, 9781133628514

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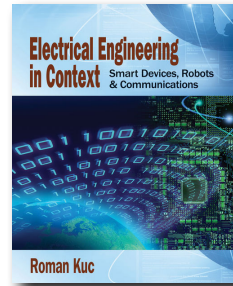


Designed to serve as a textbook for a single semester undergraduate course on electromechanical energy conversion devices or electric machines, **ELECTRIC MACHINES** strikes a balance between theoretical coverage, easy explanations, and practical

applications, presenting real world applications of concepts without compromising on the rigor or the continuity of the text. The book provides excellent readability, in a conversational style, combined with invaluable industry insight. The accompanying website provides problems solved in MATLAB, SPICE simulations, manufacturing data, as well as additional problems for students and instructors.

ELECTRICAL ENGINEERING IN CONTEXT
 Smart Devices, Robots & Communications
 Roman Kuc, *Yale University*
 © 2015, 608pp, Hardback, 9781285179186

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ELECTRICAL ENGINEERING IN CONTEXT: SMART DEVICES, ROBOTS & COMMUNICATIONS by bestselling author Roman Kuc describes the basic components and technologies that make today's computer-assisted

systems operate and cooperate, inviting the reader to understand by participating in the design process. Directed at the undergraduate electrical engineering student, this book starts with the basics and requires a working knowledge of algebra. Rather than simple plug-and-chug exercises, the book teaches sophisticated problem-solving and design tools. Students will learn through designing digital displays, extracting information from signals, and optimizing system performance through parameter value selection and observing graphical data displays. Animations showing dynamic system behavior and relating to the book figures are available through the book's companion site. At the completion of the course, students will have an understanding of the capabilities of current digital devices and ideas for possible new applications. This will benefit students in other courses requiring quantitative skills and in their profession. To help accomplish this tall order, the book is written in a graduated intensity that can be adapted to the specific needs and talents of each student: Basic commands and graphs are used in first-level problems that illustrate device performance while varying parameter values and in designs that are open-ended, driven by student curiosity. Some problems can be solved using software packages, but many exercises are for paper and pencil solution. MATLAB based examples and problems

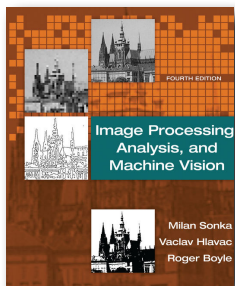
are also included for users comfortable with computer programming.

IMAGE PROCESSING, ANALYSIS, AND MACHINE VISION, 4E

Milan Sonka, University of Iowa; Vaclav Hlavac, Czech Technical University of Prague; Roger Boyle, University of Leeds, United Kingdom

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The brand new edition of IMAGE PROCESSING, ANALYSIS, AND MACHINE VISION is a robust text providing deep and wide coverage of the full range of topics encountered in the field of image processing and machine vision. As a result, it can serve

undergraduates, graduates, researchers, and professionals looking for a readable reference. The book's encyclopedic coverage of topics is wide, and it can be used in more than one course (both image processing and machine vision classes). In addition, while advanced mathematics is not needed to understand basic concepts (making this a good choice for undergraduates), rigorous mathematical coverage is included for more advanced readers. It is also distinguished by its easy-to-understand algorithm descriptions of difficult concepts, and a wealth of carefully selected problems and examples.

IMAGE PROCESSING, ANALYSIS, AND MACHINE VISION, INTERNATIONAL EDITION, 4E

Milan Sonka, University of Iowa; Vaclav Hlavac, Czech Technical University of Prague; Roger Boyle, University of Leeds, United Kingdom

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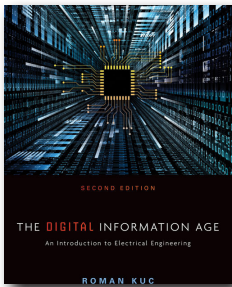
THE DIGITAL INFORMATION AGE, 2E

An Introduction to Electrical Engineering

Roman Kuc, Yale University

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THE DIGITAL INFORMATION AGE SECOND EDITION by bestselling author Roman Kuc is designed for students considering electrical engineering as a major, and non-engineering majors interested in understanding digital communication

systems. Communication between humans and smart devices takes place through sensors and actuators, with logic circuits manipulating binary data to implement useful tasks. The text then examines the basic problem of communicating audio and video data over a network connecting computers and smart devices. System operation is described from analog-to-digital conversion, signals that encode data, through the processing that extracts data from noise-corrupted signals and error correction techniques, to data packet transmission over wired and wireless networks. Basic topics from probability and digital signal processing are presented as needed and illustrated with relevant examples. Ideas are illustrated and extended by problems and projects completed in Excel, with sophistication that evolves along with the course, starting with spreadsheet formulas and graphs, through macros, to simple Visual Basic for Applications (VBA) programming that produces animations that simulate system operation. The accrued facility with Excel techniques is a course outcome valued by students in all majors.

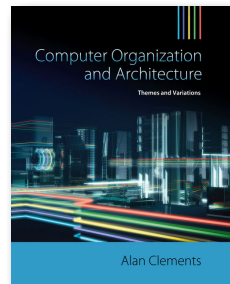
COMPUTER ORGANIZATION & ARCHITECTURE

Themes and Variations

Alan Clements, University of Teesside, United Kingdom

© 2014, 936pp, Hardback, 9781111987046

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COMPUTER ORGANIZATION AND ARCHITECTURE: THEMES AND VARIATIONS stresses the structure of the complete system (CPU, memory, buses and peripherals) and reinforces that core content with an emphasis on

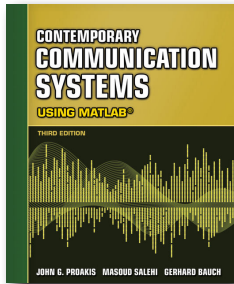
divergent examples. This approach to computer architecture is an effective arrangement that provides sufficient detail at the logic and organizational levels appropriate for EE/ECE departments as well as for Computer Science readers. The text goes well beyond the minimal curriculum coverage and introduces topics that are important to anyone involved with computer architecture in a way that is both thought provoking and interesting to all.

CONTEMPORARY COMMUNICATION SYSTEMS USING MATLAB®, 3E

John G. Proakis, Northeastern University; Masoud Salehi, Northeastern University; Gerhard Bauch, University of Munich

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Featuring a variety of applications that motivate students, this book serves as a companion or supplement to any of the comprehensive textbooks in communication systems. The book provides a variety of exercises that may be solved on the computer

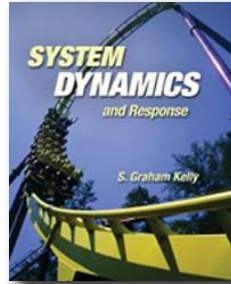
using MATLAB. By design, the treatment of the various topics is brief. The authors provide the motivation and a short introduction to each topic, establish the necessary notation, and then illustrate the basic concepts by means of an example.

SYSTEM DYNAMICS AND RESPONSE

S. Graham Kelly, University of Akron

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eBook



As engineering systems become more increasingly interdisciplinary, knowledge of both mechanical and electrical systems has become an asset within the field of engineering. All engineers should have general facility with modeling of dynamic

systems and determining their response and it is the objective of this book to provide a framework for that understanding. The study material is presented in four distinct parts; the mathematical modeling of dynamic systems, the mathematical solution of the differential equations and integro differential equations obtained during the modeling process, the response of dynamic systems, and an introduction to feedback control systems and their analysis. An Appendix is provided with a short introduction to MATLAB as it is frequently used within the text as a computational tool, a programming tool, and a graphical tool. SIMULINK, a MATLAB based simulation and modeling tool, is discussed in chapters where the development of models use either the transfer function approach or the state-space method.

GENERAL ENGINEERING

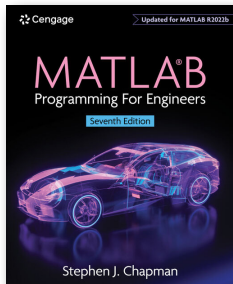
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MATLAB PROGRAMMING FOR ENGINEERS, 7E

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NEW EDITION

ENGINEERING FUNDAMENTALS, 7E

An Introduction to Engineering

Saeed Moaveni, *Minnesota State University, Mankato*

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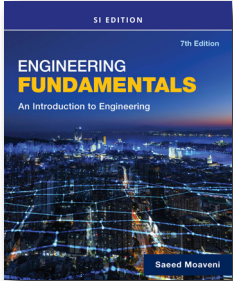
ENGINEERING FUNDAMENTALS, 7E

An Introduction to Engineering, SI Edition

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Develop the strong problem-solving skills and foundation in fundamental principles you need to become an analytical, detail-oriented and creative engineer with Moaveni's **ENGINEERING FUNDAMENTALS: AN INTRODUCTION TO ENGINEERING, SI, 7th**

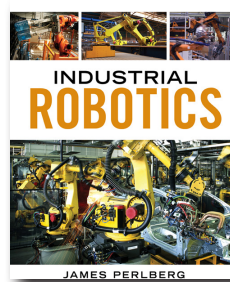
Edition. You begin by studying what engineers do with special behind-the-scenes glimpses into areas of specialization. Updates throughout this edition candidly examine what is required to succeed as an engineer today. This edition includes a new chapter on Python and offers more content on climate change and sustainability. The author introduces basic physical concepts and laws that you will encounter in future studies as well as on the job. Professional Profiles highlight the work of practicing engineers around the globe and further emphasize principles that you need to master to thrive as an engineer. WebAssign digital resources are also available to strengthen your understanding.

INDUSTRIAL ROBOTICS

Keith Dinwiddie, *Ozarks Technical Community College*

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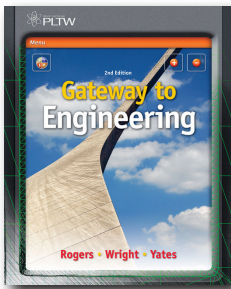
Offering current, comprehensive coverage, **INDUSTRIAL ROBOTICS** delivers a thorough introduction to the industry and a basic understanding of the subjects needed for starting a career in industrial robotics.

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George E. Rogers, Purdue University; Michael D. Wright, University of Central Missouri; Ben Yates, Missouri University of Science and Technology

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G A T E W A Y T O ENGINEERING, 2E helps you build a solid foundation in technological literacy as you study engineering-related careers and educational pathways. With a vibrant four-color design and images to help you visualize concepts, the text

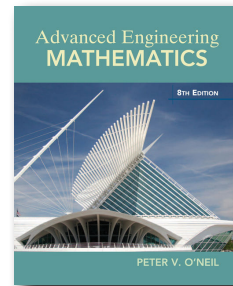
introduces the process of design, the importance of engineering graphics, and applications of electricity and electronics, mechanics, energy, communications, automation/robotics, manufacturing processes, and control systems/computer programming. The Second Edition includes a revised chapter featuring sustainable architecture and enhanced coverage of green technology. It also retains a strong engineering flavor and alignment with national Standards for Technological Literacy, making it the perfect tool for mastering Project Lead the Way's® Gateway to Technology performance objectives.

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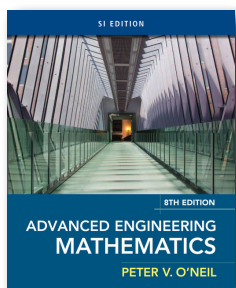
examples include illustrations of mathematical techniques as well as applications. A “Math in Context” feature clearly demonstrates how the mathematical concepts and methods you are learning relate to current engineering problems. The book is organized into seven distinctive parts to provide precise focus on the individual mathematical ideas and methods. A student solutions manual offers detailed solutions to half of the problems in the book for your use in checking your progress as well as study and review.

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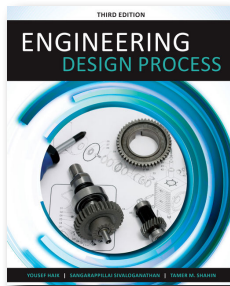
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ENGINEERING DESIGN PROCESS, 3E

Yousef Haik; Sangarappillai Sivaloganathan, United Arab Emirates University; Tamer M. Shahin

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Gain a clear understanding of engineering design as ENGINEERING DESIGN PROCESS, 3E outlines the process into five basic stages -- requirements, product concept, solution concept, embodiment design and detailed design. Discover how these five

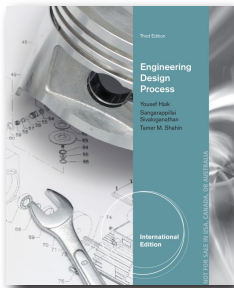
stages can be seamlessly integrated. The book illustrates how the design methods can work together coherently, while the book's supporting exercises and labs help you navigate the design process. The text leads the beginner designer from the basics of design with very simple tasks -- the first lab involves designing a sandwich -- all the way through more complex design needs. This approach to the design model equips you with the skills to apply engineering design concepts both to conventional engineering problems as well as other design problems.

ENGINEERING DESIGN PROCESS, INTERNATIONAL EDITION, 3E

Yousef Haik; Sangarappillai Sivaloganathan, United Arab Emirates University; Tamer M. Shahin

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Gain a clear understanding of engineering design as **ENGINEERING DESIGN PROCESS, 3E** outlines the process into five basic stages -- requirements, product concept, solution concept, embodiment design and detailed design.

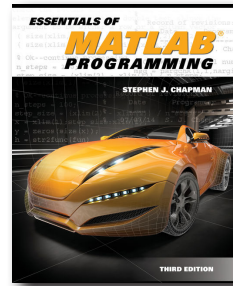
Discover how these five stages can be seamlessly integrated. The book illustrates how the design methods can work together coherently, while the book's supporting exercises and labs help you navigate the design process. The text leads the beginner designer from the basics of design with very simple tasks -- the first lab involves designing a sandwich -- all the way through more complex design needs. This approach to the design model equips you with the skills to apply engineering design concepts both to conventional engineering problems as well as other design problems.

ESSENTIALS OF MATLAB® PROGRAMMING, 3E

Stephen J. Chapman, BAE Systems Australia

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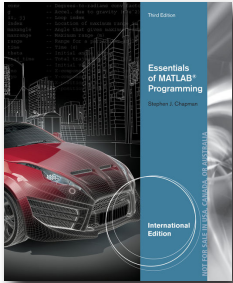
book as he teaches MATLAB as a technical programming language. This edition clearly shows you how to write clean, efficient and well-documented programs, while simultaneously introducing you to many of the practical functions of MATLAB. The first seven chapters offer an ideal introduction to programming and problem solving with MATLAB. The last two chapters address more advanced topics of additional data types and plot types, cell arrays, structures, and new MATLAB handle graphics to give you the skills you need.

ESSENTIALS OF MATLAB® PROGRAMMING, INTERNATIONAL EDITION, 3E

Stephen J. Chapman, *BAE Systems Australia*

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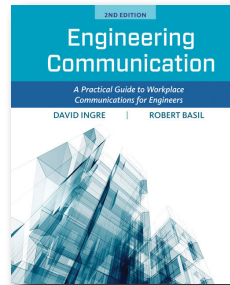
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ENGINEERING COMMUNICATION, 2E A Practical Guide to Workplace Communications for Engineers

David Ingre; Robert Basil, *Kwantlen Polytechnic University*

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Master the communication skills and strategies most important in today's workplace with Ingre/Basil's ENGINEERING COMMUNICATION: A PRACTICAL GUIDE TO WORKPLACE COMMUNICATIONS FOR ENGINEERS, 2E. Ideal for

future or practicing engineers, this practical guide is built around the successful dynamic analysis model CMAPP (context, message, audience, purpose and product). Meaningful insights and direction help you create proposals, reports, memos, letters, and job applications most appropriate for today's workplace. New coverage of digital and social media shows you how to maximize these online tools. Interrelated case studies and exercises help you strengthen the critical thinking and planning skills essential in engineering today. This edition also emphasizes important ethical and cultural considerations as you learn to develop the effective communication needed to be successful in your career.

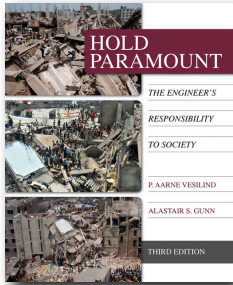
HOLD PARAMOUNT, 3E

The Engineer's Responsibility to Society

P. Arne Vesilind, Bucknell University; Alastair S. Gunn, University of Waikato

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Prepare for the ethical dilemmas you'll encounter on the job with HOLD PARAMOUNT: THE ENGINEER'S RESPONSIBILITY TO SOCIETY, 3e. This practical and essential text, co-authored by an engineer and an ethicist, covers

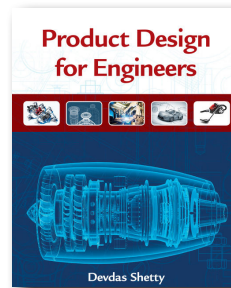
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PRODUCT DESIGN FOR ENGINEERS

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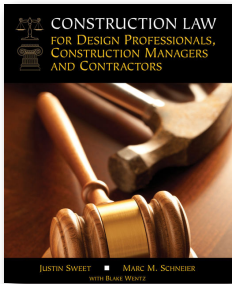
entrepreneurship, and design and introduces you to the creative problem-solving method for product success. Case studies in every chapter explore issues of design for assembly, disassembly, reliability, maintainability, and sustainability. The book's interdisciplinary approach, step-by-step coverage, and helpful illustrations and charts give you everything you need to design cost-effective, innovative products.

CONSTRUCTION LAW FOR DESIGN PROFESSIONALS, CONSTRUCTION MANAGERS AND CONTRACTORS

*Justin Sweet, University of California, Berkeley (Emeritus);
Marc M. Schneier; Blake Wentz, Milwaukee School of
Engineering*

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CONSTRUCTION LAW FOR DESIGN PROFESSIONALS, CONSTRUCTION MANAGERS AND CONTRACTORS is a condensed -- and completely revamped -- version of the bestselling authority on engineering

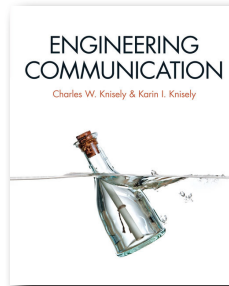
law, LEGALASPECTS OF ARCHITECTURE, ENGINEERING AND THE CONSTRUCTION PROCESS (now in its 9th edition) by Justin Sweet, Marc M. Schneier and Blake Wentz. For this new book, the authors have directed the text at engineering, architecture and construction management students. Given the authors' long and deep understanding of the intersection between the law and the construction industry, professors and students can trust this text is unparalleled. The addition of Blake Wentz to the author team emphasizes the commitment to the field. A new 2017 Update includes the latest changes regarding relevant industry associations, regulations, and codes of ethics. The supplement includes hard copies of AIA A101-2017; A101-2017, Exhibit A; A201-2017; A401-2017; and B101-2017, as well as the most recent code of ethics of: the American Institute of Architects (AIA); the American Institute of Constructors (AIC); the Design-Build Institute of America (DBIA); and the Construction Management Association of America (CMAA). The book's website has the updated EJCDC C-520, C-700, and E-500 documents.

ENGINEERING COMMUNICATION

Charles W. Knisely, Bucknell University; Karin I. Knisely, Bucknell University

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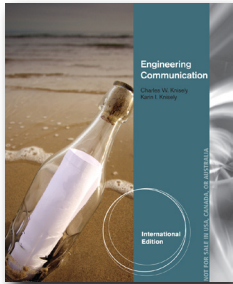
A practical how-to book, ENGINEERING COMMUNICATION is more than a guidebook for creating clear, accurate and engaging communication -- it is a complete teaching tool that includes the use of technology to produce dynamic written, oral, and

visual communication. There are numerous complete examples, many taken directly from either student or business samples. It also asks you to critically examine the goals and methods of engineering communication. Written with step-by-step instruction on how to create both written and oral communication, the pedagogy includes end-of-chapter exercises to give you opportunity to use what you have learned, and for your instructor to assess your mastery.

ENGINEERING COMMUNICATION, INTERNATIONAL EDITION

*Charles W. Knisely, Bucknell University; Karin I. Knisely,
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A practical how-to book, **ENGINEERING COMMUNICATION** is more than a guidebook for creating clear, accurate and engaging communication -- it is a complete teaching tool that includes the use of technology to produce dynamic written, oral, and

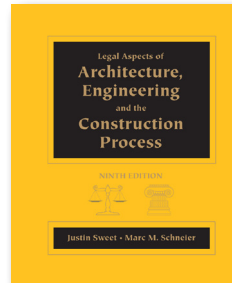
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LEGAL ASPECTS OF ARCHITECTURE, ENGINEERING AND THE CONSTRUCTION PROCESS, 9E

*Justin Sweet, University of California, Berkeley (Emeritus);
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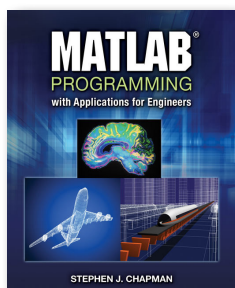
Bridging the gap between the academic world and the real world of engineering law.

MATLAB PROGRAMMING WITH APPLICATIONS FOR ENGINEERS

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MATLAB PROGRAMMING WITH APPLICATIONS FOR ENGINEERS seeks to simultaneously teach MATLAB as a technical programming language while introducing the student to many of the practical functions that make solving problems in

MATLAB so much easier than in other languages. The book provides a complete introduction to the fundamentals of good procedural programming. It aids students in developing good design habits that will serve them well in any other language that he or she may pick up later. Programming topics and examples are used as a jumping off point for exploring the rich set of highly optimized application functions that are built directly into MATLAB.

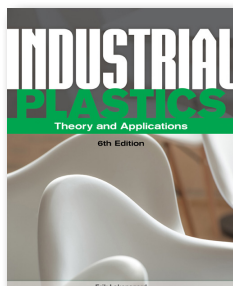
INDUSTRIAL ENGINEERING

INDUSTRIAL PLASTICS, 6E Theory and Applications

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MATERIAL SCIENCE

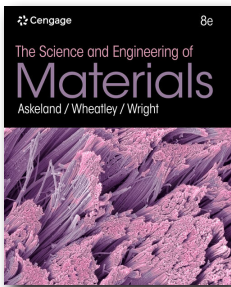
NEW EDITION

THE SCIENCE AND ENGINEERING OF MATERIALS, ENHANCED EDITION, 7E

Donald R. Askeland;
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Askeland/Wright/Wheatley's THE SCIENCE AND ENGINEERING OF MATERIALS, 8th Edition, aids engineering students in understanding the relationship between the structure, processing and properties of materials. With a wealth of material,

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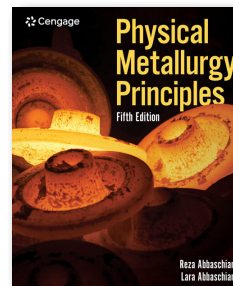
NEW EDITION

PHYSICAL METALLURGY PRINCIPLES, 5E

Reza Abbaschian, University of California - Riverside;
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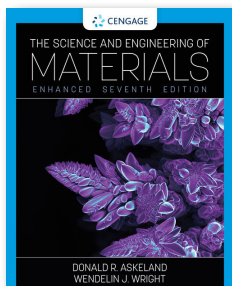
theoretical, and covers all aspects of physical metallurgy and how metals and alloys behave. The content aligns with current learning trends -- emphasizing a more fundamental approach to engineering education. Its easy-to-read format effectively conveys the essential information, complemented by strategically placed figures throughout the chapters to improve understanding.

THE SCIENCE AND ENGINEERING OF MATERIALS, ENHANCED EDITION, 7E

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Develop a thorough understanding of the relationships between structure, processing and the properties of materials with Askeland/Wright's THE SCIENCE AND ENGINEERING OF MATERIALS, ENHANCED, 7th Edition. This updated,

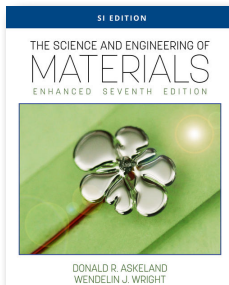
comprehensive edition serves as a useful professional reference tool both now and throughout future coursework in manufacturing, materials, design or materials selection. This science-based approach to materials engineering highlights how the structure of materials at various length scales gives rise to materials properties. You examine how the connection between structure and properties is key to innovating with materials, both in the synthesis of new materials as well as in new applications with existing materials. You also learn how time, loading and environment all impact materials -- a key concept that is often overlooked when using charts and databases to select materials. Trust this enhanced edition for insights into success in materials engineering today.

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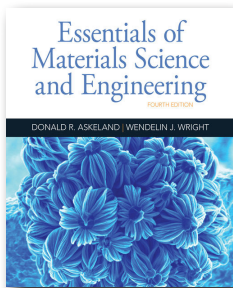
updated, comprehensive edition serves as a useful professional reference tool both now and throughout future coursework in manufacturing, materials, design or materials selection. This science-based approach to materials engineering highlights how the structure of materials at various length scales gives rise to materials properties. You examine how the connection between structure and properties is key to innovating with materials, both in the synthesis of new materials as well as in new applications with existing materials. You also learn how time, loading and environment all impact materials -- a key concept that is often overlooked when using charts and databases to select materials. Trust this enhanced edition for insights into success in materials engineering today.

ESSENTIALS OF MATERIALS SCIENCE AND ENGINEERING, 4E

Donald R. Askeland; Wendelin J. Wright, Bucknell University

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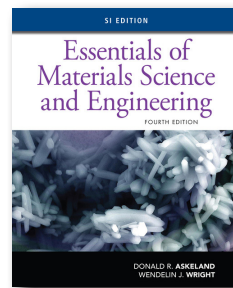
memorizing facts or lumping materials into broad categories, you gain an understanding of the whys and hows behind materials science and engineering. This knowledge of materials science provides an important framework for understanding the principles used today to engineer materials. Detailed solutions and meaningful examples assist you in learning principles while significant end-of-chapter problems provide ample practice. MindTap digital resources help you learn on your terms with an interactive eBook and personalized learning tools.

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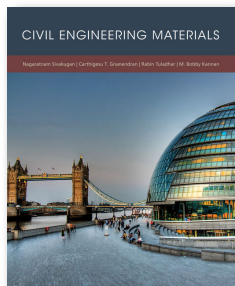
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CIVIL ENGINEERING MATERIALS

Nagaratnam Sivakugan, James Cook University, Queensland, Australia; C. T. Gnanendran, The University of New South Wales at the Australian Defence Force Academy; R. Tuladhar, James Cook University; M. Bobby Kannan, James Cook University

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CIVIL ENGINEERING MATERIALS prepares you for today's engineering challenges, providing a broad overview of the materials you will use in your studies and career. You are not only introduced to traditional materials, such as concrete, steel, timber,

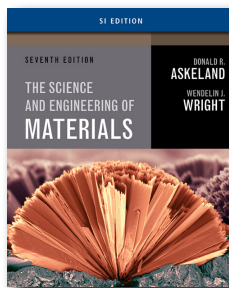
and soils, but you also explore important non-traditional materials, such as synthetics and industrial-by products. The authors use a wealth of practical examples and straight-forward explanations to ensure you gain a full understanding of the characteristics and behavior of various materials, how they interact, and how to best utilize and combine traditional and non-traditional materials. While emphasizing the effective use of civil engineering materials, the authors carefully consider sustainability to give you a broader context of how materials are current used in contemporary applications.

SCIENCE AND ENGINEERING OF MATERIALS, SI EDITION, 7E

Donald R. Askeland; Wendelin J. Wright, Bucknell University

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This updated Seventh Edition of **THE SCIENCE AND ENGINEERING OF MATERIALS** helps you to develop an understanding of the relationship between structure, processing, and properties of materials. Because the book has more material than is needed for

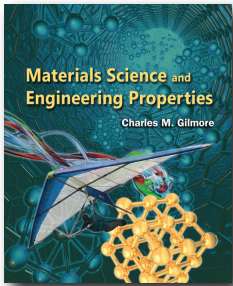
a one-semester course, you will also have a useful reference for subsequent courses in manufacturing, materials, design, or materials selection. The Askeland text emphasizes a science-based approach to materials engineering that highlights how the structure of materials at various length scales gives rise to materials properties. This connection between structure and properties is key to innovating with materials, both in the synthesis of new materials and enabling new applications with existing materials. The science-based approach highlights how materials change with time and due to loading and environment - a key concept that is often overlooked when using charts and databases to select materials.

MATERIALS SCIENCE AND ENGINEERING PROPERTIES

Charles Gilmore, Emeritus Professor, George Washington University, Washington DC

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MATERIALS SCIENCE AND ENGINEERING PROPERTIES is primarily aimed at mechanical and aerospace engineering students, building on actual science fundamentals before building them into engineering applications.

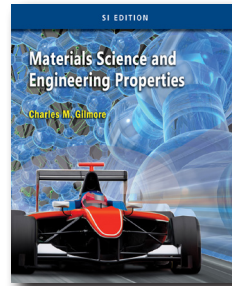
Even though the book focuses on mechanical properties of materials, it also includes a chapter on materials selection, making it extremely useful to civil engineers as well. The purpose of this textbook is to provide students with a materials science and engineering text that offers a sufficient scientific basis that engineering properties of materials can be understood by students. In addition to the introductory chapters on materials science, there are chapters on mechanical properties, how to make strong solids, mechanical properties of engineering materials, the effects of temperature and time on mechanical properties, electrochemical effects on materials including corrosion, electroprocessing, batteries, and fuel cells, fracture and fatigue, composite materials, material selection, and experimental methods in material science. In addition, there are appendices on the web site that contain the derivations of equations and advanced subjects related to the written textbook, and chapters on electrical, magnetic, and photonic properties of materials.

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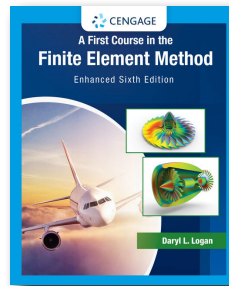
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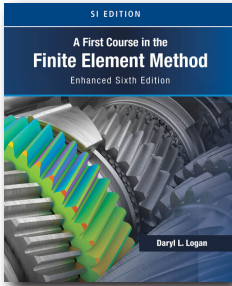
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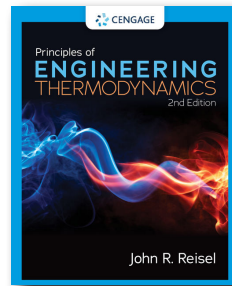
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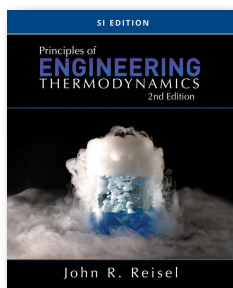
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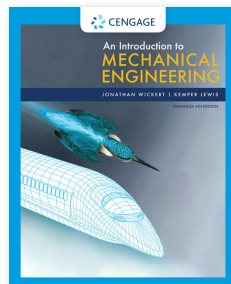
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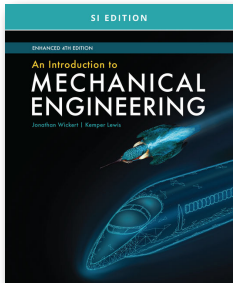
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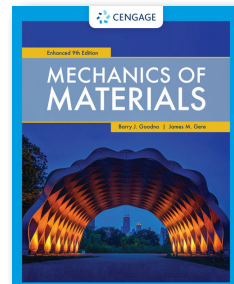
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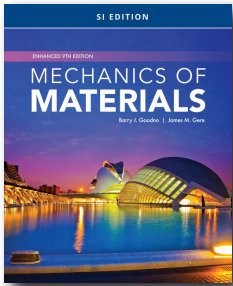
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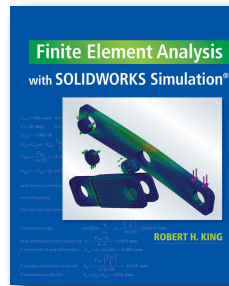
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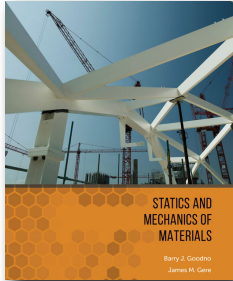
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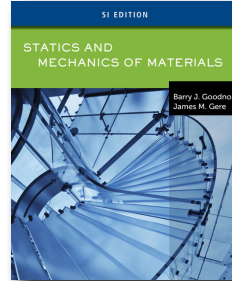
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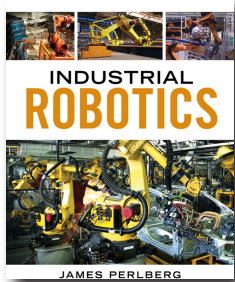
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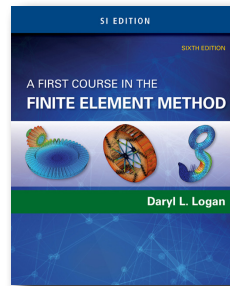
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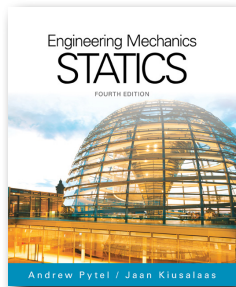
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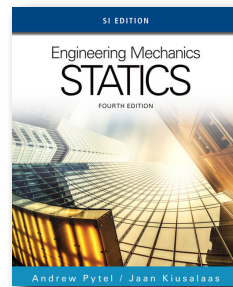
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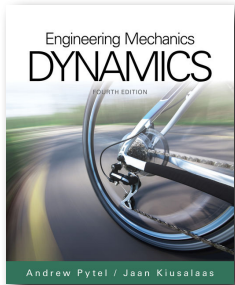
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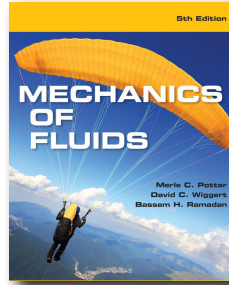
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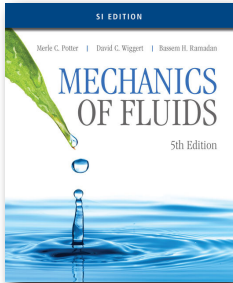
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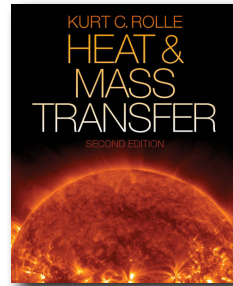
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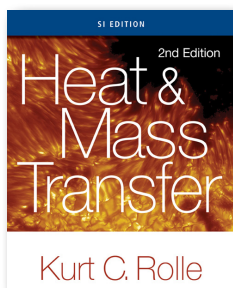
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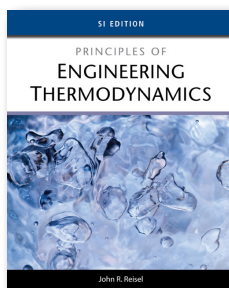
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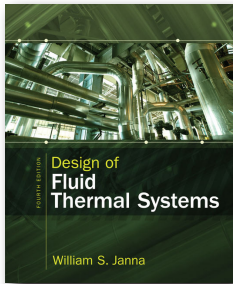
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DESIGN OF FLUID THERMAL SYSTEMS, 4E

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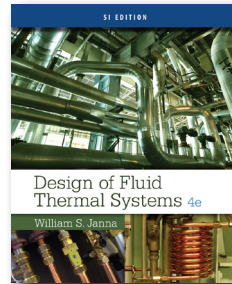
applications. The book begins with a discussion of design methodology, including the process of bidding to obtain a project, and project management techniques. The text continues with an introductory overview of fluid thermal systems (a pump and pumping system, a household air conditioner, a baseboard 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.

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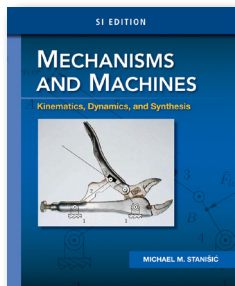
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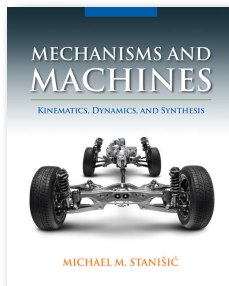
written with the aim of providing a complete, yet concise, text that can be covered in a single-semester course. The primary goal of the text is to introduce students to the synthesis and analysis of planar mechanisms and machines, using a method well suited to computer programming, known as the Vector Loop Method. Author Michael Stanisic's approach of teaching synthesis first, and then going into analysis, will enable students to actually grasp the mathematics behind mechanism design. The book uses the vector loop method and kinematic coefficients throughout the text, and exhibits a seamless continuity in presentation that is a rare find in engineering texts. The multitude of examples in the book cover a large variety of problems and delineate an excellent problem solving methodology.

MECHANISMS AND MACHINES

Kinematics, Dynamics, and Synthesis
Michael M. Stanisic, University of Notre Dame

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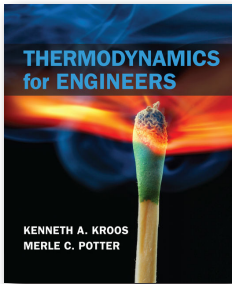
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THERMODYNAMICS FOR ENGINEERS

Kenneth A. Kroos, Villanova University; Merle C. Potter, Professor Emeritus, Michigan State University

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THERMODYNAMICS FOR ENGINEERS focuses on outcome-based learning, which has been identified by ABET as an essential aspect of engineering curricula. Learning outcomes are listed at the start of each chapter and identified as completed at

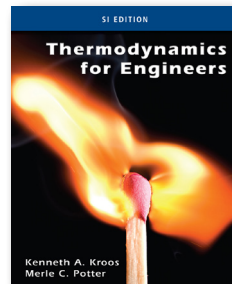
relevant places in the text, followed by a summary at the end of each chapter. Authors Kenneth Kroos and Merle Potter bring decades of teaching experience to a clear writing style that describes key concepts without straying from the course. The language of thermodynamics is explained in careful detail so that students can quickly understand the concepts presented and the analysis techniques used. Extensive use of practical examples demonstrates the proper set-up and solution of problems. These skills are then further developed using a wide variety of homework problems. Some homework problems are presented with an increased degree of complexity to allow the instructor to challenge the more accomplished. THERMODYNAMICS FOR ENGINEERS focuses on clearly outlining the role of thermodynamics in “real” engineering. It takes students through clear explanations of concepts, followed by mathematical techniques of analysis and applications of these in solving engineering problems.

THERMODYNAMICS FOR ENGINEERS, SI EDITION

Kenneth A. Kroos, Villanova University; Merle C. Potter, Professor Emeritus, Michigan State University

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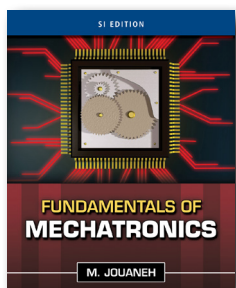
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FUNDAMENTALS OF MECHATRONICS, SI EDITION

Musa Jouaneh, University of Rhode Island

© 2013, 399pp, Paperback, 9781111569020

eBook



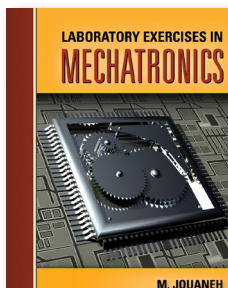
The objective of FUNDAMENTALS OF MECHATRONICS is to cover both hardware and software aspects of mechatronics systems in a single text, giving a complete treatment to the subject matter. The text focuses on application

considerations and relevant practical issues that arise in the selection and design of mechatronics components and systems. The text uses several programming languages to illustrate the key topics. Different programming platforms are presented to give instructors the choice to select the programming language most suited to their course objectives. A separate laboratory book, with additional exercises is provided to give guided hands-on experience with many of the topics covered in the text.

LABORATORY EXERCISES IN MECHATRONICS

Musa Jouaneh, University of Rhode Island

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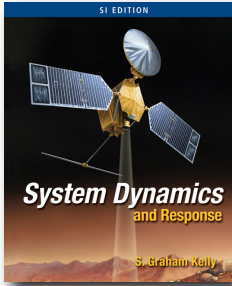
This book contains mechatronics laboratory exercises designed to give the student hands-on experience with applications of the concepts covered in a mechatronics course. 14 laboratory exercises are included plus a section that has a list of suggested

extended or final projects. The first six laboratory exercises are designed to illustrate basic measurements, electrical circuits and electronic concepts. Later exercises focus on microcontrollers, timing and state-transition diagrams, sensors, stepper motors, and feedback control.

SYSTEM DYNAMICS AND RESPONSE - SI VERSION

S. Graham Kelly, University of Akron

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As engineering systems become more increasingly interdisciplinary, knowledge of both mechanical and electrical systems has become an asset within the field of engineering. All engineers should have general facility with modeling of dynamic

systems and determining their response and it is the objective of this book to provide a framework for that understanding. The study material is presented in four distinct parts; the mathematical modeling of dynamic systems, the mathematical solution of the differential equations and integro differential equations obtained during the modeling process, the response of dynamic systems, and an introduction to feedback control systems and their analysis. An Appendix is provided with a short introduction to MATLAB as it is frequently used within the text as a computational tool, a programming tool, and a graphical tool. SIMULINK, a MATLAB based simulation and modeling tool, is discussed in chapters where the development of models use either the transfer function approach or the state-space method.

INDUSTRIAL TECHNOLOGY

MECHANICAL TECHNOLOGY

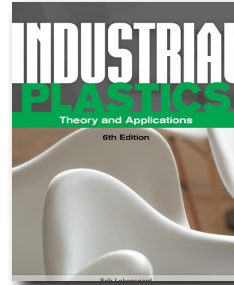
INDUSTRIAL PLASTICS, 6E

Theory and Applications

Erik Lokensgard, Eastern Michigan University, Ypsilanti, MI

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Now in its 6th edition, Industrial Plastics: Theory and Applications is back, with the extensive, detailed graphics and practical lab exercises that made previous editions so popular. In this latest edition, these trademark features accompany

updated coverage of the plastics industry, offering the very latest information on state-of-the-art equipment, with a special emphasis on processing techniques. Coverage includes plastics recycling, ISO and ASTM testing specifications, current health and safety standards, as well as examinations of current environmental issues like recycling, pollution, and incineration. With such broad coverage alongside hands-on activities to provide a clear link between theory and practice, Industrial Plastics continues to be an invaluable resource for students and professionals alike.

Notes

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