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MindTap for Engineering gives you complete control of your course to provide engaging content, to challenge every individual, and to empower student success. With MindTap, you have complete ownership of your content to deliver a seamless student experience that aligns exactly with the way you teach your course:

- Customize the interactive syllabi, emphasize the most important topics and add your own material or notes to the learning path.
- Give your students extra resources including links and videos of Engineering applications to help them focus on their future Engineering careers.
- Support your students understanding by adding in automatically graded questions, which can be algorithmically generated unlimited times when students need extra practice on difficult topics.

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Now in dynamic full color, SI Engineering Fundamentals: An Introduction to Engineering helps students develop the strong problem-solving skills and solid foundation in fundamental principles they will need to become analytical, detail-oriented, and creative engineers. The book opens with an overview of what engineers do, an inside glimpse of the various areas of specialization, and a straightforward look at what it takes to succeed. It then covers the basic physical concepts and laws that students will encounter on the job. Professional Profiles throughout the text highlight the work of practicing engineers from around the globe, tying in the fundamental principles and applying them to professional engineering. Using a flexible, modular format, the book demonstrates how engineers apply physical and chemical laws and principles, as well as mathematics, to design, test, and supervise the production of millions of parts, products, and services that people use every day.

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  1. Introduction to the Engineering Profession
  2. Preparing for an Engineering Career
  3. Introduction to Engineering Design
  4. Engineering Communication
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- Part II: Engineering Fundamentals
  6. Fundamental Dimensions and Units
  7. Length and Length-related Variables in Engineering
  8. Time and Time-related Variables in Engineering
  9. Mass and Mass-related Variables in Engineering
  10. Force and Force-related Variables in Engineering
  11. Temperature and Temperature-related Variables in Engineering
  12. Electric Current and Related Variables in Engineering
  13. Energy and Power
  14. Computational Engineering Tools: Electronic Spreadsheets
  15. Computational Engineering Tools: MATLAB
  16. Engineering Drawings and Symbols
  17. Engineering Materials
  18. Mathematics in Engineering
  19. Probability and Statistics in Engineering
  20. Engineering Economics

### PTC Creo™ Parametric 3.0

1. Introduction
   1. PTC Creo Parametric 3.0 Overview
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   5. Datasheets, Layers, and Sections
   6. Revised Features
   7. Feature Operations
   8. Assemblies
   9. Exploded Assemblies and View Manager
   10. Introduction to Drawings
   11. Part Drawings
   12. Assembly Drawings
   13. Detailed Design – Engineering Analysis
   14. Case Study

PTCCreo 3.0 is an industry-leading Parametric 3D CAD software that empowers engineers to design, simulate, and manufacture parts and products with ease. It includes powerful design tools and intuitive interfaces that make it easy for users to create complex designs. PTC Creo Parametric 3.0 provides a comprehensive solution for the design, engineering, and manufacturing processes.
Now you can make rigorous mathematical topics accessible to your students and show how to use it to solve typical problems with the very successful Essentials of MATLAB® Programming. Author Stephen Chapman emphasizes problem-solving skills throughout this edition as he presents MATLAB as a technical programming language. The book clearly shows students how to write clean, efficient and well-documented programs, while simultaneously introducing them to many of the practical functions of MATLAB. The first seven chapters are ideal for an "Introduction to Programming and Problem Solving" course for freshman engineering students. The last two chapters address more advanced topics of additional data types and plot types, cell arrays, structures, and new MATLAB handle graphics.

MATLAB® Programming for Engineers
International Edition
Stephen J. Chapman, British Aerospace, Australia
© 2016 | 672pp | 97811111576721

This practical and essential text, co-authored by an engineer and an ethicist, covers ethical dilemmas that any engineer might encounter on the job, emphasizing the responsibility of a practicing engineer to act in an ethical manner. To illustrate the complexities involved, the authors present characters who encounter situations that test the engineering code of ethics. The dialogue between the characters highlights different perspectives of each dilemma. As they proceed through the book, students see how the code of ethics can help in decision making, as well as the implications of various decisions. The philosophical theory that supports the ethical situations encountered is presented as boxed material following each section.

ENGINEERING COMPUTING
NEW EDITION

Essentials of MATLAB® Programming
International Edition
3rd Edition
Stephen J. Chapman, British Aerospace, Australia
© 2018 | 512pp | 9781305970717

Introduce the MATLAB language to your students and show how to use it to solve typical problems with the very successful Essentials of MATLAB® Programming. Author Stephen Chapman emphasizes problem-solving skills throughout this edition as he presents MATLAB as a technical programming language. The book clearly shows students how to write clean, efficient and well-documented programs, while simultaneously introducing them to many of the practical functions of MATLAB. The first seven chapters are ideal for an "Introduction to Programming and Problem Solving" course for freshman engineering students. The last two chapters address more advanced topics of additional data types and plot types, cell arrays, structures, and new MATLAB handle graphics.

MATLAB® Programming with Applications for Engineers
International Edition
1st Edition
Stephen J. Chapman, British Aerospace, Australia
© 2013 | 590pp | 9780495668084

Emphasizing problem-solving skills throughout, this fifth edition of Chapman’s highly successful book teaches MATLAB as a technical programming language, showing students how to write clean, efficient, and well-documented programs, while introducing them to many of the practical functions of MATLAB. The first eight chapters are designed to serve as the text for an “Introduction to Programming / Problem Solving” course for first-year engineering students. The remaining chapters, which cover advanced topics such as I/O, object-oriented programming, and graphical user interfaces, may be covered in a longer course or used as a reference by engineering students or practicing engineers who use MATLAB.

CHEMICAL ENGINEERING
NEW EDITION

Fundamentals of Chemical Engineering Thermodynamics, SI Edition
1st Edition
Kevin D. Dahm, Rowan University
Donald P. Visco, Jr., Associate Dean, The University of Akron
© 2015 | 800pp | 9781111580711
The Science and Engineering of Materials, SI Edition
7th Edition
Donald R. Askeland, Missouri University of Science and Technology
Wendelin J. Wright, Bucknell University
© 2016 | 967pp | 9781305077102

This updated 7th edition helps engineering students develop an understanding of the relationship between structure, processing, and properties of materials. By selecting the appropriate topics from the book’s wealth of material, instructors can emphasize materials, provide a general overview, concentrate on mechanical behavior, or focus on physical properties. Because the book has more material than is needed for a one-semester course, students 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.

CONTENTS
1. Introduction to Materials Science and Engineering
2. Atomic Structure
3. Atomic and Ionic Arrangements
4. Imperfections in the Atomic and Ionic Arrangements
5. Atom and Ion Movements in Materials
6. Mechanical Properties: Part One
7. Mechanical Properties: Part Two
8. Strain Hardening and Annealing
9. Principles of Solidification
10. Solid Solutions and Phase Equilibrium
11. Dispersion Strengthening and Eutectic Phase Diagrams
12. Dispersion Strengthening by Phase Transformations and Heat Treatment
13. Heat Treatment of Steels and Cast Irons
14. Nonferrous Alloys
15. Ceramic Materials
16. Polymers
17. Composites: Teamwork and Synergy in Materials
18. Construction Materials
19. Electronic Materials
20. Magnetic Materials
21. Photonic Materials
22. Thermal Properties of Materials
23. Corrosion and Wear
Appendix A: Selected Physical Properties of Materials
Appendix B: The Atomic and Ionic Radii of Selected Elements

INTRODUCTION TO MECHANICAL ENGINEERING
BESTSELLER
An Introduction to Mechanical Engineering, SI Edition
4th Edition
Jonathan Wickert, Iowa State University
Kemper Lewis, University at Buffalo - SUNY
© 2017 | 432pp | 9781305635753

Introduce your students to today’s ever changing field of mechanical engineering as you instill an appreciation for how engineers design hardware that builds and improves societies around the world. This fourth edition is ideal for students in their first or second year of your mechanical engineering course. It is also useful for students in closely related fields. The authors effectively balance timely treatments of technical problem-solving skills, design, engineering analysis, and modern technology to provide the solid mechanical engineering foundation students need for future success.

CONTENTS
1. The Mechanical Engineering Profession
2. Mechanical Design
3. Technical Problem-Solving and Communication Skills
4. Forces in Structures and Machines
5. Materials and Stress
6. Fluids Engineering
7. Thermal and Energy Systems
8. Motion and Power Transmission
Appendix A: Greek Alphabet
Appendix B: Trigonometry Review

MECHATRONICS
Mechanisms and Machines: Kinematics, Dynamics and Synthesis, SI Edition
1st Edition
Michael M. Stanisic, University of Notre Dame
© 2015 | 696pp | 9781285057569

Fundamentals of Mechatronics, SI Edition
1st Edition
Musa Jouaneh, University of Rhode Island
© 2013 | 399pp | 97811115669020

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Heat Transfer

Principles of Engineering Thermodynamics, SI Edition

1st Edition
John R. Reisel, University of Wisconsin
© 2016 | 576pp | 9781285056487

Written in an informal, first-person writing style that makes abstract concepts easier to understand, this text transforms the way students learn thermodynamics. While continuing to provide strong coverage of fundamental principles and applications, it asks students to explore how changes in a particular parameter can change a device's or process' performance. This approach helps them develop a better understanding of how to apply thermodynamics in their future careers and a stronger intuitive feel for how the different components of thermodynamics are interrelated. Throughout the book, students are encouraged to develop computer-based models of devices, processes, and cycles and to take advantage of the speed of Internet-based programs and computer apps to find thermodynamic data, just as practicing engineers do.

CONTENTS
1. Introduction to Thermodynamics and Energy
2. The Nature of Energy
3. Thermodynamic Properties and Equations of State
4. The First Law of Thermodynamics
5. Introduction to the Second Law of Thermodynamics
6. Entropy
7. Power Cycles
8. Refrigeration Cycles
9. Ideal Gas Mixtures
11. Combustion Analysis

HEAT TRANSFER

Principles of Heat Transfer

8th Edition
Frank Kreith, University of Colorado
Raj M. Manglik, University of Cincinnati
© 2018 | 784pp | 9781305387102

Introduce the principles of heat transfer using the classic that sets the standard of coverage and organization for all other heat transfer texts. Following the recommendations of the ASME Committee on Heat Transfer Education, it provides a comprehensive engineering approach that is ideal for your upper-level, one-semester course in heat transfer. This relevant book recognizes that in today’s world, computational analysis is more critical than rote mathematical solutions to heat transfer problems. However, the authors also incorporate an effective analytic approach. With this approach, students gain a clear understanding of the physics involved and learn how to utilize tools for analyzing more complex problems. The text also emphasizes applications to current engineering challenges in renewable energy, bioengineering, microelectronics, materials processing, and space exploration.

CONTENTS
1. Basic Modes of Heat Transfer
2. Steady Heat Conduction
3. Transient Heat Conduction
4. Numerical Analysis of Heat Conduction
5. Analysis of Convection Heat Transfer
6. Forced Convection Over Exterior Surfaces
7. Forced Convection Inside Tubes and Ducts
8. Natural Convection
9. Heat Transfer with Phase Change
10. Heat Exchangers
11. Heat Transfer by Radiation

Heat and Mass Transfer, SI Edition

2nd Edition
Kurt Rolle, PhD, P.E., University of Wisconsin
© 2016 | 696pp | 9781305112582


4th Edition
Andrew Pytel, The Pennsylvania State University
Jaan Kiusalaas, The Pennsylvania State University
© 2017 | 608pp | 9781305577435

Provide your mechanical engineering students with a solid understanding of statics without the overload of extraneous detail in Andrew Pytel and Jaan Kiusalaas' Engineering Mechanics: Statics. The authors use their extensive teaching experience and first-hand knowledge to deliver a presentation that's ideally suited to the learning skills of today's students. The authors clearly introduce critical concepts using learning features that connect real problems and examples with the fundamentals of engineering mechanics. Students learn how to analyze problems successfully before substituting numbers into formulas. This approach benefits students tremendously as they encounter actual engineering situations that do not adhere to standard formulas.

CONTENTS
1. Introduction to Statics
2. Basic Operations with Force Systems
3. Resultants of Force Systems
4. Coplanar Equilibrium Analysis
5. Planar Kinematics of Rigid Bodies
6. Beams and Cables
7. Dry Friction
8. Centroids and Distributed Loads
9. Moments and Products of Inertia of Areas
10. Virtual Work and Potential Energy


4th Edition
Andrew Pytel, The Pennsylvania State University
Jaan Kiusalaas, The Pennsylvania State University
© 2017 | 672pp | 9781305579217

Teach students the fundamental principles of Newtonian dynamics and how to apply these principles to the analysis of real-world engineering with Pytel/Kiusalaas' Engineering Mechanics: Dynamics. Students learn how to analyze problems successfully before substituting numbers into formulas. This approach prepares students for actual engineering with Pytel/Kiusalaas' Engineering Mechanics: Dynamics. Students learn how to analyze problems successfully before substituting numbers into formulas. This approach prepares students for actual engineering situations that do not adhere to standard formulas. The text discusses in detail the three fundamental methods of problem solution: force-mass-acceleration, work-energy, and impulse-momentum. The authors also cover the use of numerical methods to solve dynamics problems. These clearly identified sections let you use as many numerical methods as desired.

CONTENTS
1. Introduction to Dynamics
2. Dynamics of a Particle: Rectangular Coordinates
3. Dynamics of a Particle: Curvilinear Coordinates
4. Work-Energy and Impulse-Momentum Principle for a Particle
5. Dynamics of Particle Systems
6. Planar Kinematics of Rigid Bodies
9. Rigid-Body Dynamics in Three Dimensions
10. Vibrations

Request inspection copies and a MindTap demo by visiting www.cengage.co.uk
Develop a thorough understanding of the mechanics of materials - an essential area in mechanical, civil, and structural engineering - with the analytical approach and problem-solving emphasis in this new edition of Goodno/Gere's market-leading text. This book focuses on the analysis and design of structural members subjected to tension, compression, torsion, bending, and more. Photographs and detailed diagrams demonstrate reactive and internal forces and resulting deformations.

**CONTENTS**

1. Tension, Compression, and Shear
2. Axially Loaded Members
3. Torsion
4. Shear Forces and Bending Moments
5. Stresses in Beams (Basic Topics)
6. Stresses in Beams (Advanced Topics)
7. Analysis of Stress and Strain
8. Applications of Plane Stress (Pressure Vessels, Beams, and Combined Loadings)
9. Deflections of Beams
10. Statically Indeterminate Beams
11. Columns

Appendix A: Systems of Units and Conversion Factors
Appendix B: Problem Solving
Appendix C: Mathematical Formulas
Appendix D: Review of Centroids and Moments Of Inertia
Appendix E: Properties Of Plane Areas
Appendix F: Properties of Structural-Steel Shapes
Appendix G: Properties of Structural Lumber
Appendix H: Deflections and Slopes of Beams
Appendix I: Properties of Materials

Design of Fluid Thermal Systems, SI Edition
4th Edition
William S. Janna, The University of Memphis
© 2015 | 768pp | 9781305076075

Help students gain an understanding of fluid mechanics and strengthen their abilities to analyze this important phenomena encountered by practicing engineers. The authors use proven learning tools to help students visualize many difficult-to-understand aspects of fluid mechanics. They present numerous phenomena that are often not discussed in other texts, such as entrance flows, the difference between wakes and separated regions, free-stream fluctuations and turbulence, and vorticity.

**CONTENTS**

1. Basic Considerations
2. Fluid Statics
3. Introduction to Fluids in Motion
4. The Integral Forms of the Fundamental Laws
5. The Differential Forms of the Fundamental Laws
6. Dimensional Analysis and Similitude
7. Internal Flows
8. External Flows
9. Compressible Flow
10. Flow in Open Channels
11. Flows in Piping Systems
12. Turbomachinery

13. Measurements in Fluid Mechanics
14. Computational Fluid Dynamics
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Appendix B. Fluid Properties
Appendix C. Properties of Areas and Volumes
Appendix D. Compressible-flow Tables for Air
Appendix E. Numerical Solutions for Chapter 10
Appendix F. Numerical Solutions for Chapter 11
Bibliography
Answers to Selected Problems
Index
Provide a valuable overview of soil properties and mechanics together with coverage of field practices and basic engineering procedures with this market-leading introduction to geotechnical engineering. This book provides the important background knowledge students need to support study in later design-oriented courses and in professional practice. The authors ensure a practical and application-oriented approach to the subject by incorporating a wealth of comprehensive discussions and detailed explanations. Find more figures and worked-out problems than any other book for the course to help ensure student understanding.

CONTENTS
1. Geotechnical Engineering -- A Historical Perspective
2. Origins of Soil and Grain Size
3. Weight-Volume Relationships
4. Plasticity and Structure of Soil
5. Classification of Soil
6. Soil Compaction
7. Permeability
8. Seepage
9. In Situ Stresses
10. Stresses in a Soil Mass
11. Compressibility of Soil
12. Shear Strength of Soil
13. Lateral Earth Pressure: At-Rest, Rankine, and Coulomb
14. Lateral Earth Pressure: Curved Failure Surface
15. Slope Stability
16. Soil-Bearing Capacity for Shallow Foundations
17. Subsoil Compaction
18. An Introduction to Geosynthetics

Answers to Selected Problems Index

Prepare your students for today's civil engineering challenges, providing them with a broad overview of the materials they will use as civil engineers in their studies and careers. Civil Engineering Materials not only covers traditional materials, such as concrete, steel, timber, and soils, but also explores non-traditional materials, such as synthetics and industrial-by-products. Numerous practical examples and straightforward explanations help your students 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 use of civil engineering materials, the authors also carefully address the important issues related to sustainability to give students a broader context of how materials are used in contemporary applications.

CONTENTS
1. Engineering Behavior of Materials -- Some Fundamentals
2. Chemistry of Materials
3. Soils
4. Rocks
5. Aggregates
6. Geosynthetics
7. Asphalt Cement and Asphalt Concrete Mixtures
8. Cement and Concrete
9. Metals and Alloys
10. Steel
11. Polymers, Ceramics and Composites
12. Timber
13. Sustainable Use of Construction Materials
9. Pipeline Foundations
10. Drilled-Shaft Foundations
11. Foundations on Difficult Soil
Part III: Lateral Earth Pressure and Earth-retaining Structures
12. Lateral Earth Pressure
13. Retaining Walls
14. Sheet Pile Walls
15. Brace Cuts
Part IV: Soil Improvement and Ground Modification
16. Soil Improvement and Ground Modification
Answers to Problems Index

The leading text for foundation engineering courses, Principles of Foundation Engineering maintains a careful balance of current research and practical field applications as it introduces civil engineering students to the fundamental concepts and applications of foundation analysis design. Throughout the book, author Braja M. Das emphasizes the judgment needed to properly apply theories and analysis to the evaluation of soils and foundation design. In addition a wealth of worked out examples and figures show students how to do the work they will be doing as civil engineers, while homework problems at the end of each chapter help them hone their problem-solving skills.

CONTENTS
1. Introduction
Part I: Geotechnical Properties and Exploration of Soil
2. Geotechnical Properties of Soil
3. Natural Soil Deposits and Subsoil Exploration
Part II: Foundation Analysis
4. Shallow Foundations: Ultimate Bearing Capacity
5. Ultimate Bearing Capacity of Shallow Foundations: Special Cases
6. Vertical Stress Increase in Soil
7. Settlement of Shallow Foundation
8. Mat Foundations

ENERGY ENGINEERING

Introduction to Environmental Engineering, SI Edition
3rd Edition
P. Aarne Vesilind, Bucknell University
Susan M. Morgan, Southern Illinois University
Lauren G. Heine, Clean Production Action
© 2011 | 592pp | 9780495295853

STEEL DESIGN

6th Edition
William T. Segui, The University of Memphis
© 2018 | 800pp | 9781337094740

Introduction to structural steel design with Segui's new 6th edition. Rather than focus on the integrated design of buildings, it takes a unique approach by emphasizing the design of members and their connections. This book is designed to give you the flexibility to easily teach LRFD (Load and Resistance Factor Design), ASD (Allowable Stress Design), or both, as your time-permits. It encourages the application of fundamental principles for design procedures as well as for practical design, all the while blending in a strong theoretical approach to enhance student development. While the book is ideal for all undergraduate engineering students, later chapters can also be used in graduate courses.

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1. Introduction
2. Concepts in Structural Steel Design
3. Tension Members
4. Compression Members
5. Beams
6. Beam-columns
7. Simple Connections
8. Eccentric Connections
9. Composite Construction
10. Plate Girders
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ROAD/TRAFFIC ENGINEERING

Traffic and Highway Engineering, SI Edition
5th Edition
Nicholas J. Garber, University of Virginia
Lester A. Hoel, University of Virginia
© 2015 | 1248pp | 9781133607083

NEW EDITION

Steel Design
6th Edition
William T. Segui, The University of Memphis
© 2018 | 800pp | 9781337094740

Engineering Applications in Sustainable Design and Development, SI Edition
1st Edition
Bradley Striebig, James Madison University
Adebayo A. Ogundipe, James Madison University
Maria Papadakis, James Madison University
© 2016 | 608pp | 9781133629788

Sustainable Energy, SI Edition
1st Edition
Richard Dunlap, Institute for Research in Materials at Dalhousie University
© 2015 | 672pp | 9781133108771

Solid Waste Engineering, SI Edition
3rd Edition
William A. Worrell, Integrated Waste Management Authority
P. Aarne Vesilind, Bucknell University
Christian Ludwig, Paul Scherrer Institute and EPFL
© 2017 | 448pp | 9781305638600

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CIRCUIT THEORY/ANALYSIS

NEW TITLE

Electrical Circuits
1st Edition
James S. Kang, California State Polytechnic University
© 2018 | 1056pp | 9781305635210

Introduce your students to electric circuits with common design practices and simulations when you use Kang’s Electric Circuits. This engaging book presents the fundamental concepts of electric circuits alongside examples, exercises and problems. Fresh examples provide students with clear methods for understanding how electric circuits function. Each chapter includes several examples and problems related to circuit design with answers provided for the odd-numbered questions. This allows students to use the questions for self-guided study and practice. Electric Circuits offers comprehensive coverage, from DC circuits and AC circuits to Laplace transformed circuits. MATLAB® scripts for certain examples provide an alternate method for solving circuit problems and give students an effective tool for checking answers and reducing laborious derivations and calculations. The book also includes PSpice® and Simulink® examples to demonstrate electric circuit simulations.

CONTENTS
1. Voltage, Current, Power, and Sources
2. Circuit Laws
3. Circuit Analysis Methods
4. Circuit Theorems
5. Operational Amplifier Circuits
6. Capacitors and Inductors
7. RL and RC Circuits
8. RLC Circuits
9. Phasors and Impedances
10. Analysis of Phasor Transformed Circuits
11. AC Power
12. Three-phase Systems
13. Magnetically Coupled Circuits
14. Laplace Transform
15. Circuits Analysis in the s-Domain
16. First and Second Order Analog Filters
17. Butterworth Filter Design
18. Fourier Series
19. Fourier Transform
20. Two-port Circuits

INTRODUCTION TO ELECTRICAL ENGINEERING

The Digital Information Age
An Introduction to Electrical Engineering
International Edition
2nd Edition
Roman Kuc, Yale University
© 2015 | 400pp | 9781305077737

Electrical Engineering in Context
Smart Devices, Robots & Communications
International Edition
1st Edition
Roman Kuc, Yale University
© 2015 | 608pp | 97812857770116

DIGITAL SIGNAL PROCESSING

Digital Signal Processing Using MATLAB®
A Problem Solving Companion, International
4th Edition
Vinay K. Ingle, Northeastern University
John G. Proakis, Northeastern University
© 2017 | 672pp | 9781305637535

Introduction to Digital Signal Processing using MATLAB®
International Edition
3rd Edition
Robert J. Schilling, Clarkson University
Sandra L. Harris, Clarkson University
© 2017 | 784pp | 9781305636606

DIGITAL LOGIC/DIGITAL DESIGN

Microelectronic Circuits: Analysis & Design
International Edition
3rd Edition
Muhammad H. Rashid, University of West Florida
© 2017 | 1360pp | 9781305642805

Digital Logic and Microprocessor Design with Interfacing
International Edition
2nd Edition
Enoch O. Hwang, La Sierra University
© 2018 | 608pp | 9781305859470

Fundamentals of Logic Design
International Edition
7th Edition
Charles H. Roth, Jr., University of Texas
Larry L. Kinney, University of Minnesota
© 2014 | 816pp | 9781133628484

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Give your students a contemporary treatment of image processing that balances a broad coverage of major subject areas with in-depth examination of the most foundational topics. Birchfield’s Image Processing and Analysis offers a clear presentation that even your beginning students can follow along with higher-level discussions that will challenge your most advanced students. The book effectively balances key topics from the field of image processing in a format that gradually progresses from easy to more challenging material, while consistently reinforcing a fundamental understanding of the core concepts. The book’s hands-on learning approach and full-color presentation allow your students to begin working with images immediately. The book encourages programming as it incorporates algorithmic details and hints, using numerous full-color illustrations and detailed pseudocode to facilitate an understanding of algorithms and aid in implementation.

CONTENTS
1. Introduction
2. Fundamentals of Imaging
3. Point and Geometric Transformations
4. Binary Image Processing
5. Spatial-domain Filtering
6. Frequency-domain Processing
7. Edges and Features
8. Compression
9. Color
10. Segmentation
11. Model Fitting
12. Classification
13. Stereo and Motion

Digital Systems Design Using VHDL
International Edition
3rd Edition
Charles Roth, Jr., University of Texas
Lizy Kurian John, University of Texas
© 2018 | 592pp | 9781305638921

Written for an advanced-level course in digital systems design, this new edition integrates the use of the industry-standard hardware description language VHDL into the digital design process. The book begins with a valuable review of basic logic design concepts before introducing the fundamentals of VHDL. The book concludes with detailed coverage of advanced VHDL topics.

CONTENTS
1. Review of Logic Design Fundamentals
2. Introduction to VHDL
3. Introduction to Programmable Logic Devices
4. Design Examples
5. SM Charts and Microprogramming
6. Designing with Field Programmable Gate Arrays
7. Floating-point Arithmetic
8. Additional Topics in VHDL
9. Design of a RISC Microprocessor
10. Hardware Testing and Design for Testability
11. Additional Design Examples
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Appendix B: IEEE Standard Libraries
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Appendix D: Projects

Power System Analysis & Design, SI Edition
6th Edition
J. Duncan Glover, Failure Electrical, LLC
Thomas Overbye, University of Illinois, Mulukutla S. Sarma, Northeastern University
© 2017 | 644pp | 9781305636187

Introduce the basic concepts of power systems as well as the tools students need to apply these skills to real world situations with Power System Analysis and Design. This new edition highlights physical concepts while also giving necessary attention to mathematical techniques. The authors develop both theory and modeling from simple beginnings so students are prepared to readily extend these principles to new and complex situations. Software tools including PowerWorld® Simulation, and the latest content throughout this edition aid students with design issues while reflecting the most recent trends in the field.

CONTENTS
1. Introduction
2. Fundamentals
3. Power Transformers
4. Transmission-line Parameters
5. Transmission Lines: Steady-state Operation
6. Power Flows
7. Symmetrical Faults
8. Symmetrical Components
9. Unsymmetrical Faults
10. System Protection
11. Transient Stability
13. Transmission Lines: Transient Operation
14. Power Distribution

Power Systems/Electric Machines
Bestseller
Principles, Applications and Control Schematics International Edition
2nd Edition
Dino Zorbas, McGill University, Quebec, Canada
© 2015 | 704pp | 9781305637962

Electric Machines
Building Cross-Platform Mobile and Web Apps for Engineers and Scientists
An Active Learning Approach, International
1st Edition
Pawan Lingras, Saint Mary's University, Halifax, Matt Triff, and Rucha Lingras
© 2017 | 368pp | 9781305637962

Wireless Communications
Introduction to Wireless and Mobile Systems
Annotated International Edition
4th Edition
Dharma P. Agrawal, University of Cincinnati
Qing-An Zeng, North Carolina Agricultural and Technical University
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Department

Institution Name

Course Name

Course Start Date

Number of Students

Address

City

Country

Postcode

Telephone

Email

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