



Structural Analysis, 10/e Edition 10

Hibbeler

Binding Paperback | **Page Count** 744

For courses in Structural Analysis; also suitable for individuals planning a career as a structural engineer

Structural Analysis, 10th Edition, presents the theory and applications of structural analysis as it applies to trusses, beams, and frames. Through its reader-friendly, clear organization, the text emphasizes developing the ability to model and analyze a structure in preparation for professional practice.

The text is designed to ensure those taking their first course in this subject understand some of the more important classical methods of structural analysis, in order to obtain a better understanding of how loads are transmitted through a structure, and how the structure will deform under load.

Table of Contents

- 1 Types of Structures and Loads
- 2 Analysis of Statically Determinate Structures
- 3 Analysis of Statically Determinate Trusses
- 4 Internal Loadings Developed in Structural Members
- 5 Cables and Arches
- 6 Influence Lines for Statically Determinate Structures
- 7 Deflections
- 8 Deflections Using Energy Methods
- 9 Analysis of Statically Indeterminate Structures by the Force Method
- 10 Displacement Method of Analysis: Slope-Deflection Equations
- 11 Displacement Method of Analysis: Moment Distribution
- 12 Approximate Analysis of Statically Indeterminate Structures
- 13 Beams and Frames Having Nonprismatic Members
- 14 Truss Analysis Using the Stiffness Method
- 15 Beam Analysis Using the Stiffness Method
- 16 Plane Frame Analysis Using the Stiffness Method
- 17 Structural Modeling and Computer Analysis
- Computer Problems
- Project Problems
- Appendix
- A. Matrix Algebra for Structural Analysis
- Preliminary Problems and Fundamental Problems Solutions
- Answers to Selected Problems

ISBN 9781292247137 | **PUB Date** 4/1/2018



Fluid Mechanics, 2/e Edition 2

Hibbeler

Binding Paperback | **Page Count** 928

For Fluid Mechanics courses found in Civil and Environmental, General Engineering, and Engineering Technology and Industrial Management departments

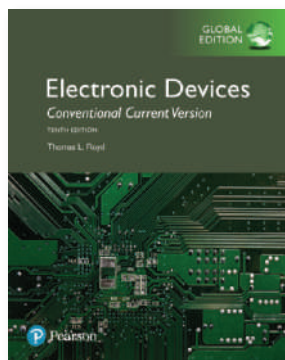
Fluid Mechanics 2nd Edition is intended to provide a comprehensive guide to a full understanding of the theory and many applications of fluid mechanics. The text features many of the hallmark pedagogical aids unique to Hibbeler texts, including its student-friendly clear organization. The text supports the development of student problem-solving skills through a large variety of problems, representing a broad range of engineering disciplines that stress practical, realistic situations encountered in professional practice, and provide varying levels of difficulty. The text offers flexibility in that basic principles are covered in chapters 1-6, and the remaining chapters can be covered in any sequence without the loss of continuity.

Updates to the 2nd Edition result from comments and suggestions from colleagues, reviewers in the teaching profession, and many of the author's students, and include expanded topic coverage and new Example and Fundamental Problems intended to further students' understanding of the theory and its applications.

Table of Contents

- 1 Fundamental Concepts
- 2 Fluid Statics
- 3 Kinematics of Fluid Motion
- 4 Conservation of Mass
- 5 Energy of Moving Fluids
- 6 Fluid Momentum
- 7 Differential Fluid Flow
- 8 Dimensional Analysis and Similitude
- 9 Viscous Flow Within Enclosed Surfaces
- 10 Analysis and Design for Pipe Flow
- 11 Viscous Flow Over External Surfaces
- 12 Turbomachinery
- 13 Open Channel Flow
- 14 Compressible Flow

ISBN 9781292247304 | **PUB Date** 12/17/2018



Electronic Devices (Conventional Current Version) **Edition 10**

Floyd

Binding Paperback | **Page Count** 928

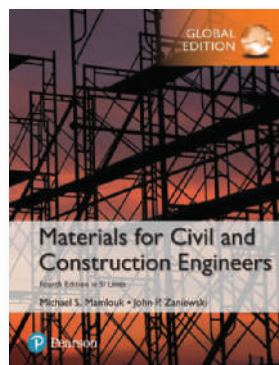
For courses in basic electronics and electronic devices and circuits

Electronic Devices (Conventional Current Version), 10th Edition, provides a solid foundation in basic analog electronics and a thorough introduction to analog integrated circuits and programmable devices. The text identifies the circuits and components within a system, helping students see how the circuit relates to the overall system function. Full-color photos and illustrations and easy-to-follow worked examples support the text's strong emphasis on real-world application and troubleshooting. Updated throughout, the 10th Edition features selected circuits keyed to Multisim V14 and LT Spice files so that students learn how to simulate, analyze, and troubleshoot using the latest circuit simulation software.

Table of Contents

1. Introduction to Semiconductors
2. Diodes and Applications
3. Special-Purpose Diodes
4. Bipolar Junction Transistors
5. Transistor Bias Circuits
6. BJT Amplifiers
7. BJT Power Amplifiers
8. Field-Effect Transistors (FETs)
9. FET Amplifiers and Switching Circuits
10. Amplifier Frequency Response
11. Thyristors
12. The Operational Amplifier
13. Basic Op-Amp Circuits
14. Special-Purpose Integrated Circuits
15. Active Filters
16. Oscillators
17. Voltage Regulators
- Answers to Odd-Numbered Problems

ISBN 9781292222998 | **PUB Date** 11/24/2011



Materials for Civil and Construction Engineers **Edition 4**

Mamlouk / Zaniewski

Binding Paperback | **Page Count** 664

For courses in Civil Engineering Materials, Construction Materials, and Construction Methods & Materials offered in Civil, Environmental, or Construction engineering departments

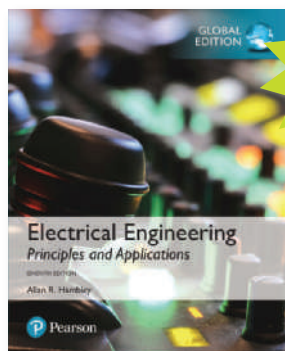
Materials for Civil and Construction Engineers helps students understand and select the materials involved in supporting the infrastructure needs of society—from buildings, to water and treatment distribution systems, to dams, highways, and airport pavements. By gaining a deep understanding of material behavior and the material selection process, students can begin to understand how to create and maintain civil and construction engineering systems crucial to society.

The primary focus of the updates presented in this 4th Edition was on the sustainability of materials used in civil and construction engineering. The information on sustainability was updated and expanded to include the most recent information. In addition, sections were added describing the sustainability considerations of each material. The problem set for each chapter was updated and increased to provide some fresh exercises. References were updated and increased in all chapters to provide students with additional reading on current issues related to different materials.

Table of Contents

- Materials Engineering Concepts
- Nature of Materials
- Steel
- Aluminum
- Aggregates
- Portland Cement, Mixing Water, and Admixtures
- Portland Cement Concrete
- Masonry
- Asphalt Binders and Asphalt Mixtures
- Wood
- Composites

ISBN 9781292154404 | **PUB Date** 8/8/2017



Electrical Engineering: Principles & Applications Edition 7

Hambley

Binding Paperback | **Page Count** 896

For courses in Electrical Engineering

The #1 title in its market, *Electrical Engineering: Principles and Applications* helps students learn electrical-engineering fundamentals with minimal frustration. Its goals are to present basic concepts in a general setting, to show students how the principles of electrical engineering apply to specific problems in their own fields, and to enhance the overall learning process. This book covers circuit analysis, digital systems, electronics, and electro mechanics at a level appropriate for either electrical-engineering students in an introductory course or non-majors in a survey course. A wide variety of pedagogical features stimulate student interest and engender awareness of the material's relevance to their chosen profession.

Table of Contents

- 1 Introduction
- 2 Resistive Circuits
- 3 Inductance and Capacitance
- 4 Transients
- 5 Steady-State Sinusoidal Analysis
- 6 Frequency Response, Bode Plots, and Resonance
- 7 Logic Circuits
- 8 Computers, Microcontrollers, and Computer-Based Instrumentation Systems
- 9 Diodes
- 10 Amplifiers: Specifications and External Characteristics
- 11 Field-Effect Transistors
- 12 Bipolar Junction Transistors
- 13 Operational Amplifiers
- 14 Magnetic Circuits and Transformers
- 15 DC Machines
- 16 AC Machines
- Appendices
- A Complex Numbers
- B Nominal Values and the Color Code for Resistors
- C The Fundamentals of Engineering Examination
- D Answers for the Practice Tests
- E Online Student Resources

ISBN 9781292223124 | **PUB Date** 4/23/2018



MATLAB for Engineers Edition 5

Moore

Binding Paperback | **Page Count** 688

For courses in Engineering

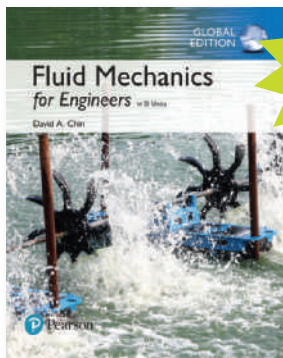
MATLAB For Engineers introduces to students the MATLAB coding language. Developed out of Moore's experience teaching MATLAB and other languages, the text meets students at their level of mathematical and computer sophistication. Starting with basic algebra, the book shows how MATLAB can be used to solve a wide range of engineering problems. Examples drawn from concepts introduced in early chemistry and physics classes and freshman and sophomore engineering classes stick to a consistent problem-solving methodology.

Students reading this text should have an understanding of college-level algebra and basic trigonometry. The text includes brief backgrounds when introducing new subjects like statistics and matrix algebra.

Table of Contents

1. About MATLAB
2. MATLAB Environment
3. Built-In MATLAB Functions
4. Manipulating MATLAB Matrices
5. Plotting
6. Logical Functions And Selection Structures
7. Repetition Structures
8. User-Controlled Input And Output
9. User-Defined Functions
10. Matrix Algebra
11. Other Kinds Of Arrays
12. Symbolic Mathematics
13. Numerical Techniques
14. Advanced Graphics
15. Creating Graphical User Interfaces
16. Simulink: A Brief Introduction
- Appendix A: Special Characters, Commands, and Functions
- Appendix B: Scaling Techniques
- Appendix C: The Ready Aim Fire GUI
- Appendix D
- Index

ISBN 9781292231204 | **PUB Date** 4/1/2018



Mastering
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Fluid Mechanics for Engineers Edition 1

Chin

Binding Paperback | **Page Count** 1056

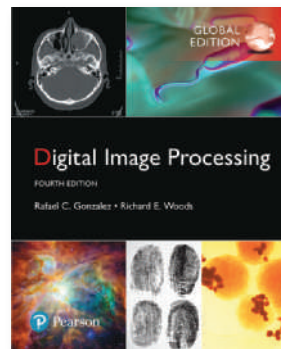
For courses in fluid mechanics

Written and conceived by an author with decades of relevant experience in the fields of fluid mechanics, engineering, and related disciplines, this 1st Edition of *Fluid Mechanics for Engineers* effectively introduces engineering students to the principles of fluid mechanics. With the understanding that fluid mechanics is a required core course for most engineering students, the author focuses first and foremost on the most essential topics of the field. Practical applications for several engineering disciplines are considered, with a special focus on civil engineering. Elective topics are also included for instructors; consideration with regard to specific courses. Written in a stimulating style, *Fluid Mechanics for Engineers* fulfills the requirements of a core course while keeping students engaged.

Table of Contents

- Properties of Fluids
- Fluid Statics
- Kinematics and Streamline Dynamics
- Finite Control Volume Analysis
- Differential Analysis
- Dimensional Analysis and Similitude
- Flow in Closed Conduits
- Turbomachines
- Flow in Open Channels
- Drag and Lift
- Boundary-Layer Flow
- Compressible Flow

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Digital Image Processing Edition 4

Gonzalez / Woods

Binding Paperback | **Page Count** 1024

For courses in Image Processing and Computer Vision

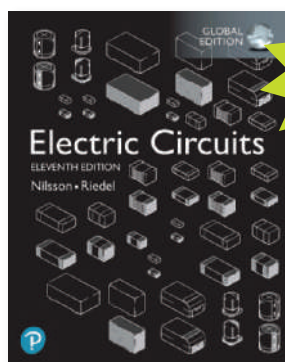
For 40 years, *Image Processing* has been the foundational text for the study of digital image processing. The book is suited for students at the college senior and first-year graduate level with prior background in mathematical analysis, vectors, matrices, probability, statistics, linear systems, and computer programming. As in all earlier editions, the focus of this edition of the book is on fundamentals.

The 4th Edition, which celebrates the book's 40th anniversary, is based on an extensive survey of faculty, students, and independent readers in 150 institutions from 30 countries. Their feedback led to expanded or new coverage of topics such as deep learning and deep neural networks, including convolutional neural nets, the scale-invariant feature transform (SIFT), maximally-stable extremal regions (MSERs), graph cuts, k-means clustering and superpixels, active contours (snakes and level sets), and exact histogram matching. Major improvements were made in reorganizing the material on image transforms into a more cohesive presentation, and in the discussion of spatial kernels and spatial filtering. Major revisions and additions were made to examples and homework exercises throughout the book. For the first time, we added MATLAB projects at the end of every chapter, and compiled support packages for students and faculty containing, solutions, image databases, and sample code.

Table of Contents

- 1 Introduction
- 2 Digital Image Fundamentals
- 3 Intensity Transformations and Spatial Filtering
- 4 Filtering in the Frequency Domain
- 5 Image Restoration and Reconstruction
- 6 Color Image Processing
- 7 Wavelet and Other Image Transforms
- 8 Image Compression and Watermarking
- 9 Morphological Image Processing
- 10 Image Segmentation
- 11 Feature Extraction
- 12 Image Pattern Classification
- Bibliography
- Index

ISBN 9781292223049 | **PUB Date** 8/13/2017



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Electric Circuits Edition 11

Nilsson / Riedel

Binding Paperback | **Page Count** 824

For courses in Introductory Circuit Analysis or Circuit Theory

The fundamental goals of the best-selling *Electric Circuits* remain unchanged. The 11th Edition continues to motivate students to build new ideas based on concepts previously presented, to develop problem-solving skills that rely on a solid conceptual foundation, and to introduce realistic engineering experiences that challenge students to develop the insights of a practicing engineer.

Table of Contents

1. Circuit Variables
2. Circuit Elements
3. Simple Resistive Circuits
4. Techniques of Circuit Analysis
5. The Operational Amplifier
6. Inductance, Capacitance, and Mutual Inductance
7. Response of First-Order RL and RC Circuits
8. Natural and Step Responses of RLC Circuits
9. Sinusoidal Steady-State Analysis
10. Sinusoidal Steady-State Power Calculations
11. Balanced Three-Phase Circuits
12. Introduction to the Laplace Transform
13. The Laplace Transform in Circuit Analysis
14. Introduction to Frequency Selective Circuits
15. Active Filter Circuits
16. Fourier Series
17. The Fourier Transform
18. Two-Port Circuits
- Appendix A: The Solution of Linear Simultaneous Equations
- Appendix B: Complex Numbers
- Appendix C: More on Magnetically Coupled Coils and Ideal Transformers
- Appendix D: The Decibel
- Appendix E: Bode Diagrams
- Appendix F: An Abbreviated Table of Trigonometric Identities
- Appendix G: An Abbreviated Table of Integrals
- Appendix H: Common Standard Component Values

ISBN 9781292261041 | **PUB Date** 4/22/2018



Dynamics of Structures, 5/e Edition 5

Chopra

Binding Paperback | **Page Count** 992

For courses in Structural Dynamics

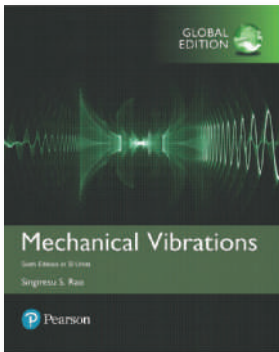
An expert on structural dynamics and earthquake engineering, Anil K. Chopra fills an important niche, explaining the material in a manner suitable for both students and professional engineers with his 5th Edition of *Dynamics of Structures: Theory and Applications to Earthquake Engineering*. No prior knowledge of structural dynamics is assumed, and the presentation is detailed and integrated enough to make the text suitable for self-study.

As a textbook on vibrations and structural dynamics, this book has no competition.

Table of Contents

- I. Single Degree of Freedom Systems
 1. Equations of Motion, Problem Statement, and Solution Methods
 2. Free Vibration
 3. Response to Harmonic and Periodic Excitations
 4. Response to Arbitrary, Step, and Pulse Excitations
 5. Numerical Evaluation of Dynamic Response
 6. Earthquake Response of Linear Systems
 7. Earthquake Response of Inelastic Systems
 8. Generalized Single-Degree-of-Freedom Systems
- II. Multi Degree of Freedom Systems
 9. Equations of Motion, Problem Statement, and Solution Methods
 10. Free Vibration
 11. Damping in Structures
 12. Dynamic Analysis and Response of Linear Systems
 13. Earthquake Analysis of Linear Systems
 14. Analysis of Nonclassically Damped Linear Systems
 15. Reduction of Degrees of Freedom
 16. Numerical Evaluation of Dynamic Response
 17. Systems with Distributed Mass and Elasticity
 18. Introduction to the Finite Element Method
- III. Earthquake Response, Design, and Evaluation of Multistory Buildings
 19. Earthquake Response of Linearly Elastic Buildings
 20. Earthquake Analysis and Response of Inelastic Buildings
 21. Earthquake Dynamics of Base-Isolated Buildings
 22. Structural Dynamics in Building Codes
 23. Structural Dynamics in Building Evaluation Guidelines

ISBN 9781292249186 | **PUB Date** 4/1/2018



Mechanical Vibrations Edition 6

Rao

Binding Paper Bound with Access Card | **Page Count** 1152

For courses in vibration engineering

Retaining the style of previous editions, this 6th SI Edition of *Mechanical Vibrations* effectively presents theory, computational aspects, and applications of vibration, introducing undergraduate engineering students to the subject of vibration engineering in as simple a manner as possible. Emphasizing computer techniques of analysis, *Mechanical Vibrations* thoroughly explains the fundamentals of vibration analysis, building on the understanding achieved by students in previous undergraduate mechanics courses. Related concepts are discussed, and real-life applications, examples, problems, and illustrations related to vibration analysis enhance comprehension of all concepts and material. In the 6th SI Edition, several additions and revisions have been made (including new examples, problems, and illustrations) with the goal of making coverage of concepts both more comprehensive and easier to follow.

Table of Contents

1. Fundamentals of Vibration
2. Free Vibration of Single-Degree-of-Freedom Systems
3. Harmonically Excited Vibration
4. Vibration Under General Forcing Conditions
5. Two-Degree-of-Freedom Systems
6. Multidegree-of-Freedom Systems
7. Determination of Natural Frequencies and Mode Shapes
8. Continuous Systems
9. Vibration Control
10. Vibration Measurement and Applications
11. Numerical Integration Methods in Vibration Analysis
12. Finite Element Method
13. Nonlinear Vibration
14. Random Vibration

ISBN 9781292178608 | **PUB Date** 4/1/2018



Digital Design Edition 6

Mano / Ciletti

Binding Paperback | **Page Count** 720

For introductory courses on digital design in an Electrical Engineering, Computer Engineering, or Computer Science department

A modern update to a classic, authoritative text, *Digital Design*, 6th Edition teaches the fundamental concepts of digital design in a clear, accessible manner. The text presents the basic tools for the design of digital circuits and provides procedures suitable for a variety of digital applications. Like the previous editions, this edition of *Digital Design* supports a multimodal approach to learning, with a focus on digital design, regardless of language. Recognizing that three public-domain languages Verilog, VHDL, and SystemVerilog all play a role in design flows for today's digital devices, the 6th Edition offers parallel tracks of presentation of multiple languages, but allows concentration on a single, chosen language.

Table of Contents

- 1 Digital Systems and Binary Numbers
- 2 Boolean Algebra and Logic Gates
- 3 Gate-Level Minimization
- 4 Combinational Logic
- 5 Synchronous Sequential Logic
- 6 Registers and Counters
- 7 Memory and Programmable Logic
- 8 Design at the Register Transfer Level
- 9 Laboratory Experiments with Standard ICs and FPGAs
- 10 Standard Graphic Symbols
- Appendix
- Answers to Selected Problems

ISBN 9781292231167 | **PUB Date** 11/16/2017



Elementary Surveying: An Introduction to Geomatics, Global Edition Edition 15

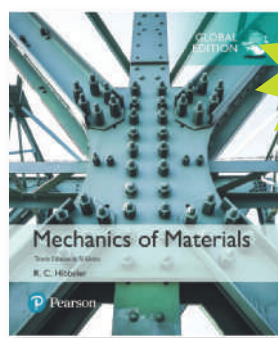
Ghilani

Binding Paperback | **Page Count** 960

Table of Contents

1. Introduction
2. Units, Significant Figures, and Field Notes
3. Theory of Errors In Observations
4. Leveling—Theory, Methods, and Equipment
5. Leveling—Field Procedures and Computations
6. Distance Measurement
7. Angles, Azimuths, and Bearings
8. Total Station Instruments; Angle Observations
9. Traversing 9.1 Introduction
10. Traverse Computations
11. Coordinate Geometry In Surveying Calculations
12. Area 12.1 Introduction
13. Global Navigation Satellite Systems—Introduction and Principles of Operation
14. Global Navigation Satellite Systems—Static Surveys
15. Global Navigation Satellite Systems—Kinematic Surveys
16. Adjustments by Least Squares
17. Mapping Surveys
18. Mapping
19. Control Surveys and Geodetic Reductions
20. State Plane Coordinates and Other Map Projections
21. Boundary Surveys
22. Surveys of the Public Lands
22. Instructions for Surveys of the Public Lands
23. Construction Surveys
24. Horizontal Curves
25. Vertical Curves
26. Volumes
27. Photogrammetry
28. Introduction to Geographic Information Systems
- Appendix A: Tape Correction Problems
- Appendix B: Example Noteforms
- Appendix C: Astronomical Observations
- Appendix D: Using the Worksheets from the Companion Website
- Appendix E: Introduction to Matrices
- Appendix F: U.S. State Plane Coordinate System Defining Parameters
- Appendix G: Answers to Selected Problems

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Mechanics of Materials Edition 10

Hibbeler

Binding Paper Bound with Access Card | **Page Count** 896

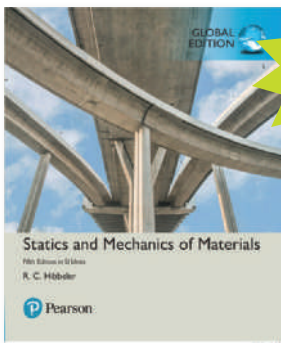
For undergraduate Mechanics of Materials courses in Mechanical, Civil, and Aerospace Engineering departments

Mechanics of Materials clearly and thoroughly presents the theory and supports the application of essential mechanics of materials principles. Professor Hibbeler's concise writing style, countless examples, and stunning four-color photorealistic art program, all shaped by the comments and suggestions of hundreds of colleagues and students, help students visualize and master difficult concepts. The 10th SI Edition retains the hallmark features synonymous with the Hibbeler franchise, but has been enhanced with the most current information, a fresh new layout, added problem solving, and increased flexibility in the way topics are covered in class.

Table of Contents

1. Stress
2. Strain
3. Mechanical Properties of Materials
4. Axial Load
5. Torsion
6. Bending
7. Transverse Shear
8. Combined Loadings
9. Stress Transformation
10. Strain Transformation
11. Design of Beams and Shafts
12. Deflection of Beams and Shafts
13. Buckling of Columns
14. Energy Methods
- Appendix
- A Geometric Properties of an Area
- B Geometric Properties of Structural Shapes
- C Slopes and Deflections of Beams
- Solutions and Answers for Preliminary Problems
- Fundamental Problems Partial Solutions and Answers
- Selected Answers
- Index

ISBN 9781292178202 | **PUB Date** 2/19/2018



Statics and Mechanics of Materials Edition 5

Hibbeler

Binding Paper Bound with Access Card | **Page Count** 936

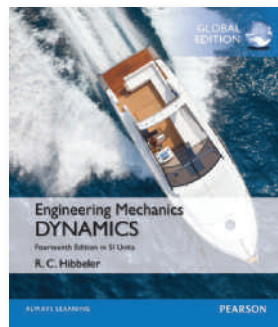
For courses in introductory combined Statics and Mechanics of Materials courses found in ME, CE, AE, and Engineering Mechanics departments

Statics and Mechanics of Materials represents a combined abridged version of two of the author's books, namely Engineering Mechanics: Statics, 14th Edition in SI Units and Mechanics of Materials, 10th Edition in SI Units. It provides a clear and thorough presentation of both the theory and application of the important fundamental topics of these subjects that are often used in many engineering disciplines. The development emphasizes the importance of satisfying equilibrium, compatibility of deformation, and material behavior requirements.

Table of Contents

1	General Principles
2	Force Vectors
3	Force System Resultants
4	Equilibrium of a Rigid Body
5	Structural Analysis
6	Center of Gravity, Centroid, and Moment of Inertia
7	Stress and Strain
8	Mechanical Properties of Materials
9	Axial Load
10	Torsion
11	Bending
12	Transverse Shear
13	Combined Loadings
14	Stress and Strain Transformation
15	Design of Beams and Shafts
16	Deflection of Beams and Shafts
17	Buckling of Columns
A	Mathematical Review and Expressions
B	Geometric Properties of An Area and Volume
C	Geometric Properties of Wide-Flange Sections
D	Slopes and Deflections of Beams
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	Fundamental Problems
	Solutions and Answers
	Selected Answers
	Index

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Engineering Mechanics: Dynamics SI Edition 14

Hibbeler

Binding Paper Bound with Access Card | **Page Count** 792

For dynamics courses

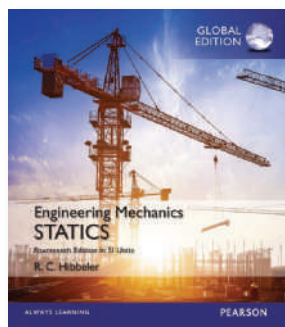
Engineering Mechanics: Dynamics excels in providing a clear and thorough presentation of the theory and application of engineering mechanics. Engineering Mechanics empowers students to succeed. This text is shaped by the comments and suggestions of hundreds of reviewers in the teaching profession, as well as many of the author's students. The Fourteenth Edition includes new Preliminary Problems, which are intended to help students develop conceptual understanding and build problem-solving skills. The

text features many problems from a broad range of engineering disciplines, stressing practical, realistic situations encountered in professional practice, and having varying levels of difficulty.

Table of Contents

•	Kinematics of a Particle
•	Kinetics of a Particle: Force and Acceleration
•	Kinetics of a Particle: Work and Energy
•	Kinetics of a Particle: Impulse and Momentum
•	Planar Kinematics of a Rigid Body
•	Planar Kinetics of a Rigid Body: Force and Acceleration
•	Planar Kinetics of a Rigid Body: Work and Energy
•	Planar Kinetics of a Rigid Body: Impulse and Momentum
•	Three-Dimensional Kinematics of a Rigid Body
•	Three-Dimensional Kinetics of a Rigid Body
•	Vibrations
•	A Mathematical Expressions
•	B Vector Analysis
•	C The Chain Rule
•	Fundamental Problems Partial
•	Solutions and Answers

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Engineering Mechanics: Statics SI Edition 14

Hibbeler

Binding Paper Bound with Access Card | **Page Count** 720

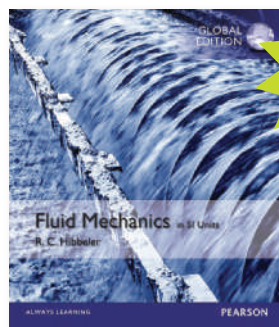
For statics courses

Engineering Mechanics: Statics excels in providing a clear and thorough presentation of the theory and application of engineering mechanics. Engineering Mechanics empowers students to succeed. This text is shaped by the comments and suggestions of hundreds of reviewers in the teaching profession, as well as many of the author's students. The Fourteenth Edition includes new Preliminary Problems, which are intended to help students develop conceptual understanding and build problem-solving skills. The text features many problems from a broad range of engineering disciplines, stressing practical, realistic situations encountered in professional practice, and having varying levels of difficulty.

Table of Contents

- 1 General Principles 3
- 2 Force Vectors 17
- 3 Equilibrium of a Particle 85
- 4 Force System Resultants 117
- 5 Equilibrium of a Rigid Body 199
- 6 Structural Analysis 263
- 7 Internal Forces 331
- 8 Friction 389
- 9 Center of Gravity and Centroid 451
- 10 Moments of Inertia 515
- 11 Virtual Work 567

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Mastering
Engineering
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Fluid Mechanics SI Edition 1

Hibbeler

Binding Paper Bound with Access Card | **Page Count** 864

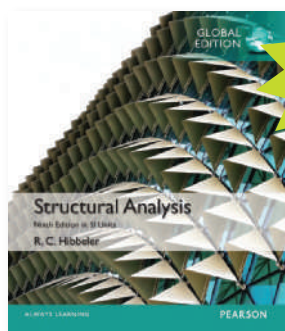
For fluid mechanics courses in civil and environmental, general engineering, and engineering technology and industrial management departments

Fluid Mechanics provides a comprehensive and well-illustrated introduction to the theory and application of Fluid Mechanics. Featuring many pedagogical aids unique to Hibbeler's texts, this text presents a commitment to the development of student problem-solving skills. With a photorealistic art program, this text is designed to help students visualize difficult concepts. Problem types from a broad range of engineering disciplines stress practical, realistic situations encountered in professional practice, and varying levels of difficulty. A thorough end-of-chapter review provides students with a concise tool for reviewing chapter contents.

Table of Contents

- Chapter 1 Fundamental Concepts
- Chapter 2 Fluid Statics
- Chapter 3 Kinematics of Fluid Motion
- Chapter 4 Conservation of Mass
- Chapter 5 Energy of Moving Fluids
- Chapter 6 Fluid Momentum
- Chapter 7 Differential Fluid Flow
- Chapter 8 Dimensional Analysis and Similitude
- Chapter 9 Viscous Flow Within Enclosed Surfaces
- Chapter 10 Analysis and Design for Pipe Flow
- Chapter 11 Viscous Flow Over External Surfaces
- Chapter 12 Turbomachinery
- Chapter 13 Open Channel Flow
- Chapter 14 Compressible Flow

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Mastering
Engineering
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Structural Analysis SI Edition 9

Hibbeler

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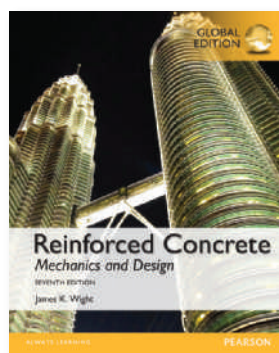
For use in structural analysis courses

Structural Analysis provides students with a clear and thorough presentation of the theory and application of structural analysis as it applies to trusses, beams, and frames. Emphasis is placed on teaching students to both model and analyze a structure. Hibbeler's problem-solving methodology, Procedures for Analysis, provides students with a logical, orderly method to follow when applying theory. With a photorealistic art program, this text is designed to help students visualize difficult concepts. Problem types from a broad range of engineering disciplines stress practical, realistic situations encountered in professional practice, varying levels of difficulty, and problems that involve solution by computer. A thorough end-of-chapter review provides students with a concise tool for reviewing chapter contents.

Table of Contents

- 1 Types of Structures and Loads
- 2 Analysis of Statically Determinate Structures
- 3 Analysis of Statically Determinate Trusses
- 4 Internal Loadings Developed in Structural Members
- 5 Cables and Arches
- 6 Influence Lines for Statically Determinate Structures
- 7 Approximate Analysis of Statically Indeterminate Structures
- 8 Deflections
- 9 Deflections Using Energy Methods
- 10 Analysis of Statically Indeterminate Structures by the Force Method
- 11 Displacement Method of Analysis: Slope-Deflection Equations
- 12 Displacement Method of Analysis: Moment Distribution
- 13 Beams and Frames Having Nonprismatic Members
- 14 Truss Analysis Using the Stiffness Method
- 15 Beam Analysis Using the Stiffness Method
- 16 Plane Frame Analysis Using the Stiffness Method
- 17 Structural Modeling and Computer Analysis
- Appendices
- A. Matrix Algebra for Structural Analysis
- Fundamental Solutions
- Answers to Selected Problems

ISBN 9781292089461 | **PUB Date** 4/2/2018



Reinforced Concrete: Mechanics and Design Edition 7

Wight

Binding Paper Bound with Access Card | **Page Count** 1168

For courses in architecture and civil engineering

Reinforced Concrete: Mechanics and Design uses the theory of reinforced concrete design to teach students the basic scientific and artistic principles of civil engineering. The text takes a topic often introduced at the advanced level and makes it accessible to all audiences by building a foundation with core engineering concepts. The 7th Edition is up-to-date with the latest Building Code for Structural Concrete, giving students access to accurate information that can be applied outside of the classroom.

Students are able to apply complicated engineering concepts to real world scenarios with in-text examples and practice problems in each chapter. With explanatory features throughout, the 7th Edition makes the reinforced concrete design a theory all engineers can learn from.

Table of Contents

- Chapter 1: Introduction
- Chapter 2: The Design Process
- Chapter 3: Materials
- Chapter 4: Flexure: Behavior and Normal Strength of Beam Sections
- Chapter 5: Flexural Design of Beam Sections
- Chapter 6: Shear in Beams
- Chapter 7: Torsion
- Chapter 8: Development, Anchorage, and Splicing of Reinforcement
- Chapter 9: Serviceability
- Chapter 10: Continuous Beams and One-Way Slabs
- Chapter 11: Columns: Combined Axial Load and Bending
- Chapter 12: Slender Columns
- Chapter 13: Two-Way Slabs: Behavior, Analysis, and Design
- Chapter 14: Two Way Slabs: Elastic and Yield-Line Analyses
- Chapter 15: Footings
- Chapter 16: Shear Friction, Horizontal Shear Transfer, and Composite Concrete Beams
- Chapter 17: Discontinuity Regions and Strut-and-Tie Models
- Chapter 18: Walls and Shear Walls
- Chapter 19: Design for Earthquake Resistance
- Appendix A: Design Aids
- Appendix B: Notation

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Digital Signal Processing First Edition 2

Mcclellan / Schafer / Yoder

Binding Paperback | **Page Count** 592

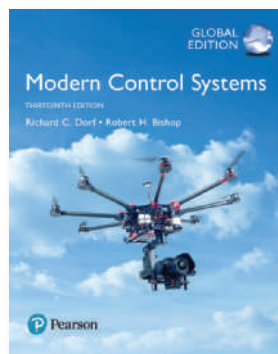
For introductory courses (freshman and sophomore courses) in digital signal processing and signals and systems. Text may be used before the student has taken a course in circuits.

DSP First and its accompanying digital assets are the result of more than 20 years of work that originated from, and was guided by, the premise that signal processing is the best starting point for the study of electrical and computer engineering. The "DSP First" approach introduces the use of mathematics as the language for thinking about engineering problems, lays the groundwork for subsequent courses, and gives students hands-on experiences with MATLAB. The 2nd Edition features three new chapters on the Fourier Series, Discrete-Time Fourier Transform, and The Discrete Fourier Transform as well as updated labs, visual demos, an update to the existing chapters, and hundreds of new homework problems and solutions.

Table of Contents

Introduction
Sinusoids
Spectrum Representation
Fourier Series Derivation
Sampling and Aliasing
FIR Filters
Problems
Frequency Response of FIR Filters
The Discrete-Time Fourier Transform
The Discrete Fourier Transform
z-Transforms
The General IIR Difference Equation
Summary and Links
Problems

ISBN 9781292113869 | **PUB Date** 4/2/2018



Modern Control Systems Edition 13

Dorf / Bishop

Binding Paperback | **Page Count** 1032

For courses in control theory

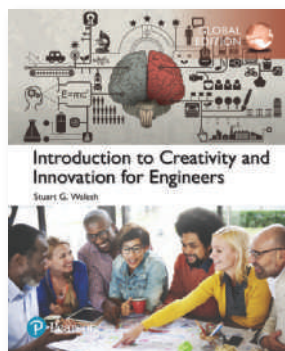
Dorf's Modern Control Systems, 13th Edition presents the structure of feedback control theory and provides a sequence of exciting discoveries. It demonstrates various real-world, global engineering problems while touching on evolving design strategies like green technology. Some of the themes include climate change, clean water, sustainability, waste management, emissions reduction, and minimizing energy.

The 13th Edition explores the role of and need for automated and precise control systems in green engineering. Key examples of green engineering, such as wind turbine control and the modeling of a photovoltaic generator to achieve maximum power delivery, are discussed in detail. The text is organized around the concept of control systems theory in the context of frequency and time domains. It covers topics such as classical control, employing root locus design, frequency and response design using Bode and Nyquist plots.

Table of Contents

1. Introduction to Control Systems
2. Mathematical Models of Systems
3. State Variable Models
4. Feedback Control System Characteristics
5. The Performance of Feedback Control Systems
6. The Stability of Linear Feedback Systems
7. The Root Locus Method
8. Frequency Response Methods
9. Stability in the Frequency Domain
10. The Design of Feedback Control Systems
11. The Design of State Variable Feedback Systems
12. Robust Control Systems
13. Digital Control Systems

ISBN 9781292152974 | **PUB Date** 4/1/2018



Introduction to Creativity and Innovation for Engineers Edition 1

Walesh

Binding Paperback | **Page Count** 368

For courses in creativity and innovation for engineers.

While primarily intended for engineering students, the widely applicable principles, ideas, tools, and methods introduced in *Introduction to Creativity and Innovation for Engineers* is also useful for practicing engineers and as well as members of other disciplines. The text prepares future and current engineers to work smarter—either as individuals or within teams and organizations—by generating and developing new ideas. The text uses clear objectives, many examples, and numerous exercises to explicate its methods.

Table of Contents

1. Why Should You Learn More About Creativity and Innovation?
2. The Brain: A Primer
3. Prelude to Whole-Brain Methods
4. Basic Whole-Brain Methods
5. Overcoming Obstacles to Creativity and Innovation
6. Characteristics of Creative and Innovative Individuals
7. Advanced Whole-Brain Methods
8. Creativity and Innovation Examples From Various Engineering Specialties
9. Moving On: The Next Move Is Yours

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Introduction to Robotics Edition 4

Craig

Binding Paperback | **Page Count** 408

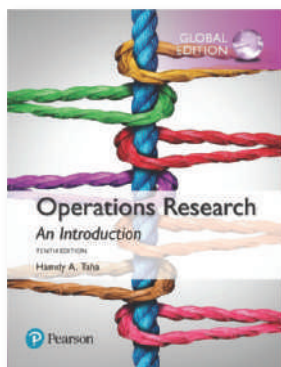
For senior-year or first-year graduate level robotics courses generally taught from the mechanical engineering, electrical engineering, or computer science departments

Craig's *Introduction to Robotics: Mechanics and Control* is the market's leading textbook used for teaching robotics at the university level. With about one-half of the material from traditional mechanical engineering material, one-fourth control theoretical material, and one-fourth computer science, it covers rigid-body transformations, forward and inverse positional kinematics, velocities and Jacobians of linkages, dynamics, linear control, nonlinear control, force control methodologies, mechanical design aspects, and programming of robots.

Table of Contents

1. Introduction
2. Spatial Transformations
3. Forward Kinematics
4. Inverse Kinematics
5. Velocities, Static Forces, and Jacobians
6. Dynamics
7. Trajectory Planning
8. Mechanical Design of Robots
9. Linear Control
10. Non-Linear Control
11. Force Control
12. Programming Languages and Systems
13. Simulation and Off-Line Programming

ISBN 9781292164939 | **PUB Date** 4/1/2018



Operations Research: An Introduction Edition 10

Taha

Binding Paper Bound with Access Card | **Page Count** 848

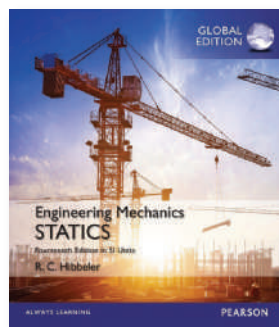
For junior/senior undergraduate and first-year graduate courses in operations research in departments of industrial engineering, business administration, statistics, computer science, and mathematics

Operations Research provides a broad focus on algorithmic and practical implementation of Operations Research (OR) techniques, using theory, applications, and computations to teach students OR basics. The book can be used conveniently in a survey course that includes all the major tools of operations research, or in two separate courses on deterministic and probabilistic decision-making. The 10th Edition preserves classical algorithms by providing essential hand computational algorithms as an important part of OR history. It also includes scenarios that show how classical algorithms can be beneficial in practice.

Table of Contents

1. What Is Operations Research?
2. Modeling with Linear Programming
3. The Simplex Method and Sensitivity Analysis
4. Duality and Post-Optimal Analysis
5. Transportation Model and Its Variants
6. Network Models
7. Advanced Linear Programming
8. Goal Programming
9. Integer Linear Programming
10. Heuristic and Constraint Programming
11. Traveling Salesperson Problem (TSP)
12. Deterministic Dynamic Programming
13. Inventory Modeling (with Introduction to Supply Chains)
14. Review of Basic Probability
15. Decision Analysis and Games
16. Probabilistic Inventory Models
17. Markov Chains
18. Queuing Systems
19. Simulation Modeling
20. Classical Optimization Theory
21. Nonlinear Programming Algorithms
- Appendix A: Statistical Tables
- Appendix B: Partial Answers to Selected Problems

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Engineering Mechanics: Statics SI Study Pack Edition 14

Hibbeler

Binding Paperback | **Page Count** 160

For statics courses

This package consists of Engineering Mechanics: Statics in SI Units, 14th Edition by Russell C. Hibbeler and Sau Cheong Fan (ISBN-10: 1292089237; ISBN-13: 9781292089232).

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- 2 Force Vectors 17
- 3 Equilibrium of a Particle 85
- 4 Force System Resultants 117
- 5 Equilibrium of a Rigid Body 199
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- 8 Friction 389
- 9 Center of Gravity and Centroid 451
- 10 Moments of Inertia 515
- 11 Virtual Work 567

ISBN 9781292171463 | **PUB Date** 4/1/2018



Engineering Mechanics: Dynamics SI Study Pack Edition 14

Hibbeler

Binding Paperback | **Page Count** 168

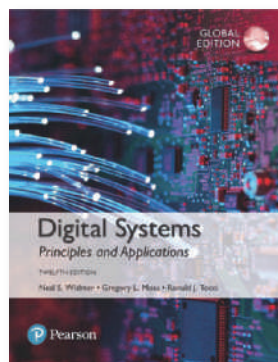
For dynamics courses

This package consists of Engineering Mechanics: Dynamics in SI Units, 14th Edition by Russell C. Hibbeler and Sau Cheong Fan (ISBN-10: 1292088729; ISBN-13: 9781292088723).

Table of Contents

- Kinematics of a Particle
- Kinetics of a Particle: Force and Acceleration
- Kinetics of a Particle: Work and Energy
- Kinetics of a Particle: Impulse and Momentum
- Planar Kinematics of a Rigid Body
- Planar Kinetics of a Rigid Body: Force and Acceleration
- Planar Kinetics of a Rigid Body: Work and Energy
- Planar Kinetics of a Rigid Body: Impulse and Momentum
- Three-Dimensional Kinematics of a Rigid Body
- Three-Dimensional Kinetics of a Rigid Body
- Vibrations
- A Mathematical Expressions
- B Vector Analysis
- C The Chain Rule
- Fundamental Problems Partial
- Solutions and Answers

ISBN 9781292171944 | **PUB Date** 2/19/2018



Digital Systems: Principles and Applications Edition 12

Tocci / Widmer / Moss

Binding Paperback | **Page Count** 1024

For introductory through advanced courses in digital electronics. This text will be used widely in technology classes ranging from high schools and two-year programs to four-year engineering, engineering technology, and computer science programs.

This 12th Edition of Digital Systems prepares students for the study of digital systems and computer and microcontroller hardware. The text begins with the basics of digital systems, including the AHDL hardware description language, then progresses to challenging topics, including the more complex VHDL.

The comprehensive text clearly introduces the purpose and fundamentals of each topic before delving into more technical descriptions. It is also definition-focused, with new terms listed in each chapter and defined in a glossary. This book has been updated with new material on section-level learning outcomes, Quadrature Shaft Encoders used to obtain absolute shaft positions, troubleshooting prototype circuits using systematic fault isolation techniques, Time Division Multiplexing, expanded discussion of VHDL data objects and more!

Table of Contents

1. Introductory Concepts
2. Number Systems and Codes
3. Describing Logic Circuits
4. Combinational Logic Circuits
5. Flip-Flops and Related Devices
6. Digital Arithmetic: Operations and Circuits
7. Counters and Registers
8. Integrated-Circuit Logic Families
9. MSI Logic Circuits
10. Digital System Projects Using HDL
11. Interfacing with the Analog World
12. Memory Devices
13. Programmable Logic Device Architectures

ISBN 9781292162003 | **PUB Date** 4/2/2018



Fundamentals of Engineering Economics Edition 4

Chan S. Park

Binding Paperback | **Page Count** 736

For introductory engineering economics courses

Chan Park, author of the best-selling Contemporary Engineering Economics, tells the story of engineering economy with the more concise Fundamentals of Engineering Economics by relating concepts from class to students' everyday lives. This book provides sound and comprehensive coverage of course concepts while addressing both the theoretical and the practical concerns of engineering economics. Written to appeal to a wide range of engineering disciplines, the text helps students build skills in making informed financial decisions and incorporates all critical decision-making tools, including the most contemporary, computer-oriented ones.

Table of Contents

PART 1 UNDERSTANDING MONEY AND ITS MANAGEMENT
Chapter 1 Engineering Economic Decisions
Chapter 2 Time Value of Money
Chapter 3 Understanding Money Management
Chapter 4 Equivalence Calculations under Inflation
PART 2 EVALUATING BUSINESS AND ENGINEERING ASSETS
Chapter 5 Present-Worth Analysis
Chapter 6 Annual-Equivalence Analysis
Chapter 7 Rate-of-Return Analysis
Chapter 8 Benefit–Cost Analysis
PART 3 DEVELOPMENT OF PROJECT CASH FLOWS
Chapter 9 Accounting for Depreciation and Income Taxes
Chapter 10 Project Cash-Flow Analysis
Chapter 11 Handling Project Uncertainty
PART 4 SPECIAL TOPICS IN ENGINEERING ECONOMIC
Chapter 12 Replacement Decisions
Chapter 13 Understanding Financial Statements
Appendix A Self-Test Questions with Answers
Appendix B Interest Factors for Discrete Compounding
Appendix C How to Read the Cumulative Standardized Normal Distribution Function
Appendix D Summary of Essential Interest Formulas, Decision Rules, and Excel Functions

ISBN 9781292264790 | **PUB Date** 3/12/2018



Engineering Economy Edition 17

Sullivan / Wicks / Koelling

Binding Paperback | **Page Count** 752

For courses in undergraduate introductory engineering economics.

Understand the importance of engineering economics principles and how to make smart economic choices. Used by engineering students worldwide, this bestselling text provides a sound understanding of the principles, basic concepts, and methodology of engineering economy. Explanations and examples that are student-centered and practical in real-life situations help students develop proficiency in the methods and processes for making rational decisions. Built upon the rich and time-tested teaching materials of earlier editions, the text is extensively revised and updated to reflect current trends and issues. The new edition captures the spirit of environmental sustainability with more than 160 “green” problems, as well as new end-of-chapter problems and group exercises, and includes updates to the new 2017 Federal Tax code revisions.

Table of Contents

1 Introduction to Engineering Economy
2 Cost Concepts and Design Economics
3 Cost-Estimation Techniques
4 The Time Value of Money
5 Evaluating a Single Project
6 Comparison and Selection among Alternatives
7 Depreciation and Income Taxes
8 Price Changes and Exchange Rates
9 Replacement Analysis
11 Breakeven and Sensitivity Analysis
12 Probabilistic Risk Analysis
13 The Capital Budgeting Process
14 Decision Making Considering Multiattributes
Appendix A Using Excel to Solve Engineering Economy Problems
Appendix B Abbreviations and Notation
Appendix C Interest and Annuity Tables for Discrete Compounding
Appendix D Interest and Annuity Tables for Continuous Compounding
Appendix E Standard Normal Distribution
Appendix F Selected References
Appendix G Solutions to Try Your Skills
Appendix H Answers to Selected Problems

ISBN 9781292264905 | **PUB Date** 2/15/2018



Feedback Control of Dynamic Systems Edition 8

Gene F. Franklin / J. Da Powell / Abbas
Emami-Naeini

Binding Paperback | **Page Count** 928

ISBN 9781292274522 | **PUB Date** 2/1/2018

For courses in electrical & computing engineering

Feedback Control of Dynamic Systems, 8th Edition, covers the material that every engineer needs to know about feedback control—including concepts like stability, tracking, and robustness. Each chapter presents the fundamentals along with comprehensive, worked-out examples, all within a real-world context and with historical background provided. The text is devoted to supporting students equally in their need to grasp both traditional and more modern topics of digital control, and the author's focus on design as a theme early on, rather than focusing on analysis first and incorporating design much later. An entire chapter is devoted to comprehensive case studies, and the 8th Edition has been revised with up-to-date information, along with brand-new sections, problems, and examples.

Table of Contents

1. An Overview and Brief History of Feedback Control
2. Dynamic Models
3. Dynamic Response
4. A First Analysis of Feedback
5. The Root-Locus Design Method
6. The Frequency-Design Method
7. State-Space Design
8. Digital Control
9. Nonlinear Systems
10. Control System Design: Principles and Case Studies
- Appendix A. Laplace Transforms
- Appendix B. Solutions to the Review Questions
- Appendix C. Matlab Commands