Environmental Engineering

Principles of Environmental Engineering and Science, 3/e
Mackenzie Davis
Published 01/18/2013

Principles of Environmental Engineering is intended for a course in introductory environmental engineering for sophomore- or junior-level students. This text provides a background in fundamental science and engineering principles of environmental engineering for students who may or may not become environmental engineers. Principles places more emphasis on scientific principles, ethics, and safety, and focuses less on engineering design. The text exposes students to a broad range of environmental topics—including risk management, water quality and treatment, air pollution, hazardous waste, solid waste, and ionizing radiation as well as discussion of relevant regulations and practices. The book also uses mass and energy balance as a tool for understanding and solving environmental engineering issues. With over 720 end-of-chapter problems, as well as provocative discussion questions, and a helpful list of review items found at the end of each chapter, the text is both a comprehensive and comprehensive tool for any environmental engineering course.

Introduction to Environmental Engineering, 5/e contains the fundamental science and engineering principles needed for introductory courses and used as the basis for more advanced courses in environmental engineering. Updated with latest EPA regulations, Davis and Cornwell apply the concepts of sustainability and materials and energy balance as a means of understanding and solving environmental engineering issues. With over 720 end-of-chapter problems, as well as provocative discussion questions, and a helpful list of review items found at the end of each chapter, the text is both a comprehensive and comprehensive tool for any environmental engineering course.

Numerical Methods

Applied Numerical Methods W/MATLAB, 3/e
Steven Chapra
Published 01/27/2011

Steven Chapra's Applied Numerical Methods with MATLAB, third edition, is written for engineering and science students who need to learn numerical problem solving. Theory is introduced to inform key concepts which are framed in applications and demonstrated using MATLAB. The book is designed for a one-semester or one-quarter course in numerical methods typically taken by undergraduates. The third edition features new chapters on Eigenvalues and Fourier Analysis and is accompanied by an extensive set of m-files and instructor materials.

Vector Mechanics for Engineers: Statics & Dynamics, 10/e
Ferdinand P. Beer, E. Russell Johnston, Jr., David Mazurek, and Phillip J. Cornwell
Published 01/12/2012

Continuing in the spirit of its successful previous editions, the tenth edition of Beer, Johnston, Mazurek, and Cornwell's Vector Mechanics for Engineers provides conceptually accurate and thorough
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**Civil Engineering**

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

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**Supplements:**
- Connect Engineering
- Connect Plus Engineering

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**Statics**

**Vector Mechanics for Engineers: Statics, 10/e**
Ferdinand P. Beer, E. Russell Johnston, Jr., and David Mazurek
**Published 01/13/2012**
ISBN: 978-1-259-00792-7 (SI Metric)

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

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**Supplements:**
- Connect Engineering
- Connect Plus Engineering

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**Engineering Mechanics: Statics, 2/e**
Michael Plesha, Gary Gray, and Francesco Costanzo
**Published 01/24/2012**
ISBN: 978-1-259-01120-7 (SI Metric)

Based upon a great deal of classroom teaching experience, Plesha, Gray, & Costanzo provide a visually appealing, “step-by-step” learning framework. The presentation is modern, up-to-date and student centered, and the introduction of topics and techniques is relevant, with examples and exercises drawn from the world around us and emerging technologies. Every example problem is broken down in a consistent “step-by-step” manner that emphasizes a “Problem Solver’s Approach” which builds from chapter to chapter and moves from easily solved problems to progressively more difficult ones.

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**Dynamics**

**Engineering Mechanics: Dynamics, 2/e**
Michael Plesha, Gary Gray, and Francesco Costanzo
**Published 03/19/2012**
ISBN: 978-0-07-734587-7

Gray, Costanzo, & Plesha’s *Engineering Mechanics, 2e* is the Problem Solver’s Approach for Tomorrow’s Engineers. Based upon a great deal of classroom teaching experience, Gray, Costanzo, & Plesha provide a visually appealing learning framework to your students. The look of the presentation is modern, like the other books the students have experienced, and the presentation itself is relevant, with examples and exercises...
Vector Mechanics for Engineers: Dynamics, 10/e

Ferdinand P. Beer, E. Russell Johnston, Jr., and Phillip J. Cornwell
Published 01/12/2012

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

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Supplements:
- Connect Engineering
- Connect Plus Engineering
- COSMOS

Water Resources

Water Treatment Plant Design, 5/e

American Water Works and American Society of Civil Engineers
Published 05/21/2012

The definitive water treatment plant design reference for more than 70 years—fully updated. Thoroughly revised to include new information on sustainability, the latest technologies, and the most current standards and codes, Water Treatment Plant Design, Fifth Edition provides unsurpassed coverage of water treatment plant design topics. This authoritative resource is written by a team of water treatment plant design experts, with contributions from more than 30 international authorities. The book offers comprehensive guidance on modernizing existing water treatment facilities and planning new ones—from initial plans and permits through design, construction, and start-up.

Alternative Water Sources and Wastewater Management, 1/e

E.W. Bob Boulware
Published 09/17/2012

Alternative Water Sources and Wastewater Management explains various alternative ways of obtaining water, including rainwater catchment, solar stills, reclaiming air conditioning condensate, and bore hole design. Less polluting ways of waste management by means of composting toilets, grey water recycling, leach field gardens, new septic field design, urine recapture as fertilizer, and more are also discussed. This timely guide illustrates the limitations of existing water sources as a consequence of increased demand from an expanding world and the increased pollution of available water sources. The book gathers available knowledge from scattered sources worldwide into a condensed and coordinated source of information offering illustrations, current examples, and calculations, with the purpose of providing guidance on how to better manage this limited resource. The latest on ecologically conscious water and waste management

- A resource for cutting-edge green design techniques
- Describes rainwater catchment methods and design with installation codes from (IAPMO) International Association of Plumbing and Mechanical officials
- Illustrates off-grid systems for wastewater treatment
- Describes new net zero plumbing solutions from Europe
- Serves as a green design (LEED) technical resource for architects and engineers

Complete coverage:
- Water Cycle Water Sources; Springs; Air Conditioning Condensate Recovery; Dew Harvesting; Fog Harvesting; Glacier Water Harvesting; Rainwater Catchment; Solar Water Still; Gray Water Systems; Water Quality; Ground Water Recharge; Aquatic Plants as Waste Management System; Biological Filters and Constructed Wetlands Blackwater Recycling Systems; Septic Field; Latrines and Privies; Composting Toilets
- Urban Water Harvesting; Water-Friendly Irrigation; Water Stewardship
- Source Water Quality; Compliance with Environmental Regulations
- Septic System Design; planted and filter media systems
- UASW Design; Water Quality Tiers; Water Quality Standards

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Membrane Processes for Water Reuse, 1/e
Anthony Wachinski
Published 10/15/2012

Proven, cost-effective solutions to water and wastewater reuse challenges

Membrane Technologies for Water Reuse is a complete guide to membrane technology applied to water reuse/recycling. Membrane processes used in wastewater recycling include both pressure-driven and electrically driven processes. Pressure-driven processes include microfiltration, ultrafiltration, and reverse osmosis. Electrically driven processes include electro dialysis reversal and electro deionization. All of these are covered in the book with examples and applications. Membrane Technologies for Water Reuse

• Covers most design and application issues
• Includes example problems that illustrate the concepts presented in the book
• Contains wastewater reuse case studies
• Helps process engineers select and size membrane processes to meet reuse water quality
• Enables regulators to make informed decisions on industrial wastewater discharge alternatives
• Assists industry plant owners in making cost-effective decisions on how to best handle discharges
• Helps municipal wastewater treatment plant managers identify reuse alternatives, recoup treatment costs, meet or exceed regulatory requirements, and make cost-effective decisions
Civil Engineering Systems

Plumber’s Licensing Study Guide, 3/e
Michael Frankel and R. Woodson
Published 09/24/2012

A single book that can be used by both Master Plumbers and Journeyman Plumbers to help pass licensing exams!

Plumber’s Licensing Study Guide, Third Edition is a single-source study guide that can be used by both Master Plumbers and Journeyman Plumbers to pass licensing exams. The book contains definitions, administrative policies, procedures, and study tips and covers nomenclature, details about the various plumbing systems, and information relevant to the latest International Plumbing Code (2012). You’ll find all of the information you need, including detailed explanations, practice questions and answers, and Code alerts, to fully prepare you to take the plumber’s licensing exam—and pass it on the first try!

- Fully updated for the 2012 International Plumbing Code
- New and revised text and test questions
- Improved study tips throughout

Complete coverage of all exam topics

Supplements:

Trenchless Technology, 1/e
Mohammad Najafi
Published 11/16/2012

1. Introduction to Trenchless Technology and Cost Estimating and Scheduling
2. Life Cycle Cost Analysis
3. Effects of Different Project Delivery Methods on Costs and Schedule
4. Different Types of Cost Estimating and Scheduling
5. Budget Estimating
6. Quantity Takeoff
7. Preconstruction Services
8. Pricing Self-performed and subcontractor Work
10. Conventional Pipe Jacking and Utility Tunneling
11. Horizontal Auger Boring
12. Microtunneling
13. Pipe Ramming
14. Horizontal Directional Drilling
15. Pilot Tube Microtunneling

Foundations

Geotechnical Engineers Portable Handbook, 2/e
Robert Day
Published 03/08/2012

Fully updated to include the 2012 International Building Code (IBC), Geotechnical Engineer’s Portable Handbook, Second Edition, features a wealth of on-the-job geotechnical and construction-related information in a convenient, quick-reference format. This practical resource is filled with essential data, formulas, and guidelines you can access right away. Detailed tables, charts, graphs, and illustrations are included throughout the book for ease of use in the field.

Supplements:

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For more information or to request an examination copy contact your local sales representative or email us at mghasia_sg@mcgraw-hill.com.

Written by leading technical professionals, known worldwide for their expertise in the planning, design, and management of airports.

Airport Operations, Third Edition provides you with everything you need to know to make an airport function smoothly. The book offers full coverage of the latest developments in this fast-changing industry. Since the second edition was published in 1996, the airport industry has undergone major changes. To address them, the book has been thoroughly updated throughout, covering the very latest in the management and operation of airports—from security to passenger and freight facilities.

- Up-to-date coverage of airport security
- International focus on new airports facilities and privatization
- Reviews online ticketing, check-in, and booking arrangements
- Emphasizes safety management based on international standards organizations such as ICAO (International Civil Aviation Organization) and IATA (International Air Transport Association)
- Discusses, for the first time, the operation of multiple facility airport systems as opposed to single airports
- Contains updated environmental impact control information

Additional Resources

Project Management in Construction, 6/e
Sidney Levy
Published 08/09/2011

Fully revised to cover the most current contract information and green building guidelines, Project Management in Construction, Sixth Edition provides project managers and general contractors with the skills necessary to run every phase of a construction job. This practical guide discusses estimating, purchasing, contract administration, team management, quality control and quality assurance, safety, and other topics essential to completing a project on time and within budget.

Civil Engineering PE Practice Exams: Breadth and Depth, 1/e
Indranil Goswami
Published 01/19/2012

Presented in the Breadth and Depth format of the actual exam, this comprehensive guide is filled with hundreds of realistic practice questions based on the Principles and Practice of Civil Engineering (PE-CIVIL) exam, given by the National Council of Examiners for Engineering and Surveying (NCEES). Detailed solutions, including equations and diagrams, are provided for every question. Civil Engineering PE Practice Exams offers intensive test preparation and is the perfect companion to Civil Engineering PE All-in-One Exam Guide.

Airport Systems: Planning, Design and Management, 2/e
Richard de Neufville, Amedeo Odoni, Peter Belobaba, and Tom Reynolds
Published 01/15/2013

A completely up-to-date sourcebook for techniques and practices used in the management and operation of medium- and large-sized airport.

Transportation

Airport Systems: Planning, Design and Management, 2/e

16. Cost Estimating and Scheduling for Existing Pipe Renewals
17. CIPP
18. Sliplining
19. Close-fit Pipe
20. Modified Sliplining
21. Thermoformed Pipe
22. Cost Estimating and Scheduling for Pipe Replacement Methods
23. Cost Estimating and Scheduling for Manhole Renewals
24. Project Closeout and Delivery Requirements

Civil Engineering PE Practice Exams: Breadth and Depth, 1/e

Indranil Goswami
Published 01/19/2012
The Analysis of Irregular Shaped Structures: Diaphragms and Shear Walls, 1/e
R. Terry Malone and Robert Rice
Published 10/20/2011


Structural Design of Low-Rise Building in Cold-Formed Steel, Reinforced Masonry, and Structural Timber, 1/e
J. R. Ubejd Mujagic
Published 03/15/2012

Structural Design of Low-Rise Building in Cold-Formed Steel Reinforced Masonry, and Structural Timber authoritatively covers the primary aspects of structural design of low-rise buildings in the most common materials—cold-formed steel, reinforced masonry, and structural timber. Cold-formed steel was recently added to the NCEES (National Council of Examiners for Engineering and Surveying) structural exams, and this book also serves as a complete Professional Engineer/ Structural Engineer exam study guide.

The Construction MBA: Practical Approaches to Construction Contracting, 1/e
Matt Stevens
Published 05/28/2012

The Construction MBA: Practical Approaches to Construction Contracting clearly outlines how to manage the multiple processes that must work simultaneously to make a construction company consistently profitable. It contains proven methods that, if implemented, will make a construction firm virtually resistant to recessions and client and employee problems. Presenting a buttoned-down approach to construction contracting, this practical guide provides real-world solutions that can be applied in any construction business.

Design of Urban Stormwater Controls, MOP 23, 2/e
Water Environment Federation
Published 05/14/2012

Design of Urban Stormwater Controls, Second Edition summarizes current practice of stormwater management in urban environments. This Manual of Practice reviews: the effects of uncontrolled runoff on receiving waters; the principles and practices of stormwater management; the institutional framework for stormwater management program implementation; design of runoff controls; cost and maintenance of those controls; methodologies for performance assessment; and analytical tools for design and evaluation.

Prevention and Control of Sewer System Overflows, 3/e
Water Environment Federation
Published 07/19/2011

Fully revised throughout, this Water Environment Federation resource provides up-to-date information necessary to help managers and engineers understand and analyze an overflow problem and offers guidance on finding the most efficient, feasible, and cost-effective strategies to reduce or eliminate such overflows. This authoritative volume also serves as a planning guide for developing long-term control plans for combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs).

Bridge Engineering, 3/e
Jim Zhao and Demetrios Tonias
Published 03/12/2012

Bridge Engineering, Third Edition discusses recent highway bridge design code changes in the United States. Continuing the style and essential content of the previous editions, this revision replaces dated material with new codes and focuses on Load Resistant Factor Design (LRFD). Rehabilitation, inspection, and design remain key requirements to keep bridge systems safe and functional—these are fully covered in this book. This updated volume addresses the state of art of bridge engineering, highlights major concerns, and offers explanations and solved examples for day-to-day design issues. The book is ideal as both a textbook and a reference for the needs of the bridge and highway engineering community.
General Aviation Law, 3/e
Jerry Eichenberger
Published 11/28/2011

Fully revised throughout, General Aviation Law, Third Edition, is an essential legal guide for those who work in aviation, including mechanics, pilots, aircraft owners, and aviation business owners. This practical reference answers all questions regarding aviation law in understandable layperson’s terms. The information in the book helps you to avoid legal troubles and describes what to expect if you are taken to court. Real-world case studies illustrate the topics addressed. All pertinent laws are clearly explained and clarified, providing you with the knowledge you need to understand your legal rights and protect yourself from costly litigation.

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