

Civil Engineering Books Free

Improve the Quality of Concrete, Improve the Quality of Construction Quality measurement is not prevalent in the concrete industry and quality investment is not seen as potentially generating a positive return. Improving Concrete Quality examines how and why concrete quality should be measured, and includes instruction on developing specifications with the aim of improving concrete quality. Reduce Concrete Variability: Reduce Costs and Increase Volume The first part of the book considers the tangible and intangible benefits of improved quality. The later chapters explore concrete strength variability in detail. It provides a greater grasp of the variation in concrete, as well as a deeper understanding of how material variability affects concrete performance. The author discusses the components of variability (material, manufacturing, testing) and provides steps to measuring and reducing variability to improve the quality of concrete. The text also contains a chapter on data analysis for quality monitoring and test results. Come Away with Practices and Tools That Can Be Applied Immediately: Provides techniques and how specifications can improve concrete quality Offers a clear understanding of the link between the materials (cement, SCM, aggregate, water, air), manufacturing, testing variability, and concrete quality Includes information on analyzing test data to improve quality Improving Concrete Quality quantifies the benefits of improved quality, and introduces novel ways of measuring concrete quality. This text is an ideal resource for quality personnel in the concrete industry. It also benefits architects, engineers, contractors, and researchers.

Hydraulics for Civil Engineers provides a thorough introduction to the principles of hydraulics and fluid mechanics Combining core theories with the need for sustainable solutions, The book covers all the fundamental areas m hydraulics, inducing pressure in liquids, real flow in pipes, turbines and pumps, hydrology of surface water drainage, coastal hydraulics and hydrology of river flow Key concepts and designs ate explored using real-life scenarios with easily digestible topic summaries offered throughout each chapter. Produced by the Institution of Civil Engineers. ICE Textbooks offer clear, concise and practical information on the major principles of civil and structural engineering. They are an indispensable companion to undergraduate audiences, providing students with: A comprehensive introduction to core engineering subjects, Real-life case studies and worked examples, Practice questions, exercise and supplementary online solutions available at: www.incetextbooks.com, Key learning aims and chapter summaries, Further reading suggestions Book jacket.

This thorough update of a well-established textbook covers a core subject taught on every civil engineering course. Now expanded to cover environmental hydraulics and engineering hydrology, it has been revised to reflect current practice and course requirements. As previous editions, it includes substantial worked example sections with an on-line solution manual. A strength of the book has always been in its presentation these exercises which has distinguished it from other books on hydraulics, by enabling students to test their understanding of the theory and of the methods of analysis and design. Civil Engineering Hydraulics provides a succinct introduction to the theory of civil engineering hydraulics, together with a large number of worked examples and exercise problems with answers. Each chapter includes a worked example section with solutions; a list of recommended reading; and exercise problems with answers to enable students to assess their understanding. The book will be invaluable throughout a student's entire course – but particularly for first and second year study, and will also be welcomed by practising engineers as a concise reference.

Practicing engineers designing civil engineering structures, and advanced students of civil engineering, require foundational knowledge and advanced analytical and empirical tools. Mechanics in Civil Engineering Structures presents the material needed by practicing engineers engaged in the design of civil engineering structures, and students of civil engineering. The book covers the fundamental principles of mechanics needed to understand the responses of structures to different types of load and provides the analytical and empirical tools for design. The title presents the mechanics of relevant structural elements—including columns, beams, frames, plates and shells—and the use of mechanical models for assessing design code application. Eleven chapters cover topics including stresses and strains; elastic beams and columns; inelastic and composite beams and columns; temperature and other kinematic loads; energy principles; stability and second-order effects for beams and columns; basics of vibration; indeterminate elastic-plastic structures; plates and shells. This book is an invaluable guide for civil engineers needing foundational background and advanced analytical and empirical tools for structural design. Includes 110 fully worked-out examples of important problems and 130 practice problems with an interaction solution manual (<http://hsz121.hsz.bme.hu/solutionmanual>). Presents the foundational material and advanced theory and method needed by civil engineers for structural design Provides the methodological and analytical tools needed to design civil engineering structures Details the mechanics of salient structural elements including columns, beams, frames, plates and shells Details mechanical models for assessing the applicability of design codes

Introduction to Design for Civil Engineers

With CD-Rom

Railway Engineering

Principles of Applied Civil Engineering Design

Geosynthetics in Civil Engineering

A Field Book for Civil Engineers

Geosynthetics are man-made polymer-based materials which facilitate cost effective building, environmental, transportation and other construction projects. Given their versatility, geosynthetics are a vital material in all aspects of civil engineering. The first section of the book covers the fundamentals of geosynthetics. Chapters discuss the design and durability of geosynthetics together with their material properties and international standards governing their use. Building on these foundations, part two examines the various applications of geosynthetics in areas such as filters, separators, landfills, barriers and foundation materials. The book concludes by reviewing methods of quality assurance and the service life of geosynthetics. Written by an international team of contributors, Geosynthetics in civil engineering is an essential reference to all those involved in civil engineering. Discusses the fundamentals of geosynthetics Examines various applications in areas such as filters, separators, landfills and foundation materials Reviews quality assurance and the service life of geosynthetics

Developments in Earthquake Engineering have focussed on the capacity and response of structures. They often overlook the importance of seismological knowledge to earthquake-proofing of design. It is not enough only to understand the anatomy of the structure, you must also appreciate the nature of the likely earthquake. Seismic design, as detailed in this book, is the bringing together of Earthquake Engineering and Engineering Seismology. It focuses on the seismological aspects of design – analyzing various types of earthquake and how they affect structures differently. Understanding the distinction between these earthquake types and their different impacts on buildings can make the difference between whether a building stands or falls, or at least to how much it costs to repair. Covering the basis and basics of the major international codes, this is the essential guide for professionals working on structures in earthquake zones around the world.

After civil wars end, what can sustain peace in the long-term? In particular, how can outsiders facilitate durable conflict-managing institutions through statebuilding - a process that historically has been the outcome of bloody struggles to establish the state's authority over warlords, traditional authorities, and lawless territories? In this book, Timothy Sisk explores international efforts to help the world's most fragile post-civil war countries today build viable states that can provide for security and deliver the basic services essential for development. Tracing the historical roots of statebuilding to the present day, he demonstrates how the United Nations, leading powers, and well-meaning donors have engaged in statebuilding as a strategic approach to peacebuilding after war. Their efforts are informed by three key objectives: to enhance security by preventing war recurrence and fostering community and human security; to promote development through state provision of essential services such as water, sanitation, and education; to enhance human rights and democracy, reflecting the liberal international order that reaffirms the principles of democracy and human rights. . Improving governance, alongside the state's ability to integrate social differences and manage conflicts over resources, identity, and national priorities, is essential for long-term peace. Whether the global statebuilding enterprise can succeed in creating a world of peaceful, well-governed, development-focused states is unclear. But the book concludes with a road map toward a better global regime to enable peacebuilding and development-oriented statebuilding into the 21st century.

Civil Engineer's Reference Book, Fourth Edition provides civil engineers with reports on design and construction practices in the UK and overseas. It gives a concise presentation of theory and practice in the many branches of a civil engineer's profession and it enables them to study a subject in greater depth. The book discusses some improvements in earlier practices, for example in surveying, geotechnics, water management, project management, underwater working, and the control and use of materials. Other changes covered are from the evolving needs of clients for almost all forms of construction, maintenance and repair. Another major change is the introduction of new national and Euro-codes based on limit state design, covering most aspects of structural engineering. The fourth edition incorporates these advances and, at the same time, gives greater prominence to the special problems relating to work overseas, with differing client requirements and climatic conditions. Chapters 1 to 10 provide engineers, at all levels of development, with 'lecture notes' on the basic theories of civil engineering. Chapters 11 to 44 cover the practice of design and construction in many of the fields of civil engineering. Civil engineers, architects, lawyers, mechanical engineers, insurers, clients, and students of civil engineering will find benefit in the use of this text.

Knowledge and Skills and for Design and Management

Civil Engineering Technologist Body of Knowledge

Improving Concrete Quality

Producing Drawings, Specifications, and Cost Estimates for Heavy Civil Projects

Book of 59 Topics Including History of Civil Engineering

Advances in Civil Engineering and Building Materials

Advances in Civil Engineering and Building Materials presents the state-of-the-art development in: - Structural Engineering - Road & Bridge Engineering- Geotechnical Engineering- Architecture & Urban Planning- Transportation Engineering- Hydraulic Engineering - Engineering Management- Computational Mechanics- Construction Technology- Buildi

The construction of buildings and structures relies on having a thorough understanding of building materials. Without this knowledge it would not be possible to build safe, efficient and long-lasting buildings, structures and dwellings. Building materials in civil engineering provides an overview of the complete range of building materials available to civil engineers and all those involved in the building and construction industries. The book begins with an introductory chapter describing the basic properties of building materials. Further chapters cover the basic properties of building materials, air hardening cement materials, cement, concrete, building mortar, wall and roof materials, construction steel, wood, waterproof materials, building plastics, heat-insulating materials and sound-absorbing materials and finishing materials. Each chapter includes a series of questions, allowing readers to test the knowledge they have gained. A detailed appendix gives information on the testing of building materials. With its distinguished editor and eminent editorial committee, Building materials in civil engineering is a standard introductory reference book on the complete range of building materials. It is aimed at students of civil engineering, construction engineering and allied courses including water supply and drainage engineering. It also serves as a source of essential background information for engineers and professionals in the civil engineering and construction sector. Provides an overview of the complete range of building materials available to civil engineers and all those involved in the building and construction industries Explores the basic properties of building materials featuring air hardening cement materials, wall and roof materials and sound-absorbing materials Each chapter includes a series of questions, allowing readers to test the knowledge they have gained

Ying-Kit Choi walks engineers through standard practices, basic principles, and design philosophy needed to prepare quality design and construction documents for a successful infrastructure project.

Civil Engineering Materials explains why construction materials behave the way they do. It covers the construction materials content for undergraduate courses in civil engineering and related subjects and serves as a valuable reference for professionals working in the construction industry. The book concentrates on demonstrating methods to obtain, analyse and use information rather than focusing on presenting large amounts of data. Beginning with basic properties of materials, it moves on to more complex areas such as the theory of concrete durability and corrosion of steel. Discusses the broad scope of traditional, emerging, and non-structural materials Explains what material properties such as specific heat, thermal conductivity and electrical resistivity are and how they can be used to calculate the performance of construction materials. Contains numerous worked examples with detailed solutions that provide precise references to the relevant equations in the text. Includes a detailed section on how to write reports as well as a full section on how to use and interpret publications, giving students and early career professionals valuable practical guidance.

An Illustrated Guide for Design and Construction

Basic Civil Engineering

Hydraulics for Civil Engineers

Fundamentals of Sustainability in Civil Engineering

Civil Engineering

Construction Materials for Civil Engineering

First published in 1995, the award-winning Civil Engineering Handbook soon became known as the field's definitive reference. To retain its standing as a complete, authoritative resource, the editors have incorporated into this edition the many changes in techniques, tools, and materials that over the last seven years have found their way into civil engineering research and practice. The Civil Engineering Handbook, Second Edition is more comprehensive than ever. You'll find new, updated, and expanded coverage in every section. In fact, more than 1/3 of the handbook is new or substantially revised. In particular you'll find increased focus on computing reflecting the rapid advances in computer technology that has revolutionized many aspects of civil engineering. You'll use it as a survey of the field, you'll use it to explore a particular subject, but most of all you'll use The Civil Engineering Handbook to answer the problems, questions, and conundrums you encounter in practice.

This report provides a consensus on areas in which a civil engineering technologist might work, as well as the overall approach of combined foundational and specialty outcomes to provide a workable body of knowledge.

This book provides a foundation to understand the development of sustainability in civil engineering, and tools to address the three pillars of sustainability: economics, environment, and society. It includes case studies in the five major areas of civil engineering: environmental, structural, geotechnical, transportation, and construction management. This second edition is updated throughout and adds new chapters on construction engineering as well as an overview of the most common certification programs that revolve around environmental sustainability. Features: Updated throughout and adds two entirely new chapters Presents a review of the most common certification programs in sustainability Offers a blend of numerical and writing-based problems, as well as numerous application-based examples that utilize concepts found on the Fundamentals of Engineering (FE) exam Includes several practical case studies Offers a solution manual for instructors Fundamentals of Sustainability in Civil Engineering is intended for upper-level civil engineering sustainability courses. A unique feature is that concepts found in the Fundamentals of Engineering (FE) exam were targeted to help senior-level students refresh and prepare.

Instant Access to Civil Engineering Formulas Fully updated and packed with more than 500 new formulas, this book offers a single compilation of all essential civil engineering formulas and equations in one easy-to-use reference. Practical, accurate data is presented in USCS and SI units for maximum convenience. Follow the calculation procedures inside Civil Engineering Formulas, Second Edition, and get precise results with minimum time and effort. Each chapter is a quick reference to a well-defined topic, including: Beams and girders Columns Piles and piling Concrete structures Timber engineering Surveying Soils and earthwork Building structures Bridges and suspension cables Highways and roads Hydraulics, dams, and waterworks Power-generation wind turbines Stormwater Wastewater treatment Reinforced concrete Green buildings Environmental protection

(in S.I. Units)

Basic Knowledge in Civil Engineering

Straw Bale Building Details

A Textbook of Strength of Materials

Statebuilding

Fundamental Concepts for Owners, Engineers, Architects, and Builders

This report outlines 21 foundational, technical, and professional practice learning outcomes for individuals entering the professional practice of civil engineering.

Basic knowledge in civil engineering - book of 59 topics consists of history of civil engineering, building bye laws, bricks estimation, unit conversions, quantity of materials for concrete work, vastu etc. The main aim of writing this book is to provide basic knowledge in civil engineering for the students by analyzing pictures and diagrams to get practical knowledge

This publication establishes a basic understanding of materials used in civil engineering construction as taught in tertiary institutions across South Africa. It uses the objectives of the NQF in promoting independent learning and is the only book pertaining to Civil Engineering that covers all the necessary topics under one roof.

This book covers methods adopted for undertaking the design and construction of civil engineering projects. The options for separate design and construction are compared with design and build projects, construction management, and man agement contracting. The salient differences are shown between the various con ditions of contract used. The roles of the engineer, employer's project manager or his representative under different forms of contract are compared. Requirements for the production of contract documents, specifications, tendering procedures and choice of contractor are set out. The engineer's powers and the duties of his resident engineer on the site of con struction are considered in detail. Records, filing systems, programme and progress charts used by the resident engineer are illustrated, and advice is given on the handling of safety problems and difficult situations on site. Problems of measurement and billing of quantities according to the civil engi neering standard method are described. Correct procedures for setting rates for varied work, payment for method-related items, and handling claims for unfore seen conditions under ICE Clause 12 are given. Difficulties with delay claims and situations where the contractor submits quotations before undertaking varied work are discussed. The approach is essentially practical throughout and covers many actual prob lems met on site, including measures that are advisable in relation to site surveys and investigations, construction of earthworks and pipelines, and the production and placing of concrete.

Civil Engineering Formulas

Building Construction

Civil Engineering Project Management, Fourth Edition

Civil Engineering Hydraulics

Civil Engineering Quantities

Civil Engineer's Handbook of Professional Practice

Geotechnical Engineering: Principles and Practices, 2/e, is ideal or junior-level soil mechanics or introductory geotechnical engineering courses. This introductory geotechnical engineering textbook explores both the principles of soil mechanics and their application to engineering practice. It offers a rigorous, yet accessible and easy-to-read approach, as well as technical depth and an emphasis on understanding the physical basis for soil behavior. The second edition has been revised to include updated content and many new problems and exercises, as well as to reflect feedback from reviewers and the authors' own experiences.

Railway Engineering has been specially designed for undergraduate students of civil engineering. From fundamental topics to modern technological developments, the book covers all aspects of the railways including various modernization plans covering tracks, locomotives, and rolling stock.

Important statistical data about the Indian Railways and other useful information have also been incorporated to make the coverage comprehensive. A number of illustrative examples supplement text to aid easy understanding of design methods discussed. The book should also serve the need of students of polytechnics and those appearing of the AMIE examination and would also be a ready reference for railway professionals.

This new edition updates and revises the best practical guide for on-site engineers. Written from the point of view of the project engineer it details their responsibilities, powers, and duties. The book has been fully updated to reflect the latest changes to management practice and new forms of contract.

A must have reference for any engineer involved with foundations, piers, and retaining walls, this remarkably comprehensive volume illustrates soil characteristic concepts with examples that detail a wealth of practical considerations, It covers the latest developments in the design of drilled pier foundations and mechanically stabilized earth retaining wall and explores a pioneering approach for predicting the nonlinear behavior of laterally loaded long vertical and batter piles. As complete and authoritative as any volume on the subject, it discusses soil formation, index

properties, and classification; soil permeability, seepage, and the effect of water on stress conditions; stresses due to surface loads; soil compressibility and consolidation; and shear strength characteristics of soils. While this book is a valuable teaching text for advanced students, it is one that the practicing engineer will continually be taking off the shelf long after school lets out. Just the quick reference it affords to a huge range of tests and the appendices filled with essential data, makes it an essential addition to an civil engineering library.

Civil Engineering Materials

ELEMENTS OF CIVIL ENGINEERING AND ENGINEERING MECHANICS

Hydraulics in Civil and Environmental Engineering

Mechanics of Civil Engineering Structures

New Materials in Civil Engineering

An Introduction to the ASCE Body of Knowledge

The devil is in the details-the science and art of designing and building durable, efficient, straw bale buildings Straw bale buildings promise superior insulation and flexibility across a range of design aesthetics, while using a typically local and abundant low-embodied energy material that sequesters carbon-an important part of mitigating climate change. However, some early straw bale designs and construction methods resulted in buildings that failed to meet design goals for energy efficiency and durability. This led to improved building practices and a deeper understanding of the building science underlying this building system. Distilling two decades of site-built straw bale design and construction experience, Straw Bale Building Details is an illustrated guide that covers: Principles and process of straw bale design and building, options, and alternatives Building science of straw bale wall systems How design impacts cost, building efficiency, and durability Avoiding costly mistakes and increasing construction efficiency Dozens of time-tested detailed drawings for straw bale wall assemblies, including foundations, windows and doors, and roofs. Whether you're an architect, engineer, contractor, or owner-builder interested in making informed choices, Straw Bale Building Details is the indispensable guide to current practice in straw bale design and construction.

This book, in its third edition, continues to focus on the basics of civil engineering and engineering mechanics to provide students with a balanced and cohesive study of the two areas (as needed by them in the beginning of their engineering education). A basic undergraduate textbook for the first-year students of all branches of engineering, this book is specifically designed to conform to the syllabus of Visvesvaraya Technological University (VTU). Imparting the basic knowledge in various facets of civil engineering and the related engineering structures and infrastructure such as buildings, roads, highways, dams and bridges, the third edition covers the engineering mechanics portion in eleven chapters. Each chapter introduces the concepts to the reader, stepwise. Providing a wealth of practice examples, the book emphasizes the importance of building strong analytical skills. Practice problems, at the end of each chapter, give students an opportunity to absorb concepts and hone their problem-solving skills. The book comes with a companion CD containing the software developed using MS-Excel, to work out the problems on Forces, Centroid, Friction and Moment of Inertia. The use of this software will enable the students to understand the concepts in a relatively better way. NEW TO THIS EDITION ■ Introduces a chapter on Kinematics as per the revised Civil Engineering syllabus of VTU ■ Updates with the latest examination Question Papers, including the one held in the month of December 2013

Basic Civil Engineering is designed to enrich the preliminary conceptual knowledge about civil engineering to the students of non-civil branches of engineering. The coverage includes materials for construction, building construction, basic surveying and other major topics like environmental engineering, geo-technical engineering, transport traffic and urban engineering, irrigation & water supply engineering and CAD.

An Introduction to Design for Civil Engineers is a concise book that provides the reader with the necessary background on terminology used in design. With this book as a guide, entry-level students of civil engineering will better understand from the outset lectures on detailed subject areas. Drawing on a wealth of experience, the authors present a

Principles and Practices

Civil Engineer's Reference Book

The Civil Engineering Handbook

Civil Engineering Body of Knowledge

Preparing the Future Civil Engineer

Fundamentals of Civil Engineering

Dennis Randolph provides a rich collection of rips and recommendations on how to approach and solve the questions most commonly encountered by engineers at the local government level.

New Materials in Civil Engineering provides engineers and scientists with the tools and methods needed to meet the challenge of designing and constructing more resilient and sustainable infrastructures. This book is a valuable guide to the properties, selection criteria, products, applications, lifecycle and recyclability of advanced materials. It presents an A-to-Z approach to all types of materials, highlighting their key performance properties, principal characteristics and applications. Traditional materials covered include concrete, soil, steel, timber, fly ash, geosynthetic, fiber-reinforced concrete, smart materials, carbon fiber and reinforced polymers. In addition, the book covers nanotechnology and biotechnology in the development of new materials. Covers a variety of materials, including fly ash, geosynthetic, fiber-reinforced concrete, smart materials, carbon fiber reinforced polymer and waste materials Provides a "one-stop resource of information for the latest materials and practical applications Includes a variety of different use case studies

The book provides primary information about civil engineering to both a civil and non-civil engineering audience in areas such as construction management, estate management, and building. Basic civil engineering topics like surveying, building materials, construction technology and management, concrete technology, steel structures, soil mechanics and foundations, water resources, transportation and environment engineering are explained in detail. Codal provisions of US, UK and India are included to cater to a global audience. Insights into techniques like modern surveying equipment and technologies, sustainable construction materials, and modern construction materials are also included. Key features: • Provides a concise presentation of theory and practice for all technical in civil engineering. • Contains detailed theory with lucid illustrations. • Focuses on the management aspects of a civil engineer's job. • Addresses contemporary issues such as permitting, globalization, sustainability, and emerging technologies. • Includes codal provisions of US, UK and India. The book is aimed at professionals and senior undergraduate students in civil engineering, non-specialist civil engineering audience

ABOUT THE BOOK: The present edition of the boos is mostly overhauled and revised. One chapter on Temporary Structures is added in the portion of Building Construction. Now the book is quite up-to-date. This edition of the book is entirely new and different from its previous editions. We hope, the book will prove more useful and will serve its purpose better.

RECOMMENDATIONS: A textbook for all Engineering Branches, Competitive Examination, ICS, and AMIE Examinations In S.I Units For Degree, Diploma and A.I.M.E. (India) Students and Practicing Civil Engineers ABOUT THE AUTHOR: T.D. Ahuja Formerly Head of Civil Engineering Deptt. Allahabad Polytechnic, Allahabad and G.S. Birdi Formerly Head of Structural Engg. Deptt. Allahabad Polytechnic, Allahabad BOOK DETAILS: ISBN: 978-81-89401-47-4 Pages: 331 + 20 Paperback Edition: 9th,Year-2016 Size(cms): L-23.9 B-15.8 H-1.3 For more Offers visit our Website: www.standardbookhouse.com

Civil Engineering for the Community

Principles and Practices of Soil Mechanics and Foundation Engineering

Civil Engineering Practice in the Twenty-first Century

Geotechnical Engineering

Building Materials in Civil Engineering

Earthquake Engineering for Structural Design

While the ASCE Body of Knowledge (BOK2) is the codified source for all technical and non-technical information necessary for those seeking to attain licensure in civil engineering, recent graduates have notoriously been lacking in the non-technical aspects even as they excel in the technical. Fundamentals of Civil Engineering: An Introduction to the ASCE Body of Knowledge addresses this shortfall and helps budding engineers develop the knowledge, skills, and attitudes suggested and implied by the BOK2. Written as a resource for all of the non-technical outcomes not specifically covered in the BOK2, it details fundamental aspects of fourteen outcomes addressed in the second edition of the ASCE Body of Knowledge and encourages a broader perspective and understanding of the role of civil engineers in society as well as the reciprocal influence between civil engineering and social evolution. With discussion questions and group activities at the end of each chapter, topics covered include humanities and social sciences, experimentation, sustainability, contemporary issues and historical perspectives, risk and uncertainty, communication, public policy, globalization, leadership and teamwork, and professional and ethical responsibilities. Suitable for both current and former students in pursuit of further breadth and depth of knowledge and professional maturity, this primer promotes introspection, self-evaluation, and self-learning. It details those attitudes that are essential to the achievement of personal and professional success and advancement to positions of leadership, and encourages an appreciation of the human values that are fundamental to professional practice.

A well-written, hands-on, single-source guide to the professional practice of civil engineering There is a growing understanding that to be competitive at an international level, civil engineers not only must build on their traditional strengths in technology and science but also must acquire greater mastery of the business of civil engineering. Project management, teamwork, ethics, leadership, and communication have been defined as essential to the successful practice of civil engineering by the ASCE in the 2008 landmark publication, Civil Engineering Body of Knowledge for the 21st Century (BOK2). This single-source guide is the first to take the practical skills defined by the ASCE BOK2 and provide illuminating techniques, quotes, case examples, problems, and information to assist the reader in addressing the many challenges facing civil engineers in the real world. Civil Engineer's Handbook of Professional Practice: Focuses on the business and management aspects of a civil engineer's job, providing students and practitioners with sound business management principles Addresses contemporary issues such as permitting, globalization, sustainability, and emerging technologies Offers proven methods for balancing speed, quality, and price with contracting and legal issues in a client-oriented profession Includes guidance on juggling career goals, life outside work, compensation, and growth From the challenge of sustainability to the rigors of problem recognition and solving, this book is an essential tool for those practicing civil engineering.

This classic text, now in its sixth edition, combines a thorough coverage of the basic principles of civil engineering hydraulics with a wide-ranging treatment of practical, real-world applications. It now includes a powerful online resource with worked solutions for chapter problems and solution spreadsheets for more complex problems that may be used as templates for similar issues. Hydraulics in Civil and Environmental Engineering is structured into two parts to deal with principles and more advanced topics. The first part focuses on fundamentals, such as hydrostatics, hydrodynamics, pipe and open channel flow, wave theory, physical modelling, hydrology and sediment transport. The second part illustrates engineering applications of these principles to pipeline system design, hydraulic structures, river and coastal engineering, including up-to-date environmental implications, as well as a chapter on computational modelling, illustrating the application of computational simulation techniques to modern design, in a variety of contexts. New material and additional problems for solution have been added to the chapters on hydrostatics, pipe flow and dimensional analysis. The hydrology chapter has been revised to reflect updated UK flood estimation methods, data and software. The recommendations regarding the assessment of uncertainty, climate change predictions, impacts and adaptation measures have been updated, as has the guidance on the application of computational simulation techniques to river flood modelling. Andrew Chadwick is an honorary professor of coastal engineering and the former associate director of the Marine Institute at the University of Plymouth, UK. John Morfett was the head of hydraulics research and taught at the University of Brighton, UK. Martin Borthwick is a consultant hydrologist, formerly a flood hydrology advisor at the UK's Environment Agency, and previously an associate professor at the University of Plymouth, UK.

Practical Civil Engineering

Civil Engineering: Supervision and Management

Project Management for Construction