Reinforced Concrete Design Civil Engineering Memphis

This new edition of a highly practical text gives a detailed presentation of the design of common reinforced concrete structures to limit state theory in accordance with BS 8110.
This text is developed from the established and well-known textbook Reinforced Concrete Design. It adopts the same format of presentation to cover the design and detailing of reinforced and prestressed concrete members and structures to the new Eurocode for the design of concrete structures (Eurocode 2: Design of Concrete Structures, Part 1).
A PRACTICAL GUIDE TO REINFORCED CONCRETE STRUCTURE ANALYSIS AND DESIGN Reinforced Concrete Structures explains the underlying principles of reinforced concrete design and covers the analysis, design, and detailing requirements in the 2008 American Concrete Institute (ACI) Building Code Requirements for Structural Concrete and Commentary and the 2009 International Code Council (ICC) International Building Code (IBC). This authoritative resource discusses reinforced concrete members and provides techniques for sizing the cross section, calculating the required amount of reinforcement, and detailing the reinforcement. Design procedures and flowcharts guide you through code requirements, and worked-out examples demonstrate the proper application of the design provisions. COVERAGE INCLUDES: Mechanics of reinforced concrete Material properties of concrete and reinforcing steel Considerations for analysis and design of reinforced concrete structures Requirements for strength and serviceability Principles of the strength design method Design and detailing requirements for beams, one-way slabs, two-way slabs, columns, walls, and foundations
Through my book with the Title: Civil Engineering In Reinforced Concrete Design Making It Easy For You Without Acquiring Bachelor's DegreeYou will learn the following series of designs:1.) To determine the thickness of the Concrete Slab and the Diameter (size) of the Reinforcement Bars for any building according to the specified load that the slab will be carrying. 2.) The dimension of the beam and the Diameter (size) of Reinforcement Bars where the slab transfers its load. 3.) The dimension of the Column and the Diameter (size) of the Reinforcement Bars that carries the Beam and last but not least,4.) The dimension of the Foundation and the Diameter (size) of the Reinforcement Bars.The foregoing series of Designs are all in the category of the Preliminary Design using Working Stress Design Method prior to the execution of the final Design where the Ultimate Strength Design Method will be used.
Introduction to Reinforced Concrete Design

Strengthening of Reinforced Concrete Structures
Making It Easy For You Without Acquiring Bachelor's Degree
Limit State Design of Reinforced Concrete

Based on the latest version of designing codes both for buildings and bridges (GB50010-2010 and JTG D62-2004), this book starts from steel and concrete materials, whose properties are very important to the mechanical behavior of concrete structural members. Step by step, analysis of reinforced and prestressed concrete members under basic loading types (tension, compression, flexure, shearing and torsion) and environmental actions are introduced. The characteristic of the book that distinguishes it from other textbooks on concrete structures is that more emphasis has been laid on the basic theories of reinforced concrete and the application of the basic theories in design of new structures and analysis of existing structures. Examples and problems in each chapter are carefully designed to cover every important knowledge point. As a basic course for undergraduates majoring in civil engineering, this course is different from either the previously learnt mechanics courses or the design courses to be learnt. Compared with mechanics courses, the basic theories of reinforced concrete structures cannot be solely derived by theoretical analysis. And compared with design courses, this course emphasizes the introduction of basic theories rather than simply being a translation of design specifications. The book will focus on both the theoretical derivations and the engineering practices.
The sixth edition of this comprehensive textbook provides the same philosophical approach that has gained wide acceptance since the first edition was published in 1965. The strength and behavior of concrete elements are treated with the primary objective of explaining and justifying the rules and formulas of the ACI Building Code. The treatment is incorporated into the chapters in such a way that the reader may study the concepts in a logical sequence in detail or merely accept a qualitative explanation and proceed directly to the design process using the ACI Code.
Emphasizing a conceptual understanding of concrete design and analysis, this revised and updated edition builds the student’s understanding by presenting design methods in an easy to understand manner supported with the use of numerous examples and problems. Written in intuitive, easy–to–understand language, it includes SI unit examples in all chapters, equivalent conversion factors from US customary to SI throughout the book, and SI unit design tables. In addition, the coverage has been completely updated to reflect the latest ACI 318–11 code.
The in situ rehabilitation or upgrading of reinforced concrete members using bonded steel plates is an effective, convenient and economic method of improving structural performance. However, disadvantages inherent in the use of steel have stimulated research into the possibility of using fibre reinforced polymer (FRP) materials in its place, providing a non-corrosive, more versatile strengthening system. This book presents a detailed study of the flexural strengthening of reinforced and prestressed concrete members using fibre reinforces polymer composite plates. It is based to a large extent on material developed or provided by the consortium which studied the technology of plate bonding to upgrade structural units using carbon fibre / polymer composite materials. The research and trial tests were undertaken as part of the ROBUST project, one of several ventures in the UK Government's DTI-LINK Structural Composites Programme. The book has been designed for practising structural and civil engineers seeking to understand the principles and design technology of plate bonding, and for final year undergraduate and postgraduate engineers studying the principles of highway and bridge engineering and structural engineering. Detailed study of the flexural strengthening of reinforced and prestressed concrete members using fibre reinforced polymer composites Contains in-depth case histories
Seismic Design of Buildings & Bridges
Section and Slender Member Analysis
Reinforced Concrete Design to EuroCode 2 (EC2)
Principles of Reinforced Concrete Design
Civil and Structural Engineering: Design of Reinforced Concrete Structures

Concrete is one of the most used materials in the construction industry. In structural systems, the combination of concrete and steel reinforcement bars gives rise to reinforced concrete (RC), which is widely applied in the civil engineering field due to its adequate mechanical strength, durability, and fire resistance. Steel-rebar reinforced structures are subjected to structural deterioration when subjected to extreme loadings such as earthquake, fire, impact loadings and cyclic loading, consequently reducing the expected life and performance of structures. To enhance the structural performance, the RC structures are usually retrofitted or strengthened. This book reviews design, performance and applications of reinforced concrete.
Designed primarily as a text for undergraduate students of Civil Engineering for their first course on Limit State Design of Reinforced Concrete, this compact and well-organized text covers all the fundamental concepts in a highly readable style. The text conforms to the provision of the latest revision of Indian Code of Practice for Plain and Reinforced Concrete, IS : 456 (2000). First six chapters deal with fundamentals of limit states design of reinforced concrete. The objective of last two chapters (including design aids in appendix) is to initiate the readers in practical design of concrete structures. The text gives detailed discussion of basic concepts, behaviour of the various structural components under loads, and development of fundamental expressions for analysis and design. It also presents efficient and systematic procedures for solving design problems. In addition to the discussion of basis for design calculations, a large number of worked-out practical design examples based on the current design practices have been included to illustrate the basic principles of reinforced concrete design.Besides students, practising engineers would find this text extremely useful.
This textbook describes the basic mechanical features of concrete and explains the main resistant mechanisms activated in the reinforced concrete structures and foundations when subjected to centred and eccentric axial force, bending moment, shear, torsion and prestressing. It presents a complete set of limit-state design criteria of the modern theory of RC incorporating principles and rules of the final version of the official Eurocode 2. This textbook examines methodological more than notional aspects of the presented topics, focusing on the verifications of assumptions, the rigorousness of the analysis and the consequent degree of reliability of results. Each chapter develops an organic topic, which is eventually illustrated by examples in each final paragraph containing the relative numerical applications. These practical end-of-chapter appendices and intuitive flow-charts ensure a smooth learning experience. The book stands as an ideal learning resource for students of structural design and analysis courses in civil engineering, building construction and architecture, as well as a valuable reference for concrete structural design professionals in practice.
The new edition of Reinforced Concrete Design includes the latest technical advances, including the 1995 American Concrete Institute Building Code. Review questions and problem sets at the end of every chapter are identical to those your civil engineering undergraduates will encounter in practice.
Basic Principles of Concrete Structures
A Fundamental Approach
LIMIT STATE DESIGN OF REINFORCED CONCRETE
Reinforced Concrete Design I Course Notes
Mechanics and Design

Based on the 1995 edition of the American Concrete Institute Building Code, this text explains the theory and practice of reinforced concrete design in a systematic and clear fashion, with an abundance of step-by-step worked examples, illustrations, and photographs. The focus is on preparing students to make the many judgment decisions required in reinforced concrete design, and reflects the author's experience as both a teacher of reinforced concrete design and as a member of various code committees. This edition provides new, revised and expanded coverage of the following topics: core testing and durability; shrinkage and creep; bases the maximum steel ratio and the value of the factor on Appendix B of ACI318-95; composite concrete beams; strut-and-tie models; dapped ends and T-beam flang expands the discussion of STMs and adds new examples in SI units.
Everything civil and structural engineers in California need to prepare for the seismic design topics of the Special Civil Engineering Exam and California Structural Engineering Exam. This guide emphasizes methods that lead to the quickest and simplest solution to any problem.
The costs of inadequate earthquake engineering are huge, especially for reinforced concrete buildings. This book presents the principles of earthquake-resistant structural engineering, and uses the latest tools and techniques to give practical design guidance to address single or multiple seismic performance levels. It presents an elegant, simple and theoretically coherent design framework. Required streng determined on the basis of an estimated yield displacement and desired limits of system ductility and drift demands. A simple deterministic approach is presented along with its elaboration into a probabilistic treatment that allows for design to limit annual probabilities of failure. The design method allows the seismic force resisting system to be designed on the basis of elastic analysis results, while nonlinear analysis is used for performance verification. Detailing requirements of ACI 318 and Eurocode 8 are presented. Students will benefit from the coverage of seismology, structural dynamics, reinforced concrete, and capacity design approaches, which allows the book to be used as a foundation text in earthquake engineering.
This highly successful book describes the background to the design principles, methods and procedures required in the design process for reinforced concrete structures. The easy to follow style makes it an ideal reference for students and professionals alike.
Principles of Reinforced Concrete
Reinforced Concrete Structures: Analysis and Design
A Practical Approach
Using Externally-Bonded Frp Composites in Structural and Civil Engineering
Design and Construction

From China to Kuala Lumpur to Dubai to downtown New York, amazing buildings and unusual structures create attention with the uniqueness of their design. While attractive to developers and investors, the safe and economic design and construction of reinforced concrete buildings can sometimes be problematic. Advanced Materials and Techniques for Rein
Concrete Design for the Civil and Structural PE Exams provides you with a thorough overview of the basic theories required to solve concrete design problems on the civil PE exam and the Structural I and II exams. Easy-to-use lists of tables, figures, and concrete design nomenclature will help you to quickly locate important concrete design information. Comprehensive concrete design review for the civil PE and structural PE exams Complete overview of required codes and standards over 130 figures that illustrate the acceptable structural design criteria Increase your problem-solving speed and confidence with 37 practice problems (25 practice problems for the civil PE and Structural I exams) (10 practice problems for the Structural I exam) (2 scenario-based practice problems for the Structural II exam) Topics Covered Materials Design Specifications Flexural Design of Reinforced Concrete Beams Serviceability of Reinforced Concrete Beams Shear Design of Reinforced Concrete Columns and Compression Members Continuous One-Way Systems Two-Way Slab Systems Development of Reinforcement Prestressed Concrete Seismic Design of Reinforced Concrete Members
Civil Engineering in Reinforced Concrete DesignMaking It Easy For You Without Acquiring Bachelor's DegreeIndependently Published
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 Seventh 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 Seventh Edition makes the reinforced concrete design a theory all engineers can learn from.
Reinforced Concrete
Civil & Structural Engineering
Structural Concrete
Solutions Manual
Civil Engineering in Reinforced Concrete Design

Complete coverage of earthquake-resistant concrete building design Written by a renowned seismic engineering expert, this authoritative resource discusses the theory and practice for the design and evaluation of earthquakeresisting reinforced concrete buildings. The book addresses the behavior of reinforced concrete materials, components, and systems subjected to routine and extreme loads, with an emphasis on response to earthquake loading. Design methods, both at a basic level as required by current building codes and at an advanced level needed for special problems such as seismic performance assessment, are described. Data and models useful for analyzing reinforced concrete structures as well as numerous illustrations, tables, and equations are included in this detailed reference. Seismic Design of Reinforced Concrete Buildings covers: Seismic design and performance verification Steel reinforcement Concrete Confined concrete Axially loaded members Moment and axial force Shear in beams, columns, and walls Development and anchorage Beam-column connections Slab-column and slab-wall connections Seismic design overview Special moment frames Special structural walls Gravity framing Diaphragms and collectors Foundations
This book provides an up-to-date survey of durability issues, with a particular focus on specification and design, and how to achieve durability in actual concrete construction. It is aimed at the practising engineer, but is also a valuable resource for graduate-level programs in universities. Along with background to current philosophies it gathers together in one useful reference a summary of current knowledge on concrete durability, includes information on modern concrete materials, and shows how these materials can be combined to produce durable concrete. The approach is consistent with the increasing focus on sustainability that is being addressed by the concrete industry, with the current emphasis on ‘design for durability’.
Publisher Description
Encouraging creative uses of reinforced concrete, Principles of Reinforced Concrete Design draws a clear distinction between fundamentals and professional consensus. This text presents a mixture of fundamentals along with practical methods. It provides the fundamental concepts required for designing reinforced concrete (RC) structures, emphasizing principles based on mechanics, experience, and experimentation, while encouraging practitioners to consult their local building codes. The book presents design choices that fall in line with the boundaries defined by professional consensus (building codes), and provides reference material outlining the design criteria contained in building codes. It includes applications for both building and bridge structural design, and it is applicable worldwide, as it is not dependent upon any particular codes. Contains concise coverage that can be taught in one semester Underscores the fundamental principles of behavior Provides students with an understanding of the principles upon which codes are based Assists in navigating the labyrinth of ever-changing codes Fosters an inherent understanding of design The text also provides a brief history of reinforced concrete. While the initial attraction for using reinforced concrete in building construction has been attributed to its fire resistance, its increase in popularity was also due to the creativity of engineers who kept extending its limits of application. Along with height achievement, reinforced concrete gained momentum by providing convenience, plasticity, and low-cost economic appeal. Principles of Reinforced Concrete Design provides undergraduate students with the fundamentals of mechanics and direct observation, as well as the concepts required to design reinforced concrete (RC) structures, and applies to both building and bridge structural design.
Reinforced Concrete: Mechanics and Design, Global Edition
Concrete Design for the Civil and Structural PE Exams
Durability of Concrete
Reinforced Concrete Beams, Columns and Frames
Design of Prestressed Concrete

Reinforced Concrete Design: A Practical Approach, 2E is the only Canadian textbook which covers the design of reinforced concrete structural members in accordance with the CSA Standard A23.3-04 Design of Concrete Structures, including its 2005, 2007, and 2009 amendments, and the National Building Code of Canada 2010. Reinforced Concrete Design: A Practical Approach covers key topics for curriculum of undergraduate reinforced concrete design courses, and it is a useful learning resource for the students and a practical reference for design engineers. Since its original release in 2005 the book has been well received by readers from Canadian universities, colleges, and design offices. The authors have been commended for a simple and practical approach to the subject by students and course instructors. The book contains numerous design examples solved in a step-by-step format. The second edition is going to be available exclusively in hard cover version, and colours have been used to embellish the content and illustrations. This edition contains a new chapter on the design of two-way slabs and numerous revisions of the original manuscript. Design of two-way slabs is a challenging topic for engineering students and young engineers. The authors have made an effort to give a practical design perspective to this topic, and have focused on analysis and design approaches that are widely used in structural engineering practice. The topics include design of two-way slabs for flexure, shear, and deflection control. Comprehensive revisions were made to Chapter 4 to reflect the changes contained in the 2009 amendment to CSA A23.3-04. Chapters 6 and 7 have been revised to correct an oversight related to the transverse reinforcement spacing requirements in the previous edition of the book. Chapter 8 includes a new design example on slender columns and a few additional problems. Several errors and omissions (both text and illustrations) have also been corrected. More than 300 pages of the original book have been revised in this edition. Several supplements are included on the book web site. Readers will get time-limited access to the new column design software BPA COLUMN, which can generate column interaction diagrams for rectangular and cicrcular columns of variable dimensions and reinforcement amount. Additional supplements include spreadsheets related to foundation design and column load take down, and a few Power Point presentations showcasing reinforced concrete structures under construction and in completed form. Instructors will have an access to additional web site, which contains electronic version of the Instructor's Solution Manual with complete solutions to the end-of-chapter problems, and Power Point presentations containing all illustrations from the book. The book is a collaborative effort between an academic and a practising engineer and reflects their unique perspectives on the subject. Svetlana Brzev, Ph.D., P.Eng. is a faculty at the Civil Engineering Department of the British Columbia Institute of Technology, Burnaby, BC. She has over 25 years of combined teaching, research, and consulting experience related to structural design and rehabilitation of concrete and masonry structures, including buildings, municipal, and industrial facilities. John Pao, MEng, PEng, Struct.Eng, is the President of Bogdonov Pao Associates Ltd. of Vancouver, BC, and BPA Group of Companies with offices in Seattle and Los Angeles. Mr. Pao has extensive consulting experience related to design of reinforced concrete buildings, including high-rise residential and office buildings, shopping centers, parking garages, and institutional buildings.
This book is focused on the theoretical and practical design of reinforced concrete beams, columns and frame structures. It is based on an analytical approach of designing normal reinforced concrete structural elements that are compatible with most international design rules, including for instance the European design rules – Eurocode 2 – for reinforced concrete structures. The book tries to distinguish between what belongs to the structural design philosophy of such structural elements (related to strength of materials arguments) and what belongs to the design rule aspects associated with specific characteristic data (for the material or loading parameters). A previous book, entitled Reinforced Concrete Beams, Columns and Frames – Mechanics and Design, deals with the fundamental aspects of the mechanics and design of reinforced concrete in general, both related to the Serviceability Limit State (SLS) and the Ultimate Limit State (ULS), whereas the current book deals with more advanced ULS aspects, along with instability and second-order analysis aspects. Some recent research results including the use of non-local mechanics are also presented. This book is aimed at Masters-level students, engineers, researchers and teachers in the field of reinforced concrete design. Most of the books in this area are very practical or code-oriented, whereas this book is more theoretically based, using rigorous mathematics and mechanics tools. Contents 1. Advanced Design at Ultimate Limit State (ULS). 2. Slender Compression Members – Mechanics and Design. 3. Approximate Analysis Methods. Appendix 1. Cardano’s Method. Appendix 2. Steel Reinforcement Table. About the Authors Jostein Hellesland has been Professor of Structural Mechanics at the University of Oslo, Norway since January 1988. His contribution to the field of stability has been recognized and magnified by many high-quality papers in famous international journals such as Engineering Structures, Thin-Walled Structures, Journal of Constructional Steel Research and Journal of Structural Engineering. Noël Challamel is Professor in Civil Engineering at UBS, University of South Brittany in France and chairman of the EMI-ASCE Stability committee. His contributions mainly concern the dynamics, stability and inelastic behavior of structural components, with special emphasis on Continuum Damage Mechanics (more than 70 publications in International peer-reviewed journals). Charles Casandjian was formerly Associate Professor at INSA (French National Institute of Applied Sciences), Rennes, France and the chairman of the course on reinforced concrete design. He has published work on the mechanics of concrete and is also involved in creating a web experience for teaching reinforced concrete design – BA-CORTEX. Christophe Lanos is Professor in Civil Engineering at the University of Rennes 1 in France. He has mainly published work on the mechanics of concrete, as well as other related subjects. He is also involved in creating a web experience for teaching reinforced concrete design – BA-CORTEX.
This substantially revised second edition takes into account the provisions of the revised Indian Code of practice for Plain and Reinforced Concrete IS 456 : 2000. It also provides additional data on detailing of steel to make the book more useful to practicing engineers. The chapter on Limit State of Durability for Environment has been completely revised and the new provisions of the code such as those for design for shear in reinforced concrete, rules for shearing main steel in slabs, lateral steel in columns, and stirrups in beams have been explained in detail in the new edition. This comprehensive and systematically organized book is intended for undergraduate students of Civil Engineering, covering the first course on Reinforced Concrete Design and as a reference for the practicing engineers. Besides covering IS 456 : 2000, the book also deals with the British and US Codes. Advanced topics of IS 456 : 2000 have been discussed in the companion volume Advanced Reinforced Concrete Design (also published by Prentice-Hall of India). The two books together cover all the topics in IS 456 : 2000 and many other topics which are so important in modern methods of design of reinforced concrete.
Principle of Reinforced Concrete introduces the main properties of structural concrete and its mechanical behavior under various conditions as well as all aspects of the combined function of reinforcement and concrete. Based on the experimental investigation, the variation regularity of mechanical behavior, working mechanism, and calculation method are presented for the structural member under various internal forces. After examining the basic principle and analysis method of reinforced concrete, the book covers some extreme circumstances, including fatigue load, earthquake, explosion, high temperature (fire accident), and durability damage, and the special responses and analysis methods of its member under these conditions. This work is valuable as a textbook for post-graduates, and can be used as a reference for university teachers and under-graduates in the structural engineering field. It is also useful for structural engineers engaged in scientific research, design, or construction. Focuses on the principles of reinforced concrete, providing professional and academic readers with a single volume reference Experimental data enables readers to make full use of the theory presented The mechanical behavior of both concrete and reinforcement materials, plus the combined function of both are covered, enabling readers to understand the behaviors of reinforced concrete structures and their members Covers behavior of the materials and members under normal and extreme conditions
Theory and Design
Reinforced Concrete Design to Eurocode 2
Conforms to 1995 ACI Codes
Concrete Design
Reinforced Concrete Design

This book will provide comprehensive, practical knowledge for the design of reinforced concrete buildings. The approach will be unique as it will focus primarily on the design of various structures and structural elements as done in design offices with an emphasis on compliance with the relevant codes. It will give an overview of the integrated design of buildings and explain the design of various elements such as slabs, beams, columns, walls, and footings. It will be written in easy-to-use format and refer to all the latest relevant American codes of practice (IBC and ASCE) at every stage. The book will compel users to think critically to enhance their intuitive design capabilities.
Now updated to reflect the latest ACI 318-05 Building Code, this cutting-edge book analyzes the design of reinforced concrete members through a unique and practical step-by-step trial and adjustment procedure. Supplements narrative with flow charts to guide readers logically through the learning process. Provides ample photographs of instructional testing of concrete members to decrease the need for actual laboratory testing. Uses Strain Limits Design Method in all design examples as mandated in the new code, using the new load factors and strength reduction factors. Updates chapter on seismic design of buildings to comply with the major changes to the ACI 318 Code and the new International Building Code provisions on seismic design. Adds chapter on the LRFD design of bridge deck structures in accordance with AASHTP 2002, including a summary of the various pertinent load and design provisions and equations. Offers an expanded section on the strut-and-tie modeling for the design of reinforced concrete deep beams. A useful construction reference for engineers.
This book provides an extensive coverage of the design of reinforced concrete structures in accordance with the current Indian code of practice (IS 456: 2000). As some of the Indian code provisions are outdated, the American code provisions are provided, wherever necessary. In addition, an attempt is made to integrate the provisions of IS 456 with earthquake code (IS 13920), as more than 60% of India falls under moderate or severe earthquake zones. The text is based on the limit state approach to design and covers areas such as the properties of concrete, design of various structural elements such as compression and tension members, beams & slabs, and design for flexure, shear torsion, uni-axial and biaxial bending and interaction of these forces. Each chapter features solved examples, review questions, and practice problems as well as ample illustrations that supplement the text. An exhaustive list of references as well as appendices on strut-and-tie-method, properties of soils, and practical tips add value to the rich contents of book.
Elastic, Plastic and Yield Design of Reinforced Structures presents a whole set of new results which have been published by the authors over the last 30 years in the field of continuum solid mechanics applied to the analysis and design of reinforced civil engineering structures. The focus is on the development and application of up-scaling/homogenization methods in the design of such composite structures, with a special emphasis on the plastic behavior and ultimate strength of materials. The specificity of the book is highlighted by at least two completely innovative concepts which lie at the very heart of the book's originality: the elaboration of a fully comprehensive homogenization-based method for the design of reinforced structures (and not only materials), through the study of macroscopic behavior, and the development of a multiphase model for materials reinforced by linear inclusions, which considerably extends the range of applicability of the classical homogenization procedure. Sums up almost thirty years of original research in the field of mechanics applied to the analysis and design of reinforced civil engineering structures Focuses on the application of upscaling/homogenization methods to the design of civil engineering structures Highlights the elaboration of a fully comprehensive homogenization-based method for the design of reinforced structures (and not only materials), through the concept of macroscopic behavior Features development of a multiphase model for materials reinforced by linear inclusions, which considerably extends the range of applicability of the classical homogenization procedure.
Seismic Design of Reinforced Concrete Buildings
FUNDAMENTALS OF REINFORCED CONCRETE DESIGN
Design of Concrete Structures
Elastic, Plastic and Yield Design of Reinforced Structures
Design theory and examples

Concrete Design covers concrete design fundamentals for architects and engineers, such as tension, flexural, shear, and compression elements, anchorage, lateral design, and footings. As part of the Architect’s Guidebooks to Structures Series it provides a comprehensive overview using both imperial and metric units of measurement. Written by experienced professional structural engineers Concrete Design is beautifully illustrated, with more than 170 black and white images, contains clear examples that show all design steps, and provides rules of thumb and simple tables for initial sizing. A refreshing change in textbooks for architectural materials courses, it is an indispensable reference for practicing architects and students alike. As a compact summary of key ideas it is ideal for anyone needing a quick guide to concrete design.
The 14th edition of the classic text, Design of Concrete Structures, is completely revised using the newly released 2008 ACI (American Concrete Institute) Code. This new edition has the same dual objectives as the previous editions; first to establish a firm understanding of the behavior of structural concrete, then to develop proficiency in the methods used in current design practice. Design of Concrete Structures covers the behavior and design aspects of concrete and provides updated examples and homework problems. New material on slender columns, seismic design, anchorage using headed deformed bars, and reinforcing slabs for shear using headed studs has been added. The notation has been thouroughly updated to match changes in the ACI Code. The text also presents the basic mechanics of structural concrete and methods for the design of individual members for bending, shear, torsion, and axial force, and provides detail in the various types of structural systems applications, including an extensive presentation of slabs, footings, foundations, and retaining walls.
Reinforced Concrete Design to BS 8110 Simply Explained
Practical Deterministic and Probabilistic Approaches
CE 3053
Design of Reinforced Concrete
Advanced Materials and Techniques for Reinforced Concrete Structures