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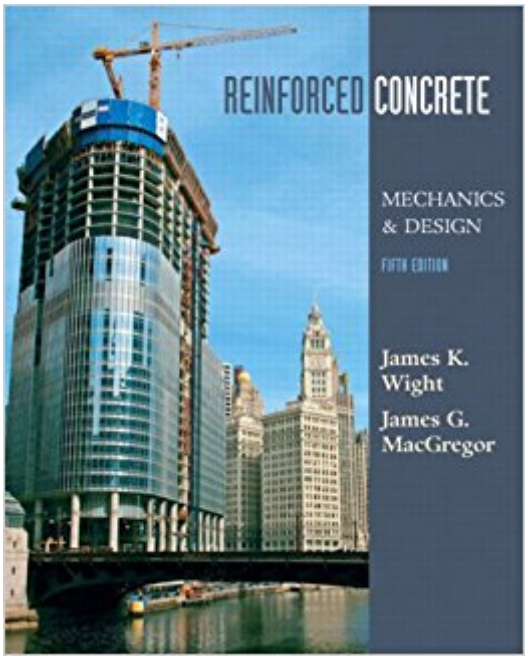
Reinforced Concrete: Mechanics And Design (5th Edition)



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Synopsis

Reinforced concrete design encompasses both the art and science of engineering. This book presents the theory of reinforced concrete as a direct application of the laws of statics and mechanics of materials. In addition, it emphasizes that a successful design not only satisfies design rules, but also is capable of being built in a timely fashion and for a reasonable cost. A multi-tiered approach makes Reinforced Concrete: Mechanics and Design an outstanding textbook for a variety of university courses on reinforced concrete design. Topics are normally introduced at a fundamental level, and then move to higher levels where prior educational experience and the development of engineering judgment will be required.

Book Information

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Customer Reviews

Reinforced Concrete Mechanics & DesignFifth EditionJames K. Wight â ¢ James G. MacGregor A multi-tiered approach makes Reinforced Concrete: Mechanics and Design an outstanding textbook for a variety of courses on reinforced concrete design.This new edition has been updated so all chapters are in compliance with the 2008 edition of the ACI Building Code. New problems were developed for chapters where major changes were made, and all of the examples throughout the text were either reworked or checked for accuracy. Other changes include the following:â ¢ Â All flexural analysis of various beam and slab sections is now covered in Chapter 4. After completing this chapter students should be prepared to analyze any beam section they may encounter either in their courses or in a design office.â ¢ Â All flexural design for beams and one-way slabs is covered

in Chapter 5. Information on continuous floor systems, which was in Chapter 10 of prior Â editions, has been moved to Chapter 5. Also, Chapter 5 gives more extensive information on structural analysis of continuous floor systems, including modeling assumptions and the interplay between analysis and design.â ¢ Â Chapter 12 has been significantly modified to comply with changes in the ACI Code for analysis and design of slender columns. A new detailed design example is included to demonstrate the new code provisions. â ¢ Â Chapter 13 includes all of the analysis and design requirements for two-way floor systems, which was previously presented in two chapters. As with Chapter 5, this chapter includes new information on structural analysis and modeling assumptions for continuous two-way floor systems.â ¢ Â An expanded coverage of the yield-line analysis method for two-way slabs, including several examples, is presented in Chapter 14.â ¢ Â In Chapter 18 the discussion of flexural design procedures for shear walls that resist lateral loads, including walls with either uniformly distributed vertical reinforcement or with vertical reinforcement concentrated at the edges of the wall section, has been expanded. Also, a capacity-design approach is presented for the shear design of structural walls that resist earthquake-induced forces. Â â ¢ Â Appendix A now contains a large number of axial load vs. moment interaction diagrams that incorporate the strength reduction factor. Both students and designers should find these figures very useful.

James K. Wight received his B.S. and M.S. degrees in Civil Engineering from Michigan State University in 1969 and 1970, and his Ph.D. from the University of Illinois at Urbana-Champaign in 1973. He has been a professor of structural engineering in the Civil and Environmental Engineering Department at the University of Michigan since 1973. He teaches undergraduate and graduate classes on analysis and design of reinforced concrete structures. He is well known for his work in earthquake-resistant design of concrete structures and spent a one-year sabbatical leave in Japan where he was involved in the construction and simulated earthquake testing of a full-scale reinforced concrete building. Professor Wight has been an active member of the American Concrete Institute since 1973 and was named a Fellow of the Institute in 1984. He is the immediate past-Chair of the ACI Building Code Committee 318 and past-Chair of Subcommittee 318-E. He is also past-Chair of the ACI Technical Activities Committee and Committee 352 on Joints and Connections in Concrete Structures. He has received several awards from the American Concrete Institute including the Delmar Bloem Distinguished Service Award (1991), the Joe Kelly Award (1999), the Boise Award (2002), the Structural Research Award (2003) for a paper he co-authored with a former student, and the Alfred Lindau Award (2008). Professor Wight has received numerous awards for his teaching and service at the University of Michigan including the ASCE Student

Chapter Teacher of the Year Award, the College of Engineering Distinguished Service Award, the College of Engineering Teaching Excellence Award, and the Chi Epsilon-Great Lakes District Excellence in Teaching Award. He recently received a Distinguished Alumnus Award (2008) from the Civil and Environmental Engineering Department of the University of Illinois at Urbana-Champaign. Â Â James G. MacGregor, University Professor of Civil Engineering at the University of Alberta, Canada, retired in 1993 after 33 years of teaching, research, and service, including three years as Chair of the Department of Civil Engineering. He has a B.Sc. from the University of Alberta and a M.S. and Ph.D. from the University of Illinois. In 1998 and 1999 he received a Doctor of Engineering (Hon) from Lakehead University, and in 1999 a Doctor of Science (Hon) from the University of Alberta. Dr. MacGregor is a Fellow of the Academy of Science of the Royal Society of Canada and a Fellow of the Canadian Academy of Engineering. A Past President and Honorary Member of the American Concrete Institute, Dr. MacGregor has been an active member of ACI since 1958. He has served on ACI technical committees including the ACI Building Code Committee and its subcommittees on flexure, shear, and stability and the ACI Technical Activities Committee. This involvement and his research has been recognized by honors jointly awarded to MacGregor, his colleagues, and students. These included the ACI Wason Medal for the Most Meritorious Paper (1972, and 1999), the ACI Raymond C. Reese Medal, and the ACI Structural Research Award (1972 and 1999). His work on the developing the Strut-and-Tie model for the ACI Code was recognized by the ACI Structural Research Award (2004). In addition, he has received several ASCE Awards, including the prestigious ASCE Norman Medal with three colleagues (1983). Dr. MacGregor chaired the Canadian Committee on Reinforced Concrete Design from 1977 through 1989, moving on to chair the Standing Committee on Structural Design for the National Building Code of Canada from 1990 through 1995. From 1973 to 1976 he was a member of the Council of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta. At the time of his retirement from the University of Alberta, Professor MacGregor was a principal in MKM Engineering Consultants. His last project with that firm was the derivation of site-specific load and resistance factors for an eight-mile long concrete bridge.

I have an older 4th edition, very used, and still in good shape. The educational content is very good IMO. But it stops there.I purchased the 6th edition for a school requirement, and as others have mentioned, the binding disintegrated, pages falling out, etc..I now purchased the 7th edition since it is updated for the ACI 318-14 material, and the reviews seemed high. I realize now that the reviews are for all versions of the book, not just the 7th edition.This 7th edition is printed on extremely low

quality paper. It’s similar to the cheapest paper you can buy for your home printer. The low quality paper makes the book about a third larger than the previous editions, although the number of pages between all versions is only around 10 pages. The low quality finish on the paper results in a lot of see-through properties. So while you read a page there is a lot of background showing through from the pages beneath what you are reading. Also, the low quality paper warps/waves much easier, like it is a primed to absorb any amount of humidity in the air. I attached several images showing the 3 versions size comparison; the binding of 6th edition; and size and see-through properties of the 7th edition. You can see the 7th edition is just plain white paper. I hope it helps others to be informed buyers.I am returning this 7th edition promptly. The 6th edition is low quality construction. The 7th edition is lower quality construction than the 6th. $212 is far too much for me to pay for such a low quality construction like this. Fool me twice with the 7th edition - shame on me.I really did like the content and wish I could find the new edition in a normal textbook quality. This forces me to find a different book entirely...

This is probably the best textbook for reinforced concrete design in the market, especially for the two to three semester sequences of reinforced concrete courses that are taught at universities. It provides many in-depth examples and clearly explains all procedures in a very concise manner, making the textbook very readable. The authors also spent a lot of time discussing the MECHANICS of reinforced concrete, which is something that many other textbooks do not thoroughly cover. I would highly recommend this textbook to any student in Structural Engineering. It is also serves as an excellent reference for practicing structural engineers. You will not be disappointed when you read this textbook.

Cover all basic material, a very good reference for both structural engineers, and graduate students. Very good reference to understand ACI 318 deeper and better, although works well for other standard codes due to comprehensive coverage of materials. May not be good for those people who looking for a simpler source or for some undergraduate students in early of their study.

This is one of the most thorough and complete concrete books out there. from the early years of college until my thesis defense for my masters in structural engineering, this book has helped me alot.

Good book and low price.

Amazing product, fast shipping, great customer service! Love it!

The book has everything you could ask for in a Concrete textbook. We didn't use this too much in class, but from what we did use the detail was very thorough.

Prof. J. K. Wight, who was the Chairman of the committee, which revised the current ACI 318 code has joined with professor J.G. MacGregor (who also is a past President of ACI and chaired several ACI & Canadian code committees) in writing the fifth edition of this standard, well established and popular text book. Their experience is distilled in this well written book, which covers both theoretical as well as practical aspects of reinforced concrete structures. The ACI code clauses are well explained with examples. Though the book a bit expensive, it contains 1112 pages of useful information which includes several figures, tables, photos, charts and several worked out examples. A few examples are also in SI units and equations are presented in SI units also throughout this book.Hope in future editions the authors will include a CD containing some spreadsheets for the design of various elements. I would recommend this book to any one interested in reinforced concrete design.

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