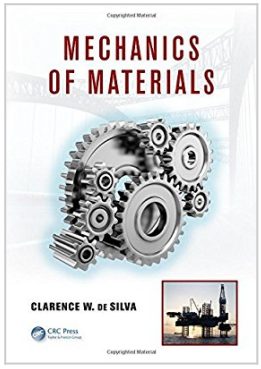

Mechanics of Materials (Computational Mechanics and Applied Analysis)

By Clarence W. de Silva

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A systematic presentation of theory, procedures, illustrative examples, and applications, **Mechanics of Materials** provides the basis for understanding structural mechanics in engineering systems such as buildings, bridges, vehicles, and machines. The book incorporates the fundamentals of the subject into analytical methods, modeling approaches, numerical methods, experimental procedures, numerical evaluation procedures, and design techniques.

It introduces the fundamentals, and then moves on to more advanced concepts and applications. It discusses analytical methods using simple mathematics, examples and experimental techniques, and it includes a large number of worked examples and case studies that illustrate practical and real-world usage.

- In the beginning of each chapter, states and summarizes the objectives and approaches, and lists the main topics covered in the chapter
- Presents the key issues and formulas in a "Summary Sheet" at the end of each chapter
- Provides as appendices at the end of the book, useful reference data and advanced material that cannot be conveniently integrated into the main chapters

Mechanics of Materials is a result of the author's experience in teaching an undergraduate course in mechanics of materials consisting of mechanical, manufacturing, materials, mining and mineral engineering students and in teaching other courses in statics, dynamics, modeling, vibration, instrumentation, testing, design, and control. This book is suitable for anyone with a basic engineering background. The practical considerations, design issues, and engineering techniques, and the snapshot-style presentation of advanced theory and concepts, makes this a useful reference for practicing professionals as well.

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Editorial Review

Review

"On the basis of what I have seen so far, this would appear to be a book very well-suited to a first course in Mechanics of Materials (etc.). Topics are explained in an admirable degree of detail, which should make the book particularly student-friendly. The author brings a wealth of practical experience, with good examples from engineering practice."
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?Peter X. Liu, Carleton University

About the Author

Dr. Clarence W. de Silva, P.E., Fellow ASME and Fellow IEEE, is a professor of mechanical engineering at the University of British Columbia, Vancouver, and occupies the Senior Canada Research Chair Professorship in Mechatronics and Industrial Automation. He earned Ph.D. degrees from the Massachusetts Institute of Technology, USA and the University of Cambridge, England, and received an honorary D.Eng. degree from University of Waterloo, Canada. De Silva has received several awards, made 32 keynote addresses at international conferences, and served as editor on 14 journals. He has 21 technical books, 18 edited books, 44 book chapters, 220 journal articles, and 250 conference papers in publication.

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