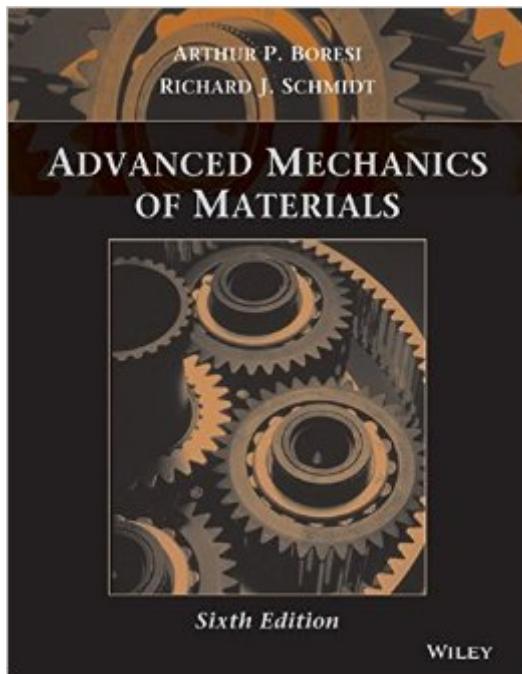


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# Advanced Mechanics Of Materials



## Synopsis

Building on the success of five previous editions, this new sixth edition continues to present a unified approach to the study of the behavior of structural members and the development of design and failure criteria. The text treats each type of structural member in sufficient detail so that the resulting solutions are directly applicable to real-world problems. New examples for various types of member and a large number of new problems are included. To facilitate the transition from elementary mechanics of materials to advanced topics, a review of the elements of mechanics of materials is presented along with appropriate examples and problems.

## Book Information

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## Customer Reviews

I've used this book both as a graduate student and a professor in civil/mechanical engineering. This book fills an important gap in advanced mechanics of materials/applied elasticity books (e.g. Ugural & Fenster, Cook & Young, Barber). Why? It contains a complete chapter on static failure theories including both pressure-independent (von Mises, Tresca) and pressure-dependent (Coulomb and Drucker-Prager) approaches. It also includes a full chapter on fracture mechanics, traditional fatigue, stress concentration factors, and creep. This book is a great launching point for courses involving plates & shells, elastic stability, and plasticity. However, this is not an elasticity text. Neither is this book a text on finite element analysis, although the publisher has an online chapter on FEA available. The reading level is challenging. Period. For an easier read, try Barber's "Intermediate Mechanics of Materials" or Cook and Young's "Advanced Mechanics of Materials."

The bottom line is that this classic book, based on the 1931 text of Fred Seely of the Univ. of Illinois, is very useful, but it's not for the faint-hearted.

I don't subscribe to the point of view of those people who don't like this book. The book is clear, concise, well written. I used in one of my Master's classes, and I loved it. It covers: stress theory, elasticity, fatigue analysis, basics of FE method, basic crack theory. Again, as I use to write in all my reviews: for each one of the chapters, one may find dozens of books. For the beginner and the practitioner this book is OK. It has been said: "Computers make a good engineer a better one, a bad engineer a dangerous man". If you don't know the THEORY, you will FAIL in the practice. Do you really think one needs to perform a FEM analysis in order to know that as the radius of a round approaches zero, the stress at a point reaches the infinity?!? Here you will find the theory needed to SAFELY perform structural analysis (with or without computers). I think this book is a good one, and should stand in every engineer's bookshelf

The book was delivered in a timely manner in the condition described. The book itself is not very useful. The explanations are very brief and gloss over a lot of material. I had to use some of my other textbooks to look up equations that were required for the problems listed in each chapter. I recommend a different mechanics of materials book. The mech. of. mat. book by Philpot is much better and covers almost all the material in this book, and covers other material.

This book is well written and even manages to maintain an interesting easily read tone. The only reason I don't give it a 5 is because it is not a stand alone text. Aside from stress/strain theories and general planar analysis (Mohr's circle relations, Hooke's Laws), there is not much review of basic mechanics of materials in this book so it is not going to work for students new to mechanics or who are looking to be able to review basic mechanics before you delve into the meat of advanced mechanics. In fact, I recommend having a basic mechanics book available even for the more advanced students because it is often a necessary reference for many of the problems. Aside from the above drawback, the new material presented in this book is laid out very well and with just enough detail to keep an engineer happy. What I mean by this is that only enough mathematics is used as is necessary, and the author avoids extensive exhausting proofs wherever he can. Some of the advanced topics covered are as follows: Inelastic Material Behavior Applications of Energy Methods Advanced Bending & Torsion Curved Beam Analysis Elastic and Inelastic Foundations Stress Concentrations Fracture Mechanics Fatigue Contact Stresses Creep

Indispensable, very good quality book. Gives solid background for the interested parties. Not for faint-hearted, needs solid math knowledge. You need to solve the problems. I would recommend it to my friend.

I find this book very clear and yet it has several topics. But the site where the solutions are supposed to be are rather confusing, and, for some unknown reason, only teachers have access to the answer key. I think a graduation student should be given the right to check his answer, since he is not a kid who will cheat on his homework or anything.

This textbook is practically unreadable. It spends massive amounts of time going through unnecessary conceptual groundwork- without helpful examples. Variables and constants are suddenly introduced without explanation, the appendix is a joke, and the entire text is unbearably dry. This book is a professor's wet dream and a student's constant nightmare. I wish a thousand years of ill will upon Mr. Boresi and his descendants. His life is a sham and his legacy is for jest

A very strong and useful book for graduate students, especially in field of structural engineering and mechanical engineering. Just it may need to add some newly engineering material in practice.

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