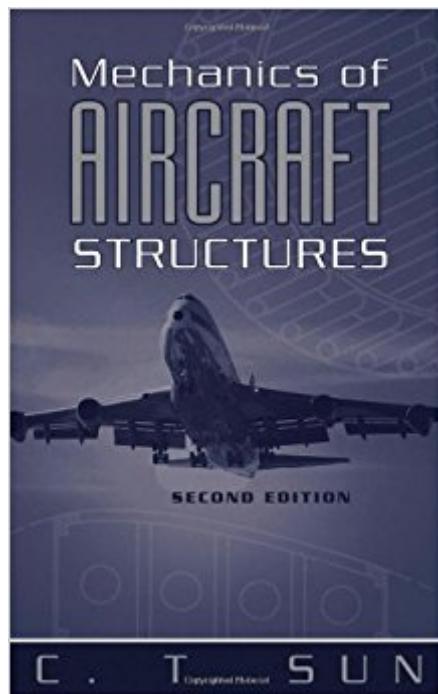


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# Mechanics Of Aircraft Structures



## Synopsis

Designed to help students get a solid background in structural mechanics and extensively updated to help professionals get up to speed on recent advances. This Second Edition of the bestselling textbook Mechanics of Aircraft Structures combines fundamentals, an overview of new materials, and rigorous analysis tools into an excellent one-semester introductory course in structural mechanics and aerospace engineering. It's also extremely useful to practicing aerospace or mechanical engineers who want to keep abreast of new materials and recent advances. Updated and expanded, this hands-on reference covers: \* Introduction to elasticity of anisotropic solids, including mechanics of composite materials and laminated structures \* Stress analysis of thin-walled structures with end constraints \* Elastic buckling of beam-column, plates, and thin-walled bars \* Fracture mechanics as a tool in studying damage tolerance and durability. Designed and structured to provide a solid foundation in structural mechanics, Mechanics of Aircraft Structures, Second Edition includes more examples, more details on some of the derivations, and more sample problems to ensure that students develop a thorough understanding of the principles.

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## Customer Reviews

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C. T. SUN, PhD, is the Neil A. Armstrong Distinguished Professor in the School of Aeronautics and Astronautics at Purdue University in West Lafayette, Indiana, and the recipient of the 2004 Purdue University Research Award. Dr. Sun teaches composites, elasticity, fracture mechanics, and aircraft structures. He is a Fellow of both the American Institute of Aeronautics and Astronautics (AIAA), the American Society of Mechanical Engineers (ASME), and the American Society for Composites (ASC).

This is the worst textbook I have ever attempted to utilize during my college career, and that says a lot about how useless this textbook is. It is extremely inefficient and offers zero explanations and presents everything in the most useless and overcomplicated manner than will confuse the experienced reader. There is practically nothing to "learn" from this book unless you are a professional engineer and have previously mastered everything this book attempts to present. If you are a student, I can without a doubt say that purchasing this textbook is not worth your money and certainly not worth the amount of time you will waste trying to learn the basics in it. I sincerely hope that the author and publisher of this book will consider marketing it as a professional reference material and NOT a textbook. This 2-star rated book sincerely sucks. A zero-star rating would more accurately reflect this book. What a waste.

I am an aerospace engineering student who had to purchase this book for a structures class. The book is relatively short, which is fine, and covers what needs to be covered. The problem is that its layout is hard to follow and many of the derivations are one-offs with little relation to the rest of the material. A better layout would derive everything in a principled manner and then show how, for example, Bernoulli Euler and Timoshenko beam theory are merely simple versions of general beam

theory based on your assumptions. That would really help us understand what assumptions are being made, why they are being made, and we have the tools to tackle whatever by starting from the general equations. I highly recommend Kosmatka's structures notes from UCSD in place of CT Sun. If it ever is published go for that instead.

I won't go into much detail about the frustrating and inadequate nature of this book, as many others have already done so. Basically, all you need to know about this book is that it is a waste of time. The author rarely explains anything with sufficient detail and seems to expect you to already know an incredible amount about aircraft structures. My TA even told us that we had better come to class every day, because the textbook is pretty much worthless. I wondered why anyone would force students to waste money on a book that is clearly insufficient, but then I recognized the author's name. It seems the only reason why I am forced to buy this book is because the author is a professor at my school. Just stay away from this book if you can.

I purchased this book, knowing the negative comments about it, but I was required to do so. I'm trying to do homework, and the book assumes you know every single thing from mechanics and strength of materials. There's no reference formulas, no examples whatsoever. Maybe it's possible to use this text as a reference, not \$100+ textbook to learn from. Looks like the author wrote this book to supplement his own class with a reference, but the world is bigger than his class. Please, whoever bought this book, scan the pages into pdf and distribute it to the internet for free, because this book isn't worth any money. I'm not learning anything, just doing Mechanics of Materials over again under a different name. If you want to learn aircraft structures, you need to do a research and find texts, where real engineers discuss real-life problems.

I do not like this book. I am able to read and comprehend the material, but it is difficult to do. The derivations are very math intensive, and there aren't enough words explaining the steps during the derivations. The steps laying out the derivation are complete at the beginning of the derivation, but they diminish as the derivation is worked out. The book isn't terrible, but I prefer my instructors notes over the book. I only open this book when I can't piece together my notes taken in class.

I haven't utilized this book much, but I was required to purchase it for my class. I've used it for homework assignments from the questions in the text, but for nothing else. The notes I've gotten in class have been sufficient, and the few times I've turned to the book or further clarification, it hasn't

provided any. Not very detailed in any particular subject. Not overly helpful for deeper study.

This is the required book for my graduate class on structures. Its best if you already have a familiarity with the basic concepts of stress and strain, torsion, bending, etc. It has good examples, though, and the problems at the end of the chapter are not too hard (tho, they do require a lot of algebra and plug-and-chug). There are not selected answers in the back. If you're looking for a good basic book on structures, this one probably isn't for you. Also, they don't actually talk a whole lot about applications to aircraft structures. What the book DOES do is cover the basic theories that one would need to start to analyze aircraft structures. It does not cover design of aircraft structures.

Great.

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