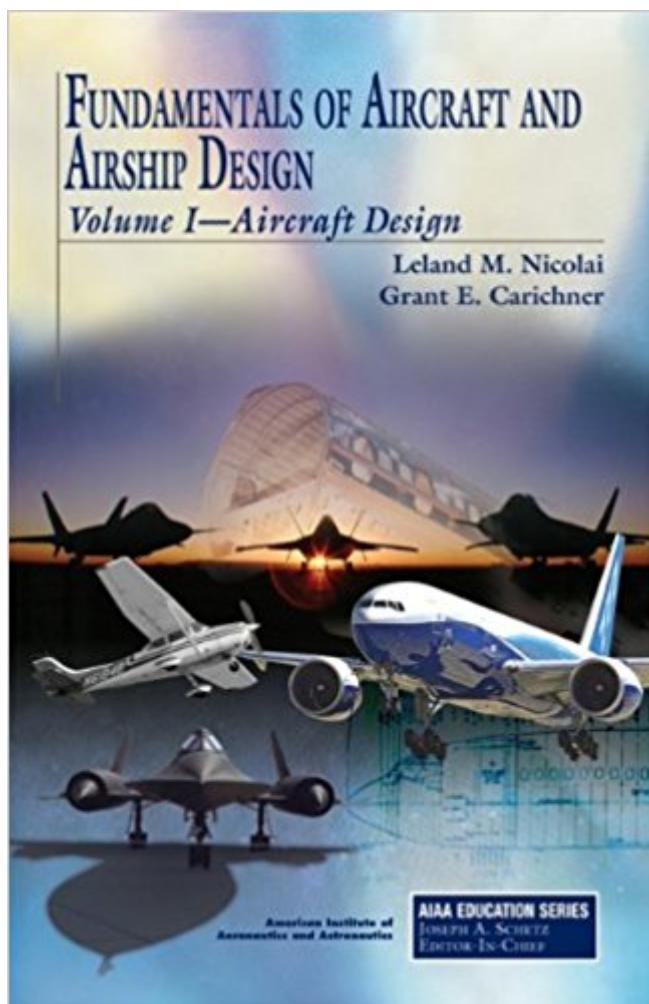


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# Fundamentals Of Aircraft And Airship Design (AIAA Education Series)



## Synopsis

This book is revision and expansion of the classic 1975 aircraft design textbook that has been used worldwide for more than 30 years. Completely updated with the latest industry processes and techniques, it will benefit graduate and upper-level undergraduate students as well as practicing engineers. The aircraft is only a transport mechanism for the payload, and all design decisions must consider payload first. Simply stated, the aircraft is a dust cover. Fundamentals of Aircraft and Airship Design, Volume 1: Aircraft Design; emphasizes that the science and art of the aircraft design process is a compromise and that there is no right answer; however, there is always a best answer based on existing requirements and available technologies.

## Book Information

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## Customer Reviews

On a preliminary evaluation of the book, I am impressed with it. The book is very clearly laid out and though not a comment on content, I am quite a fan of the book's form factor. Starting with the first few chapters including a review of practical aerodynamics and performance methods, Nicolai writes in a manner very suitable to a person without any design experience particularly in aircraft. He gives a very good explanation of the overall design process and how his book fits into it. The book has a excellent mix of theory and practical application. Much theory is given to explain how and why things are the way they are but this is accompanied by real world data and practical application. My only gripe, though very petty in the overall scope of things, is the lack of mention of light sport aircraft

which I believe is the best thing to happen to light general aviation in recent years. In his book, Nicolai also refers to Roskam and Raymer's text. Having Roskam's set of books, I can say that they are indeed an invaluable resources however, Nicolai's book is significantly better laid out and features somewhat better explanations of things. This is particularly true of the introductory chapters which I believe is sufficient to get the new aircraft designer on his feet with a clear idea of how to proceed. I can't exactly say the same for Roskam's Part I which involves less theory and more explanation of the use of formulae and method. Once I read the book in more depth, I will edit this review as necessary.

Having worked in preliminary design of modern commercial airliners for several years I must say, this is the book which best summarizes the current industry practices. Maths are down to the relevant amount, reflecting the real ways of working, which makes it a readable book at the same time. The large aircraft/engine/aero database in the appendix adds a lot of value, as reference data is the most important thing in preliminary design. Highly recommended to students in aircraft design and also to engineers who are looking for an answer on why aircraft look the way they do. **AIRSHIP ENTHUSIASTS BEWARE:** This book does not cover airship design at all.

We use this book for our senior design class at The University of Texas at Arlington, this book is sold through AIAA also, it is a well organized and structured book for a student and even graduates who are looking for reference books. This book focuses on physical and technical understanding required for designing an aircraft with a little bit of historical background. This book also includes some color photos and graphs, I would recommend buying this book.

This book comes in two volumes. The book you see is Volume 1 which is devoted to Aircraft Design only. Airship Design is supposedly covered in Volume 2 which I have been unable to locate. The AIAA says it is unavailable. Does that mean it hasn't been published yet or just that they didn't have one to send me? If any of you find out, please let me know. Volume 1 is an excellent 900-page book with about 200 pages of appendices. Volume 2 promises several Case Studies which I am most interested in.

Great condition

Lots of updates from the original, with new information for composites, and much better content for

smaller aircraft. Great reference for airplane design.

good

This is an updated edition of Nicolai's 1975 publication. I personally feel that it will equal Raymer's Aircraft Design: A Conceptual Approach (Aiaa Education Series), which is the current reigning collegiate aircraft design publication. The book is well written and even presents a section design propeller-driven aircraft. He has an extensive section on structural design and analysis. I am planning on adopting this book for our senior aircraft design course.

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