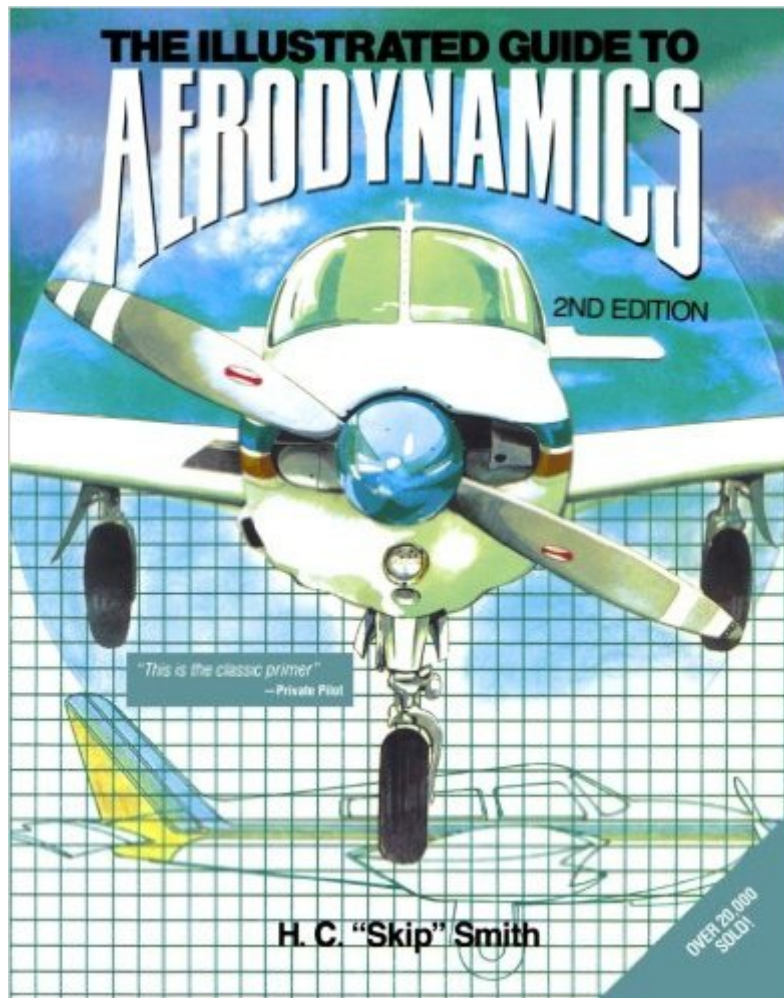


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# Illustrated Guide To Aerodynamics



## Synopsis

Most pilots and flight students wince at the mention of the term "aerodynamics" because most courses and books dealing with the subject do so using complicated scientific theory and intricate mathematical formulas. And yet, an understanding of aerodynamics is essential to the people who operate and maintain airplanes. This unique introductory guide, which sold more than 20,000 copies in its first edition, proves that the principles of flight can be easy to understand, even fascinating, to pilots and technicians who want to know how and why an aircraft behaves as it does. Avoiding technical jargon and complex calculations, Hubert "Skip" Smith demonstrates how aerodynamic factors affect all aircraft in terms of lift, thrust, drag, in-air performance, stability, and control. Readers also get an inside look at how modern aircraft are designed-including all the steps in the design process, from concept to test flight and the reasoning behind them. This edition features expanded coverage of aircraft turning and accelerated climb performance, takeoff velocities, load and velocity-load-factors, area rules, and hypersonic flight, as well as the latest advances in laminar flow airfoils, wing and fuselage design, and high-performance lightplanes. Question and answer sections are added for classroom use.

## Book Information

Paperback: 352 pages

Publisher: McGraw-Hill Education; 2 edition (December 1, 1991)

Language: English

ISBN-10: 0830639012

ISBN-13: 978-0830639014

Product Dimensions: 7.4 x 0.7 x 9.3 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: 4.7 out of 5 stars Â Â See all reviews Â (36 customer reviews)

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## Customer Reviews

Unless one has considerable experience interpreting mathematical formulae, it may be worth their while to consider a book such as this before reading a university level aerodynamics textbook. The textbook will be made somewhat more comprehensible knowing the basic principles which a more

descriptive book, such as this one, can teach simply. Most textbooks in the subject, even those meant as introductory, give a painfully mathematical and theoretical treatment with insufficient verbal explanation. They are meant for complete school courses, where a teacher can qualitatively describe the physical principles. Without the benefit of professors, a book like Smith's is required to provide the intuitive capacity which then makes the textbooks useful. The Illustrated Guide to Aerodynamics was not prepared as a university textbook, hence its semi-quantitative, largely practical, explanation of aerodynamics principles, but students will still find it valuable in reducing the effort needed when they turn to their textbooks. The important concepts are all covered and explained well, along with aerodynamics terms and design considerations. Use this book to help you understand, the others to help your grade point average. Smith's book would also be understandable to those who are not students, but do want to know about the physical principles involved in aircraft flight. Many diagrams and graphs explain the subject matter in pictures. A knowledge of basic mechanics and basic fluid mechanics is required, however. My only complaint is the author's use of English units on an SI continent. English units are somewhat forgivable however, since aerodynamics and fluid mechanics are areas which continue to resist complete conversion to SI.

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