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› [Aircraft Propulsion and Gas Turbine Engines, Second Edition Instruction Manual](#)

CRC Press Second Edition (ISBN-10: 1466595167)

Aircraft Propulsion and Gas Turbine Engines, Second Edition

Brand: CRC Press

Model: Second Edition (ISBN-10: 1466595167)

INTRODUCTION

This manual provides an overview of the **Aircraft Propulsion and Gas Turbine Engines, Second Edition** textbook by Ahmed F. El-Sayed. This edition expands upon the first, incorporating critical advancements and new subject areas relevant to aerospace and aeronautical engineering.

AIRCRAFT PROPULSION AND GAS TURBINE ENGINES

SECOND EDITION



AHMED F. EL-SAYED

Image 1: Front cover of the textbook, displaying the title, author, and a graphic of an aircraft and engine components.

The book is structured to facilitate comprehensive study of both air-breathing and non-air-breathing propulsion systems, making it a valuable resource for students and professionals in the field.

CONTENT STRUCTURE

The Second Edition is organized into three primary parts:

- **Parts One and Two:** Dedicated to air-breathing engines, covering fundamental principles and advanced topics in gas turbine engines.
- **Part Three:** Focuses on non-air-breathing or rocket engines, extending the scope to include space propulsion technologies.

This division allows for a structured approach to understanding the diverse aspects of aircraft propulsion.

KEY TOPICS COVERED

Significant additions and updates in this edition include:

- **Piston Engines:** Integrated coverage of piston engines with propeller technology.
- **Pump Technologies:** Introduction to various pump technologies relevant to propulsion systems.
- **Rocket Propulsion:** Expanded content on rocket engines, enabling comparative study of aerospace and aeronautical topics.
- **Modern Advancements:** Updates reflecting the latest developments in turbine engines, fuels, and combustion.
- **Contemporary Subjects:** Discussions on biofuel economic viability and propulsion technologies for Unmanned Aerial Vehicles (UAVs).

SECOND EDITION

AIRCRAFT PROPULSION AND GAS TURBINE ENGINES

AHMED F. EL-SAYED

Aircraft Propulsion and Gas Turbine Engines, Second Edition builds upon the success of the book's first edition, with the addition of three major topic areas: Piston Engines with integrated propeller coverage; Pump Technologies; and Rocket Propulsion. The rocket propulsion section extends the text's coverage so that both Aerospace and Aeronautical topics can be studied and compared. Numerous updates have been made to reflect the latest advances in turbine engines, fuels, and combustion. The text is now divided into three parts, the first two devoted to air breathing engines, and the third covering non-air breathing or rocket engines.

FEATURES

- Provides a readable, up-to-date as well as future trends of aircraft and rocket propulsion systems
- Adds coverage of piston engines and propeller technology that power Unmanned Air Vehicles and small aircraft
- Describes utilization of airbreathing engines in rockets for extended range
- Adds pump technology topics and biofuels for aircraft
- Includes a Solutions Manual, Exam Supplement, Figure Slides, and web resources

MECHANICAL ENGINEERING

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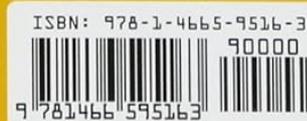


Image 2: Back cover of the textbook, highlighting key features and content additions of the second edition.

BOOK SPECIFICATIONS

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AUTHOR INFORMATION

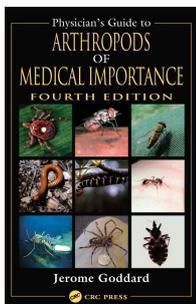
The book is authored by **Prof. Ahmed F. El-Sayed**, an experienced engineer and academician. His background includes 10 years with EgyptAir in maintenance, technical inspection, and R&D, as well as engine overhaul. He has conducted research with Westinghouse (USA) and Rolls Royce (UK) and taught propulsion and turbomachinery courses at numerous universities globally. Prof. El-Sayed has lectured extensively on aircraft engine design and performance at institutions including NASA Glenn, MIT, the US Air Force Academy, and von Karman Institute. He is the author of eight books and over eighty technical papers.

FURTHER ASSISTANCE

For academic inquiries, discussions, or requests related to the content of this book, Prof. Ahmed F. El-Sayed can be contacted via email at dr_ahmedhelal@yahoo.com.

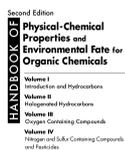
Related Documents - Second Edition (ISBN-10: 1466595167)

	<p>Aircraft Propulsion and Gas Turbine Engines - Comprehensive Technical Guide</p> <p>An in-depth technical exploration of aircraft propulsion systems and gas turbine engines, covering their history, design principles, performance parameters, and various types. Authored by Ahmed F. El-Sayed and published by CRC Press.</p>
	<p>Ergonomics for Beginners: A Quick Reference Guide, Third Edition</p> <p>A comprehensive guide to human factors and ergonomics (HF/E) principles for designing safer, healthier, and more efficient systems, workplaces, and products. Covers posture, environment, work organization, and more.</p>
	<p>Bridge Engineering Handbook Second Edition: Construction and Maintenance</p> <p>A comprehensive reference for bridge engineers, this second edition of the Bridge Engineering Handbook focuses on the construction and maintenance of bridges, detailing modern practices, seismic design, and life-cycle management.</p>



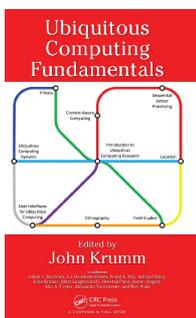
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