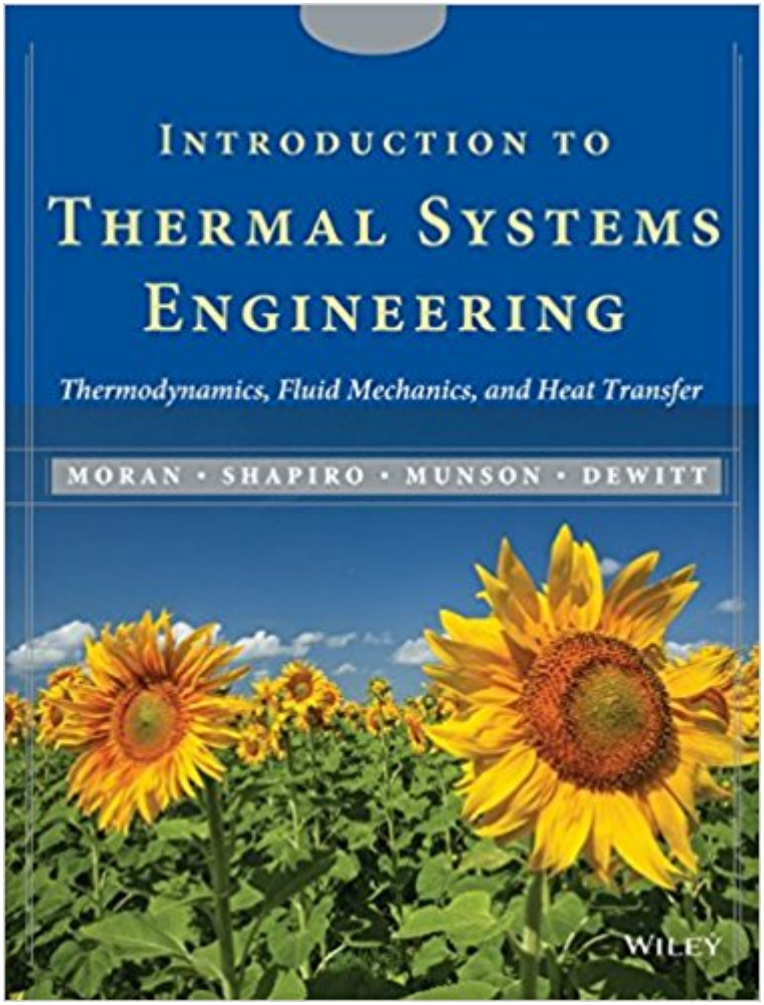
Introduction To Thermal Systems Engineering: Thermodynamics, Fluid Mechanics, And Heat Transfer



Synopsis

This survey of thermal systems engineering combines coverage of thermodynamics, fluid flow, and heat transfer in one volume. Developed by leading educators in the field, this book sets the standard for those interested in the thermal-fluids market. Drawing on the best of what works from market leading texts in thermodynamics (Moran), fluids (Munson) and heat transfer (Incropera), this book introduces thermal engineering using a systems focus, introduces structured problem-solving techniques, and provides applications of interest to all engineers.

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Customer Reviews

Written by four of the leading authors in the field, INTRODUCTION TO THERMAL SYSTEMS ENGINEERING offers an integrated presentation of thermodynamics, fluid mechanics, and heat transferâ ”in one concise text! Authors Michael Moran, Howard Shapiro, Bruce Munson, and David DeWitt have surveyed the fields of thermodynamics, fluid mechanics, and heat transfer, and identified the critical subject areas needed to analyze thermal systems. The text contains all the core material you need in thermal systems engineering, while an accompanying CD offers the full printed text, 200 pages of additional content, and a wealth of resources that will enhance your understanding of the material and help you hone your problem-solving skills. Features Offers a highly accessible, readable, presentation, with a strong emphasis on engineering. Student-centered pedagogy and classroom-tested content are adapted from the market-leading texts in thermodynamics, fluids, and heat transfer. The text presents a unifying theme: the application of

thermodynamics, fluid mechanics, and heat transfer in thermal systems engineering. Includes numerous homework problems, a consistent problem-solving methodology, and examples with detailed solutions. Includes a FREE eText on CD Containing: The full-printed text with hyperlinks 200 pages of additional content Additional worked examples Answers to selected end-of-chapter problems Short Video clips Software for solving problems in thermodynamics and in heat transfer

Dr. Michael J. Moran, is Professor of Mechanical Engineering at the Ohio State University. He is a specialist in engineering thermodynamics and thermoeconomics. He also works in the area of thermal design and optimization.Munson is Professor of Engineering Mechanics at Iowa State University. He received his B.S. and M.S. degrees from Purdue University and his Ph.D. degree from the Aerospace Engineering and Mechanics Department of the University of Minnesota in 1970. mechanics courses for studies in civil engineering, mechanical engineering, engineering science, and agricultural engineering and is the recipient of an Iowa State University Superior Engineering Teacher Award and the Iowa State University Alumni Association Faculty Citation. He has authored and coauthored many theoretical and experimental technical papers on hydrodynamic stability, low Reynolds number flow, secondary flow, and the applications on hydrodynamic stability, low Reynolds number flow, secondary flow, and the applications of viscous incompressible flow. He is a member of the American Society of Mechanical Engineers and The American Physical Society. Donald F. Young, Anson Marston Distinguished Professor Emeritus in Engineering, is a Faculty member in the Department of Aerospace Engineering and Engineering Mechanics at Iowa State University. Dr. young received his B.S. degree in mechanical engineering, his M.S. and Ph.D. degrees in theoretical and applied mechanics from Iowa State, and has taught both undergraduateand graduate courses in fluid mechanics for many years. In addition to being named a Distinguished Professor in the College of engineering, Dr. Young has also Received the Standard Oil Foundation Outstanding Teacher Award and the Iowa State University Alumni Association Faculty Citation. He has been engaged in fluid mechanics research for more than 35 years, with special interest in similitude and modeling and the interdisciplinary field o biomedical fluid mechanics. Dr.. Young has contributed to many technical publications and is the author or coauthor of two textbooks on applied mechanics. He is a fellow of the American society of Mechanical Engineers. Theodore H. Okiishi, Associate Dean of Engineering and past Chair of Mechanical engineering at Iowa State university, has taught fluid mechanics courses there since 1967. He received his undergraduate and graduate degrees at Iowa State. Form 1965 to 1967, Dr. Okiishi served as a U.S. Army officer with duty assignments at the National Aeronautics and Space

Administration Lewis Research Center, Cleveland, Ohio, where he participated in rocket nozzle heat transfer research, and at the combined Intelligence Center, Saigon, Republic of south Vietnam, where he studied seasonal river flooding problems. Professor Okiishi is active in research on turbomachinery fluid dynamics. He and his graduate students and other colleagues have written a number of journal articles based on their studies. some of these projects have involved significant collaboration with government and industrial laboratory researchers with two technical papers winning the ASME Melville Medal. Dr. Okiishi has received several awards for teaching. He hasdeveloped undergraduate and graduate courses in classical fluid dynamics as well as the fluid dynamics of turbomachines. He is a licensed professional engineer. His technical society activities include having been chair of the board of directors of The American society of Mechanical Engineers (ASME) International Gas Turbine Institute. He is a Fellow ofÂ The American Society of (ASME) InternationalÂ Gas Turbine Institute. He is a Fellow of The American society of Mechanical Engineers and the editor of the "Journal of Turbomachinery.Purdue Univ.Purdue Univ.Munson is Professor of Engineering Mechanics at Iowa State University. He received his B.S. and M.S. degrees from Purdue University and his Ph.D. degree from the Aerospace Engineering and Mechanics Department of the University of Minnesota in 1970. mechanics courses for studies in civil engineering, mechanical engineering, engineering science, and agricultural engineering and is the recipient of an Iowa State University Superior Engineering Teacher Award and the Iowa State University Alumni Association Faculty Citation. He has authored and coauthored many theoretical and experimental technical papers on hydrodynamic stability, low Reynolds number flow, secondary flow, and the applications on hydrodynamic stability, low Reynolds number flow, secondary flow, and the applications of viscous incompressible flow. He is a member of the American Society of Mechanical Engineers and The American Physical Society. Donald F. Young, Anson Marston Distinguished Professor Emeritus in Engineering, is a Faculty member in the Department of Aerospace Engineering and Engineering Mechanics at Iowa State University. Dr. young received his B.S. degree in mechanical engineering, his M.S. and Ph.D. degrees in theoretical and applied mechanics from Iowa State, and has taught both undergraduateand graduate courses in fluid mechanics for many years. In addition to being named a Distinguished Professor in the College of engineering, Dr. Young has also Received the Standard Oil Foundation Outstanding Teacher Award and the Iowa State University Alumni Association Faculty Citation. He has been engaged in fluid mechanics research for more than 35 years, with special interest in similitude and modeling and the interdisciplinary field o biomedical fluid mechanics. Dr.. Young has contributed to many technical publications and is the author or coauthor of two textbooks on applied mechanics. He is a fellow of

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Bought as a book to help me with my Design of Thermal Systems class, since we didn’t have an assigned text book. Basically, it’s a summary of the Moran/Shapiro fluid mechanics, heat transfer, and thermo. It’s not very thick, maybe an inch, and it’s great. Again, it summarizes what should be 3 textbooks, it’s a great resource. Also, it has reference pages at the back that those three textbooks would have.I highly recommend this book to any mechanical engineering student or professional who wants a small overview of these three main classes. Plus a great price and it’s hardbound.

The following textbook covers the basic principles for Thermodynamics, Heat Transfer and Fluid Mechanics.

The textbooks is ’old school’ but as long as you have a good teacher, or working knowledge it is easy to follow. make sure you get one with the cd rom in it, i don’t really understand why they put a chapter in thats not actually in the book....

Great conditions and great price

As described and delivered on time.

This books walks you through a lot of the material. Although it seems simple it is very dense with information. you will definitely need someone to teach you, you cannot learn everything from this book

Some damage but usable

One of the few books I actually thought was worth keeping after BSME graduation.

Introduction to Thermal Systems Engineering: Thermodynamics, Fluid Mechanics, and Heat Transfer Computational Fluid Mechanics and Heat Transfer, Third Edition (Series in Computational and Physical Processes in Mechanics and Thermal Sciences) Computational Fluid Mechanics and Heat Transfer, Second Edition (Series in Computional and Physical Processes in Mechanics and Thermal Sciences) Introduction to Thermal Sciences: Thermodynamics, Fluid Dynamics, Heat Transfer Polymer Melt Processing: Foundations in Fluid Mechanics and Heat Transfer (Cambridge Series in Chemical Engineering) Computational Fluid Mechanics and Heat Transfer:2nd (Second) edition Introduction to Thermodynamics and Heat Transfer + EES Software Thermal Physics: An Introduction to Thermodynamics, Statistical Mechanics, and Kinetic Theory (Oxford Science Publications) Biofluid Mechanics, Second Edition: An Introduction to Fluid Mechanics, Macrocirculation, and Microcirculation (Biomedical Engineering) Diffusion: Mass Transfer in Fluid Systems (Cambridge Series in Chemical Engineering) Heat Conduction Using Greenâ ™s Functions, 2nd Edition (Series in Computational Methods and Physical Processes in Mechanics and Thermal Sciences) Design of Fluid Thermal Systems, SI Edition Design of Fluid Thermal Systems Fluid Mechanics and Thermodynamics of Turbomachinery, Seventh Edition Heat and Mass Transfer: Fundamentals and Applications (Mechanical Engineering) Fluid Mechanics for Chemical Engineers (UK Higher Education Engineering Chemical Engineering) Heat Transfer (McGraw-Hill Series in Mechanical Engineering) A Brief Introduction to Fluid Mechanics (Mechanical Engineering) Introduction to Heat Transfer Reinforced Concrete: Mechanics and Design (4th Edition) (Civil Engineering and Engineering Mechanics)