

AN INNOVATIVE APPROACH TO EFFECTIVE TEACHING OF THERMODYNAMICS

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Biography

Yunus Çengel is the Dean of the Faculty of Engineering at Adnan Menderes University ADU in Aydin, Turkey, and Professor Emeritus at the University of Nevada, Reno, USA. He received his Ph. D. in Mechanical Engineering in 1984 from North Carolina State University in USA. Before joining ADU in 2012, he served as the Dean of the Faculty of Mechanical Engineering at Yildiz Technical University YTU and as Advisor to President at Scientific and Technological Research Council TUBITAK. Prior to returning Turkey, he served as a faculty member at the University of Nevada, Reno UNR for 18 years and as the director of the Industrial Assessment Center at UNR for several years. He also served as the advisor to the Ministry of Energy and Natural Resources and the Ministry of National Education in Turkey on energy efficiency, energy policies, and education reform.

Professor Çengel is the author or coauthor of the widely adopted textbooks *Thermodynamics: An Engineering Approach*, *Fundamentals of Thermal-Fluid Sciences*, *Heat and Mass Transfer: Fundamentals and Applications*, *Fluid Mechanics: Fundamentals and Applications*, *Introduction to Thermodynamics and Heat Transfer*, and *Differential Equations for Scientists and Engineers* all published by McGraw-Hill. Some of his textbooks have been translated into Chinese, Japanese, Korean, Thai, Spanish, Portuguese, Turkish, Italian, Greek, and French.

He is the recipient of several outstanding teacher awards, and he has received the ASEE Meriam/Wiley Distinguished Author Award twice. He is a registered Professional Engineer in the State of Nevada, USA.

Summary:

Thermodynamics is a basic science that has long been an essential part of engineering curricula all over the world. The principles of thermodynamics are based on our everyday experiences and observations, and an observant mind should have no difficulty understanding it. Yet thermodynamics is often perceived as a difficult subject, and many students dread the

experience as they have difficulty seeing its relevance to the real world, and leave the course with a superficial understanding of the subject matter. In this presentation some techniques that will make the thermodynamics experience of students a more pleasant and fruitful one by relating the subject matter to real-world applications and experiences are given.