

diagrams that are drawn to scale, is ubiquitous in this textbook. The examples are not trivial, drill problems, but rather complex and timely real world problems that are of interest by themselves. As with the presentation, the solutions to these examples are complete and do not skip steps. Similarly the book includes numerous end of chapter problems, both typeset and online. Most of these problems are more detailed than those found in other thermodynamics textbooks. The supplements include complete solutions to all exercises, software downloads, and additional content on selected topics. These are available at the book web site www.cambridge.org/KleinandNellis.

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This new text integrates fundamental theory with modern computational tools such as EES, MATLAB®, and FEHT to equip students with the essential tools for designing and optimizing real-world systems and the skills needed to become effective practicing engineers. Real engineering problems are illustrated and solved in a clear step-by-step manner. Starting from first principles, derivations are tailored to be accessible to undergraduates by separating the formulation and analysis from the solution and exploration steps to encourage a deep and practical understanding. Numerous exercises are provided for homework and self-study and include standard hand calculations as well as more advanced project-focused problems for the practice and application of computational tools. Appendices include reference tables for thermophysical properties and answers to selected homework problems from the book. Complete with an online package of guidance documents on EES, MATLAB®, and FEHT software, sample code, lecture slides, video tutorials, and a test bank and full solutions manual for instructors, this is an ideal text for undergraduate heat transfer courses and a useful guide for practicing engineers

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This book provides engineers with the tools to solve real-world heat transfer problems. It includes advanced topics not covered in other books on the subject. The examples are complex and timely problems that are inherently interesting. It integrates Maple, MATLAB, FEHT, and Engineering Equation Solver (EES) directly with the heat transfer material. Equips students with the essential knowledge, skills, and confidence to solve real-world heat transfer problems using EES, MATLAB, and FEHT.

This book presents studies on the plasticity, failure, and damage behavior of materials and structures under monotonic and cyclic loads. Featuring contributions by leading authors from around the globe, it focuses on the description of new effects observed in experiments, such

