

We've Got The Ingredients For

FLUID MECHANICS

THEODORE ALLEN, JR. and RICHARD L. DITSWORTH, both of Arizona State University. 1972, 382 pages, \$15.50

A Solutions Manual is available.

Succinct and precise in their exposition, Allen and Ditsworth's text offers a unified treatment of fluid mechanics. Utilizing the student's background in thermodynamics and dynamics, their undergraduate book employs vectors, accompanied by physical illustrations, to formulate those physical laws which pertain to continuum fluid mechanics. A large number of illustrated problems, self-study questions, and assigned problems are also included.

HEAT TRANSFER, Second Edition

BENJAMIN GEBHART, Cornell University. 1971, 608 pages, \$18.50

Although different in many respects from its predecessor, this text has retained its original orientation: to present a description of the more important physical processes, theories, and methods of analysis utilized in the field of heat transfer. In order to accomplish this purpose, the author has begun with a relatively rigorous examination of the fundamentals and progressed to an up-to-date account of the state-of-the-art in several very crucial new areas in heat transfer, e.g., radiation transport, and natural convection.

EXPERIMENTAL METHODS FOR ENGINEERS, Second Edition

JACK P. HOLMAN, Southern Methodist University. 1971, 423 pages, \$13.50

A Solutions Manual is available.

For students taking core courses in engineering experimentation, this text offers a broad treatment of instrumentation and the analysis of experimental data. This edition contains more information on experiment planning and the importance of feedback during performance, emphasizing the analysis of uncertainties in planning experiments and instrumentation. A variety of numerical examples, problems, and methods are included.

ANALYTICAL METHODS IN CONDUCTION HEAT TRANSFER

GLEN E. MYERS, University of Wisconsin. 1971, 500 pages, \$19.50

Instead of examining all existing classical solutions, this book concentrates on a number of analytical methods for solving conduction heat transfer problems. The first half of the book discusses exact techniques, including Bessel functions, superposition, and normalization. The second half emphasizes computer methods, and incorporates material on the finite-difference method as well as the finite-element method, a subject which has never previously been presented in a heat transfer text.



McGraw-Hill Book Company

Chemical Engineering Education

THERMODYNAMICS, Second Edition

WILLIAM C. REYNOLDS, Stanford University.
1968, 512 pages, \$12.50

The basic macroscopic principles of thermodynamics are developed in this fundamental text with insight obtained by consideration of the microscopic aspects of matter. Throughout, the author uses the basic conceptual ideas of statistical thermodynamics rather than its details. Disorder, randomness, and uncertainty notations are used in conjunction with the Gibb's definition of entropy to provide an intuitive basis for the second law postulate.

ENGINEERING THERMODYNAMICS

WILLIAM C. REYNOLDS, Stanford University
and HENRY C. PERKINS, University of
Arizona. 1970, 544 pages, \$13.50

The first seven chapters of this book are identical to those in *Thermodynamics, Second Edition*. However, the remaining chapters emphasize applications to actual engineering systems. The material on power systems has been expanded, and chapters on compressible flow and heat transfer included. There are no detailed statistical thermodynamic calculations in this version, though the statistical concepts remain in the fundamental development of the first seven chapters and are used later in qualitative ways.

Prices are subject to change without notice.

CHEMICAL ENGINEERING KINETICS, Second Edition

J. M. SMITH, University of California, Davis.
1970, 544 pages, \$16.50

With the general purpose of acquainting students with the tools necessary to design new chemical reactors and predict the performance of existing ones, this book develops principles of kinetics and reactor design and then applies them to actual chemical reactors. Emphasis is placed on real reactions using experimental rather than hypothetical data. Kinetics, homogeneous reactions, heterogeneous catalytic and non-catalytic reactors, and residence time distribution effects are treated in detail.

DESIGN OF THERMAL SYSTEMS

W. F. STOECKER, University of Illinois. 1971,
250 pages, \$10.95

Entirely contemporary in its approach, this text emphasizes the usage of such new tools as computer-aided design, simulation, and optimization in thermal systems. Beginning with material on workable systems, the economics of engineering design, and mathematical modeling, the author proceeds to examine topics and specific procedures in optimization. In addition to applications in such traditional areas as power generation, heating and refrigeration, the book extends the thermal systems concept into a much broader range of topics, including the entire thermal processing field.

330 West 42nd Street, New York, New York 10036