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CHEMICAL ENGINEERING TEXTS FROM McGRAW-HILL:



The CATALYSTS

TO GREATER STUDENT LEARNING



COST AND OPTIMIZATION ENGINEERING, Second Edition

F. C. Jelen, Fellow of the American Association of Cost Engineers,
and James H. Black, University of Alabama and Fellow of the American Association of Cost Engineers
1983, 530 pages, (0-07-032331-3)

The *only* book that covers the entire breadth of cost engineering, this successful text is ideal for courses in engineering economics, cost engineering, and chemical plant design. Featuring the work of contributors from both industry and education, *Cost and Optimization Engineering, 2/e* presents up-to-date cost data plus complete coverage of important, timely topics. The new edition examines the new tax laws and discusses all aspects of inflation in detail. A novel and illuminating analysis of productivity is provided, and a chapter on risk analysis has been added.

Solutions Manual (0-07-032332-1)

FUNDAMENTALS OF TRANSPORT PHENOMENA

Ray W. Fahien, University of Florida
1983, 640 pages (tent.), (0-07-019891-8)

Written by the widely respected editor of *Chemical Engineering Education*, this is the only text in the field to treat simultaneously the one-dimensional transport of heat, momentum, and mass in detail before examining the more complex subject of multidimensional transport. As a result of this approach, repetition is reduced, the analogies are fully exploited, and their limitations are exposed. The book meets the need for a beginning transport phenomena text that • offers a careful explanation of the fundamentals • assumes

minimal prior mathematical or scientific background • proceeds gradually in a logical step-by-step approach • illustrates both the similarities and dissimilarities in the equations used to describe the transport process and • emphasizes the physical meaning of mathematical quantities and operations such as the gradient, the divergence, and the dyadic product.

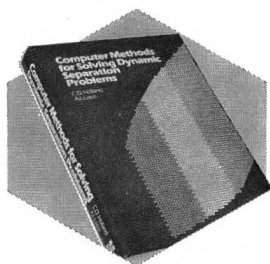
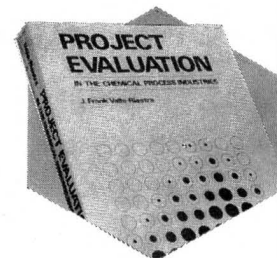
Solutions Manual (0-07-019892-6)

PROJECT EVALUATION IN THE CHEMICAL PROCESS INDUSTRIES

J. Frank Valle-Riestra, Dow Chemical U.S.A., and Adjunct Professor, University of California, Berkeley
1983, 736 pages (tent.), (0-07-066840-X)

This is the first text to bring together and systematize all of the constituent themes of project evaluation and management in the chemical process industries. Intended for courses in project evaluation, plant design, and senior design, it gives students insight into how to apply acquired project evaluation tools, as well as assimilated academic disciplines, to "real world" industrial situations—with the ultimate objective of promoting the commercial success of projects. Approximately 400 problems—often open-ended, unstructured, and typical to the industrial environment—allow students to practice problem-solving techniques and learn methods of problem synthesis in realistic situations.

Solutions Manual (0-07-066841-8)



COMPUTER METHODS FOR SOLVING DYNAMIC SEPARATION PROBLEMS

Charles D. Holland, Texas A&M University, and Athanasios I. Liapis, University of Missouri at Rolla
1983, 512 pages (tent.), (0-07-029573-5)

Now there is a book that provides an in-depth, unified presentation of modeling, numerical solutions of modeling equations, and the analysis of both staged and continuous separation processes.

The perfect text for courses in dynamics of separation processes, advanced unit operations, and applied numerical methods, it features methods for setting up ordinary and partial differential equations for simple systems at the beginning of the book, developing techniques useful for formulating more complex systems in subsequent chapters. Selected numerical methods are presented in a programmed manner using clear, simple examples so that students with no previous exposure to numerical methods can easily understand the material.

Solutions Manual (0-07-029574-3)

MEASUREMENT AND DETECTION OF RADIATION

Nicholas Tsoulfanidis, University of Missouri-Rolla
1983, 571 pages, (0-07-065397-6)

Assuming no background in the subject, this new book teaches students how to select the proper detector, analyze the results of counting experiments, and perform radiation measurements following proper health physics procedures. It provides exceptionally comprehensive treatment of errors to help students understand the importance of reporting errors when analyzing experimental results. Coverage of data analysis methods is clear and concise, discussing methods of curve fitting, interpolation, and least square fitting as well as the tools needed for analyzing spectroscopic measurements. The text also offers exceptionally detailed treatment of spectroscopy.

