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# Fluid Mechanics By McCabe Smith

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Introductory Chemical Engineering  
Thermodynamics  
STOICHIOMETRY AND PROCESS CALCULATIONS  
The Publishers' Trade List Annual  
Unit Operations of Chemical Engineering  
Fluid Mechanics, Heat Transfer, and Mass  
Transfer  
Handbook of Fluidization and Fluid-Particle  
Systems  
Fluid Mechanics and Heat Transfer  
Practical Guides in Chemical Engineering  
Fluid Mechanics for Chemical Engineers  
Unit Operations-i Fluid Flow and Mechanical  
Operations  
Water Treatment Unit Processes  
Chemical Engineering Fluid Mechanics  
Introduction to Chemical Engineering  
Respiratory Defense Mechanisms  
Unit Operations of Chemical Engineering  
Fundamentals of Water Treatment Unit Processes  
Unit Operations of Particulate Solids  
Hydrodynamics and Transport Processes of  
Inverse Bubbly Flow  
Supercritical Fluid Technology in Materials  
Science and Engineering  
Chemical Engineering Fluid Mechanics, Revised  
and Expanded

Computer Methods in Chemical Engineering  
Physical, Chemical, and Biological  
Theory and Practice  
Chemical Engineering Fluid Mechanics, Third  
Edition  
Fluid Mechanics for Chemical Engineers  
Engineering Flow and Heat Exchange  
Interdisciplinary Approaches to Food Digestion  
A TEXTBOOK OF CHEMICAL ENGINEERING  
THERMODYNAMICS  
Applied Fluid Mechanics: CD-ROM  
Piping Design Handbook  
Unit Operations of Chemical Engineering  
Momentum, Heat, and Mass Transfer  
Fundamentals  
Physical and Chemical Equilibrium for Chemical  
Engineers  
Chemical Process Design and Integration  
Scaling Chemical Processes  
Inexpensive Demonstrations and Laboratory  
Exercises  
Loose Leaf for Introduction to Chemical  
Engineering Thermodynamics  
Chemical Engineering: Solutions to the Problems  
in Volume 1  
Introduction to Chemical Engineering Fluid  
Mechanics

*Fluid  
Mechanics  
By McCabe  
Smith*

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**DURHAM LUCIANO**

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Introductory Chemical  
Engineering

Thermodynamics

McGraw-Hill Science, Engineering & Mathematics  
This textbook is designed for undergraduate courses in chemical engineering and related disciplines such as biotechnology, polymer technology, petrochemical engineering, electrochemical engineering, environmental engineering, safety engineering and industrial chemistry. The chief objective of this text is to prepare students to make analysis of chemical processes through calculations and also to develop in them systematic problem-solving skills. The students are introduced not only to the application of law

of combining proportions to chemical reactions (as the word 'stoichiometry' implies) but also to formulating and solving material and energy balances in processes with and without chemical reactions. The book presents the fundamentals of chemical engineering operations and processes in an accessible style to help the students gain a thorough understanding of chemical process calculations. It also covers in detail the background materials such as units and conversions, dimensional analysis and dimensionless groups, property estimation, P-V-T behaviour of fluids, vapour pressure and phase equilibrium

relationships, humidity and saturation. With the help of examples, the book explains the construction and use of reference-substance plots, equilibrium diagrams, psychrometric charts, steam tables and enthalpy composition diagrams. It also elaborates on thermophysics and thermochemistry to acquaint the students with the thermodynamic principles of energy balance calculations.

Key Features :

- SI units are used throughout the book.
- Presents a thorough introduction to basic chemical engineering principles.
- Provides many worked-out examples and exercise problems with answers.
- Objective type questions

included at the end of the book serve as useful review material and also assist the students in preparing for competitive examinations such as GATE.

*STOICHIOMETRY AND PROCESS*

*CALCULATIONS* CRC Press

Introduction to Chemical Engineering Thermodynamics presents comprehensive coverage of thermodynamics from a chemical engineering viewpoint. The text provides a thorough exposition of the principles of thermodynamics, and details their application to chemical processes. The chapters are written in a clear, logically organized manner, and contain an abundance of

realistic problems, examples, and illustrations to help students understand complex concepts. This text is structured to alternate between the development of thermodynamic principles and the correlation and use of thermodynamic properties as well as between theory and applications.

The Publishers' Trade List Annual CRC Press  
Combining comprehensive theoretical and empirical perspectives into a clearly organized text, *Chemical Engineering Fluid Mechanics, Second Edition* discusses the principal behavioral concepts of fluids and the basic methods of analysis for resolving a variety of engineering situations. Drawing on

the author's 35 years of experience, the book covers real-world engineering problems and concerns of performance, equipment operation, sizing, and selection from the viewpoint of a process engineer. It supplies over 1500 end-of-chapter problems, examples, equations, literature references, illustrations, and tables to reinforce essential concepts.

*Unit Operations of Chemical Engineering* Springer Nature  
Carefully designed to balance coverage of theoretical and practical principles, *Fundamentals of Water Treatment Unit Processes* delineates the principles that support practice, using the unit processes approach as the

organizing concept. The author covers principles common to any kind of water treatment, for example, drinking water, municipal wastewater, industrial water treatment, industrial waste water treatment, and hazardous wastes. Since technologies change but principles remain constant, the book identifies strands of theory rather than discusses the latest technologies, giving students a clear understanding of basic principles they can take forward in their studies. Reviewing the historical development of the field and highlighting key concepts for each unit process, each chapter follows a general format that consists of process description,

history, theory, practice, problems, references, and a glossary. This organizational style facilitates finding sections of immediate interest without having to page through an excessive amount of material. Pedagogical Features End-of-chapter glossaries provide a ready reference and add terms pertinent to topic but beyond the scope of the chapter Sidebars sprinkled throughout the chapters present the lore and history of a topic, enlarging students' perspective Example problems emphasize tradeoffs and scenarios rather than single answers and involve spreadsheets Reference material includes several

appendices and a quick-reference spreadsheet Solutions manual includes spreadsheets for problems Supporting material is available for download

Understanding how the field arrived at its present state of the art places the technology in a more logical context and gives students a strong foundation in basic principles. This book does more than build technical proficiency, it adds insight and understanding to the broader aspects of water treatment unit processes.

**Fluid Mechanics, Heat Transfer, and Mass Transfer** CRC Press

"Presents the fundamentals of momentum, heat, and mass transfer from

both a microscopic and a macroscopic perspective. Features a large number of idealized and real-world examples that we worked out in detail."

*Handbook of Fluidization and Fluid-Particle Systems* CRC Press

This practical book provides instruction on how to conduct several "hands-on" experiments for laboratory demonstration in the teaching of heat transfer and fluid dynamics. It is an ideal resource for chemical engineering, mechanical engineering, and engineering technology professors and instructors starting a new laboratory or in need of cost-effective and easy to replicate

demonstrations. The book details the equipment required to perform each experiment (much of which is made up of materials readily available in most laboratories), along with the required experimental protocol and safety precautions. Background theory is presented for each experiment, as well as sample data collected by students, and a complete analysis and treatment of the data using correlations from the literature.

Fluid Mechanics and Heat Transfer McGraw-Hill Higher Education Scaling Chemical Processes: Practical Guides in Chemical Engineering is one of a series of short texts that each provides a focused introductory view on a single

subject. The full library spans the main topics in the chemical process industries for engineering professionals who require a basic grounding in various related topics. They are 'pocket publications' that the professional engineer can easily carry with them or access electronically while working. Each text is highly practical and applied, and presents first principles for engineers who need to get up to speed in a new area fast. The focused facts provided in each guide will help you converse with experts in the field, attempt your own initial troubleshooting, check calculations, and solve rudimentary problems. This book discusses scaling



chemical processes from a laboratory through a pilot plant to a commercial plant. It bases scaling on similarity principles and uses dimensional analysis to derive the dimensionless parameters necessary to ensure a successful chemical process development program. This series is fully endorsed and co-branded by the IChemE, and they help to promote the series. Offers practical, short, concise information on the basics to help you get an answer or teach yourself a new topic quickly Includes industry examples to help you solve real world problems Provides key facts for professionals in convenient single subject volumes Discusses scaling

chemical processes from a laboratory through a pilot plant to a commercial plant Practical Guides in Chemical Engineering PHI Learning Pvt. Ltd. This volume in the Coulson and Richardson series in chemical engineering contains full worked solutions to the problems posed in volume 1. Whilst the main volume contains illustrative worked examples throughout the text, this book contains answers to the more challenging questions posed at the end of each chapter of the main text. These questions are of both a standard and non-standard nature, and so will prove to be of interest to both academic staff teaching courses in this area and to the

keen student. Chemical engineers in industry who are looking for a standard solution to a real-life problem will also find the book of considerable interest. \* An invaluable source of information for the student studying the material contained in Chemical Engineering Volume 1 \* A helpful method of learning - answers are explained in full

*Fluid Mechanics for Chemical Engineers*  
John Wiley & Sons

Designed for introductory undergraduate courses in fluid mechanics for chemical engineers, this stand-alone textbook illustrates the fundamental concepts and analytical strategies in a rigorous and systematic, yet mathematically accessible manner.

Using both traditional and novel applications, it examines key topics such as viscous stresses, surface tension, and the microscopic analysis of incompressible flows which enables students to understand what is important physically in a novel situation and how to use such insights in modeling. The many modern worked examples and end-of-chapter problems provide calculation practice, build confidence in analyzing physical systems, and help develop engineering judgment. The book also features a self-contained summary of the mathematics needed to understand vectors and tensors, and explains solution methods for partial differential equations.

Including a full solutions manual for instructors available at [www.cambridge.org/de](http://www.cambridge.org/de), this balanced textbook is the ideal resource for a one-semester course.

*Unit Operations-i Fluid Flow and Mechanical Operations* Prentice Hall

Suitable for practicing engineers and engineers in training, this book covers the most important operations involving particulate solids.

Through clear explanations of theoretical principles and practical laboratory exercises, the text provides an understanding of the behavior of powders and pulverized systems. It also helps readers develop skills for operating, optimizing, and

innovating particle processing technologies and machinery in order to carry out industrial operations. The author explores common bulk solids processing operations, including milling, agglomeration, fluidization, mixing, and solid-fluid separation.

**Water Treatment Unit Processes** CRC Press

Fluid Mechanics for Chemical Engineers, Second Edition, with Microfluidics and CFD, systematically introduces fluid mechanics from the perspective of the chemical engineer who must understand actual physical behavior and solve real-world problems. Building on a first edition that earned Choice Magazine's

Outstanding Academic Title award, this edition has been thoroughly updated to reflect the field's latest advances. This second edition contains extensive new coverage of both microfluidics and computational fluid dynamics, systematically demonstrating CFD through detailed examples using FlowLab and COMSOL Multiphysics. The chapter on turbulence has been extensively revised to address more complex and realistic challenges, including turbulent mixing and recirculating flows. Chemical Engineering Fluid Mechanics Pearson Education Fluid Mechanics for Chemical Engineers, third edition retains the characteristics that

made this introductory text a success in prior editions. It is still a book that emphasizes material and energy balances and maintains a practical orientation throughout. No more math is included than is required to understand the concepts presented. To meet the demands of today's market, the author has included many problems suitable for solution by computer. Two brand new chapters are included. The first, on mixing, augments the book's coverage of practical issues encountered in this field. The second, on computational fluid dynamics (CFD), shows students the connection between hand and computational fluid dynamics.

Introduction to Chemical Engineering  
Cambridge University Press

Aimed at the standard junior level introductory course on fluid mechanics taken by all chemical engineers, the book takes a broad-scale approach to chemical engineering applications including examples in safety, materials and bioengineering. A new chapter has been added on mixing, as well as flow in open channels and unsteady flow.

CRC Press

This encyclopedic volume covers almost every phase of piping design - presenting procedures in a straightforward way.;Written by 82 world experts in the field, the Piping Design

Handbook: details the basic principles of piping design; explores pipeline shortcut methods in an in-depth manner; and presents expanded rules of thumb for the piping design

**Respiratory Defense Mechanisms** CRC Press

Introductory college text with emphasis on unit operation.

*Unit Operations of Chemical Engineering*  
CRC Press

For the first time, this singular and comprehensive text presents a focus on quantitative studies aiming to describe food digestion and the tools that are available for quantification. A case study relevant to real-world applications places this theoretical knowledge in context and demonstrates the

different ways digestion studies can be used to develop food products. Interdisciplinary Approaches to Food Digestion undertakes a multidisciplinary approach to food digestion studies, placing them in context and presenting relevant phenomena plus the challenges and limitations of different approaches. This book presents a unique, useful reference work to scientists, students, and researchers in the area of food science, engineering, and nutrition. Over the last two decades there has been an increasing demand for foods that deliver specific nutritional values. In addition, the dramatic increase of food related diseases such

as obesity requires the development of novel food products that control satiety and glycemic response. Overall, digestion studies are gaining increasing attention in recent years, especially as the link between diet and health/well-being becomes more evident. However, digestion is a complex process involving a wide range of disciplines such as medicine, nutrition, chemistry, materials science, and engineering. While a significant body of work exists within each discipline, there is a lack of a multidisciplinary approach on the topic which will provide a holistic view of the process. With Interdisciplinary Approaches to Food

Digestion, researchers are finally presented with this much needed approach.

*Fundamentals of Water Treatment Unit Processes* John Wiley & Sons

This book presents recent research in the field of transport phenomena in porous materials, including heat and mass transfer, drying and adsorption. Covering a comprehensive range of topics related to the transport phenomenon in engineering (including state-of-the-art, theory and technological applications), it discusses some of the most important theoretical advances, computational developments and applications in porous materials domain. Providing an update on

the current state of knowledge, this self-contained reference resource will appeal to scientists, researchers and engineers in a variety of disciplines, such as chemical, civil, agricultural and mechanical engineering.

*Unit Operations of Particulate Solids* CRC Press

This title analyzes the chemical reactions, structures and fundamental properties of supercritical fluid systems for the production of new compounds, nanomaterials, fibers, and films. It compiles contemporary research and technological advances for increased selectivity and reduced waste in chemical, industrial, pharmaceutical, and biomedical

applications. Topics include fluid dynamics, catalysis, hydrothermal synthesis, surfactants, conducting polymers, crystal growth, and other aspects and applications of supercritical fluids.

**Hydrodynamics and Transport Processes of Inverse Bubbly**

**Flow** Unit Operations of Chemical Engineering Suitable for undergraduates, postgraduates and professionals, this is a comprehensive text on physical and chemical equilibrium. De Nevers is also the author of Fluid Mechanics for Chemical Engineers. Supercritical Fluid Technology in Materials Science and Engineering John Wiley & Sons

\*\*\*\*\*Recently Published!\*\*\*\*\*Unit

Operations of Chemical Engineering, 7th edition continues its lengthy, successful tradition of being one of McGraw-Hill's oldest texts in the Chemical Engineering Series. Since 1956, this text has been the most comprehensive of the introductory, undergraduate, chemical engineering titles available.

Separate chapters are devoted to each of the principle unit operations, grouped into four sections: fluid mechanics, heat transfer, mass transfer and equilibrium stages, and operations involving particulate solids. Now in its seventh edition, the text still contains its balanced treatment of theory and engineering practice, with many practical, illustrative



examples included. Almost 30% of the problems have been revised or are new, some of which cover modern topics such as food processing and

biotechnology. Other unique topics of this text include diafiltration, adsorption and membrane operations.

Best Sellers - Books :

- [Lessons In Chemistry: A Novel By Bonnie Garmus](#)
- [A Court Of Silver Flames \(a Court Of Thorns And Roses, 5\)](#)
- [The Creative Act: A Way Of Being By Rick Rubin](#)
- [The Covenant Of Water \(oprah's Book Club\)](#)
- [Stone Maidens By Lloyd Devereux Richards](#)
- [If Animals Kissed Good Night](#)
- [If He Had Been With Me](#)
- [Ugly Love: A Novel](#)
- [What To Expect When You're Expecting](#)
- [The Subtle Art Of Not Giving A F\\*ck: A Counterintuitive Approach To Living A Good Life](#)