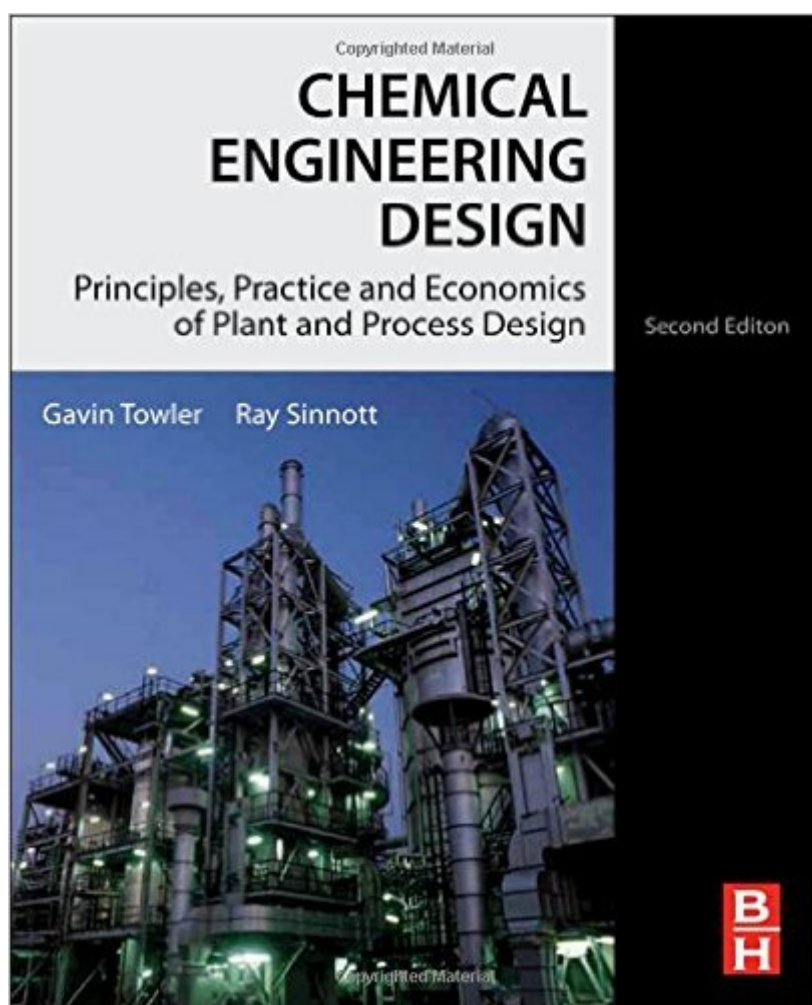


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# Chemical Engineering Design, Second Edition: Principles, Practice And Economics Of Plant And Process Design



## Synopsis

"Bottom line: For a holistic view of chemical engineering design, this book provides as much, if not more, than any other book available on the topic" --Extract from Chemical Engineering Resources review

Chemical Engineering Design is a complete course text for students of chemical engineering. Written for the Senior Design Course, and also suitable for introduction to chemical engineering courses, it covers the basics of unit operations and the latest aspects of process design, equipment selection, plant and operating economics, safety and loss prevention. It is a textbook that students will want to keep through their undergraduate education and on into their professional lives.

New to this edition: Revised organization into Part I: Process Design, and Part II: Plant Design. The broad themes of Part I are flowsheet development, economic analysis, safety and environmental impact and optimization. Part II contains chapters on equipment design and selection that can be used as supplements to a lecture course or as essential references for students or practicing engineers working on design projects.

New discussion of conceptual plant design, flowsheet development and revamp design

Significantly increased coverage of capital cost estimation, process costing and economics

New chapters on equipment selection, reactor design and solids handling processes

New sections on fermentation, adsorption, membrane separations, ion exchange and chromatography

Increased coverage of batch processing, food, pharmaceutical and biological processes

All equipment chapters in Part II revised and updated with current information

Updated throughout for latest US codes and standards, including API, ASME and ISA design codes and ANSI standards

Additional worked examples and homework problems

• The most complete and up to date coverage of equipment selection

108 realistic commercial design projects from diverse industries

A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data and Excel spreadsheet calculations plus over 150 Patent References, for downloading from the companion website

Extensive instructor resources: 1170 lecture slides plus fully worked solutions manual available to adopting instructors

## Book Information

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## Customer Reviews

"An essential support text for the traditional design product. ...Well written, it is easy to read and is superbly indexed" --Trans IChemE ["Bottom line: For a holistic view of chemical engineering design, this book provides as much, if not more, than any other book available on the topic. Nearly every subject is accompanied by examples and new technologies are also addressed. In short, a complete, well-written and illustrated resource that is a pleasure to use."](#) --From

[www.cheresources.com](http://www.cheresources.com) (Chemical Engineering Resources) "Chemical Engineering Design is a complete text for students of chemical engineering. Written for the senior design course, and also suitable for introduction to chemical engineering courses, it covers the basics of unit operations and the latest aspects of process design, equipment selection, plant and operating economics, safety and loss prevention. It includes detailed worked examples, case studies, end-of-chapter exercises, plus supporting data, spreadsheet calculations and equipment specification sheets for downloading." --Chemical Engineering Progress "The book was originally written by British chemical engineer Sinnott as Volume Six of the Chemical Engineering series edited by Coulson and Richardson. It was intended as a stand-alone design textbook for undergraduate design projects that would supplement the other volumes, so it was no long stretch to publish it separately in 2008. Towler (chemical engineering, Northwestern U., Illinois) helped update and revise it, and integrated US laws, codes, and standards into it. This second edition takes account of comments about strengths and weaknesses by students and instructors. It also is rearranged to fit a typical two-course senior design sequence better, focusing first on process design then on plant design." --Reference and Research Book News, Inc.

["Bottom line: For a holistic view of chemical engineering design, this book provides as much, if not more, than any other book available on the topic."](#) <sup>TM</sup> Extract from Chemical Engineering Resources review. Chemical Engineering Design is a complete course text for students of chemical engineering. Written for the Senior Design Course, and also suitable for introduction to chemical

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