

1. Record Nr.	UNINA9910739473103321
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Titolo	Chemical and Bioprocess Engineering : Fundamental Concepts for First-Year Students // by Ricardo Simpson, Sudhir K. Sastry
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2013
ISBN	1-4614-9126-6
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (XX, 352 p. 208 illus., 84 illus. in color.)
Disciplina	660.0
Soggetti	Biochemical engineering Food—Biotechnology Thermodynamics Heat engineering Heat transfer Mass transfer Mathematical models Biochemical Engineering Food Science Engineering Thermodynamics, Heat and Mass Transfer Mathematical Modeling and Industrial Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Fundamentals of Magnitudes, Units Systems, and Their Applications in Process Engineering -- Fundamentals of Process Control, Communication, and Instrumentation -- Learning from Nature and its Applications in Chemical and Bioprocess Engineering -- Challenging and Solving Problems with Basic Tools, Testing Student's Attitude -- A Glimpse of Thermodynamics and Transport Phenomena -- Fundamentals of Material Balances (Non-reactive Systems) -- Fundamentals of Material Balances (Reactive Systems) -- Fundamentals of Mathematical Modeling, Simulation, and Process Control -- Scale Up in Chemical and Bioprocess Engineering -- Optimization and Chemical/Bioprocess Optimization -- Basic Economic Principles and a Glimpse on How to Take a Decision Among Alternatives.

Sommario/riassunto

This is a unique introductory textbook that covers all aspects of both chemical and bioprocess engineering and provides a thorough grounding in the fundamentals so that the background may be used in future work. Included are more than 400 proposed and solved exercises, each classified by its level of difficulty. Each chapter contains references and selected web pages to vividly illustrate examples. To aid the reader, each chapter is marked according to Bloom's Taxonomy to indicate the level of attention given to each concept. About the Authors Ricardo Simpson is a Professor at the Universidad Técnica Federico Santa María, Department of Chemical and Environmental Engineering, Valparaíso, Chile. Sudhir Sastry is a Professor at The Ohio State University, Department of Food, Agricultural and Biological Engineering, Columbus, Ohio, USA.
