The Encyclopedia of Production and Manufacturing Management has been developed to serve this field as the fundamental reference work. In the last two decades, production and manufacturing management absorbed in rapid succession several new production management concepts: manufacturing strategy, focused factory, just-in-time manufacturing, concurrent engineering, total quality management, supply chain management, flexible manufacturing systems, lean production, mass customization, and more (see Table of Contents for a complete list). It is clear that with the increasing globalization of manufacturing, the field will continue to expand. This explosive growth in concepts and practices underscores the need for this volume.

The Encyclopedia’s audience is a technically diverse one. It includes anyone concerned with manufacturing techniques, methods, and manufacturing decisions. The articles are fundamentally designed to serve as initial sources of information for all readers, with special emphasis on the needs of students and practitioners. In addition, most researchers in manufacturing deal fairly exclusively with a limited number of manufacturing areas. The Encyclopedia provides the researcher with an effective reference tool covering the broad spectrum of topics (new and classic) in production and manufacturing management. The entries in this encyclopedia include the most recent technical and strategic innovations in production and manufacturing management. Comprehensiveness and currency are the guiding principle of topics covered in the Encyclopedia.

The Encyclopedia consists of articles of varying lengths—the longer articles on important concepts and practices range from five to fifteen pages. There are about 100 such articles written by nearly 100 authors from around the world. In addition, there are over 1000 shorter entries on concepts, practices and principles. The range of topics and depth of coverage is intended to suit both student and professional audiences. The shorter entries provide digests of unfamiliar and complicated subjects. Difficult subjects are made intelligible to the reader without oversimplification.

The articles themselves are organized for a consistent presentation. The structural organization used in the majority of the articles is as follows: Description and basic concepts; Historical perspective; Strategic perspectives; Implementation; Technology perspective; Significant analytical models; Effect on performance; Timing—When is it appropriate?; Location—Where is it used or practiced?; Results; Cases and Collective wisdom.

A special feature of this encyclopedia is the list called Manufacturers and Organizations Discussed in the Encyclopedia following the Table of Contents. Several articles use real life examples from more than 100 manufacturing and other firms from the U.S., Japan, Europe, and other countries. The practices of some manufacturers such as Chrysler, Ford, GM, and Toyota are discussed. The list provides an easy and quick access to references about companies and organizations in the list. At the end of the Encyclopedia, there are two Appendixes with different bibliographies. Appendix I is organized alphabetically and includes writings on all topics covered by the encyclopedia. Appendix II is a topical bibliography under 21 broad topics from Capacity Planning to Supply Chain. The second bibliography can greatly speed the search for publications on a given topic. The two appendixes should serve as valuable research tools.
Accounting Systems Implications of TOC, Monte R. Swain, Stanley E. Fawcett, Brigham Young University
Activity-Based Costing, Monte R. Swain, Stanley E. Fawcett, Brigham Young University
Activity-Based Costing: An Evaluation, M. Michael Umble, Baylor University; Elisabeth J. Umble, Texas A&M University
Aggregate Plan and Master Production Schedule Linkage, Chen H. Chung, University of Kentucky
Agile Logistics (Enterprise Logistics), Noel P. Greis, John D. Kasarda, University of North Carolina
Agile Manufacturing, Pratrap S. S. Chinniah, Sagar V. Kamarthi, Northeastern University
Assembly Line Design, Patrick R. McMullen, University of Maine
Balanced Scorecards, Ramachandran Ramanan, University of Notre Dame
Bullwhip Effect in Supply Chain Management, Hokey Min, University of Louisville
Capacity Management in Make-to-Order Production Systems, V. Sridharan, Clemson University
Capacity Planning: Long-Range, Gregory P. White, Southern Illinois University at Carbondale.
Capacity Planning: Medium-and Short-Range, Gregory P. White, Southern Illinois University at Carbondale
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Concurrent Engineering, Morgan Swink, Michigan State University
Core Manufacturing Competencies, Morgan Swink, Michigan State University
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Cost Analysis for Purchasing, Robert B. Handfield, Michigan State University
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Customer Service Through Value Chain Integration, Richard E. White, University of North Texas; John N. Pearson, Arizona State University
Disaggregation in an Automated Manufacturing Environment, Chen H. Chung, University of Kentucky
Dynamic Kanban Control for JIT Manufacturing, Kendra E. Moore, ALPHATECH, Inc.; Elif Kizilkaya, Northeastern University; Surendra M. Gupta, Northeastern University
Dynamic Routing in Flexible Manufacturing Systems, H. Joseph Wen, Kenneth D. Lawrence, New Jersey Institute of Technology
Electronic Data Interchange in Supply Chain Management, Hokey Min, University of Louisville
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Environmental Issues: Reuse and Recycling, Surendra M. Gupta, Pitipong Veerakamolmal, Northeastern University
Facilities Location Decisions, Basheer M. Khumawala, Sukran N. Kadiapasaoglu, University of Houston
Flexibility in Manufacturing, Kenneth K. Boyer, DePaul University
Flexible Automation, Kathryn E. Stecke, Rodney P. Parker, The University of Michigan
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History of Manufacturing Management, James M. Wilson, Glasgow University, UK
Human Resource Issues and Advanced Manufacturing Technology, Corinne M. Karuppan, Southwest Missouri State University
Human Resource Issues in Manufacturing, Thomas W. Dougherty, University of Missouri; George F. Dreher, Indiana University
International Manufacturing, Arnoud De Meyer, INSEAD, France.
Inventory Flow Analysis, Edward W. Davis, University of Virginia
ISO 9000/9001 Quality Standards, James R. Evans, University of Cincinnati
JIT Evolution and Use in the United States, Richard E. White, University of North Texas
Just-In-Time Manufacturing, Gregory P. White, Southern Illinois University at Carbondale
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Kanban-Based Manufacturing Systems, S. Sengupta, Oakland University, USA; S.P. Dutta, University of Windsor, Canada
Lean Manufacturing Implementation, JT Black, Auburn University
Learning Curve Analysis, Timothy L. Smunt, Wake Forest University
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Manufacturing Flexibility, Paul M. Swamidass, Auburn University
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Manufacturing Strategy, Paul M. Swamidass, Auburn University; Neil R. Darlow, Cranfield University, UK.
Manufacturing Systems, JT Black, Auburn University
Manufacturing Systems Modeling Using Petri Nets, Kendra E. Moore, ALPHATECH, Inc.; Surendra M. Gupta, Northeastern University
Manufacturing Technology Use in the U.S. and Benefits, Paul M. Swamidass, Auburn University
Manufacturing with Flexible Systems, Paul G. Ranky, New Jersey Institute of Technology
Mass Customization, Rebecca Duray, University of Colorado at Colorado Springs
Mass Customization and Manufacturing, Pratap S. S. Chinnaiah, Sagar V. Kamarthi, Northeastern University
MRP (Material Requirements Planning), V. Sridharan, R. Lawrence LaForge, Clemson University
MRP Implementation, Chee-Chung Sum, Kwan-Kee Ng, National University of Singapore, Singapore
New Product Development Through Supplier Integration, Robert B. Handfield, Michigan State University
Order Release, Jeffrey W. Herrmann, University of Maryland
Outsourcing of Product Design and Development, Hilary Bates, University of Warwick, UK; David Twigg, University of Brighton, UK
Performance Excellence: The Malcolm Baldrige National Quality Award Criteria, James R. Evans, University of Cincinnati
Performance Measurement in Manufacturing, Gregory P. White, Southern Illinois University at Carbondale
Process Approach to Manufacturing Strategy Development, K. W. Platts, University of Cambridge, UK
Process Industry Scheduling, Sam G. Taylor, University of Wyoming, Steve Bolander, Colorado State University
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Purchasing: Acquiring the Best Inputs, Stanley Fawcett, Brigham Young University
Purchasing: The Future, Larry C. Gianipero, University of Maryland
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Schedule Stability, R. Lawrence LaForge, Clemson University; Sukran N. Kadipasaoglu, University of Houston, USA; V. Sridharan, Clemson University
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Simulation Analysis of Manufacturing and Logistics Systems, Enver Yucese, INSEAD, France; John W. Fowler, Arizona State University
Simulation Languages, David L. Olson, Texas A&M University; James R. Evans, University of Cincinnati
Simulation of Production Problems Using Spreadsheet Programs, David L. Olson, Texas A&M University; James R. Evans, University of Cincinnati
Simulation Software Selection, Enver Yucese, INSEAD, France; John W. Fowler, Arizona State University
SMED, JT Black, Auburn University
Statistical Process Control Using Control Charts, Amitava Mitra, Auburn University
Supplier Partnership as Strategy, Brian Leavy, Dublin City University, Ireland.
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Supplier Relationships, Thomas F. Burgess, University of Leeds, UK
Supply Chain Management: Competing Through Integration, Stanley E. Fawcett, Brigham Young University
Synchronous Manufacturing using Buffers, M. Michael Umble, Baylor University
Target Costing, Ramachandran Ramanan, University of Notre Dame
Teams: Design and Implementation, John K. McCready, North Carolina State University; Matthew C. Bloom, University of Notre Dame
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U-Shaped Assembly Lines, Gerald Aase, Northern Illinois University; Robert F. Jacobs, Indiana University
Virtual Manufacturing, Pratap S. S. Chinnaiah, Sagar V. Kamarthi, Northeastern University
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