

1. Record Nr.	UNINA9910254953603321
Autore	Mauergauz Yuri
Titolo	Advanced Planning and Scheduling in Manufacturing and Supply Chains // by Yuri Mauergauz
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-27523-2
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (584 p.)
Disciplina	650
Soggetti	Production management Mathematical models Engineering economics Engineering economy Operations research Decision making Operations Management Mathematical Modeling and Industrial Mathematics Engineering Economics, Organization, Logistics, Marketing Operations Research/Decision Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part 1. Modelling -- 1.Reference Models -- Chapter 2.Mathematical Models -- Chapter 3.Production Bottlenecks Models -- 4. Multi-Criteria Models and Decision Making -- 5.Planning Inputs -- 6.Demand Forecasting -- 7.Examples of Advanced Planning Models -- Part II. Planning Processes -- 8.Single-Echelon Inventory Planning -- 9.Supply Chain Inventory Dynamics -- 10.Planning of Supplies to Consumers -- 11.Lot Sizing -- 12.Production Scheduling -- 13.Shop Floor Scheduling: Single-Stage Problems -- 14.Shop Floor Scheduling: Multi-Stage Problems -- 15.Multi-Criteria Scheduling -- Schedule 1.Legend -- Schedule 2.Abbreviations and Definitions -- Schedule 3.Schedule Classification Parameters -- Schedule 4.Production Intensity Integral Calculations -- Schedule 5.Planning Software.

This book is a guide to modern production planning methods based on new scientific achievements and various practical planning rules of thumb. Several numerical examples illustrate most of the calculation methods, while the text includes a set of programs for calculating production schedules and an example of a cloud-based enterprise resource planning (ERP) system. Despite the relatively large number of books dedicated to this topic, *Advanced Planning and Scheduling* is the first book of its kind to feature such a wide range of information in a single work, a fact that inspired the author to write this book and publish an English translation. This work consists of two parts, with the first part addressing the design of reference and mathematical models, bottleneck models and multi-criteria models and presenting various sample models. It describes demand-forecasting methods and also includes considerations for aggregating forecasts. Lastly, it provides reference information on methods for data stocking and sorting. The second part of the book analyzes various stock planning models and the rules of safety stock calculation, while also considering the stock traffic dynamics in supply chains. Various batch computation methods are described in detail, while production planning is considered on several levels, including supply planning for customers, master planning, and production scheduling. This book can be used as a reference and manual for current planning methods. It is aimed at production planning department managers, company information system specialists, as well as scientists and PhD students conducting research in production planning. It will also be a valuable resource for students at universities of applied sciences.
