



**JORDAN UNIVERSITY OF SCIENCE AND
TECHNOLOGY
INDUSTRIAL ENGINEERING DEPARTMENT**



Course Number and Name	IE452 Production Planning and Inventory Control
Course Description	The course covers the concept of value chain with a focus on supply chain analyses, capacity planning, inventory models, and demand forecasting. Additional topics include Material Requirement Planning (MRP) and job shop scheduling.
Credits and contact hours	3 Credit hours; 3 hours of lectures
Pre- or Co-requisites	IE344 Operations Research (1)
Required/ Elective	Required

Text Book(s)	L. J. Krajewski, L. P. Ritzman, and M. Malhotra (2007). <i>Operations Management: Processes and Value Chains</i> . 8th ed. New Jersey, Prentice Hall. Or a newer edition
Software tools	MS Excel, OM Explorer
References	<ul style="list-style-type: none"> • Roger G. Schroeder, 2000, Operations Management Contemporary Concepts and Cases, McGraw-Hill, New York. • Askin, R. G. and Standridge, C. R., 1993, Modeling and Analysis of Manufacturing Systems, John Wiley & Sons Inc., New York.

Course Objectives	<p>Upon completion of this course, the students will</p> <ul style="list-style-type: none"> • be familiar with the role of operations managers in the organization • be able to use systematic approaches for analyzing, modeling and solving operations related problems • be able to identify bottleneck operations, suggest long and/or short term solutions based on forecasted demands to assure efficiency • be able to seek knowledge, stay updated, and pursue further learning and training in related fields
Measured Outcomes	3c and 3i

Topics	Chapters in Text	Evaluation	
Introduction to Operations Management	Chapters 1 and 2	Class Work	10
Forecasting	Chapter 13	First Exam	25
Inventory Management	Chapter 12	Second Exam	30
Constraint Management	Chapter 7	Final Exam	40
Resource Planning	Chapter 15		