

Course Specifications

Course Title:	<i>Inventory control</i>
Course Code:	<i>OPER 322</i>
Program:	<i>Operations research</i>
Department:	<i>Statistics and Operations research</i>
College:	<i>Science</i>
Institution:	<i>King Saud University</i>

A. Course Identification

1. Credit hours: 3(2+1)	
2. Course type	
a.	University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b.	Required <input type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: Level 6 / 3rd Year	
4. Pre-requisites for this course (if any): OPER 213 + MATH 207	
5. Co-requisites for this course (if any): None	

B. Course Description and Objectives

1. Course Description <i>Definitions and models of inventory control. The simple economic order quantity (EOQ) model. The EOQ model with shortages. The economic production quantity (EPQ) model. The (EPQ) model with shortages. Single or multiple items constrained inventory control models. Some dynamic inventory control models with deterministic or probabilistic demand. Inventory control models with continuous demand rate. Some probabilistic inventory control models.</i>
2. Course Main Objective <ul style="list-style-type: none"> • Familiarize students with basic knowledge of inventory models and their applications. • Provide student with tools and methods needed to solve inventory models.

C. Course Content

No	List of Topics	Contact Hours
1	Elements of inventory control	2
2	Economic Order Quantity model and its Properties	4
3	Economic Order Quantity with Quantity Discounts	4
4	Economic Production Quantity model	2
5	Economic Order Quantity model with shortage	2
6	Multi-item model with Space or capital constrains	2
7	Single item multi-period dynamic inventory model	6
8	Introduction to probabilistic Inventory models. Newsboy problem.	4
9	Single period inventory problem	4
	Total	30

D. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Midterm exam 1	7, 8, 9	30 %
2	Midterm exam 2	11, 12, 13	30 %
3	Final exam	15, 16, 17	40 %
8			

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Office hours : 6 hrs / week

F. Learning Resources

Required Textbooks	<i>Introduction to Inventory control, Zaid T. Balkhi, King Saud University Press, 2005.</i>
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