هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission
اعتماد
NCAAA
2024
TP-153

Course Specification
(Bachelor)

Course Title:	Supply Chain Economics
Course Code:	INE 5351
Program:	Bachelor of Industrial Engineering
Department:	Industrial Engineering
College:	Engineering
Institution:	King Khalid University
Version:	1
Last Revision Date:	18-12-2025

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☐Required		☒ Elective		
3. Level/year at which this course is offered: (9/5)					
4. Course general Description:					
This course introduces economic principles and analytical methods used in supply chain planning and decision-making. Topics include facility location, transportation, inventory management, forecasting, aggregate planning, and global supply chain optimization.					
5. Pre-requirements for this course (if any)**:**					
INE 4351					
6. Co-requisites for this course (if any)**:**					
NIL					
7. Course Main Objective(s):					
Understand economic foundations of supply chain decisions Analyze cost drivers and trade-offs Apply quantitative supply chain models Develop practical optimization skills					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30

2.	Laboratory/Studio	NIL
3.	Field	NIL
4.	Tutorial	30
5.	Others (specify)	NIL
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Explain supply chain economic concepts and cost structures	K1	Lectures and tutorials	Assignments Midterm Exam Final Exam
1.2	Describe economic trade-offs in facility location, transportation, and inventory decisions	K3		
1.3	Identify the Supply Chain Performance	K4		
2.0	**Skills**			
2.1	Formulate supply chain economic models	S1	Lectures and tutorials	Assignments Midterm Exam Final Exam
2.2	Apply forecasting a techniques	S3		
2.5	Apply and adapt current digital technology for	S6		

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	global supply chain optimization decisions			
3.0	**Values, autonomy, and responsibility**			
3.1	Demonstrate ethical and professional responsibility in supply chain decisions	V1	Lectures and tutorials	Participation
3.2	Demonstrate commitment to continuous learning and sustainable practices in supply chain planning and optimization.	V4	Teamwork	Group project

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Supply Chain Economics	4
2.	Supply Chain Drivers and Metrics	4
3.	Transportation and Transshipment Models	6
4.	Facility Location Planning	6
5.	Network Design Models	6
6.	Aggregate Planning	4
7.	Demand Forecasting	4
8.	Inventory Models	6
9.	Dynamic Production Planning	6

10.	Global Supply Chain Optimization	8
	Total	60

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	6 to 8 Assignments	2, 3, 4, 5, 6, 7, 8, 9	10
2.	Quiz 1	7	10
3.	Quiz 2	12	10
4.	2 Mid Term Exam	5, 10	30
5.	Final Exam	16	40
...			100

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Chopra, S. & Meindl, P., Supply Chain Management, ISBN: 978-0134731889 - 2012
Supportive References	Simchi-Levi et al., Designing and Managing the Supply Chain, ISBN: 978-0073341521
Electronic Materials	• Academic journals (Elsevier, Springer, IEEE) • Online databases and learning platforms
Other Learning Materials	Case studies, datasets, simulation exercises

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classrooms
Technology equipment (projector, smart board, software)	projector
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect (Questionnaire)
Effectiveness of Students' assessment	Faculty	Direct
Quality of learning resources	Program Leaders	Direct
The extent to which CLOs have been achieved	Faculty	Direct
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**REVIEWED BY CURRICULUM COMMITTEE APPROVED BY QUALITY COMMITTEE**
REFERENCE NO.	**9-6-47**
DATE	**25/06/1447**