هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد
NCAAA

2024
TP-153

Course Specification
(Bachelor)

Course Title:	PRODUCTION PLANNING AND CONTROL
Course Code:	INE-3315
Program:	Bachelors in industrial engineering
Department:	Industrial Engineering
College:	College of Engineering
Institution:	King Khalid University
Version:	2
Last Revision Date:	8/12/2025

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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: ((sixth Level/ Third Year)					
4. Course general Description:					
This course aims at equipping the acknowledge and tools for planning and controlling services and manufacturing industries with the aim of maximizing productivity.					
5. Pre-requirements for this course (if any)**:**					
INE3271					
6. Co-requisites for this course (if any)**:**					
NIL					
7. Course Main Objective(s):					
Develop an understanding of and an appreciation for the production and operations management function in any organization. To understand the importance of productivity and competitiveness. To understand the importance of an effective production and operations strategy to an organization. To understand the importance of product and service design decisions and its impact other design decisions and operations. To understand the relationship of the various planning practices of capacity planning, inventory management, aggregate planning, material requirements planning and scheduling.					

2. Teaching mode (mark all that apply)

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

No	Mode of Instruction	Contact Hours	Percentage
	• 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	Identify the different phases involved in manufacturing industries	K1	Power point presentation and Traditional teaching method using board	Assignment quiz Midterm exam Final exam
1.2	Identify the different phases involved in service industries	K3	Power point presentation and Traditional teaching method using board	Assignment quiz Midterm exam Final exam
2.0	**Skills**			
2.1	Forecast Demand using basic forecasting methods to determine capacity requirfemnents	S5	Power point presentation and Traditional teaching method using board	Assignment quiz Midterm exam Final exam

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.3	Analyze importance of aggregate planning with scheduling	S6	Power point presentation and Traditional teaching method using board	Assignment quiz Midterm exam Final exam
3.0	**Values, autonomy, and responsibility**			
3.1	Analyze need of Material requirement planning	V3	Power point presentation and Traditional teaching method using board	Assignment quiz Midterm exam Final exam
3.2	Plan inventory using different lot sizing methods	V4	Power point presentation and Traditional teaching method using board	Assignment quiz Midterm exam Final exam

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction and course overview	4
2.	Productivity	8
4	Forecasting	8
5	Capacity planning	8
6	Inventory Control	8
7	Aggregate planning	8
8	MRP	8
9	Scheduling	8
Total		**60**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignments	3,5,8,10	20%
2.	Quizzes	4, 9	10%

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
3.	Mid Exam- I	5	15%
4.	Mid Exam- II	10	15%
5.	Final Exam	16	40%

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Operations Management: Sustainability and Supply Chain Management - Arab World Edition" (12th Edition) Authors: Jay Heizer, Barry Render, Chuck Munson, and Mahmoud Abu-Zeid (for the Arab World Edition updates). Publication Year: 2021 Publisher: Pearson Education ISBN: 9781292403705
Supportive References	• Operations Management, Heizer et al, Arab world edition, Pearson, 2013, ISBN-13, 978-1447903031. • Production and Operations Analysis, Steven Nahmias and Tava Lennon Olsen, 7 th Edition 2015, Pearson/Prentice Hall. ISBN-13: 978-1478623069; ISBN-10: 1478623063
Electronic Materials	**Production planning Journals**
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	• Lecture room • Backboard facility for sharing lecture notes, submission of assignments, and attempting quizzes. • Smart board
Technology equipment (projector, smart board, software)	• Every student requires access to On-site computer and the Internet. • Access to the textbook online material
Other equipment (depending on the nature of the specialty)	None

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Course Evaluation Survey (CES)
Effectiveness of students assessment	Students	Blackboard feedback
Quality of learning resources	Students	Course Evaluation Survey (CES)
The extent to which CLOs have been achieved	Course Evaluation Committee (CEC)	In-Situ Evaluation
Other		

G. Specification Approval

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