Department of Industrial Engineering,
School of Engineering,
University of Management and Technology
Course Outline

Course code: IE 412 **Course Title: Supply Chain Management**

Program	BSIE
Credit Hours	3
Duration	One semester (Fall 2024)
Prerequisites	Nil
Resource Person	Syed Rehan Ashraf
Counseling Timing	Monday-Wednesday 11:00 AM to 1:30 PM Thursday 2:00 PM to 4:30 PM
Contacts	rehan.ashraf@umt.edu.pk Ext: 3687 SEN 303/06

Chairman/Director signature…….

Dean's signature……

Date…….

Course Learning Outcomes:

At the end of the course students should be able to:

1. **Analyze** the logistics in a competitive environment for businesses and determine how effective supply chain management may result in better customer service and the business. C4
2. **Examine** logistics costs and performance from a customer perspective for improving customer value and profitability, the concept of total cost analysis and logistics costing, cost drivers and activity-based costing. C4
3. **Select** a responsive supply chain drawing upon efficient demand management and planning, lean, agility, and CPFR model C4.
4. **Examine** the supply chain risk profile and recommend measures to incorporate sustainability in supply the chain C4.
5. **Organize** a sustainable supply chain model for food / Energy C5

Course Learning Outcomes (CLOs) Mapping with Program Learning Outcomes (PLOs):

Semester	Course Code	Title	Course Learning Outcomes	PLO 1 Engg. Knowledge	PLO 2 Problem Analysis	PLO 3 Solution Design	PLO 4 Investigation	PLO 5 Mod. Tool Usage	PLO 6 Engr. & Society	PLO 7 Env. &Sust.	PLO 8 Ethics	PLO 9 Team Work	PLO 10 Communication	PLO 11 Proj. Mgmt.	PLO 12 Lifelong Learning
Seventh	IE 412	Supply Chain Management	1. **Analyze** the logistics in a competitive environment for businesses and determine how effective supply chain management may result in better customer service and the business. C4				✓								
			2. **Examine** various logistics costs and performance from a customer perspective for improving customer value and profitability, the concept of total cost analysis and logistics costing, cost drivers and activity-based costing. C4				✓								
			3. **Select** a responsive supply chain drawing upon efficient demand management and planning, lean, agility, and CPFR model. C4			✓									
			4. **Examine** the supply chain risk profile and recommend measures to incorporate sustainability in supply the chain. C4							✓					
			5. **Organize** a sustainable supply chain model for food / Energy C5							✓					

Learning Methodology:

Classroom lectures, problem solving exercises, tutorials and class notes.

Grade Evaluation Criteria

Components	Marks
Quizzes (3 Avg, on 8th, 12th, 20th, 26th)	15
Case Study (Open Ended covering to CLO 5)	10
Mid Term Exam	25
Final Exam	50
Total	100

Textbooks

1. Logistics and Supply Chain Management by Martin Christopher, 2016, 5th Edition, FT Press.
2. Supply Chain and Logistics Management By Donald J Bowersox 2002

Reference Book

1. Jay Heizer and Barry Render, 2020, "Operations Management", 13th Edition, Pearson.
2. William J. Stevenson, 2021, Operations Management, 14th Edition, McGraw Hill.

Calendar of Course Contents

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Weeks	Course Contents	Reference Chapter(s)	CLOs
1	• Logistics, the supply chain and competitive strategy	CH #1	1
2~4	• Logistics and customer Value	CH # 2	1
5~7	• Measuring Logistics cost and performance	CH #3	2
8	• Matching Supply and Demand	CH # 4	3
Mid Term			
9~10	• Creating the responsive Supply Chain	CH # 5	3
11~12	• Strategic Lead Time Management	CH # 6	3
13~14	• Managing risk in the Supply chain	CH # 10	4
15	• Creating a sustainable supply chain	CH # 13	4
Final Term			

Note: Tentative

Mapping of CLOs to Direct Assessments

CLOs▼	Quiz 1	Quiz 2	Quiz 3	Quiz 4	Complex Engineering Problem	Midterm Exam	Final Exam
1	✓					✓	✓
2		✓				✓	✓
3			✓				✓
4				✓			✓
5					✓		

Tentative