MS6322: TRANSPORTATION LOGISTICS

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Transportation Logistics

Subject Code
MS - Decision Analytics and Operations
Course Number
6322

Academic Unit
Decision Analytics and Operations (DAOS)

College/School
College of Business (CB)

Course Duration
One Semester

Credit Units
3

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
This advanced course provides an in-depth examination of transportation and logistics management within the broader context of supply chain operations. Topics covered include strategic demand planning, order processing, and customer

service from the outbound logistics perspective. The course also delves into distribution network design, facility location analysis, warehousing, packaging, and materials handling. Key transportation fundamentals, routing and scheduling techniques, and the unique considerations of international trade logistics are explored. Strategies for managing shipping derivatives, risk, and service pricing are discussed, as well as the growing importance of green and sustainable logistics practices. Through a combination of lectures, case studies, and hands-on exercises, students will develop a comprehensive understanding of how effective transportation and logistics management can drive supply chain efficiency and competitive advantage. Practical applications of quantitative methods and decision support tools are emphasized throughout the course.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the fundamental concepts, principles, and strategic role of transportation and logistics within the context of supply chain management.	20	x	x	x
2	Analyze key operational decisions and apply appropriate analytical tools and techniques in transportation planning, network design, and logistics management	20	x	x	x
3	Develop business models and strategic plans that incorporate logistics considerations to enhance supply chain efficiency and competitiveness.	20	x	x	x
4	Evaluate transportation and logistics markets, including pricing structures, service offerings, and emerging trends and technologies.	20	x	x	x
5	Demonstrate the ability to work collaboratively in teams to solve complex transportation and logistics problems, while considering ethical, social, and environmental responsibilities.	20	x	x	x

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Attend and actively participate in interactive lectures	Attend and actively participate in interactive lectures on the fundamental concepts, principles, and strategic role of transportation and logistics in supply chain management.	1, 2, 3, 4	
2	Collaborate in group case studies, conduct presentations and report writing.	Collaborate in team-based case studies, presentations, and report writing to analyze real-world transportation and logistics problems, apply analytical tools, and communicate findings. Conduct research and discussions on current industry trends, technologies, and ethical considerations in transportation and logistics. Complete individual assignments and reflective essays to critically analyze issues and apply course concepts.	1, 2, 3, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Group Case Studies, Presentation and Report	1, 2, 3, 4, 5	30	-	Yes
2	Individual Assignment	1, 2, 3, 4, 5	20	-	Yes
3	Class Participation	1, 2, 3, 4, 5	10	-	Yes

Continuous Assessment (%)

60

Examination (%)

40

Examination Duration (Hours)

2

Minimum Continuous Assessment Passing Requirement (%)

20

Minimum Examination Passing Requirement (%)

20

Assessment Rubrics (AR)

Assessment Task

Group Case Studies, Presentation and Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Capacity to analyse the real-world cases and ability to employ principles and methods to explain the findings and insights, and conduct a presentation.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Individual Assignment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Answer the exercise correctly and provide managerial interpretations on the results using the relevant concepts and theories.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Class participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Attend the lectures and engage in class discussions.

Excellent
(A+, A, A-) High

Good
(B+, B, B-) Significant

Fair
(C+, C, C-) Moderate

Marginal
(D) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Answer exam questions including both multi-choice questions and discussion questions correctly in two hours.

Excellent
(A+, A, A-) High

Good
(B+, B, B-) Significant

Fair
(C+, C, C-) Moderate

Marginal
(D) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Group Case Studies, Presentation and Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Capacity to analyse the real-world cases and ability to employ principles and methods to explain the findings and insights, and conduct a presentation.

Excellent
(A+, A, A-) High

Good
(B+, B) Moderate

Marginal
(B-, C+, C) Low

Failure
(F) Not even reaching marginal levels

Assessment Task
Individual Assignment (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Answer the exercise correctly and provide managerial interpretations on the results using the relevant concepts and theories.

Excellent
(A+, A, A-) High

Good
(B+, B) Moderate

Marginal
(B-, C+, C) Low

Failure
(F) Not even reaching marginal levels

Assessment Task
Class participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Attend the lectures and engage in class discussions.

Excellent
(A+, A, A-) High

Good
(B+, B) Moderate

Marginal
(B-, C+, C) Low

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(F) Not even reaching marginal levels

Assessment Task
Examination (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Answer exam questions including both multi-choice questions and discussion questions correctly in two hours.

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(A+, A, A-) High

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(B-, C+, C) Low

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(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

1. Introduction to Transportation and Logistics
2. Outbound-to-Customer Logistics: Demand Planning/Order Management/Customer Services
3. Distribution Strategies: Facility Location, Warehousing, Packaging and Materials Handling
4. Transport: Fundamentals
5. Transport: Routing and Scheduling
6. International Trade and Logistics
7. Shipping Derivatives and Risk Management
8. Transport Service Pricing and Revenue Management
9. Green Logistics

Reading List

Compulsory Readings

	Title
1	Coyle et al., Supply Chain Management: A Logistics Perspective, 10th Edition (Cengage Learning)

Additional Readings

	Title
1	Paul R. Murphy, Jr. and A. Michael Knemeyer. Contemporary Logistics, 11/E (Pearson, 2015)
2	Chopra, S., and P. Meindl, Supply Chain Management: Strategy, Planning and Operation, 6th ed., Prentice Hall, 2015, New Jersey.
3	Simchi-Levi, D., P. Kaminsky, and E. Simchi-Levi, Designing and Managing the Supply Chain, 3rd ed., McGraw-Hill, 2007, New York.
4	Ronald H. Ballou, Business Logistics/Supply Chain Management, 5th Edition (Upper Saddle River, NJ: Prentice-Hall, 2004).