

Course Outline

Course Code : DOS3712
Course Title : Physical Distribution Management
Class Date : From 10/8/2026 To 13/11/2026
Semester : Semester 1, Academic Year 2025/26
Faculty : Dr GOH Shao Hung
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Overview

This course helps students to appreciate the strategic importance of good distribution operations planning in the context of supply chain management and economic development in Asia. A strategic framework of physical distribution system design is presented to help build critical analytical skills for decision making in the management of physical distribution and transportation of goods, from the perspectives of both the user and provider of third-party logistics (3PL) services. The operating characteristics of various transport modes in international and domestic freight will be discussed. Specific considerations and requirements for distribution in different industry sectors (e.g. e-commerce, service/reverse logistics and third-party logistics) will also be introduced.

The course covers some applications of operations research and heuristic techniques to physical distribution system design (e.g. facility location and mode selection) and transportation management problems (e.g. vehicle routing/scheduling and fleet planning). Where available, Asian cases will be used to highlight and educate students on unique business operations in this region.

Course Objectives

The objective of this course is to introduce and integrate knowledge in this area with applications in logistics and supply chain management. It exposes students to the work environment and the diverse challenges faced by business analysts, logistics planners and supply chain managers. The teaching method will be a combination of lectures, problem-based learning and class discussions on assigned reading topics and case analysis. Active class participation by students is expected.

Assessment

Assessment Components	Weightage
Class Tests (Individual)	50%
Group Assignments (Group*)	20%
Group Project (Group*)	20%
Class Participation (Individual)	10%

* For group assessments, each group member will get the same score, unless there is a lack of individual contribution to the group effort.

Schedule and Outline

Lesson/ Week	Date	Session
1	10-Aug*	Role of Physical Distribution in Trade and Supply Chains
2	17-Aug	Distribution and Replenishment Strategies
3	24-Aug	Material Handling: Planning, Processes and Principles
4	31-Aug	Network Design and Facility Location
5	7-Sep	Logistics Facility Sizing and Design
6	14-Sep	Logistics Facility Automation and Efficiency, Mid-Term Test
7	28-Sep	Overview of Freight Transport
8	5-Oct	Air and Ocean Freight Distribution
9	12-Oct	Road Freight Distribution
10	19-Oct	Vehicle and Intermodal Routing
11	26-Oct	E-commerce, Service and Reverse Logistics
12	2-Nov	Course Summary and Review; End-of-Term Test
13	9-Nov*	Project Presentations

* Public holidays. Make-up class arrangements (if required) to be announced.

General Guide & Reading

Case (for Weeks 5 and 9):

- Goh, S.H. Best-in-Class Inventory Management at Boonthavorn Ceramic Company, 2023

References (optional):

- Edward H. Frazelle. World-Class Warehousing and Material Handling, 2nd Edition, McGraw-Hill Education, 2016
- John J. Bartholdi III and Steven T. Hackman. Warehouse and Distribution Science, Available at www.warehouse-science.com, 2019
- Robert A. Novack, Brian Gibson, Yoshinori Suzuki and John J. Coyle. Transportation: A Global Supply Chain Perspective, 10th Edition (International or Asia), Cengage, 2024

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:

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- <http://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct>
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