

SDSC4051: FACILITIES AND DISTRIBUTION MANAGEMENT

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Facilities and Distribution Management

Subject Code

SDSC - School of Data Science

Course Number

4051

Academic Unit

School of Data Science (DS)

College/School

School of Data Science (DS)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

MA2506 Probability and Statistics and SDSC3027 Smart Logistics and Transportation

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

Logistics managers and engineers have to make decisions in facilities and distribution planning and scheduling. This course aims to equip students with necessary concepts, modelling skills and solution techniques for solving a variety of simple practical problems in facilities and distribution management.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Define logistics products and logistics customer service and process orders	10	x		
2	Evaluate and select transport modes and apply appropriate optimization models and techniques in transport decision-making	10	x		
3	Formulate basic inventory policies and make purchasing and scheduling decisions	30	x	x	
4	Define storage system functions, design and operate a storage handling system, formulate facility-location strategy and apply appropriate methods in the selection of facility location	20	x	x	
5	Formulate appropriate models for planning and scheduling problems in facilities and distribution management and solve them using computer software packages	30	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.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)	
1	Lectures	Introduction and Explanation of Theory through Examples	1, 2, 3, 4, 5	2 hours/week
2	Tutorials	Further Learning Theory from Solving Problems together by Members in a Group	3, 4, 5	1 hour/week

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Assignments	1, 2, 3, 4	10	
2	Projects	3, 4, 5	30	

Continuous Assessment (%)

40

Examination (%)

60

Examination Duration (Hours)

2

Assessment Rubrics (AR)**Assessment Task**

Assignments

Criterion

Submitted solutions to individual assignments.

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

Projects

Criterion

Submitted group work and presentations.

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

Criterion

Submitted solutions to the final examination.

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

Part III Other Information

Keyword Syllabus

- Logistics strategy and planning
- Transport fundamentals
- Transport decision
- Vehicle routing and scheduling
- Inventory Policy
- Storage and handling
- Facility location
- Network planning

Reading List

Compulsory Readings

Title	
1	Lecture notes

Additional Readings

Title	
1	Business Logistics/Supply Chain Management, 5th Edition, Ronald H. Ballou, Pearson Prentice Hall.