SEEM4051: FACILITIES AND DISTRIBUTION MANAGEMENT

Effective Term
Summer Term 2023

Part I Course Overview

Course Title
Facilities and Distribution Management

Subject Code
SEEM - Systems Engineering and Engineering Management
Course Number
4051

Academic Unit
Systems Engineering (SYE)

College/School
College of Engineering (EG)

Course Duration
One Semester

Credit Units
3

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
MA2172 Applied Statistics for Sciences and Engineering and SEEM3027 Logistics and Materials Management

Precursors
Nil

Equivalent Courses
MEEM4051 Facilities and Distribution Management

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			
2	Evaluate and select transport modes and apply appropriate optimization models and techniques in transport decision-making	10			
3	Formulate basic inventory policies and make purchasing and scheduling decisions	30			
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			
5	Formulate appropriate models for planning and scheduling problems in facilities and distribution management and solve them using computer software packages	30			

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	Group Activities	Further Learning Theory from Solving Problems together by Members in a Group	1, 2, 3, 4, 5	1 hour/week
3	Consultation Hours	Discussions of Course Materials	1, 2, 3, 4, 5	1 hour/week/ 25 students

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Participation & ExercisesStudents need to participate actively in in-class activities such as class exercises and discussions designed to facilitate their understanding of knowledge and mastering in skills of modelling and problem solving taught in class.	1, 2, 3, 4, 5	10	
2	Case Studies & Mini ProjectsStudents are required to effectively apply knowledge and skills learned from the course in modelling, analyzing and solving some simple practical problems.	1, 2, 3, 4, 5	30	

Continuous Assessment (%)

40

Examination (%)

60

Examination Duration (Hours)

2

Assessment Rubrics (AR)

Assessment Task

Participation & Exercises

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
Case Studies & Mini 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	Nil

Additional Readings

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