

City University of Hong Kong
Course Syllabus

offered by Department of Systems Engineering
with effect from Semester A 2024 / 25

Part I Course Overview

Course Title: Engineering Management Principles and Concepts

Course Code: SYE5010

Course Duration: One Semester

Credit Units: 3

Level: P5

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title) Nil

Precursors:
(Course Code and Title) Nil

Equivalent Courses:
(Course Code and Title) SEEM5010 Engineering Management Principles and Concepts (offered until 2021/22) / ADSE5010 Engineering Management Principles and Concepts (offered until 2023/24)

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. Abstract

This course aims to equip students with the basic principles and concepts in engineering management. After completion of the course students are able to:

Elaborate on management principles and concepts

- Identify and explain the primary engineering managerial functions, principles and concepts
- Understand managerial ethics and social responsibility
- Identify business strategies and differentiate between strategic, tactical and operational plans
- Formulate the concepts of organizational structure and design.

Elaborate on management leadership skills

- Describe and apply the basic process of effective communication
- Differentiate between managing and leading
- Recognize different decision making strategies
- Analyse motivation

Apply teamwork and personal management capabilities

- Identify own personality type using MBTI profiles
- Improve own leadership capabilities
- Understand difference in various types of teams
- Apply teamwork and managerial skills to get the best out of class projects

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Elaborate on management principles and concepts (definition, ethics, strategy, planning, organizational structure). <i>See above for details.</i>	40%	✓		
2.	Elaborate on management leadership skills (communication, leadership, decision making, and motivation). <i>See above for details</i>	30%	✓	✓	
3.	Apply teamwork and personal management capabilities (personal capabilities, leadership, team performance). <i>See above for details.</i>	30%			✓
		100%			

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.

3. Learning and Teaching Activities (LTAs)

(LTAs designed to facilitate students' achievement of the CILOs.)

LTA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
Large class activity	Weekly lectures. Lectures will be supplemented by: Management games	✓	✓	✓	2 hours/week
Tutorial	Weekly tutorial with Q & A and discussion. Tutorials are supplemented by: - Management games - Presentation by students	✓	✓	✓	1 hour/week
Consultation hour	Weekly consultation hours are available for students to ask questions.	✓	✓		1 hour/week

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.			Weighting	Remarks
	1	2	3		
Continuous Assessment: <u>50</u> %					
Mid-term	✓	✓		10%	Written exam paper half-way the course.
Presentation	✓		✓	10%	Students will present a summary and critical evaluation of one of the papers on the reading list.
Group assignment 1	✓		✓	15%	Group assignments assess student's understanding of theory and evaluate group work.
Group assignment 2		✓	✓	15%	Group assignments assess student's understanding of theory and evaluate group work.
Examination: <u>50</u> % (duration: 2 hours , if applicable)					
				100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Individual: final examination (50%), mid-term (10%), presentation (10%)	Assessed through group presentation, mid-term and final exam.	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Teamwork: 2 assignments (15% each)	Assignments are assessed in the form of a written report.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Conditions to pass the course:

- The score of the final exam must be 40 points out of 100 or higher.
- The total weighted average must be 40 points out of 100 or higher.
- Presentation is mandatory
- The two group assignments are mandatory.

If one or more off the above criteria are *not* met, the student will receive an overall grade F (fail) for the whole course.

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Individual: final examination (50%), mid-term (10%), presentation (10%)	Assessed through group presentation, mid-term and final exam.	High	Significant	Moderate/Basic	Not even reaching marginal levels
2. Teamwork: 2 assignments (15% each)	Assignments are assessed in the form of a written report.	High	Significant	Moderate/Basic	Not even reaching marginal levels

Conditions to pass the course:

- The score of the final exam must be 40 points out of 100 or higher.
- The total weighted average must be 40 points out of 100 or higher.
- Presentation is mandatory
- The two group assignments are mandatory.

If one or more off the above criteria are *not* met, the student will receive an overall F (fail) for the whole course.

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

- Engineering management
- Engineering management functions: Planning, Organizing, Leading, Controlling.
- Social responsibility and managerial ethics
- Group and team dynamics.
- Leadership
- Communication models.
- Decision-making
- Presentation

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Management, Hitt, Black and Porter, 3rd Edition, 2012, Pearson
2.	Other materials (e.g. lecture notes and articles) will be made available on Canvas

Note: the textbook (Hitt et al.) is for self-study. The lectures do not aim to address all the chapter of the textbook. The lectures are intended to add value by providing additional relevant information and explanation that is not available in the textbook. The textbook is required reading for the final exam.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

NIL