

SYE6107: CONTEMPORARY OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Contemporary Occupational Safety and Health Management

Subject Code

SYE - Systems Engineering

Course Number

6107

Academic Unit

Systems Engineering (SYE)

College/School

College of Engineering (EG)

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

ADSE6107 Contemporary Occupational Safety and Health Management (offered until 2023/24)

Exclusive Courses

Nil

Part II Course Details

Abstract

This course covers the key topics of contemporary occupational safety and health management for engineering management students, including occupational safety and health legislations, theories, concepts, and techniques of occupational safety and health, and occupational safety and health management system. This course aims to provide an overview of technical and management techniques that can be used for industrial accident prevention and investigation. Also, the students will learn how to apply the techniques of accident mitigation in various industries.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the legal system in Hong Kong with the interpretation and application of its relevant ordinances.	20	x	x	
2	Identify various occupational safety and health hazards in workplaces and develop the corresponding control measures.	40		x	x
3	Understand the elements of safety and health management system.	20		x	x
4	Apply technical and management techniques for industrial accident prevention, mitigation and investigation.	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	Large class activities	Learning through teaching is primarily based on lectures. Few guest-lectures by distinguished safety and health professionals will be arranged to facilitate student' s appreciation and understanding of the real-life applications of various concepts and methods.	1, 2, 3, 4	26 hours/semester

2	Group Activities	A group project will be conducted by students. In the group project, students apply the technical and management techniques to industrial accident prevention, mitigation and investigation.	1, 2, 3, 4	13 hours/semester
---	------------------	--	------------	-------------------

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?
1	Project - Written project report (30%) - Individual contribution (15%) - Individual presentation (5%)	1, 2, 3, 4	50	-	No
2	Quiz	1, 2, 3	20	-	No
3	Individual assignment	1, 2, 3	30	-	No

Continuous Assessment (%)

100

Examination (%)

0

Minimum Continuous Assessment Passing Requirement (%)

30

Assessment Rubrics (AR)**Assessment Task**

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

Criterion

Students' ability to apply the technical and management techniques to industrial accident prevention, mitigation and investigation.

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

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

Criterion

Students' ability to understand the fundamental principles and concepts of occupational safety and health management. It is a mid-term test, which includes multiple choice questions, True/False questions and/or long questions covering the first part of the course teaching material.

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

Students' understanding of the concepts learnt in class, textbooks, and their ability to apply subject-related knowledge.

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

Project Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Students' ability to apply the technical and management techniques to industrial accident prevention, mitigation and investigation.

Excellent

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

(F) Failure

Assessment Task

Quiz (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Students' ability to understand the fundamental principles and concepts of occupational safety and health management. It is a mid-term test, which includes multiple choice questions, True/False questions and/or long questions covering the first part of the course teaching material.

Excellent

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

(F) Failure

Assessment Task

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

Criterion

Students' understanding of the concepts learnt in class, textbooks, and their ability to apply subject-related knowledge.

Excellent

(A+, A, A-) Excellent

Good

(B+, B) Good

Marginal

(B-, C+, C) Marginal

Failure

(F) Failure

Additional Information for AR

All assessment tasks will be numerically marked and grades awarded accordingly.

Part III Other Information**Keyword Syllabus**

Occupational Safety and Health Legislation, Safety and Health Management System, Occupational Safety, Occupation Health, Risk Management, Safety Inspection and Reporting, Safety Training Technique, Safety Audit, Safety Plan Development, Accident Investigation and Reporting, Workplace Ergonomics.

Reading List**Compulsory Readings**

Title	
1	Goetsch, D.L., Occupational safety and health for technologists, engineers, and managers, NY : Pearson Ninth Edition, 2019.

Additional Readings

Title	
1	Lecture notes and slides
2	To be announced on canvas
3	Conway, J. (2016). The Industrial Internet of Things: an evolution to a smart manufacturing enterprise. Schneider Electric.
4	Achillas, C., Tzetzis, D., & Raimondo, M. O. (2017). Alternative production strategies based on the comparison of additive and traditional manufacturing technologies. International Journal of Production Research, 55(12), 3497-3509.
5	Gardan, J. (2016). Additive manufacturing technologies: state of the art and trends. International Journal of Production Research, 54(10), 3118-3132.
6	Sanders, A., Elangeswaran, C., & Wulfsberg, J. P. (2016). Industry 4.0 implies lean manufacturing: Research activities in industry 4.0 function as enablers for lean manufacturing. Journal of Industrial Engineering and Management (JIEM), 9(3), 811-833.