

City University of Hong Kong
Course Syllabus

offered by Department of Advanced Design and Systems Engineering
with effect from Semester A 2022 / 23

Part I Course Overview

Course Title: Contemporary Occupational Safety and Health Management

Course Code: ADSE6107

Course Duration: One Semester

Credit Units: 3

Level: P6

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) Nil

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. 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.

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.	Explain the legal system in Hong Kong with the interpretation and application of its relevant ordinances.	20%	✓	✓	
2.	Identify various occupational safety and health hazards in workplaces and develop the corresponding control measures.	40%		✓	✓
3.	Understand the elements of safety and health management system.	20%		✓	✓
4.	Apply technical and management techniques for industrial accident prevention, mitigation and investigation.	20%	✓	✓	✓
		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 self-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. Teaching and Learning Activities (TLAs)

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

TLA	Brief Description	CILO No.				Hours/week (if applicable)
		1	2	3	4	
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.	✓	✓	✓	✓	26 hours/sem
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.	✓	✓	✓	✓	13 hours/sem
Consultation Hours	Consultation hours will be used to facilitate discussions of various issues related to the lecture materials and project work.	✓	✓	✓	✓	13 hours/sem

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	4		
Continuous Assessment: <u>100</u> %						
<u>Project</u> Written project report (30%) Individual contribution (15%) Individual presentation (5%)	✓	✓	✓	✓	50%	
<u>Quiz</u>	✓	✓	✓		20%	
<u>Individual assignment</u>	✓	✓	✓		30%	
Examination: <u>0</u> % (duration: _____, 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 in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Project Report	Students' ability to apply the technical and management techniques to industrial accident prevention, mitigation and investigation.	Excellent	Good	Marginal	Failure
2. Quiz	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	Good	Marginal	Failure
3. Individual assignment	Students' understanding of the concepts learnt in class, textbooks, and their ability to apply subject-related knowledge.	Excellent	Good	Marginal	Failure

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

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Project Report	Students' ability to apply the technical and management techniques to industrial accident prevention, mitigation and investigation.	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Quiz	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.	High	Significant	Moderate	Basic	Not even reaching marginal levels
3. Individual assignment	Students' understanding of the concepts learnt in class, textbooks, and their ability to apply subject-related knowledge.	High	Significant	Moderate	Basic	Not even reaching marginal levels

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

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.)

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.

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

2.2 Additional Readings

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

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.