SEEM4023: OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

Effective Term
Summer Term 2023

Part I Course Overview

Course Title
Occupational Health and Safety Management

Subject Code
SEEM - Systems Engineering and Engineering Management
Course Number
4023

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
Students must complete a minimum of 60 CUs to be eligible

Precursors
Nil

Equivalent Courses
MEEM4023 Occupational Health and Safety Management/ADSE4027 Occupational Safety for Intelligent Manufacturing Systems

Exclusive Courses
Nil

Part II Course Details

Abstract

The aims of the course are to provide an overview of technical and management techniques that are used to prevent and investigate industrial accidents and to develop a broad appreciation of the management responsibility and practices for the health and safety of the employee. Students will also be provided a general understanding of the obligation and organisation of management on occupational health and safety in work environment. They will be able to develop the skills required for accident prevention and analysis.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Outline the benefit for having a good occupational health and safety management system.	10			
2	List the company responsibility and ordinances related to occupational safety and health.	30			
3	Identify the potentially dangerous and risky components in a given system or work environment.	20			
4	Apply technical and management techniques for industrial accidents prevention and investigation.	30			
5	Work effectively as a team member in laboratory activities and mini-project.	10			

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	Large class activities	The large class activities include mainly lectures. Each student needs to conduct a mini-project.	1, 2, 3, 4	33 hours/semester
2	Laboratory Work	The first laboratory is about the measurement and evaluation of the lighting conditions. The second laboratory is about the indoor air quality assessment.	1, 2, 3, 4, 5	6 hour/semester

3	Consultation Hours	Consultation hours will be used to facilitate discussions of various issues related to the lecture materials.	1, 2, 3, 4, 5	13 hours/semester

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Laboratory Report (100%)i.Group assessment · Experimental results (40%) · Result analysis and discussion (40%)ii.Individual assessment: · Peer assessment (10%)iii.Individual discussion and conclusion (10%)Laboratory reports will be marked according to the requirement described on the lab sheets.	1, 2, 3, 4, 5	20	
2	Mini-project Report (100%)Base on project report and presentation:i.Group assessment · Project report (40%) · Group presentation (40%)ii.Individual assessment: · Peer assessment (10%) · Individual presentation (10%)Mini projects include presentation and written report.	1, 2, 3, 4, 5	20	
3	Test scoreIt is a mid-term test, which includes multiple choice questions and long questions covering the first part of the course teaching material.	1, 2, 3, 4	10	

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)
2

Assessment Rubrics (AR)

Assessment Task
Laboratory Report

Criterion
Laboratory activities: Group assessment Experimental results (40%)Result analysis and discussion (40%)Individual assessment: Peer assessment (10%)Individual discussion and conclusion 10%)Laboratory reports will be marked according to the requirement described on the lab sheets.

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
Mini-project Report

Criterion
Base on project report and program demonstration:Group assessment Project report (40%)Group presentation (40%)Individual assessment:Peer assessment (10%)Individual presentation (10%)Mini projects include presentation and written report.

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
Test score

Criterion
It is a mid-term test, which includes multiple choice questions and 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
Examination

Criterion
Students will be assessed by testing their 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

Part III Other Information

Keyword Syllabus
Management Leadership. Safety and Health Management System. Liabilities and Safety Legislation. Computers and Safety. Safety Inspection and Audit. Accident Prevention and Investigation. Accident Costs Estimation. Indoor Air Quality Management. Industrial Noise Control and Management. Hazardous-Waste Management.

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	Asfahl, C. R., Industrial Safety and Health Management, Pearson Prentice Hall, Sixth Edition, 2009.
2	Occupational Safety Management and Engineering, Willie Hammer and Dennis Price, Prentice Hall, Fifth Ed., 2001.