

Subject Description Form

Subject Code	CSE1D03
Subject Title	How Safe are We at Work?
Credit Value	3
Level	1
Pre-requisite / Co-requisite/ Exclusion	CEE students are allowed to take CSE1D03.
Objectives	Occupational safety and health is essential to all modern organizations or businesses so as to ensure employees' well-being and foster a productive working environment. This subject aims to help students understand the principles and practice of workplace safety and acquire skills and knowledge about general preventive measures.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ol style="list-style-type: none"> a. understand the basic principles of occupational safety and health. b. interpret the current occupational safety and health legislation through applications in various workplace settings. c. identify and evaluate general safety and health hazards commonly found in workplaces. d. provide solutions to prevent workplace accidents, by applying the knowledge of hazard identification and evaluation. e. enhance English language skills in both reading and writing.
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> 1. Basic Concepts of Occupational Safety and Health <ul style="list-style-type: none"> • Definition of key occupational safety and health terms • Basic knowledge of different types of hazards • Principles of hazard control • Introduction of risk management 2. Overview of Occupational Safety and Health in Hong Kong <ul style="list-style-type: none"> • Introduction of occupational safety and health related legislation in Hong Kong. • Roles and responsibilities of employers and employees. • Factors affecting accident occurrence in local industries. 3. Health and Hygiene at Workplace <ul style="list-style-type: none"> • General occupational health issues in Hong Kong: chemicals, display screen equipment, manual handling operations, heat stroke and influenza. • Health risk in the workplace: air quality, lighting, ventilation, workstation design and use of chemicals.

	<ul style="list-style-type: none"> Occupational diseases, stresses, and illness. <p>4. Safety at Workplace</p> <ul style="list-style-type: none"> Common types of accidents in Hong Kong: slip, trip, and fall on the same level, struck by objects or vehicles, injured by hand tools, injured by animals, fall from height, injured whilst lifting. General occupational safety hazards and preventive measures. <p>5. Ergonomics and Occupational Health</p> <ul style="list-style-type: none"> Work-related musculoskeletal disorders: introduction to work-related musculoskeletal injuries and disorders; risk factors for work-related musculoskeletal disorders (physical and psychosocial), occupational rehabilitation models and programs. Office ergonomic and assessment: introduction to ergonomics; the body at work; anthropometry; simple biomechanics; workplace design; work seating; work related upper limb disorders; display screen equipment; influence of work organization. Ergonomic intervention for workplace health promotion: introduction to workplace-based interventions; physical activities in the workplace; participatory ergonomic in the workplace. 																																																
<p>Teaching/Learning Methodology</p>	<p>With the aid of lecture notes and reference materials, the basic contents of this subject will be presented by lectures.</p> <p>In order to facilitate higher order of thinking, coursework assignments will be set for the students. Students will be required to relate the lecture materials with real life application. The assignment will help achieve all the intended learning outcomes.</p> <p>Besides, tutorials will be provided to supplement lectures and case studies. The tutorials will facilitate learning to achieve all the intended learning outcomes of the subject. In-class case studies with group discussions and presentations will be used to enhance analytical and critical thinking skills of students. Through case studies or exercises, students will analyze the causes of occupational injuries, carry out job hazard analysis and risk assessment for workplace activities. Students will be asked to demonstrate ideas with logical thinking and reasoning by searching related reference cases.</p> <p>Self-study by students, including literature and information searching, is required to achieve all the intended learning outcomes of the subject.</p>																																																
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1"> <thead> <tr> <th data-bbox="536 1684 938 1823">Specific assessment methods/tasks</th> <th data-bbox="938 1684 1094 1823">% weighting</th> <th colspan="5" data-bbox="1094 1684 1495 1769">Intended subject learning outcomes to be assessed</th> </tr> <tr> <td></td> <td></td> <th data-bbox="1094 1769 1174 1823">a</th> <th data-bbox="1174 1769 1254 1823">b</th> <th data-bbox="1254 1769 1334 1823">c</th> <th data-bbox="1334 1769 1414 1823">d</th> <th data-bbox="1414 1769 1495 1823">e</th> </tr> </thead> <tbody> <tr> <td colspan="7" data-bbox="536 1823 1495 1877">Continuous Assessment</td> </tr> <tr> <td data-bbox="536 1877 938 1930">Essay/ Project Report ¹</td> <td data-bbox="938 1877 1094 1930">60%</td> <td data-bbox="1094 1877 1174 1930">√</td> <td data-bbox="1174 1877 1254 1930">√</td> <td data-bbox="1254 1877 1334 1930">√</td> <td data-bbox="1334 1877 1414 1930">√</td> <td data-bbox="1414 1877 1495 1930">√</td> </tr> <tr> <td data-bbox="536 1930 938 1984">Tutorial Activities ²</td> <td data-bbox="938 1930 1094 1984">10%</td> <td data-bbox="1094 1930 1174 1984">√</td> <td data-bbox="1174 1930 1254 1984">√</td> <td data-bbox="1254 1930 1334 1984">√</td> <td data-bbox="1334 1930 1414 1984">√</td> <td data-bbox="1414 1930 1495 1984"></td> </tr> <tr> <td data-bbox="536 1984 938 2033">Quiz ³</td> <td data-bbox="938 1984 1094 2033">30%</td> <td data-bbox="1094 1984 1174 2033">√</td> <td data-bbox="1174 1984 1254 2033">√</td> <td data-bbox="1254 1984 1334 2033">√</td> <td data-bbox="1334 1984 1414 2033"></td> <td data-bbox="1414 1984 1495 2033">√</td> </tr> </tbody> </table>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed							a	b	c	d	e	Continuous Assessment							Essay/ Project Report ¹	60%	√	√	√	√	√	Tutorial Activities ²	10%	√	√	√	√		Quiz ³	30%	√	√	√		√						
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	Total	100%		
<p>Students must attain at least grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.</p> <p>¹ For the assessment of essay or project report, the literacy of students including their abilities to comprehend occupational safety and health information based on the stated indicative syllabus, to think analytically and critically, as well as to communicate in written form individually will be assessed. Students will be required to prepare an essay or project report of 1500-2500 words. This piece of writing will be graded jointly by the subject instructor and the ELC staff member. Subject instructor and ELC staff member will take up 45% and 15% of the total assessment respectively. Students must obtain grade D or above in the essay or project report in order to attain a passing grade in the overall result.</p> <p>² Class assignments including case studies are set to evaluate and reinforce the understanding of the knowledge covered in the indicative syllabus of the subject.</p> <p>³For the assessment of students’ reading assignment, students are asked to read an extensive text of at least 200 pages, such as code of practices, guidance notes and journal papers on occupational safety and health topics , and answer pre-designed questions in the form of a quiz which is counted 30% of the total assessment of the subject. A final written quiz allows students to demonstrate their level of learning with respect to this subject’s intended outcomes.</p>				
Student Study Effort Expected	Class contact:			
	▪ Lectures/ Tutorials			39 Hrs.
	Other student study effort:			
	▪ Coursework			35 Hrs.
	▪ Self-Study			46 Hrs.
	Total student study effort			120 Hrs.
Cluster Area	Science, Technology and Environment			
Requirements Intended to Fulfill	Eligible for “Writing” (W) designation – include an extensive piece of writing as essay or project report (2,500 words) AND “Reading” (R) designation – include a reading of an extensive text (100,000 words or 200 pages) as reference materials for the preparation of written assignment and carrying out tutorial activities.			
Reading List and References	Essential Textbook:			

1. Bohle, P. (2000). *Managing occupational health and safety : a multidisciplinary approach*. South Yarra : Macmillan Publishers Australia.
2. Stranks, J.W. (2006). *Health and safety pocket book*. Oxford : Butterworth-Heinemann.
3. Hughes, P., Ferrett, E. (2016). *International Health and Safety at Work*. 3rd ed. Oxford: Taylor & Francis Group.

Recommended Reading:

- Graham, R.P. (1999). *Safety at work*. Aldershot, England : Gower.
- Reese, C. D. (2012). *Accident/incident prevention techniques*. Boca Raton, FL : CRC Press/Taylor & Francis Group.
- Schneild, T.D. (2014). *Workplace Safety and Health : Assessing Current Practices and Promoting Change in the Profession*. Boca Raton, FL : CRC Press.
- Karwowski, W., Marras, W.S. (2006) *The Occupational Ergonomics Handbook*. CRC press
- Chaffin, D.B., Andersson, G.B.J. (2006). *Occupational Biomechanics*. 2nd ed. New York: Wiley Interscience.
- Grandjean, E. (1988) *Fitting the Task to the Man: A Textbook of Occupational Ergonomics*. 4th ed. London: Taylor and Francis.
- Marek, T., Karwowski, W., Rice, V. (2011) *Advances in Understanding Human Performance: Neuroergonomics, Human Factors Design, and Special Populations*. Boca Raton: CRC Press.