Subject Description Form

Subject Code	BSE534
Subject Title	Legislation Aspects of Fire Safety Management
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	To equip the students with knowledge of the Legislation Aspects of Fire Safety Management. The purpose is to provide the students with legislation knowledge with respect to fire safety management, so that they can learn about the regulations in relation to the fire services installation and the recommended practices for buildings of different uses; and integration with the fire safety for the building as a whole. Comparison with the overseas regulations and the use of fire statistical records to improve the fire safety provisions and management strategies will also be discussed. It will be at the level of practicing building services engineers who are working in the area of fire engineering or interested to learn more.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. have a clear understanding of the legislation knowledge with respect to fire safety management; b. understand the regulations in relation to the fire services installation; c. appreciate the recommended practices for buildings of different uses; and integration with the fire safety for the building as a whole; d. understand merits and limitations of existing prescriptive fire safety code and the performance based code; e. improve the fire safety provisions and management strategies.
Subject Synopsis/ Indicative Syllabus	**Introduction:** The principles and philosophy of fire regulation; Introduce the sources of various fire safety regulations and authorities concerned. **Review of regulations:** A brief review of existing regulations and authority governing the design of fire safety systems. **Legal system:** A critical analysis of the local legal system relating to fire safety and the role of legal system in fire safety aspect of construction industry. **Authorities:** The structure and role of Fire Services Department, Buildings Department, Independent Commission Against Corruption, Labour Department, Health and Safety Ordinance, etc., in legal system and their roles in fire safety.

Codes of practice: Minimum fire service installations and equipment, and inspection and testing and maintenance of installations and equipment (FSI), means of escape (MoE), means of access (MoA), fire resisting construction (FRC).

Human Behaviour: Crowd movement, evacuation in fire, individual capability to evacuate, crowd behaviour and management, evacuation time.

Review of standards: Standards used in fire safety regulations; Review of British Standard, National Fire Protection Association codes including Life Safety Code, Australian Standard etc.

Fire safety and the community: Community fire losses, HK Fire statistics and their implications to fire safety provisions and management strategies in building, public fire safety education.

Comparison of legislation from other developed countries: Review legislation in UK, USA, China, Canada and Australia and comparison.

Performance-Based Fire Codes: Fire Engineering approach in development of fire safety regulation and its impact to local building industry. Implementation with reference to MoE, MoA, FRC and FSI codes. Fire modelling and design fire.

Case studies and application of research: Legislation in hotels, commercial buildings, places of assembly and entertainment, residential buildings, industrial buildings, hospitals, special buildings such as tunnels, air-supported structures.

Teaching/Learning Methodology

- Lectures and seminars
- Student seminars/tutorials

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a.	b.	c.	d.	e.	
1. Examination	60%	✓	✓	✓	✓		
2. Continuous assessment	40%		✓			✓	
Total	100%						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Based on examination mark (60%) and continuous assessment mark (40%). The continuous assessment is made up of course work, seminar and case study.

Tutorial work

Tutorial work will mainly focus on problem solving based on examination type questions and practical examples.

Reading List and References	Barry, F.T. (2002). *Risk-Informed, Performance-Based Industrial Fire Protection: An Alternative to Prescriptive Codes*, TFBarry Publications. BS 7974:2001 (2001). *Application of Fire Safety Engineering Principles to the Design of Buildings – Code of Practice*, London, UK. Buildings Department (2015). *Code of Practice for the Fire Safety in Buildings 2011.* Hong Kong: Buildings Department, Hong Kong SAR Government. Custer, R.L.P. and Meacham, B.J. (1997). *Introduction to Performance-Based Fire Safety*, Society of Fire Protection Engineers, Boston, MA, USA. Della-Giustina, D.E. (2014). *The Fire Safety Management Handbook, American Society of Safety Engineers*, 3rd Ed., Des Plaines, Illinois, USA. Fire Code Performance Centre Ltd. (2001). *Fire Engineering Guidelines*, Sydney, Australia. Fire Protection Association (2014). Essentials of Fire Safety Management, The UK's National Fire Safety Organization. Fire Services Department (2012). *Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection and Testing and Maintenance of Installations and Equipment*, Hong Kong: Fire Services Department, Hong Kong SAR Government. Hurley M. J. and Rosenbaum E.R. (2015), *Performance-Based Fire Safety Design*, CRC Press. Malhotra, H.L. (1987). *Fire Safety in Buildings*, Building Research Establishment Report, Department of the Environment, Building Research Establishment, Fire Research Station, Borehamwood, Herts, WD6 2BL, UK. Miller, R. (2003). Tolley's Fire Safety Management Handbook, LexisNexis UK. NFPA 101 (2021). *Life Safety Code*, National Fire Protection Association, Quincy, MA, USA. NFPA 550 (2017). *Guide to the Fire Safety Concepts Tree*, National Fire Protection Association, Quincy, MA, USA. Scott, K. (2012). Building Code Basics: Fire, Based on the 2012 International Fire Code, International Code Council. Society of Fire Protection Engineers and National Fire Protection Association (2015). *SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings*, MA, USA. Wolski, A. Dembsey, N.A. & Meacham B.J. (2000). Accommodating Perceptions of Risk in Performance-based Building Fire Safety Code Development, *Fire Safety Journal*, Vol. 34, Issue 3, April, p. 297-309.