

## Subject Description Form

<b>Subject Code</b>	BSE4316
<b>Subject Title</b>	Law, Regulations and Standards for Fire Safety
<b>Credit Value</b>	3
<b>Level</b>	4
<b>Pre-requisite / Co-requisite/ Exclusion</b>	Nil
<b>Objectives</b>	The objectives of this subject are to provide an overview of the law, regulations and standards for fire safety; and enable the students to use the codes of practices for fire engineering designs for buildings of different usages.
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ul style="list-style-type: none"><li>a. demonstrates awareness, understand and appraise the fire safety related building ordinances, codes and regulations;</li><li>b. apply knowledge of fire safety related national engineering standards and the legislation and litigation relating to fire safety designs;</li><li>c. analyze, adopt and evaluate the specific code requirements related to the design, inspection, testing and maintenance of the fire protection systems and recommend fire safety practices for buildings of different usages;</li><li>d. interpret existing fire safety standards and related statutory requirements in an evolving area of the building industry, and evaluate the applicability of research and fire safety alternatives to a range of non-typical conditions; and</li><li>e. apply the performance-based codes to non-typical fire safety designs, as there is growing trend of transformation from traditional prescriptive approach to performance-based fire safety designs.</li></ul>

**Subject Synopsis/  
Indicative Syllabus**

1. Legal systems, law and regulations  
Introduction to the local legal system relating to building fire safety. Laws of Hong Kong, regulations and authorities concerned such as the Buildings Department (BD) and Fire Services Department (FSD).
2. Fire Safety Law Enforcement  
Fire Services Ordinance, Buildings Ordinance, Dangerous Goods Ordinance, Fire Services Amendment Bill (RFE), Legislative Proposal to Upgrade Fire Safety of Old Industrial Buildings, and introduction of the relationship between fire engineering and the law enforcement system of Hong Kong.
3. Fire safety standards and codes of practice  
Codes of practice for minimum fire service installations and equipment and inspection and testing of installations and equipment by FSD. Code of practice for fire safety in buildings by BD.
4. Fire safety and the community  
Compartmentation. Community fire losses. Hong Kong fire statistics and their implication to fire safety provisions and management strategies in building. Public fire safety education.
5. Introduction and development of performance-based fire codes  
Fire engineering approach in the development of fire safety regulations and its impact to local building industry. Use of fire models to conduct the state-of-the-art performance-based design.
6. Introduction to the fire service intervention strategies and evaluate the impact of different intervention strategies on building structures after fire, and how a good fire protection design may enhance firefighting efficiency.

<p><b>Teaching/Learning Methodology</b></p>	<p>Teaching approach includes lectures, tutorials, in-class test, case studies/ exercises with group discussion, report submission and seminar presentations, and end-of-semester examination to facilitate learning to achieve all the intended learning outcomes.</p> <p>Applications of regulations, standards, and circular letters prepared by various statutory bodies and others will be discussed in lectures with all the intended learning outcomes being achieved. Tutorials will be used to support lectures. Student participation is expected in solving selected examples in tutorial work, including examination questions and longer open-ended problems. In addition, discussion on problematic areas will be held during tutorials in order to develop a better understanding of the subject. These will facilitate learning to achieve all intended learning outcomes.</p> <p>The in-class test is to examine the understanding of the students on the subject topics covered in the whole course. This will help to achieve the intended learning outcomes, in particular (a), (b) and (c).</p> <p>The group discussion, report submission and seminar presentations on case studies/ exercises allow students to work as teams. These may be literature review, code review on application of codes to practice design of the fire services systems, through a student-centered learning approach. These seminar and report on case studies/ exercises will facilitate learning to achieve all the intended learning outcomes, in particular (b), (c) and (d).</p> <p>End-of –semester examination will evaluate student’s understanding of the knowledge being taught.</p> <p>Independent study by students, such as literature and information searching, is required to achieve all the intended learning outcomes.</p>
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<p><b>Assessment Methods in Alignment with Intended Learning Outcomes</b></p>	<p>Specific assessment methods/tasks</p>	<p>% Weighting</p>	<p>Intended subject learning outcomes to be assessed</p>				
			<p>a</p>	<p>b</p>	<p>c</p>	<p>d</p>	<p>e</p>
	<p>1. In-class Test</p>	<p>15</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>		
	<p>2. Group Report Submission</p>	<p>15</p>		<p>✓</p>	<p>✓</p>	<p>✓</p>	
	<p>3. Group Presentation</p>	<p>10</p>		<p>✓</p>	<p>✓</p>	<p>✓</p>	
	<p>4. Final Examination</p>	<p>60</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>
	<p>Total</p>	<p>100</p>					
<p><b>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.</b></p>							

<b>Student Study Effort Expected</b>	Class contact:	
	▪ Lectures	24 Hrs.
	▪ Tutorials/ Seminars	13 Hrs.
	▪ In-class Test	2 Hrs.
	Other student study effort:	
	▪ Coursework	35 Hrs.
	▪ Self Study	46 Hrs.
	Total student study effort	120 Hrs.
<b>Reading List and References</b>	<b>References:</b> <ol style="list-style-type: none"> <li>1. Code of Practice for Fire Safety in Buildings 2011, Buildings Department, Hong Kong Special Administrative Region (HKSAR), the latest version.</li> <li>2. Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment, Fire Services Department (FSD), HKSAR, the latest version.</li> <li>3. Hurley M.J. and Rosenbaum E.R., Performance-Based Fire Safety Design, CRC Press, 2015.</li> <li>4. Laws of Hong Kong with Ordinance and the Sub-leg Regulations, HKSAR.</li> <li>5. List of FSD Circular Letters, FSD, HKSAR.</li> <li>6. Loss Prevention Council LPC Rules for Automatic Sprinkler Installations Incorporating British Standard BS EN 12845 – Fixed firefighting systems – Automatic sprinkler systems – Design, installation and maintenance (with suitable modification pertinent to Hong Kong), LPC, UK, 2003.</li> </ol>	