

## Form 2B

# City University of Hong Kong

## Information on a Course

offered by Department of Architecture and Civil Engineering  
with effect from Semester A in 2014/2015

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### Part I

<b>Course Title:</b>	Applied Fire and Plumbing Engineering
<b>Course Code:</b>	CA6607
<b>Course Duration:</b>	1 Semester (Some courses offered in Summer Term may start a few weeks earlier than the normal University schedule. Please check the teaching schedules with CLs before registering for the courses.)
<b>Credit Units:</b>	3
<b>Level:</b>	P6
<b>Medium of Instruction:</b>	English
<b>Prerequisites:</b>	Nil
<b>Precursor:</b>	Nil
<b>Equivalent Courses:</b>	BC6607 Advanced Fire and Plumbing Engineering
<b>Exclusive Courses:</b>	Nil

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### Part II

#### Course Aims:

To understand the importance of fire protection and fire fighting in modern buildings. To study the statutory requirements relating to fire protection and fire fighting in Hong Kong and China Mainland with the emphasis on both active means and passive means.

#### Course Intended Learning Outcomes (CILOs):

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	understand the approach of performance-based fire safety engineering study;	---
2.	create strategy for conducting a deterministic fire safety engineering approach;	---
3.	calculate different flow conditions in plumbing system;	---
4.	apply the current and new technologies of plumbing engineering	---

## Teaching and Learning Activities (TLAs):

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

**Semester Hours:** 3 hours per week

**Lecture/Tutorial/Laboratory Mix:** Lecture (2); Tutorial (1); Laboratory (0)

CILO No.	TLAs	Total Hours (if applicable)
CILO 1	<ul style="list-style-type: none"><li>Lectures and tutorials: performance-based fire safety engineering approach</li></ul>	12
CILO 2	<ul style="list-style-type: none"><li>Lectures and tutorials: strategy for conducting a deterministic fire safety engineering approach</li></ul>	9
CILO 3	<ul style="list-style-type: none"><li>Lectures and tutorials: different flow conditions in plumbing system</li></ul>	6
CILO 4	<ul style="list-style-type: none"><li>Lectures and tutorials: current and new technologies of plumbing engineering</li></ul>	12

## Assessment Tasks/Activities:

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

**Coursework:** 50%

**Examination:** 50% (Examination duration = 2 hours)

To pass a course, a student must obtain minimum marks of 30% in both coursework and examination components, and an overall mark of at least 40%.

CILO No.	Type of assessment tasks/activities	Weighting (if applicable)	Remarks
CILO 1	<ul style="list-style-type: none"><li>Examination and Project: performance-based fire safety engineering approach</li></ul>	---	<ul style="list-style-type: none"><li>Nil</li></ul>
CILO 2	<ul style="list-style-type: none"><li>Examination and Project: strategy for conducting a deterministic fire safety engineering approach</li></ul>	---	<ul style="list-style-type: none"><li>Nil</li></ul>
CILO 3	<ul style="list-style-type: none"><li>Examination and Calculation: different flow conditions in plumbing system</li></ul>	---	<ul style="list-style-type: none"><li>Nil</li></ul>
CILO 4	<ul style="list-style-type: none"><li>Examination and Quiz: current and new technologies of plumbing engineering</li></ul>	---	<ul style="list-style-type: none"><li>Nil</li></ul>

## Grading of Student Achievement:

### Grading Pattern:

Standard

Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

## Part III

### Keyword Syllabus:

Review of fire science, modelling fire growth and development; zone and field models, appraisal of fire engineering systems; prescriptive and performance based fire codes; fire escape; cold and hot water supply; sanitation and drainage, basic hydraulics, plumbing and drainage system design, components of plumbing and drainage systems, new plumbing technologies.

### Recommended Reading:

- **Texts:**
    1. CIBSE (2003) Fire engineering, 2nd ed., London.
    2. Barham R. (1996) Fire engineering and emergency planning, E & FN Spon, London.
    3. Fire Prevention Council (1998) Fire spread in curtain walled buildings [videorecording], Borehamwood, England.
    4. Bryan J.L. (1993) Fire suppression and detection systems, 3rd ed., Macmillan, New York.
    5. CIPHE (2002) Plumbing Engineering Services Design Guide, Hornchurch, Essex, UK.
    6. Swaffield, J.A. and Galowin, L.S. (1992) The Engineered design of building drainage systems, Ashgate, Hants, England.
  - **Online Resources:**
    1. <http://www.cibse.org>
    2. <http://www.ashrae.org>
    3. <http://www.nist.gov>
    4. <http://www.iphe.org.uk>
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