An introduction to

Department of Building Services Engineering

And

MSc in Fire and Safety Engineering

The Hong Kong Polytechnic University
Research Focuses of RCFE
(Director: Professor W.K. Chow)

- Fire modeling
- Fire suppression systems
- Advanced topics in fire
Fire & Safety Engineering
Fire & Safety Engineering

Water mist
Smoke Stratification

By Ko Chi Hong
Backdraft
Sprinklers
Large Space Fire Test
Atrium Hot Smoke Test

Megabox
Tunnel fire simulation
Residential sprinkler test
Evacuation study
The time line comparison between fire development and evacuation/damage to property
Building Fire Simulation
Outline of Building in Simulation

Boundary Line

Window

Door

Partition / Wall
Soot condition
Fire Scenario

Temperature after 75 s in Case 5 approximate more than 300°C

Visibility after 75 s in Case 5 approximate 0m in whole floor

Temperature after 77 s in Case 6 approximate more than 300°C

Visibility after 78 s in Case 6 approximate 0m in 2m (Height)
Evacuation
To provide better housing for all.
To develop a secure and safe city.

**Host Department:**
Department of Building Services Engineering

**Programme Duration:**
The normal duration:
For MSc, 2.5 years (PT) / 1 year (FT)
For PgD, 2 years (PT) / 9 months (FT)

**Aims of the Programme:**
The aim of the programme is to provide continuing education in fire and safety engineering to those with qualifications at professional level.

The programme aims to develop students' knowledge in fire and safety engineering as well as their learning attitude, study skills and their intellectual and imaginative power.

It concentrates on fundamental analysis and the development of fire and safety science and engineering concepts.

It is intended for students to understand the requirements for providing fire safety in all aspects, and how this is achieved through appropriate design, installation, operation and fire safety management. Students need to consider how fire designs integrate with the building, and satisfy building usage. One aim is to enhance quality teaching in Hong Kong on the new topic of engineering performance-based fire codes.

In safety engineering, emphasis is put on improving the safety aspect of buildings. Accident prevention, hazard assessment, risk analysis, safety management and auditing, and safety in construction sites would all be discussed.
Programme Duration:

★ The normal duration:

- For MSc
  - 2.5 years (PT)
  - 1 year (FT)

- For PgD
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  - 9 months (FT)
Aims of the Programme

- To provide continuing education in fire and safety engineering to those with qualifications at professional level.
- To develop students knowledge in fire and safety engineering as well as their learning attitude, study skills and their intellectual and imaginative power.
Aims of the Programme

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### Programme Structure

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>BSE 532</td>
<td>Fire Engineering Systems</td>
<td>3</td>
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<tr>
<td>BSE 533</td>
<td>Fire Dynamics</td>
<td>3</td>
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<td>BSE 574</td>
<td>Research Methods</td>
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<td>Core Subject: (Discipline Elective#)</td>
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<tr>
<td>BSE 558</td>
<td>Accident Prevention, Hazard Assessment &amp; Control</td>
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<tr>
<td>BSE 559</td>
<td>Safety Management System and Safety Auditing</td>
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# offers subject to availability
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<tr>
<td>BSE 531</td>
<td>Computational Fire Modelling for Building Design</td>
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<tr>
<td>BSE 534</td>
<td>Legislation Aspects of Fire Safety Management</td>
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<td>BSE 535</td>
<td>Design Considerations for Fire Safety Management</td>
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<td>BSE 5510</td>
<td>Safety Aspects in Construction</td>
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<td>BSE 5511</td>
<td>Occupational Health and Ergonomics</td>
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<td>BSE 590</td>
<td>BSE Dissertation</td>
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## Programme Structure for MSc / PgD Award

<table>
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<th>Award Type</th>
<th>Course Structure</th>
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<tr>
<td>MSc Award (Without dissertation)</td>
<td>4 Cores + 3 Discipline Electives + 3 Other Electives</td>
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<tr>
<td>MSc Award (With dissertation)</td>
<td>4 Cores + 3 Discipline Electives / Other Electives</td>
</tr>
<tr>
<td>PgD Award</td>
<td>4 Cores + 3 Discipline Electives / 3 Other Electives</td>
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Fire Laboratory
Contact information

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Thank you