1. KentVision Code and title of the module

PSCI6010 – Fires and Explosions

## Division and School/Department or partner institution which will be responsible for management of the module

Division of Natural Sciences (Chemistry and Forensic Science)

## The level of the module (Level 4, Level 5, Level 6 or Level 7)

Level 6

## The number of credits and the ECTS value which the module represents

15 Credits (7.5 ECTS)

## Which term(s) the module is to be taught in (or other teaching pattern)

Spring

## Prerequisite and co-requisite modules and/or any module restrictions

None

## The course(s) of study to which the module contributes

Compulsory for the following courses:

BSc (Hons) Forensic Science

MSci Forensic Science

Optional for the following courses:

BSc (Hons) Chemistry

MChem Chemistry

Not available as an elective module

## The intended subject specific learning outcomes. On successfully completing the module students will be able to:

8.1 Demonstrate broad knowledge and understanding of the physics and chemistry of fires and explosions.

8.2 Demonstrate wide-ranging knowledge and understanding of the principal areas of forensic investigation of fires and explosions.

8.3 Demonstrate extensive knowledge and understanding of the analysis and identification of accelerants, incendiary devices, explosives and explosive residues.

8.4 Safely and confidently manage fire and explosion scenes.

8.5 Demonstrate expansive knowledge and understanding of the observation and assessment of damage to buildings and vehicles, and injury to persons.

8.6 Accurately identify of the causes of fires and explosions, and their classification as natural, accidental, negligent or deliberate.

## The intended generic learning outcomes. On successfully completing the module students will be able to:

9.1 Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to the subject areas identified above.

9.2 Apply such knowledge and understanding to the solution of qualitative and quantitative problems.

9.3 Demonstrate confidence in essay writing and presenting scientific material and arguments clearly and correctly, in writing and orally, to a range of audiences including legal contexts.

9.4 Demonstrate effective problem-solving skills, relating to qualitative and quantitative information, extending to situations where evaluations have to be made on the basis of limited information.

9.5 Demonstrate accurate and efficient numeracy and computational skills, including such aspects as error analysis, order-of-magnitude estimations, correct use of units and modes of data presentation.

## A synopsis of the curriculum

This module covers a range of core chemical science that relates to fire and explosive events. The applied investigation of such events is also discussed to give students a wider appreciation of previous case studies and the complexities of post-fire and post-blast investigations.

## Reading list

## The University is committed to ensuring that core reading materials are in accessible electronic format in line with the Kent Inclusive Practices.

## The most up to date reading list for each module can be found on the university's [reading list pages](https://kent.rl.talis.com/index.html).

## Contact Hours

Private Study: 128

Contact Hours: 22

Total: 150

## Assessment methods

13.1 Main assessment methods

* Assignment 1 (4 hours) – 10%
* Assignment 2 (4 hours) – 10%
* Examination (3 hours) – 80%

13.2 Reassessment methods

* Like-for-like

## Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section 12) and methods of assessment (section 13)

**Module learning outcomes against learning and teaching methods:**

| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Lectures | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |

**Module learning outcomes against assessment methods:**

| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assignment 1 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Assignment 2 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Examination | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |

## Inclusive module design

The Division recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

## Campus(es) or centre(s) where module will be delivered

Canterbury

## Internationalisation

Science is an international discipline with widely applicable international resonance. This module presents subject-specific knowledge generated, developed, and refined by scientists around the world. Mastery of the learning outcomes will equip students to apply the knowledge in a wide range of international contexts and these will be addressed in making the content relevant to current global issues. The Division of Natural Sciences is an international community of students and staff and group activities and teaching will provide a platform for internationally-focussed discussion.

**DIVISIONAL USE ONLY**

**Module record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

| Date approved | New/Major/minor revision | Start date of delivery of (revised) version | Section revised  (if applicable) | Impacts PLOs (Q6&7 cover sheet) |
| --- | --- | --- | --- | --- |
| 9 Dec 2021 | Minor | Sept 2022 | 5, 10, 12 | No |
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| Revised FSO Jan 2018 |