1. KentVision Code and title of the module

PSCI0021 – Molecules and Analysis

## 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 3

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

30 credits (15 ECTS)

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

Autumn

## 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 with a Foundation Year

BSc (Hons) Chemistry with Foundation Year

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 knowledge and understanding of a range of chemistry-based topics;

8.2 Demonstrate experimental laboratory skills;

8.3 Solve problems;

8.4 Interpret data.

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

9.1 Receive and respond to a variety of sources of information (e.g. textual, numerical, verbal, and graphical);

9.2 Problem solve by a variety of methods (especially numerical) including the use of computers;

9.3 Use self-management plus organisational skills and the capacity to support life-long learning.

## A synopsis of the curriculum

The mole; chemical equations; titrations; atoms and molecules; energy levels; acids and bases; orbitals; bonds; molecular shapes; spectra; bond energies, hydrogen bonding, analytical methods - IR, UV-Vis, NMR).

## 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: 250

Contact Hours:50

Total: 300

## Assessment methods

13.1 Main assessment methods

* LAB – Experiment A1 (3 hours) – 3.34%
* LAB – Experiment A2 (3 hours) – 3.34%
* LAB – Experiment A3 (3 hours) – 3.34%
* LAB – Experiment A4 (3 hours) – 3.34%
* LAB – Experiment A5 (3 hours) – 3.34%
* LAB – Experiment A6 (3 hours) – 3.34%
* Online Quiz 1 (1 hour) – 10%
* Online Quiz 2 (1 hour) – 10%
* Examination (2 hours) – 60%

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 | 9.1 | 9.2 | 9.3 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Private Study | **x** |  |  | **x** | **x** | **x** |  |
| Lectures | **x** |  | **x** |  | **x** | **x** | **x** |
| Laboratory |  | **x** |  | **x** |  |  | **x** |

**Module learning outcomes against assessment methods:**

| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 9.1 | 9.2 | 9.3 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Online Quizzes | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Laboratory Reports |  | **x** |  | **x** |  | **x** | **x** |
| Examination |  |  | **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) |
| --- | --- | --- | --- | --- |
| 28 Feb 2019 | Major | Sept 2019 | 8-9,13-14 | No |
| 9 Dec 2021 | Minor | Sept 2022 | 13 | No |

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| Revised FSO Jan 2018 |