1. **Title of the module**

PSCI0021 (PS021) Molecules and Analysis

1. **School or partner institution which will be responsible for management of the module**

Physical Sciences

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 3

1. **The number of credits and the ECTS value which the module represents**

30 credits (15 ECTS)

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

Autumn

1. **Prerequisite and co-requisite modules**

None

1. **The programmes of study to which the module contributes**

Forensic Science with a Foundation Year

Chemistry with a Foundation Year

This is not available as a wild module.

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
2. Demonstrate knowledge and understanding of a range of chemistry-based topics
3. Demonstrate experimental laboratory skills
4. Solve problems
5. Interpret data

1. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**
2. Receive and respond to a variety of sources of information (e.g. textual, numerical, verbal, and graphical).
3. Problem solve by a variety of methods (especially numerical) including the use of computers.
4. Use self-management plus organisational skills and the capacity to support life-long learning.
5. **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).

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

* Philip Matthews, Advanced Chemistry, Cambridge Univ. Press 1992
* Burrows et al., Chemistry3: Introducing Inorganic, Organic and Physical Chemistry, 2nd Edition, Oxford University Press (2013)

1. **Learning and teaching methods**

Total contact hours: 80

Private study hours: 220

Total study hours: 300

1. **Assessment methods**
   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%)

Class Test 1 – 1 hour (10%)

Class Test 2 – 1 Hour (10%)

Exam - 2 hours (60%)

13.2 Reassessment methods

Like-for-like

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 9.1 | 9.2 | 9.3 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| *Independent study* | **X** |  |  | **X** | **X** | **X** |  |
| *Lectures* | **X** |  | **X** |  | **X** | **X** | **X** |
| *Laboratory* |  | **X** |  | **X** |  |  | **X** |
| *Practicals* |  |  |  |  | **X** |  |  |
| **Assessment method** |  |  |  |  |  |  |  |
| *Assignments* | **X** |  | **X** |  | **x** |  | **x** |
| *Class test* |  |  |  |  | **x** | **X** |  |
| *Lab reports* |  | **X** |  | **X** |  |  | **x** |
| *Examination* |  |  | **X** |  | **x** |  |  |

1. **Inclusive module design**

The School 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

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

Chemistry is an international subject and industry. Chemistry principles are discovered, techniques are also developed, refined and shared by chemists across the globe. Mastery of the subject-specific learning outcomes, will equip students to apply the theories and techniques of this module in a wide range of international contexts. The support and activities SPS provides to its students is also designed with our international student body in mind.

**FACULTIES SUPPORT OFFICE USE ONLY**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 28/02/19 | Major | September 2019 | 8,9,13,14 | no |
|  |  |  |  |  |

Revised FSO Jan 2018