1. **Title of the module**

LABS411 General & Inorganic Chemistry

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

Digital and Lifelong Learning

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

Level 4

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

15 Credits (7.5 ECTS)

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

Flexible delivery model

Autumn and/or Spring and/or Summer

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

N/A

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

FdSc and BSc (Hons) in Applied Chemical Sciences

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

8.1 Use chemical terminology.

8.2 Explain the trend in the periodic table using theoretical models.

8.3 Write and balance equations and oxidation state of elements

8.4 Understand the principles of electronegativity.

8.5 Explain the reactivity series and give example reactions.

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

9.1 Demonstrate the development of practical/technical skills

9.2 Analyse, evaluate and correctly interpret data

9.3 Communicate and present data effectively

9.4 Obtain and use information from a variety of sources as part of self-directed learning.

9.5 Manage the time and use organisation skills within the context of self-directed learning.

1. **A synopsis of the curriculum**

The course will be organised on the basis of selected modules covering various aspects of general and inorganic chemistry. Illustrations will be drawn from the exemplars indicated below as appropriate for the final award.

* Atomic structure – Structure of atom
* Bonding – covalent/ionic bonding including intermolecular interaction
* The Periodic Table – The periodic properties of elements
* Balancing Equations and Oxidation states
* S Block chemistry – The properties of Group 1 and 2 elements
* Halogens and Noble Gases
* Periodicity
* Reactivity Series

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

George Facer (2009) A2 Chemistry. Edexcel.

Lister, T. and Renshaw, J (2009) A2 Chemistry. Nelson Thornes.

Parsons (2007) GCSE Core Science. CGP.

Catherine E. Housecroft and A. G. Sharpe (2012) Pearson Education

H. Stephen Stoker (2016) Cengage Learning

Darrell D. Ebbing; Steven D. Gammon (2013) Brooks/Cole

1. **Learning and teaching methods**

Blended Distance learning:

Contact Hours: 120

Private Study Hours: 30

Total Study Hours: 150

* 1. **Assessment methods**

Main assessment methods

Essay assignment/s (70%) - 1600 words.

Moodle Quiz (30%) .

The pass mark for this module is 40%. The aim of the assessment is that there should be an equal balance between ‘application’ (i.e. reflection related to practical/work experience) and ‘theory’ (i.e. examination), but that neither should enable the student to obtain a pass grade independently and in its entirety.

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 | 8.5 | 8.6 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |
| **Teaching** | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** | **x** | **x** | **x** |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Work-based experience |  |  |  |  |  |  | **x** | **x** | **x** | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Assignment/s | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Moodle Quiz | **x** | **x** | **x** | **x** | **x** | **x** |  |  |  |  | **x** |

1. **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

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

Blended distance learning – delivered from Medway and Canterbury campus

1. **Internationalisation**

International vocation is an important part of Applied Chemical Science. The intended learning outcomes 8.1, 8.2, 8.4, 8.5 and 8.6, for this module cover key universal principles and concepts of General and Inorganic chemistry and therefore are core components of Applied Chemical Science worldwide. The syllabus also covers writing and balancing equations which is a fundamental skill in chemistry based research. Furthermore, Organic Chemistry is a core component of the Pharmaceutic R & D industry and this module reflects international aspects.

**DIVISIONAL 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 delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
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