1. KentVision Code and title of the module

CHEM6200 – Chemistry Research Project

## 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

30 Credits (15 ECTS)

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

Autumn and Spring

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

None

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

Optional for the following courses:

BSc (Hons) Chemistry (including all variants)

BSc (Hons) Forensic Science (including all variants)

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 extensive knowledge and understanding of the principles and theories relating to Chemical Skills in presenting scientific material and arguments clearly and correctly, in writing and orally, to a range of audiences.

8.2 Demonstrate extensive knowledge and understanding of the core and foundation scientific physical, biological and chemical concepts, terminology, theory, units, conventions and methods. Also as applied to and in relation to forensic analysis.

8.3 Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to the subject and to apply such knowledge and understanding to the solution of qualitative and quantitative problems.

8.4 Recognise and analyse problems and plan strategies for their solution by the evaluation, interpretation and synthesis of scientific information and data.

8.5 Demonstrate competence in the planning, design and execution of investigations, from the problem-recognition stage through to the evaluation and appraisal of results and findings; this to include the ability to select appropriate techniques and procedures.

8.6 Interpret data derived from laboratory observations and measurements in terms of their underlying significance and the theory underpinning them, and to present such data in a professional environment.

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

9.1 Demonstrate a broad range of communication skills.

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

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

9.4 Demonstrate strong information-retrieval skills, in relation to primary and secondary information sources, including information retrieval through on-line computer searches.

9.5 Demonstrate confident interpersonal skills, relating to the ability to interact with other people and to engage in team working.

9.6 Demonstrate efficient time-management and organisational skills, as evidenced by the ability to plan and implement efficient and effective modes of working. Self-management and organisational skills with the capacity to support life-long learning.

## A synopsis of the curriculum

During this module students will choose a research project from one of four areas: Computational Chemistry, Solid-State Chemistry, Synthetic (Organic) Chemistry, or Chemical Pedagogy. They will then independently plan and execute their experiments, simulations (computational chemistry) or pedagogical research with guidance from an academic supervisor. The module provides framework research training.

## 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: 274

Contact Hours: 26

Total: 300

## Assessment methods

13.1 Main assessment methods

* Project Report (20-25 pages) – 50%
* Progress Report (2 pages) – 10%
* Presentation (15 minutes) – 20%
* Supervisor Mark – 20%

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 | 9.6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Seminar | **x** | **x** |  |  |  |  | **x** |  |  | **x** |  |  |
| Guided Research | **x** | **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 | 9.6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Report | **x** |  | **x** |  |  |  |  | **x** |  |  | **x** | **x** |
| Progress Report | **x** | **x** |  | **x** |  |  | **x** |  |  | **x** |  | **x** |
| Presentation | **x** | **x** |  |  | **x** | **x** | **x** |  | **x** | **x** | **x** |  |
| Supervisor Mark | **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 | 10, 12 | No |
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| Revised FSO Jan 2018 |