1. **Title of the module**

CHEM6200 (CH620) - Research Project

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 6

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 and Spring

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

None

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

BSc/BSc with Foundation Year/BSc with Year in Industry Forensic Chemistry

BSc/BSc with Year in Industry Chemistry

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:**

Have a knowledge and understanding of:

8.1 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 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. (A1)

8.3 Ability to 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. (B5)

8.4 Ability to recognise and analyse problems and plan strategies for their solution by the evaluation, interpretation and synthesis of scientific information and data. (B6)

8.5 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. (C16)

8.6 Ability to 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. (C19)

Relationship to programme learning outcomes is direct, as per labelling in programme specification.

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

Have a knowledge and understanding of:

9.1 Generic skills needed for students to undertake further training of a professional nature. (D13)

9.2 Communication skills, covering both written and oral communication. (D21)

9.3 Problem-solving skills, relating to qualitative and quantitative information, extending to situations where evaluations have to be made on the basis of limited information. (D22)

9.4 Numeracy and computational skills, including such aspects as error analysis, order-of-magnitude estimations, correct use of units and modes of data presentation. (D23)

9.5 Information-retrieval skills, in relation to primary and secondary information sources, including information retrieval through on-line computer searches. (D24)

9.6 Information-technology skills such as word-processing and spreadsheet use, data-logging and storage, Internet communication, etc. (D25)

9.7 Interpersonal skills, relating to the ability to interact with other people and to engage in team-working. (D26)

9.8 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. (D27)

9.9 Study skills needed for continuing professional development and professional employment. (D29)

9.10 Ability to plan and implement independent projects at BSc level. (D32)

Relationship to programme learning outcomes is direct, as per labelling in programme specification.

1. **A synopsis of the curriculum**

Here, you will undertake a lab-based research project. You will choose one of three areas: Computational Chemistry, Solid-State Chemistry or Synthetic (Organic) Chemistry. You will then independently plan and execute your experiments or simulations (computational chemistry) with guidance from an academic supervisor. The module provides framework research training.

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

Literature as indicated by the project supervisor.

1. **Learning and teaching methods**

Total contact hours: 25

Private study hours: 275

Total study hours: 300

1. **Assessment methods**
   1. Main assessment methods

Project Report (about 20-25 sides of A4 excluding figures and tables etc, 50%)

Progress Report (2 pages, 10%)

Presentation (15 minutes, 20%)

Supervisor Mark (20%)

13.2 Reassessment methods

Like-for-like, some elements of which may only take place in term time.

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* | *9.6* | *9.7* | *9.8* | *9.9* | *9.10* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Private Study/Presentation** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Seminar | **X** | **X** |  |  |  |  | **X** | **X** |  |  | **X** | **X** |  |  |  |  |
| Guided Research | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Supervisor Mark | **X** |  | **X** |  |  |  |  |  | **X** |  |  |  | **X** | **X** | **X** |  |
| Progress report | **X** | **X** |  | **X** |  |  | **X** | **X** |  |  | **X** | **X** |  | **X** | **X** | **X** |
| Presentation | **X** | **X** |  |  | **X** | **X** | **X** | **X** |  | **X** | **X** | **X** |  |  | **X** | **X** |
| Project Report | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |  | **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**

The internationalisation focus of this module is achieved by utilising techniques and information beyond the UK theories or skills being tested which are grounded in universal principles with broad international application

**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) |
|  |  |  |  |  |
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Revised FSO Jan 2018