1. **Title of the module**

CHEM3090 (CH309) - Fundamental Organic Chemistry for Physical Scientists

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 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)**

Autumn and Spring

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

**Co-requisites:**

CHEM3080 Molecules Matter & Energy

CHEM3140 Introduction to Biochemistry and Drug Chemistry

And

PSCI3810 Chemical Skills for Forensic Scientists

Or

CHEM3820 Chemical Skills

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

BSc/BSc with Foundation Year/BSc with Year in Industry/MSci & MChem in Chemistry, Forensic Science

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:**

Demonstrate:

1. Knowledge and understanding of core and foundation scientific physical and chemical concepts, terminology, theory, units and conventions to chemistry and forensic science. FS/FC A1. Chem A1.
2. Knowledge and understanding of areas of organic chemistry (organic functional groups, organic materials and compounds, synthetic pathways) as applied to chemistry and forensic science. FS/FC A3. Chem A3.
3. An ability to demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to chemistry and to apply such knowledge and understanding to the solution of qualitative and quantitative problems. FS/FC B1. Chem B5.
4. An ability to recognise and analyse novel problems and plan strategies for their solution by the evaluation, interpretation and synthesis of scientific information and data. FS/FC B2. Chem B6.
5. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**

Demonstrate:

1. Problem-solving skills, relating to qualitative and quantitative information, extending to situations where evaluations have to be made on the basis of limited information.
2. Numeracy skills, including such aspects as correct use of units, significant figures, decimal places etc.
3. Information-retrieval skills, in relation to primary and secondary information sources, including information retrieval through on-line computer searches.
4. 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.
5. Study skills needed for continuing professional development and professional employment.
6. **A synopsis of the curriculum**

This module reintroduces the basic concepts of organic chemistry that are vital in understanding pharmaceutical and biological substances. You will study the basics of the chemistry of carbon, the element critical to underpinning life, including its basic building blocks and functional groups. We also cover the mechanisms by which basic organic reactions occur including elimination, substitution and oxidation processes.

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

Core (Compulsory) Text for all Forensic Science students taking CH309

* Fundamentals of Organic Chemistry, McMurry, 7th Edition, 2011 (ISBN-10 1439049718)

It is expected and necessary that you read this textbook as an accompaniment to all lecture notes and coursework for CH309. Older editions of the above are as valid and as useful as the latest edition

Core (Compulsory) Text for all Chemistry students taking CH309

* Organic Chemistry, Jonathan Clayden, Nick Greeves, Stuart G. Warren, 2nd Edition, 2012 (ISBN-10 0199270295)

It is expected and necessary that you read this textbook as an accompaniment to all lecture notes and coursework for CH309.

1. **Learning and teaching methods**

Total contact hours: 36

Private study hours: 114

Total study hours: 150

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

Assignment 1 4 hours (8%)

Assignment 2 4 hours (8%)

Assignment 3 4 hours (8%)

Assignment 4 4 hours (8%)

Assignment 5 4 hours (8%)

Examination 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* | *9.4* | *9.5* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |
| *Lectures* | **×** | **×** | **×** | **×** |  |  |  | **×** | **×** |
| *Private Study* | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** |
| *Workshop* | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |
| *Coursework* | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** |
| *Examination* | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** | **×** |

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**

n/s

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**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) |
|  |  |  |  |  |
|  |  |  |  |  |

Revised FSO Jan 2018