1. **Title of the module**

PSCI6370 (PS637) DNA Analysis & Interpretation

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**

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**

Prerequisite:

CHEM3140 Introduction to Biochemistry and Drug Chemistry or equivalent

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

MSci in Forensic Science

MChem in Chemistry

BSc in Forensic Science/Chemistry including Year in Industry variants

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 core biological concepts, terminology, theory, units, conventions, and methods, including knowledge of cells, biochemistry and human DNA.
3. Demonstrate knowledge and understanding of concepts, principles & theories of DNA & forensic genetics, and ability to apply such knowledge and understanding to the solution of qualitative and quantitative problems in the area of DNA.
4. Use skills required for, and knowledge of, the analysis of forensic DNA.
5. Interpret data derived from laboratory observations and measurements in terms of their underlying significance and the theory underpinning them.
6. Display skills in the safe handling of chemicals, taking into account their physical and chemical properties, including any hazards associated with their use and to risk assess such hazards.
7. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**
8. Recognise and implement good measurement science and practice.
9. Solve problems, relating to qualitative and quantitative information, extending to situations where evaluations have to be made on the basis of limited information.
10. Use information-retrieval skills, in relation to primary and secondary information sources, including information retrieval through on-line computer searches.
11. **A synopsis of the curriculum**

The module lectures will cover the following topics:

* Historical methods
* DNA sample collection, processing and storage
* DNA theory
* DNA databases and statistical interpretation
* Quality Assurance, management and control
* Legal aspects
* Forensic case studies
* Future trends

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

* Publications from the learned literature including journal articles from Science & Justice and Forensic Science International
* Fundamentals of Forensic DNA typing (Butler 2009, Academic Press)
* Forensic DNA typing (Butler 2005, Academic Press)

1. **Learning and teaching methods**

Total contact hours: 30

Private study hours: 120

Total study hours: 150

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

* Genotyping exercise (two pages, 10%)
* Lab write up (six pages, 10%)
* Examination (three hours, 80%)

The genotyping exercise and the lab write up are compulsory sub-elements and must be passed to pass the module

* 1. 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* | *9.1* | *9.2* | *9.3* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |
| Private Study | x | x | x | x | x | x | x | x |
| Lectures | x | x | x | x | x | x | x | x |
| Laboratory | x | x | x | x | x | x | x | x |
| **Assessment method** |  |  |  |  |  |  |  |  |
| Genotype exercise | x | x | x | x | x | x | x |  |
| Lab write up | x | x | x | x | x | x | x | x |
| Examination | 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 module embraces the concept of internationalisation by teaching and embedding methods from both the UK, USA and wider afield

**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 | 8,9,11,13 | no |
|  |  |  |  |  |

Revised FSO Jan 2018