Confirmation that this version of the module specification has been approved by the School Learning and Teaching Committee:

11-3-15………………………………………….(date)

**SECTION 1: MODULE SPECIFICATIONS**

1. Title of the module

**DNA Analysis & Interpretation (PS637)**

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

**School of Physical Sciences**

1. Start date of the module

**Existing module, revised for September 2015**

1. The number of students expected to take the module

**100**

1. Modules to be withdrawn on the introduction of this proposed module and consultation with other relevant Schools and Faculties regarding the withdrawal

**None**

1. The level of the module (*e.g*. Certificate [4], Intermediate [5], Honours [6] or Postgraduate [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)

**Term 1**

1. Prerequisite and co-requisite modules

**CH314 Introduction to Biochemistry and Drug Chemistry or equivalent**

1. The programmes of study to which the module contributes

**MSci in Forensic Science/Forensic Chemistry; MChem in Chemistry**

 **BSc in Forensic Science/Forensic Chemistry/Chemistry including Year in Industry variants**

**This is not available as a wild module**

1. The intended subject specific learning outcomes

**11.1 Knowledge and understanding of core biological concepts, terminology, theory, units, conventions, and methods, including knowledge of cells, biochemistry and human DNA**

**11.2 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.**

**11.3 Skills required for, and knowledge of, the analysis of forensic DNA.**

**11.4 Ability to interpret data derived from laboratory observations and measurements in terms of their underlying significance and the theory underpinning them.**

**11.5 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**

1. The intended generic learning outcomes

**12.1 Ability to recognise and implement good measurement science and practice**

**12.2 Problem-solving skills, relating to qualitative and quantitative information, extending to situations where evaluations have to be made on the basis of limited information**

**12.3 Information-retrieval skills, in relation to primary and secondary information sources, including information retrieval through on-line computer searches**

1. 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. Indicative Reading List

**Textbooks:**

* ***Fundamentals of forensic DNA typing* (Butler 2009) – ISBN 978-0-12-374999-4**
* ***Forensic DNA typing* Butler ISBN 0-12-147951-X**

**Publications from the learned literature including journal articles from *Science & Justice* and *Forensic Science International***

1. Learning and Teaching Methods, including the nature and number of contact hours and the total study hours which will be expected of students, and how these relate to achievement of the intended module learning outcomes

*Learning and Teaching Methods:*

**The total amount of time spent on the module will be 150 hours**

1. **24 hours will be spent on lectures**
2. **The module will make use of online teaching materials and formative quizzes encompassing 50 hours of self study**
3. **One lab class is associated with this module (6 hours)plus 8 hrs self study for a lab write-up.**
4. **A further 62 hours on directed self-study. These are supported by a weekly article dealing with contemporary issues and topics**

*Achievement of module learning outcomes:*

* **Lectures: 11.1, 11.2, 11.3, 11.5, 12.2, 12.3**
* **Lab class: 11.3, 11.4, 11.5, 12.1, 12.2, 12.3**
1. Assessment methods and how these relate to testing achievement of the intended module learning outcomes
* **The written examination will account for 80%: 11.1, 11.2, 11.3, 11.5, 12.2**
* **DNA profiling case study will account for 10%: 11.2, 11.3, 11.5, 12.2, 12.3**
* **lab report will account for 10%: 11.3, 11.4, 11.5, 12.1, 12.2**
1. Implications for learning resources, including staff, library, IT and space

This is an existing module. One off purchase of materials for DNA lab class and profiling case study will be made in advance from SPS funds.

1. The School recognises and has embedded the expectations of current disability equality legislation, and supports students with a declared disability or special educational need in its teaching. Within this module we will make reasonable adjustments wherever necessary, including additional or substitute materials, teaching modes or assessment methods for students who have declared and discussed their learning support needs. Arrangements for students with declared disabilities will be made on an individual basis, in consultation with the University’s disability/dyslexia support service, and specialist support will be provided where needed.

1. Campus(es) where module will be delivered:

**Canterbury**