1. **Title of the module**

PSCI5110 (PS511) - Digital Forensics

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 5

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

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

Prerequisite:

Successful completion of Stage 1 of a Forensic Science degree programme or equivalent experience.

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

MSci/BSc Forensic Science with/without a Year in Industry

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

Have a knowledge and understanding of:

1. Association of Chief Police Officer’s guidelines for ‘National Working Practices in Facial Imaging’ (A7, B9, 10).

2. The main facial identification techniques used in criminal investigations (A2, 6, B9, 10, 12, C18).

3. Practical experience of b) using facial composite software (A2, B9, 10, 12, 13, C17, 18, 22, D24, 28, 29).

4. Methods used in digital image forensics and their implementation in computer software (A6, B9, 10, 11, 12, 15, D24, 25).

5. Aspects of digital forensics including: legislation to enforce appropriate computer use, cryptography for secret communication, network forensics and methods used to hide data on computer hardware and methods for retrieving it (A2, 6, B9, 10, 11, 12, 15, C18, 22, D24, 25, 27).

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

1. To use forensic software in relation to mock criminal investigations (B9, 10, 11, 12, D25, 27).

2. To enhance skills in a laboratory environment (B13, C17, 19, D28, 29).

3. Ability to demonstrate knowledge and understanding of the essential facts, and concepts, relating to the subject area (A2, B9, 10, 11, 12, D23, 24).

1. **A synopsis of the curriculum**

Facial Identification

Indicative topics are: Facial reconstruction, facial composites, description by witness – cognitive interview - Turnbull’s rules (R v Turnbull, 1976), identity parades – psychology of facial identification – video identity parades, facial mapping, automated recognition technologies, age progression.

Digital Image Analysis

Indicative topics are: Image formation, image storage, image distortion, image restoration methods, the digital image in crime detection, steganography (implementation and detection).

Digital Forensics

Indicative topics are: Encryption, fallacies about hiding and destroying data, where to find data and methods for retrieving it, disk imaging, file integrity, cryptographic hashing, privacy vs need for investigation. Legislation relating to computer misuse.

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

* Crime Scene to Court, The Essentials of Forensic Science, 2nd edition, ed. P. White. Royal Society of Chemistry, 2004. ISBN: 0854046569
* Digital Image Processing using Matlab, Gonzalez, Woods and Eddins, Pearson Prentice Hall, 2004
* Handbook of Computer Crime Investigation, E. Casey, Academic Press, 2002

1. **Learning and teaching methods**

Total contact hours: 40

Private study hours: 110

Total study hours: 150

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

Assignment 1 (6.6%) 2hr

Assignment 2 (6.6%) 2hr

Assignment 3 (6.7%) 2hr

Lab assignment 4 (6.7%) 2hr

Lab assignment 5 (6.7%) 2hr

Lab assignment 6 (6.7%) 2hr

Examination (60%) 2hr

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* | *8.5* | *9.1* | *9.2* | *9.3* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |
| **Private Study** | **x** | **x** |  | **x** | **x** | **x** | **x** | **x** |
| *Laboratory* | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| *Lectures* | **x** | **x** |  | **x** | **x** | **x** | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |
| *Assignment* | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| *Laboratory* | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| *Examination* | **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**

Forensic Science is an international subject with laws of physical sciences discovered and techniques developed and refined by physical scientists across the globe. Mastery of the subject-specific learning outcomes, will equip students to apply the theories and techniques of this module in a wide range of international contexts. The module team is drawn from the School of Physical Sciences, which includes many members of staff with international experience of teaching and research collaboration. In compiling the reading list, consideration has been given to the range of texts that are available internationally. The support SPS provides to its students is also attuned to our international student body.

**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