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MODULE DESCRIPTOR

Module Title

Forensic Examination & Analysis

| | | | |
|-----------|----------------|-------------|--------|
| Reference | AS2063 | Version | 5 |
| Created | June 2022 | SCQF Level | SCQF 8 |
| Approved | September 2004 | SCQF Points | 30 |
| Amended | August 2022 | ECTS Points | 15 |

Aims of Module

To enable students to develop practical, analytical and communication skills in forensic analysis and forensic imaging. To provide the principles and practice of techniques used by forensic analysts and document examiners.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Understand the principles of use and operation of selected analytical and imaging instruments.
- 2 Interpret fully and record accurately the results of experimental procedures of forensic analysis, forensic imaging and document examination.
- 3 Explain the methods of construction of characters used in all instances of handwriting and identify both natural and deliberate modifications made to handwriting.

Indicative Module Content

This is a largely practical based module which is subdivided into a number of different types of activity: consolidation of basic laboratory skills, development of advanced laboratory skills via a series of core and extended experiments. Within each type of activity the exercises are designed to develop practical, analytical and problem solving skills. Students undertake a range of prescribed experiments using spectroscopic and chromatographic techniques applied to forensic samples. Students will undertake a number of prescribed experiments using different microscopes to analyse a range of forensic samples including fibres, footprints, fingerprints, bullets and documents. Handwriting and signatures; construction of characters, natural variation, accidental and deliberate modification. Origin and history of documents: inks, paper, impressions, erasures and obliteration. Analysis of documents using a range of techniques e.g. ESDA, chromatography, microscopy, spectroscopy. Video Spectral Comparator, comparison microscope. The development of communication skills and attitudes appropriate to an experimental scientist is an important element of the course.

Module Delivery

This is a lecture based module supplemented by tutorials, practical laboratory classes and case study workshops.

| Indicative Student Workload | Full Time | Part Time |
|---|-----------|-----------|
| Contact Hours | 125 | N/A |
| Non-Contact Hours | 175 | N/A |
| Placement/Work-Based Learning Experience [Notional] Hours | N/A | N/A |
| TOTAL | 300 | N/A |
| Actual Placement hours for professional, statutory or regulatory body | | |

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

| | | | | | |
|--------------|----------------|------------|-----|--------------------|------|
| Type: | Practical Exam | Weighting: | 50% | Outcomes Assessed: | 1, 3 |
| Description: | Skills test | | | | |

Component 2

| | | | | | |
|--------------|---------------------------|------------|-----|--------------------|---|
| Type: | Coursework | Weighting: | 50% | Outcomes Assessed: | 2 |
| Description: | Written laboratory report | | | | |

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The first grade represents Component 1 (PE1) equally weighted with the second, Component 2 (CW1). A minimum module grade of D is required for a pass, with compensation of grade E in Component 1 or Component 2 permitted. Non-submission of either component will result in an NS grade.

| Module Grade | Minimum Requirements to achieve Module Grade: |
|--------------|--|
| A | AA, AB, BA |
| B | AC, AD, BB, BC, CA, CB, DA |
| C | AE, BD, BE, CC, CD, DB, DC, EA, EB |
| D | CE, DD, DE, EC, ED |
| E | AF, BF, CF, DF, EE, EF, FA, FB, FC, FD, FE |
| F | FF |
| NS | Non-submission of work by published deadline or non-attendance for examination |

Module Requirements

| | |
|--------------------------|---|
| Prerequisites for Module | Successful completion of Stage 1 Forensic and Analytical Science or equivalent. |
| Corequisites for module | None. |
| Precluded Modules | None. |

INDICATIVE BIBLIOGRAPHY

- 1 LANGFORD, A.M., DEAN J., REED R., HOLMES D.A., WEYERS J., and JONES A. *Practical Skills in Forensic Science*. Current Edition. Prentice Hall.
- 2 WHITE, P.C., *Crime Scene to Court, The Essentials of Forensic Science*. Current Edition. The Royal Society of Chemistry.
- 3 JACKSON A.R.W., JACKSON J.M., MOUNTAIN H., and BREARLEY D. *Forensic Science*. Current Edition. Pearson.
- 4 BELL S. and MORRIS K. *An Introduction to Microscopy*. Current Edition. CRC Press Taylor & Francis Group.
- 5 AUCHIE, D., 2014. Evidence. 4th ed. Edinburgh: W. Green. (Law Basics series)
- 6 CHRISTIE, S., 2009. An introduction to Scots criminal law.. 2nd ed. Dundee: Dundee University Press.
- 7 WHITE, R., WILLOCK, I., and MACQUEEN, H., 2013. The Scottish legal system. 5th ed. Hayward Heath: Bloomsbury Professional.