

## MODULE DESCRIPTOR

### Module Title

Practical Analytical Science

|           |                |             |        |
|-----------|----------------|-------------|--------|
| Reference | PL2602         | Version     | 1      |
| Created   | April 2023     | SCQF Level  | SCQF 8 |
| Approved  | September 2004 | SCQF Points | 15     |
| Amended   | August 2021    | ECTS Points | 7.5    |

### Aims of Module

To enable students to develop practical, analytical skills in forensic analytical science.

### Learning Outcomes for Module

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

- 1 Undertake analytical science experiments, utilising and operating selected analytical instruments with a forensic purpose.
- 2 Acquire accurate results from experimental procedures used in analytical science and fully record data and observations.
- 3 Analyse and interpret results and report findings in a written formal report.

### Indicative Module Content

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, electrochemical and chromatographic techniques applied to forensic samples.

### Module Delivery

This is a laboratory based module supplemented with tutorial/workshop sessions.

### Indicative Student Workload

|  | Full Time | Part Time |
|--|-----------|-----------|
| Contact Hours  | 36        | N/A       |
| Non-Contact Hours  | 114       | N/A       |
| Placement/Work-Based Learning Experience [Notional] Hours                    | N/A       | N/A       |
| TOTAL  | 150       | N/A       |
| <i>Actual Placement hours for professional, statutory or regulatory body</i> |           |           |

**ASSESSMENT PLAN**

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

**Component 1**

Type: Coursework Weighting: 100% Outcomes Assessed: 1, 2, 3  
 Description: Laboratory Report

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

Component 1 (Laboratory Report) comprises 100%. A minimum of a Grade D is required to pass the module.

| Module Grade | Minimum Requirements to achieve Module Grade:                                  |
|--------------|--|
| A            | A  |
| B            | B  |
| C            | C  |
| D            | D  |
| E            | E  |
| F            | F  |
| 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 SKOOG, D.A., HOLLER, F.J. AND CROUCH, S.R. *Principles of Instrumental Analysis* . Current Edition. Thomson Brooks/Cole.
- 2 PRICHARD, F.E. *Quality Assurance in Analytical Chemistry* . Current Edition. Chemistry Laboratory. Wiley.
- 3 MONK, P.M. *Fundamentals of Electroanalytical Chemistry* . Current Edition. Wiley