

## MODULE DESCRIPTOR

### Module Title

Professional Development and Research Skills

Reference	CMM507	Version	8
Created	June 2022	SCQF Level	SCQF 11
Approved	November 2003	SCQF Points	15
Amended	July 2022	ECTS Points	7.5

### Aims of Module

To develop research skills relevant to rapidly evolving scientific disciplines and technologies. To foster an awareness of ethical and legal implications of IT. To develop interpersonal communication skills, written oral and collaborative.

### Learning Outcomes for Module

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

- 1 Undertake a literature review based on acquired search techniques.
- 2 Critically review, evaluate and assess published research.
- 3 Design experiments and other studies using statistical designs linked to specific methods of analysis.
- 4 Through group work, critically evaluate real situations as regards social and ethical issues, work practice, IP, copyright and related legal issues; data protection, privacy and liability.
- 5 Communicate effectively using scientific rigour and presentation style.

### Indicative Module Content

Literature research skills and electronic sources? library skills. Critical thinking and analytical skills, peer reviews and balanced reporting. Self-reflection. The scientific method and hypothesis testing, hypothetical deductive versus inductive methods. Experimental design, reproducible research? evaluation of research outcomes. Statistics: experimental design models, data summaries, analysis and descriptive statistics; inference. Social and ethical implications of IT? copyright? patents, intellectual property rights, contracts, product liability, data protection. Effective groups. Project planning and management, skills? tools and techniques? configuration management. Report writing, citation styles? practical skills in formatting, building contents and indices? report writing style. Oral presentations.

### Module Delivery

The course content is delivered by a combination of lectures and interactive lab sessions, and is based on extensive use of case studies.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	30	30
Non-Contact Hours	120	120
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<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, 4, 5
Description:	This is a coursework. For a given brief, students will consider professional, social and legal issues; students will devise a project plan, design an experiment and, given data, use statistical techniques to undertake analysis and evaluation.				

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

The coursework pass grade is D.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	To achieve an A, the student must achieve an A in Component 1.
<b>B</b>	To achieve a B, the student must achieve a B in Component 1.
<b>C</b>	To achieve a C, the student must achieve a C in Component 1.
<b>D</b>	To achieve a D, the student must achieve a D in Component 1.
<b>E</b>	To achieve an E, the student must achieve an E in Component 1.
<b>F</b>	To achieve an F, the student must achieve an F in Component 1.
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

1	BAINBRIDGE, D., 2008. Introduction to Information Technology Law, Pearson.
2	BELL, J., 2014. Doing Your research Project. Open University Press.
3	BOWDEN, J., 2011. Writing a report: How to prepare, write and present really effective reports. How To Books Ltd.
4	BLAIR, L., 2016. Writing a Graduate Thesis or Dissertation. Sense Publishers.
5	CRESWELL, J.W. , 2014. Research design: qualitative, quantitative, and mixed methods approaches. Sage.
6	MADSEN, B., 2016, Statistics for non-statisticians. Springer.