



Module code	RMPP_PCOM7E	NQF level	7
Credit value	20	Study duration	12 weeks

Research Methods and Professional Practice

Module description

This module provides a practical foundation in research methods that enables students to conduct research in practical settings. The approach covers various tools and techniques that a researcher may deploy and facilitates continual feedback throughout the module through cases and project tasks.

The selected textbook offers a comprehensive redress of the subject, based around the scientific method and offering much details for doing research in various type of organisations. Students will be able to identify with research practicalities no matter their background, as well as use critical analysis of the key principles of research methodology in bringing together the knowledge gained throughout other modules on the programme. The module will also highlight professional, legal, social, cultural and ethical issues related to computing projects, as well as the applicable codes of ethics and practice.

The module uses continuous assessment throughout with weekly case studies and milestone assessments, hence facilitating peer-to-peer as well as instructor interactions. Students will demonstrate their ability and strengths through evidence and reflections by maintaining an e-portfolio.

This module aims to:

- Provide students with the ability to:
 - study and reflect on key principles and methods in research based on the scientific method and relevant to various disciplines
 - examine various research strategies and designs as applicable to projects at hand
 - develop research competencies, in particular those relating to the collection and analysis of data types to enable a critical design and evaluation of independent research
 - take a reflective and independent approach to the learning process

Learning outcomes

On completion of this module, students will be able to:

- appraise the professional, legal, social, cultural and ethical issues that affect computing professionals
- appraise the principles of academic investigation, applying them to a research topic in the applicable computing field
- evaluate critically existing literature, research design and methodology for the chosen topic, including data analysis processes

- produce and evaluate critically a research proposal for the chosen topic

Syllabus

- Scientific investigations, ethical considerations and risk management
- Defining and refining the problem
- Critical literature review
- Research design –theoretical framework and hypothesis development
- Data collection –interviews, observation, questionnaires
- Measurement of variables and sampling
- Quantitative data analysis
- Qualitative data analysis
- Research reporting

Learning and teaching methods

The module will be delivered through the provision of specified reading materials on the virtual learning platform, which shall be supported by specified online discussion forums and lecturecasts. The flexible and participative approach of the module will develop a collaborative research inquiry in the advancement of computing, enabling them to accelerate in their chosen career.

Students will demonstrate their ability and strengths through evidence and reflections by maintaining an e-portfolio. The e-portfolio will also act as a means for assessment on evidence of personal growth and CPD.

Synchronous sessions will give students the opportunity to interact with fellow students and for tutor contact. The sessions will include live coding sessions to help students contextualise their knowledge. These synchronous sessions will be recorded in order to ensure that all students can access the material in their own time.

At pre-arranged days and agreed times during the module (usually weekly, prior to a synchronous session), the module tutor will be available for a drop in telephone or preparatory learning liaison session. This is to give students the opportunity to ask specific and general questions relating to the week’s learning opportunities and enable them to contextualise their learning.

For team activities in this module, students will be grouped according to time zones to ensure team members can communicate easily with each other. Details on the process for team activities and peer assessment will be made available to students at the outset of the module.

Description of unit of assessment	Length/Duration	Submission date	Weighting
Literature review	2,000 words	Unit 7	30%
Research proposal presentation	15 minutes	Unit 10	30%
Individual module e-portfolio	2,500 words equivalent	Unit 12	40%