

COMP08079 Research Method in IT

Full Title	Research Method in IT		
Status	Uploaded to Banner	Start Term	2020
NFQ Level	08	ECTS Credits	05
Module Code	COMP08079	Duration	Semester - (13 Weeks)
Grading Mode	Numeric	Department	Business, Humanities and Tech
Module Author	Seamus Dowling		

Module Description

This module is designed to provide students with an introduction to methodologies (and their constituent methods) used to carry out a research project in computing and related technology disciplines. It is designed for students from a wide variety of backgrounds and aims to help them to develop critical thinking and to learn modern research techniques.

Learning Outcomes

On completion of this module the learner will/should be able to:

1. Apply modern research methods appropriate to applied computing research problems / questions.
2. Discuss current challenges and research foci in selected areas.
3. Independently acquire and assess relevant knowledge that is contextually appropriate and specific to an applied area of computing research.
4. Formally exhibit their research capabilities within an area of applied computing.
5. Apply professional standards relevant to the process of research in computing / IT.
6. Participate in peer collaboration and evaluation exercises.

Indicative Syllabus

The following are the major topic areas covered in this module:

- The Philosophy and Nature of Inquiry
- The Nature and Objectives of Research
- Research Design and Planning
- Research Methodologies for Computing and Information Technology
- Choosing and Planning a Research Project
- Writing a Research Proposal
- Reviewing the Literature
- Tools of Research
- Data Collection and Analysis
- Managing / Achieving Objectives
- Writing the Research Report
- Presenting Data, Drawing Conclusions, Identifying Future Work
- Presenting Research Findings

Teaching and Learning Strategy

This module can be delivered via the traditional face-to-face delivery methodology, via a blended or fully online format, employing both online and offline methodologies.

It is a self-directed experiential learning module allowing the learner to apply their newly acquired knowledge, skills and competencies in network cybersecurity to real live problems and innovations. This module is key to the development of the individual professional practice.

The module allows the learner to apply the frameworks and methodologies in a real work environment and produce professional standard innovative project deliverables and implementations.

Assessment Strategy

All assessment will be carried out in line with the programme, campus and institute assessment strategies and in line with the Code of Practice No. 3 Student Assessments: Marks and Standards.

Each project will be defined to have a real end-product or research into a possible innovative solution to a problem which will benefit an organisation and achieve the personal and academic learning outcomes of the learner. Each project will be assigned a supervisor who will agree the expectations, scope, necessary resources, feasibility and deliverables for the project with the learner. The course board should act as an advisory team by reviewing and approving all project descriptions to ensure that no legal, financial, resource, ethical or health and safety issue may be involved.

The supervisor will meet/communicate with the learner on a regular basis (15 minutes contact hours per student per week) to review progress and provide guidance. A workshop will be dedicated at the start of the project to Reflective practice and reflective writing and journaling. Students will have the opportunity to submit their work in progress reflective journal for constructive feedback from the supervisor prior to final submission.

Sample Project Marking Schemes:

Project implementation and documentation - 85%	Possible Marks	Marks Awarded
Project Proposal	10	
Research - Literature Review	20	
Structure & Methodology	15	
Project Implementation	25	
Conclusions & Findings	15	
Demonstration & Presentation - 15%		
Structure & content	5	
Presentation & delivery	5	
Ability to deal with questions	5	

The project marking scheme may vary to facilitate specific projects.

Repeat Assessment Strategies

Repeat facilities will be accommodated in line with GMIT Code of Practice No. 3 Student Assessment: Marks & Standards procedures and in compliance with programme board decisions.

Decisions on nature of resubmission of the project will be linked to the need to achieve particular learning outcomes. Individuals will be asked to present their work in a formal context to validate authenticity and ownership of work.

Indicative Coursework and Continuous Assessment:		100 %		
Form	Title	Percent	Week (Indicative)	Learning Outcomes
Assessment	Project discussion/debate & participation	10 %	Week 4	2,6
Written Report	Research proposal and evaluation	30 %	Week 7	1,3,5
Written Report	Review existing literature and create draft Literature Review	60 %	End of Semester	1,3,4,5,6

Full Time Delivery Mode Average Weekly Workload:			3.00 Hours		
Type	Description	Location	Hours	Frequency	Weekly Avg
Lecture	Research Methods Lectures - Online delivery of content via live and recorded lectures, webinars, activities, video and audio assignments	Computer Laboratory	2	Weekly	2.00
Tutorial	Research Methods Discussions	Computer Laboratory	1	Weekly	1.00

Online Learning Delivery Mode Average Weekly Workload:			3.00 Hours		
Type	Description	Location	Hours	Frequency	Weekly Avg
	Research Methods Lectures - Online delivery of content via				

Lecture	live and recorded lectures, webinars, activities, video and audio assignments	Online	2	Weekly	2.00
Tutorial	Research Methods Discussions	Online	1	Weekly	1.00

Blended Delivery Mode Average Weekly Workload:			3.00 Hours		
Type	Description	Location	Hours	Frequency	Weekly Avg
Lecture	Research Methods Lectures - Online delivery of content via live and recorded lectures, webinars, activities, video and audio assignments	Online	2	Weekly	2.00
Tutorial	Research Methods Discussions	Online	1	Weekly	1.00

Required Reading Book List
Martin, N., (2014). <i>Doing a Successful Research Project</i> . Red Globe Press. ISBN 1137306424 ISBN-13 9781137306425
Mligo, E., (2016). <i>Introduction to Research Methods and Report Writing</i> . Wipf and Stock Publishers. ISBN 9781498278508 ISBN-13 1498278507
Bryman, A., (2008). <i>Social Research Methods</i> . Oxford University Press, USA. ISBN 0199202958 ISBN-13 9780199202959

Journal Resources
Readings assigned from relevant Internet sites, journals and newspapers. This will be individual project dependent

Programme Membership
GA_KCYBC_L08 202000 Higher Diploma in Science in Cybersecurity Risk & Compliance