

Module specification

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Module Code	COM754
Module Title	Research Methods for Digital Technologies
Level	7
Credit value	20
Faculty	FAST
HECoS Code	100962 – Research Skills
Cost Code	GACP

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Computer Science	Core
MSc Computer Science (with Advanced Practice)	Core
MSc Software Engineering	Core
MSc Software Engineering (with Advanced Practice)	Core
MSc Cyber Security	Core
MSc Cyber Security (with Advanced Practice)	Core
MSc Big Data and Data Analytics	Core
MSc Big Data and Data Analytics (with Advanced Practice)	Core
MSc Computer Game Development	Core
MSc Computer Game Development (with Advanced Practice)	Core
MA Game Art	Core
MA Game Art (with Advanced Practice)	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	21 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	21 hrs
Placement / work based learning	0 hrs
Guided independent study	179 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	10/05/2023
With effect from date	September 2023
Date and details of revision	
Version number	1

Module aims

The module will provide the necessary underpinning skills to ensure that competent work and standards are achieved and maintained throughout the student's chosen programme of study. This will encompass the development of professional level information handling and analysis skills, as well as ensuring students become proficient at planning and managing their own research projects.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Synthesise complex information from a variety of sources
2	Critically evaluate research methodologies in the context of research for digital technology
3	Plan and execute a small research project
4	Compile, analyse and disseminate data in relation to a small research project

Assessment

Indicative Assessment Tasks:

The module assessment will be based around the planning and execution of a small research project along with the appropriate synthesis and contextualisation of contemporary work within the students chosen field.

Students will be required to produce a literature review relevant to the chosen field and then plan and execute a small research project that is guided by a relevant contemporary methodology. Additional activities such as time scale planning, ethical analysis and case study work will form the early phases of the coursework. The research project itself must demonstrate the application of a formal data analysis technique and lead to relevant findings that will be disseminated appropriately. Examples of project dissemination could be a formal academic paper, poster presentation or viva.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1,2,3,4	Coursework	100%

Derogations

None

Learning and Teaching Strategies

The early stages of the module will be delivered through a mixture of lectures and tutorials as students are guided through the formal processes relating to research practice. Sessions will be supported with a range of digital content and activities designed to encourage directed study.

The later stages of the module will transition to more tutorial-based sessions with informal support as the research projects approach their completion.

Throughout the module, students will have the opportunity to disseminate and discuss information through student-led seminars and peer group discussions. Guest speakers may utilised where appropriate to strengthen the diversity and scope of the module content. Students will have access to lecture materials, and ancillary resources, via the University's VLE platform.

Indicative Syllabus Outline

Postgraduate-level study and study skills

Self-reflection and critical thinking

Professional presentation of information

Overview of the research domain

Evaluating information sources

Referencing / how to avoid plagiarism

Qualitative and quantitative research methods

Statistical analysis

Hypothesis testing

Critical analytical thinking

Research and professional ethics

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update. Please *ensure correct referencing format is being followed as per University Harvard Referencing Guidance.*

Essential Reads

Oates, B. J., Griffiths, M., McLean, R. (2022), *Researching Information Systems and Computing*, Second Edition, California: Sage Publication Ltd.

Wallace & Wray, (2021) *Critical Reading and Writing for Postgraduates*, Sage Publications Ltd

Other indicative reading

Carlo Lauro, N., Amaturò, E., Grassia, M. G., Aragona, B., Marino, M. (2017), *Data Science and Social Research: Epistemology, Methods, Technology and Applications*, Berlin: Springer.

Lankoski, P., Bjork, S. (2015) *Game Research Methods: An Overview*, North Carolina: Lulu Press.

Lazar, J. (2017), *Research Methods in Human-Computer Interaction*, Second Edition, Massachusetts: Morgan Kaufmann

Paarsch, H. K. (2016), *A Gentle Introduction to Effective Computing in Quantitative Research: What Every Research Assistant Should Know*, Massachusetts: MIT Press.

Squire, K. (2010), *Real-Time Research: Improvisation Game Scholarship*, North Carolina: Lulu Publishing.

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes

Engaged
Enterprising
Creative
Ethical

Key Attitudes

Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets

Digital Fluency

Organisation

Critical Thinking

Emotional Intelligence

Communication