

## Module specification

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Module code	COM742
Module title	Postgraduate Study and Research Methods
Level	7
Credit value	20
Faculty	FAST
Module Leader	Vic Grout
HECoS Code	100962
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 Computing	Core
MSc Computer Networking	Core
MSc Cyber Security	Core
MSc Computer Game Development	Core
MSc Data Science and Big Data Analytics	Core
MA Game Art	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
<b>Total active learning and teaching hours</b>	21 hrs
Placement / work based learning	0 hrs
Guided independent study	179 hrs
<b>Module duration (total hours)</b>	200 hrs

<b>For office use only</b>	
Initial approval date	28/11/2018
With effect from date	01/09/2019
Date and details of revision	approved on 22/07/2020 for the addition of MSc Data Science and Big Data Analytics August 2021 addition of MA Game Art
Version number	2

## 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 recognising and managing their own research skills and are able to self-evaluate their work.

The module aims to:

- Ensure students are competent in appropriate professional skills
- Embed the ethos of continuous professional development and reflective practice

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

1	Display a mastery of communicating computing and IT related information
2	Critically evaluate complex information from a variety of sources
3	Synthesise and iterate a professional plan for a research study
4	Demonstrate a critical understanding of research methodologies in computing

## Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

The module will be assessed through coursework, which would contain several elements, such as a group seminar presentation, critique of academic publication, and the development of a short research paper or proposal. These elements will be related and based around a subject of investigation.

Element 1 typically involves evidencing study, and understanding of, a topic of study and current research in that field (indicative word count 1,500).

Element 2 typically involves students conducting a structured piece of research and employing appropriate analysis and evaluation techniques (indicative word count 2,500).

Students will select suitable topics within the field of computing, relevant to their chosen programme of study's specialism, and produce small-scale research investigations and critiques of these works that are presented through several deliverables and relate these developments or issues to practice and the effect upon the computing industry. The area of specialism could be the topic of the student's dissertation and in this case the submission would be the Dissertation proposal.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1,2	Coursework	40%
2	3,4	Coursework	60%

## Derogations

None

## Learning and Teaching Strategies

The module will be delivered through a mixture of lectures, tutorials and directed private study. Students will also disseminate and discuss information through student-led seminars and peer group discussion. Guest speakers are utilised 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.

In line with the Active Learning Framework, this module will be blended digitally with both a VLE and online community. Content will be available for students to access synchronously and asynchronously and may indicatively include first and third-party tutorials and videos, supporting files, online activities any additional content that supports their learning.

## 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.

### Essential Reads

Goldacre, B. (2009), *Bad Science*, Fourth Estate.

Leedy, P.D. and Ormrod, J.E. (2015), *Practical Research: Planning and Design*. 11th ed. London: Pearson.

### **Other indicative reading**

Bolton, G. (2018), *Reflective Practice: Writing and Professional Development*. 5th ed. Los Angeles: Sage.

Cottrell, S. (2017), *Critical Thinking Skills: Developing Effective Analysis and Argument*. 3rd ed. Basingstoke: Palgrave Macmillan.

Craswell, G. and Poore, M. (2011), *Writing for Academic Success*. 2nd ed. London: SAGE.

Davies, M. (2011), *Study Skills for International Postgraduates*. London: Palgrave.

Wisker, G. (2008), *The Postgraduate Research Handbook*. 2nd ed. Basingstoke: Palgrave Macmillan.

### Journals:

ACM Digital Library (available electronically through the library)

Computer Networks and Computer Communications (journals available electronically via Science Direct through the Library)

IEEE Xplore Digital Library (available through the University Library)

### Professional Body Websites:

The British Computer Society (BCS) <http://www.bcs.org/>

The Institution of Engineering and Technology (IET) <http://www.theiet.org/>

The Institute of Electrical and Electronics Engineers (IEEE) <http://www.ieee.org>

The Association of Computing Machinery (ACM) <http://www.acm.org>

## **Employability skills – the Glyndŵr Graduate**

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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

Creative

Ethical

### **Key Attitudes**

Commitment

Curiosity

Resilience

Confidence

Adaptability

### **Practical Skillsets**

Digital Fluency

Organisation  
Critical Thinking  
Emotional Intelligence  
Communication