Module specification

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Module code	EDS622
Module title	Innovation and Immersive Technology
Level	6
Credit value	20
Faculty	Faculty of Social and Life Sciences
Module Leader	Nathan Roberts
HECoS Code	100368
Cost Code	GAEC

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
Standalone module aligned to BA (Hons) Education for QA and assessment purposes	Option

Pre-requisites

N/A

Breakdown of module hours

Learning and teaching hours (asynchronous)	14 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	10 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	**24** hrs
Placement / work based learning	0 hrs
Guided independent study	176 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	07/11/2022
With effect from date	01/02/2023

Module aims

The modules aims to enable participants to;

- Gain a theoretical understanding of the potential for the use of immersive technology within subject disciplines/industry
- Explore innovative approaches to using immersive technology to support their role within subject disciplines/industry
- Understand the value to a subject discipline/industry of the use of immersive technology

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

1	Critically analyse innovative approaches to using immersive technology within a specific subject discipline/industry
2	Predict the potential application of immersive technology within a specific subject discipline/industry
3	Critically reflect on the benefits and advantages of the of immersive technology within a specific subject discipline/industry

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.

Assessment One: Portfolio

Participants will develop an immersive portfolio across the duration of the module. The portfolio will demonstrate;

- Investigation of a minimum of 6 applications within immersive technology and a critical analysis of the potential application to participants' subject discipline/industry.

- Participants will showcase their learning to their peers at the end of the module.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-3	Portfolio	100%

Derogations

N/A

Learning and Teaching Strategies

The module is taught through a combination of workshops. An active and inclusive approach is used to engage learners in the topics and will involve individual, group work and flipped learning experiences aligned to the university's Active Learning Framework (ALF). The approach offers students a flexible and adaptive learning experience, using dynamic learning opportunities that can accommodate a range of options that includes both synchronous and asynchronous learning. The Moodle VLE and other on-line materials and resources will be available to support learning. ALF offers a balance between the workshop elements and digitally enabled activity to support the learning on this module.

Indicative Syllabus Outline

Subject areas will include:

- Extended Reality (XR)
- Simulation
- Capturing Immersive Data
- Prototyping
- Mobile/Portable Technologies

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

Blokdyk, G. (2018). *Immersive Technology A Complete Guide*. 5STARCooks.

Dalton, J. (2021). *Reality Check: How Immersive Technologies Can Transform Your Business.* 1st edition. London ; New York, NY: Kogan Page.

Other indicative reading

Ariel, G. (2019). A*ugmenting Alice: The Future of Identity, Experience and Reality*. 1st edition. BIS Publishers.

Donally, J. (2021). *The Immersive Classroom: Create Customized Learning Experiences with AR/VR*. International Society for Technology in Education.

Frehlich, C. (2020). *Immersive Learning: A Practical Guide to Virtual Reality's Superpowers in Education.* Rowman & Littlefield Publishers.

Merle, M.L. and Davis, A. (2017). *Corporate Innovation in the Fifth Era: Lessons from Alphabet/Google, Amazon, Apple, Facebook, and Microsoft.* 1st edition. Cartwright Publishing.

Additional Web Resources

Road to VR. (2019). Road to VR. [online] Available at: https://www.roadtovr.com/
Feltham, J. (2015). UploadVR VR/AR News & Reviews. [online] UploadVR. Available at: https://uploadvr.com/

Instructables.com. (2019). Instructables - How to make anything. [online] Available at: https://www.instructables.com/

Arduino (2018). Arduino - Home. [online] Arduino.cc. Available at: https://www.arduino.cc/
peel 3d. (n.d.). 3d Scanner handheld affordable - 3d scanning solution. [online] Available at: https://peel-3d.com/

Xsens (2019). Motion Capture. [online] Xsens.com. Available at: https://www.xsens.com/motion-capture

www.flashforge.com. (n.d.). Flashforge Professional 3D Printer Manufacture - FlashForge. [online] Available at: https://www.flashforge.com/

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
Curiosity
Confidence
Adaptability

Practical Skillsets
Digital Fluency

Organisation
Leadership and Team working
Critical Thinking
Communication