PRIFYSGOL glyndŵr UNIVERSITY

MODULE SPECIFICATION FORM

Module Title:	**Learning and Teaching with Technology**	**Level**:	6	**Credit Value**:	20

Module code:	SCI621	New ✓ Existing ☐	**Code of module being replaced**:	NA

Cost Centre:	GAFS	**JACS3 code**:	F100

Trimester(s) in which to be offered:	1	**With effect from:**	September 16

School:	Applied Science, Computing & Engineering	**Module Leader:**	Clive Buckley

Scheduled learning and teaching hours	50 hrs
Guided independent study	150 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered	Core	Option
BSc (Hons) Chemistry with Education	☐	✓

Office use only
Initial approval July 2016
APSC approval of modification July 2016 Version 1
Have any derogations received SQC approval? Yes ☐ No ✓

Module Aims
This module aims to: Facilitate the development of students' technical skills to employ technologies in learning and teaching. Explore existing and emerging pedagogies for the digital age. Evaluate the use of technologies to support and enhance learning. Examine technologies for accessibility.

Intended Learning Outcomes

At the end of this module, students should be able to:

1. Evaluate and apply a deep knowledge and understanding of current educational theoretical perspectives in the area of technological instruction.
2. Develop and extend skills to facilitate teaching with technology.
3. Consider the effectiveness of such technologies to support flexible and distance learning.
4. Assess the application of technology to improve accessibility.

Key skills for employability

KS1	Written, oral and media communication skills
KS2	Leadership, team working and networking skills
KS3	Opportunity, creativity and problem solving skills
KS4	Information technology skills and digital literacy
KS5	Information management skills
KS6	Research skills
KS7	Intercultural and sustainability skills
KS8	Career management skills
KS9	Learning to learn (managing personal and professional development, self-management)
KS10	Numeracy

At the end of this module, students will be able to		Key Skills	
1	Critically evaluate and apply a deep knowledge and understanding of current educational theoretical perspectives in the area of technological instruction.	KS1	KS4
		KS5	KS6
		KS9	Corresponding Key Skill
2	Develop and extend skills to facilitate teaching with technology.	KS1	KS3
		KS4	KS5
		KS6	KS9
3	Consider the effectiveness of such technologies to support flexible and distance learning.	KS1	KS2
		KS4	KS5

		KS6	KS9
4	Examine how technologies can support accessibility.	KS1	KS3
		KS4	KS5
		KS6	KS7

Transferable/key skills and other attributes

1. Act autonomously in planning and implementing tasks.
2. Contribute to professional debate in the field of education, especially as it applies to the use of technology.
3. Undertake analysis, critical reflection and evaluation.
4. Enhanced communication skills including use of multi-media.

Derogations

None

Assessment: Please give details of indicative assessment tasks below.

An e-portfolio that

1. Appraises in detail on the potential of technologies for a chosen curriculum area (science / chemistry) and age phase.
2. Critically discusses the advantages and disadvantages of various aspects of this technology and its impact in relation to learning and teaching and enhancing practice.
3. Demonstrates ability in the production of technologically supported learning objects.
4. Explores how technologies can be used to enhance accessibility.
5. Includes a current literature review and bibliography relevant to the technologies appraised in terms of pedagogic applications.

Please indicate the type(s) of assessment

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1 - 4	E-Portfolio	100 %		4,000

Learning and Teaching Strategies:

Lead in lectures extensively supported by workshops.

Directed study tasks involving the critical review of the existing literature and production of teaching and learning resources.

Development of an annotate bibliography to support pedagogical research.

On-line activities, including on-line conferences, mobile technologies, social media

Syllabus outline:

- Learning and teaching in the digital age: pedagogies and practice
- Technologies for learning and teaching
- Social media and digital literacy
- Security and e-safety

Bibliography:

Essential reading

Wheeler, S. (2015) *Learning with 'e's* Crown House

Software manuals / websites as appropriate

Useful websites

National curriculum in Wales http://learning.gov.wales/resources/improvementareas/curriculum/programmes-of-study/?lang=en

National curriculum in England https://www.gov.uk/government/collections/national-curriculum

Hwb Digital Learning for Wales http://hwb.wales.gov.uk/

JISC: http://www.jisc.ac.uk/

Educause http://www.educause.edu/

Other indicative reading

Carliner, S. and Shank, P. (Eds.) (2008) *The E-learning Handbook* Pfeiffer

Horton, W. (2006) *E-Learning by Design* Pfeiffer

Relevant Blogs (e.g. *steve-wheeler.blogspot.com/ donaldclarkplanb.blogspot.com/)*