Module Descriptor

Title	Critical Anaysis of Mathematics Teaching		
Session	2025/26	**Status**	
Code	UGED09005	**SCQF Level**	9
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Education and Social Sciences**		
Module Co-ordinator	L Bell		

Summary of Module

Completion of this module allows students to undertake the Level 10 Dissertation module with a continued focus on Mathematics teaching. Alternatively, and by agreement with the module co-ordinator, students may choose to focus on an alternative curricular area/current issue in the dissertation.

The module will address:

1. Approaches to the teaching, acquisition and understanding of Mathematics teaching, including a range of relevant case studies.

2. National (Scottish and UK) and international perspectives relating to the teaching, acquisition and understanding of Mathematics.

3. International perspectives, including key indicators, student achievement, political and societal variations and how these may impact upon approaches to learning and teaching of Mathematics.

4. Current issues, theories and priorities relating to the teaching, acquisition and understanding of Mathematics teaching.

The module will support students towards meeting the GTCS Standard for Provisional Registration by working towards the following standards: Professional Values (Social Justice; Trust and Respect; Integrity) (1.1); Professional Commitment (1.2); Have knowledge and understanding of education systems (2.2.1); Have knowledge and understanding of pedagogical theories and professional practice (2.1.1); Utilise pedagogical approaches and resources (3.1.2); Engage critically with literature, research and policy (3.3.1); Engage in reflective practice to develop and advance career-long professional learning and expertise (3.3.2).

In relation to learning for sustainability, students will develop knowledge and skills in inclusion and social justice, enquiry, critical approaches, reflection and dealing with uncertainty.

Through participating in the module, students will demonstrate, in particular, that they are critical thinkers, analytical, inquiring, research-minded and knowledgeable.

Module Delivery Method	On-Campus[1] ☒	Hybrid[2] ☐	Online[3] ☐	Work -Based Learning[4] ☐
Campuses for Module Delivery	☒ Ayr ☐ Dumfries	☐ Lanarkshire ☐ London ☐ Paisley	☐ Online / Distance Learning ☐ Other (specify)	

Terms for Module Delivery	Term 1	☒	Term 2	☐	Term 3	☐
Long-thin Delivery over more than one Term	Term 1 – Term 2	☐	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
L1	Demonstrate awareness and understanding of the development of approaches to learning and teaching in relation to Mathematics teaching.
L2	Be aware of, discuss and reflect upon national and international approaches to the acquisition and understanding of Mathematics teaching.
L3	Analytically reflect upon how the acquisition and understanding of Mathematics teaching may be affected by political and societal variations.
L4	Demonstrate an understanding of academic literature that discusses current and emerging theories and policies relating to effective and successful approaches to learning and teaching as it relates to Mathematics teaching.
L5	Demonstrate an understanding of the contribution of citation indexes, online databases and journal abstracts to the navigation of academic literature.

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	**During completion of this module, there will be an opportunity to achieve core skills in:**
Knowledge and Understanding (K and U)	**SCQF 9** Demonstrate and / or work with: An understanding of how approaches to learning and teaching in relation to Mathematics teaching have been and are subject to change. A critical understanding of current and emerging theories and policies in relation to Mathematics teaching.

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

Practice: Applied Knowledge and Understanding	**SCQF 9** Apply knowledge skills and understanding: In using a range of the principal professional skills, techniques, practices and/or materials associated with the successful teaching in relation to Mathematics teaching . In using a number of skills, practices and/or materials that or specialised and/or advanced in relation to Mathematics teaching. In practising routine methods of inquiry and/or research in relation to Mathematics teaching.
Generic Cognitive skills	**SCQF 9** Undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues in relation to Mathematics teaching. Identify and analyse routine professional problems and issues in relation to Mathematics teaching. Draw on a range of national, international, historic and current sources in making judgements and presenting arguments.
Communication, ICT and Numeracy Skills	**SCQF 9** Use a wide range of routine skills and some advanced and specialised skills in support of established practices in a subject/discipline/sector, for example: Present or convey, formally and informally, information on topics relating to Mathematics teaching to a range of audience, using a range of digital applications to support and enhance work. Interpret, use and evaluate numerical and graphical data to achieve goals/targets which relate to the stated learning outcomes.
Autonomy, Accountability and Working with Others	**SCQF 9** Exercise autonomy and initiative working independently in activities relating to the stated learning outcomes and relate these at a professional level to successful practice in professional environments. Practise in ways that show awareness of own and others' roles and responsibilities.

Prerequisites	**Module Code**	**Module Title**
	Other	
Co-requisites	**Module Code**	**Module Title**

Learning and Teaching
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours. 200

Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	12
Tutorial / Synchronous Support Activity	24
Asynchronous Class Activity	24
Independent Study	140
Please select	
Please select	
TOTAL	200

Indicative Resources
The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Bottomley et al. (2019) Critical Thinking Skills for your Education Degree. Critical Publishing (Available as e-book) Cottrell, S. (2019) The Study Skills Handbook. Fifth edition. London: Palgrave Macmillan (e-book)
(N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements
In line with the Student Attendance and Engagement Procedure, Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time. **For the purposes of this module, academic engagement equates to the following:** All students are required to attend all scheduled classes and participate with all delivered elements of the module as part of their engagement with their programme of study. Consideration will be given to students who have protection under the appropriate equality law. Please refer to UWS Regulations, Chapter 1, 1.64 – 1.67, available at the following link: http://www.uws.ac.uk/current-students/rights-and-regulations/regulatory-framework/ Given the professional nature of the programme, 100% attendance and engagement is expected. The module co-ordinator and year group leader maintain an overview of attendance and engagement. Should there be concerns, there will be liaison between module co-ordinator, year group leader, personal tutor and the student to identify steps to support engagement and success.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code. In line with current legislation (Equality Act, 2010) and the UWS Equality, Diversity, and Human Rights Code, our modules are accessible and inclusive, with reasonable adjustment for different needs where appropriate. Aligned with the overall commitment to equality and diversity stated in the Programme Specifications, the module supports equality of opportunity for students from all backgrounds and with different learning needs. Using the Aula VLE, learning materials will be presented electronically in formats that allow flexible access and manipulation of content. The module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice will be made in accordance with UWS policy and regulations. The University's Equality, Diversity and Human Rights Policy can be accessed at the following link: http://www.uws.ac.uk/equality/ Student teachers are encouraged to reflect on their developing understanding of aspects relating to equality and diversity and to consider how this helps them to work towards meeting the Standard for Provisional Registration (GTCS, 2021), of which demonstrating commitment to social justice and inclusion is a significant part. Through studying this module, student teachers develop the professional skills and abilities to employ teaching strategies and resources, including digital approaches, to meet the needs and abilities of every learner; and build positive, rights respecting relationships for learning. A direct focus on these aspects not only advances equality in the student environment, by promoting empathy and affiliation, but also within the school settings where student teachers undertake their school experience.
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	**Education**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☒ **Yes** ☐ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**
School Assessment Board	Education
Moderator	J Ellis
External Examiner	L Waddell
Accreditation Details	GTCS
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	2.06

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Completion of a compare/contrast reading frame in relation to two relevant journal articles (or their equivalents)
Assessment 2

2000-word written critical analysis of one of the generic themes discussed in the module (effective pedagogies, motivation or assessment, for example), as agreed by the subject lead tutor
Assessment 3
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Reading Frame	☐	☐	☐	☒	☒	40	N/A

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Essay	☒	☒	☒	☒	☒	60	N/A

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	hours

Change Control

What	**When**	**Who**
new template, no changes	mar 25	L Bell