University of the West of Scotland

Module Descriptor

Session:

Title of Module: Science in Society			
Code: UGED08005	**SCQF Level: 8 (Scottish Credit and Qualifications Framework)**	**Credit Points: 20**	**ECTS: (European Credit Transfer Scheme) 10**
School:	School of Education and Social Sciences		
Module Co-ordinator:	J Isdale		

Summary of Module

This module is an optional element of level 8 of the B.A. Education Programme.

Students will develop their personal knowledge and understanding of how science impacts on, and at times, conflicts with, modern society. Students will develop their scientific literacy and socio-scientific reasoning skills by undertaking inquiry tasks that focus on how socio-scientific issues arise, why they are often controversial and how the general public interacts with such issues in order to make informed democratic decisions about how best to deal with such issues. Information gathered during these inquires will be presented for formative assessment within a variety of formats, including but not limited to discussions, forum posts and peer assessment. Examples of pedagogical approaches will be modelled throughout the session.

The module will focus on contemporary topical science issues, examples of such issues being Climate change and global warming, Embryonic Stem Cell Research, IVF and pre-implantation genetic screening, uses of animal in medical research etc.

The module will support students towards meeting the GTCS Standard for Provisional Registration by working towards the following standards:

- 1.1 Professional Standards (Social Justice, Trust and Respect, and Integrity)
- 1.2 Professional Commitment
- 2.1.1 Have knowledge and understanding of Pedagogical Theories and Professional Practice
- 3.3.1 Engage critically with literature, research and policy
  3.3.2 Engage in reflective practice to develop and advance career-long professional learning and expertise

Module Delivery Method					
Face-To-Face	**Blended**	**Fully Online**	**HybridC**	**Hybrid 0**	**Work-Based Learning**
☒	☐	☐	☐	☐	☐
See Guidance Note for details.					

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit) (tick as appropriate)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
☐	☒	☐	☐	☐	☐	Add name

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	☐	Term 2	☒	Term 3	☐

Learning Outcomes: (maximum of 5 statements) **These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module.** At the end of this module the student will be able to:	
L1	Demonstrate a broad knowledge and understanding of the relevant areas (including form multiple perspectives) of contemporary science issues.
L2	Apply knowledge & understanding and skills of related topical science issues in personal research using a range of communication modes such as graphical representations, concept mapping, audio-visual media etc.
L3	Apply a critical analysis of the personal development of relevant skills such as the critical refection of issues discussed, and the effective communication of arguments within the issues discussed.
L4	Convey complex ideas surrounding topical scientific issues in a well-structured and coherent form.
L5	Click or tap here to enter text.

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 Level **8** Demonstrate a specialist Knowledge and Understanding of the main scientific concepts that impinge on discussions involved in Topical Science Issues. Demonstrate an awareness and understanding of some of the major contemporary science issue explored and the multiple perspectives that impinge on them.
Practice: Applied Knowledge and Understanding	SCQF Level **8** Apply knowledge & understanding and communication skills relating to topical science issues to present information gathered during personal research on campus

Generic Cognitive skills	SCQF Level **8** Critically analyse personal development of awareness of topical science issues. Students will also use a range of approaches to formulate and critically evaluate evidence-based solutions emergent from contemporary science issues.
Communication, ICT and Numeracy Skills	SCQF Level **8** Convey complex information via face to face and online group discussion with peers using a range of ICT applications to process and display data gathered during personal research tasks
Autonomy, Accountability and Working with others	SCQF Level **8** Exercise autonomy and initiative in personal research undertaken during the module and demonstrate ability to support others via peer assessment

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	**Module Title:**
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

*Indicates that module descriptor is not published.

Learning and Teaching
A mix of workshops and use of the VLE, employing within this module support a range of learning and teaching methodologies including exposition, whole-class discussion, paired and group work, problem-based learning, student presentations, and resources such as subject-specific equipment, interactive whiteboards, laptops, will be used, as appropriate, to develop student learning. Student handbooks and other material made available to students will give more detailed information on the particular learning and teaching methodologies, and combinations of these methodologies, to be used for timetabled student sessions. This will clarify for students both their expectations for timetabled sessions, and their expectations for the overall balance of learning and teaching methodologies to be used during the module.
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.

Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	24.5

Tutorial/Synchronous Support Activity	9
Asynchronous Class Activity	14
Independent Study	152.5
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
Choose an item.	
	Hours Total

**Indicative Resources: (eg. Core text, journals, internet access)

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

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Day, S.P & Bryce, T.G.K (2011) Does the Discussion of Socio-Scientific Issues require a Paradigm Shift in Science Teachers' Thinking? International Journal of Science Education, 33 (12) pp. 1675-1702.

Lewis, J & Leach, J (2006) Discussion of Socio-scientific Issues: The role of science knowledge. International Journal of Science Education. 28 (11) pp. 1267–1287

Ratcliffe, M & Grace, M. (2003) Science Education for Citizenship: Teaching Socio-Scientific Issues. Open University Press.

Sadler T. D. (2011) Socio-scientific Issues in the Classroom: Teaching, Learning and Research. Springer. (eBook available through Library link to Springer)

Sadler, T. D., Barab, S. A., & Scott, B. (2007). What do students gain by engaging in socio-scientific inquiry? Research in Science Education, 37, 371-391.

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Please ensure the list is kept short and current. Essential resources should be included, broader resources should be kept for module handbooks / Aula VLE.

Resources should be listed in Right Harvard referencing style or agreed professional body deviation and in alphabetical order.

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(**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 fulltime students (part-time and distant learning students should check with their programme leader for any queries) 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/

In accordance with module and programme handbooks, any student whose attendance has fallen below the 75% minimum requirement for a module could be withdrawn from and given a re-attend decision for that module. To assure placement partners that students are appropriately prepared to undertake periods of school experience, unsatisfactory attendance across academic modules may prevent progress to placement, or result in withdrawal from the programme, as a student would be deemed not to have met the professional requirements of the programme as accredited by the GTCS.

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.

Aligned with the overall commitment to equality and diversity stated in the Programme Specification, the module supports equality of opportunity for students from all backgrounds and with different learning needs. Using the 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 knowledge and understanding of biases and their impact on people and practices and challenge these. They also develop the

professional skills and abilities to create opportunities for learning to be transformative in terms of challenging assumptions and expanding world views.

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
Assessment Results (Pass/Fail)	Yes ☒No ☐
School Assessment Board	BA T2 Education
Moderator	S Day
External Examiner	L Waddell
Accreditation Details	e.g. ACCA Click or tap here to enter text.
Changes/Version Number	

Assessment: (also refer to Assessment Outcomes Grids below)
Interdisciplinary research tasks will be undertaken throughout this module with information shared on campus and via the University VLE. Formative assessment Formative assessment will take place throughout the module with peer and tutor feedback that can be used by the students to help them reflect on the module material more deeply and will also provide formative feedback for students to use to feed forward improvements into their summative assessment. Summative assessment The final assignment will discuss how the Science perspective (which is only one perspective among many) might influence the general public's thinking and decision-making processes related topical science issues. Student handbooks, and other detailed material made available to students, will clarify the relationship between formative assessment and the specific learning outcomes for the module. This will ensure that students can relate feedback from formative assessment to their individual progress on the

learning outcomes for the module. On summative assessments, students will receive detailed information indicating the ways in which summative assessments will assess individual learning outcomes for the module. As appropriate, students will also receive detailed information on how feedback will be provided for assessments.

Assessment 1 – Free Text

Assessment 2 – Free Text

Assessment 3 – Free Text

(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.)

Assessment Outcome Grids (See Guidance Note)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Written Assignment	x	x	x	x	x	100	

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours

Component 3

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Combined Total for All Components						**100%**	**XX hours**

Change Control:

What	When	Who
Further guidance on aggregate regulation and application when completing template	16/01/2020	H McLean
Updated contact hours	14/09/21	H McLean
Updated Student Attendance and Engagement Procedure	19/10/2023	C Winter
Updated UWS Equality, Diversity and Human Rights Code	19/10/2023	C Winter
Guidance Note 23-24 provided	12/12/23	D Taylor
General housekeeping to text across sections. .	12/12/23	D Taylor

Version Number: MD Template 1 (2023-24)