University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Sustainability Principles			
Code: CEWM11012	SCQF Level: 11 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: (European Credit Transfer Scheme) 10
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Gillian Clayton		

Summary of Module
In 2015, the United Nations launched Agenda 2030 with the agreement of 17 Sustainable Development Goals. These commit Governments, organisations and people to achieving sustainable development across the three pillars of sustainability, namely environment, society, and economy. In other words, planet, people, profit. These targets require innovative solutions to end inequalities in terms of poverty, hunger, education, gender equality, and the protection of Earth and its natural resources. The current climate emergency is focusing society's attention on the need for a more sustainable approach to manufacturing, processing and waste management with many countries adopting 'net zero' targets by 2050, including moving towards a more circular economy.
The module examines the three principles of sustainability and their relationship to the circular economy. These concepts and principles are then applied to a range of industrial and utility sectors including agriculture, water resources, construction and the energy industry, as well as resource recovery and recycling.
On completion of this module, you will gain the following Graduate Attributes: **Critical thinking** as you work **collaboratively** on a **research-minded** assignments, **Problem solving** and **effective communication.**
Your research will be **innovative** and **creative** producing **resilient** solutions to our environmental and waste management challenges.

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 detailed knowledge of sustainability including ecosystem services and environmental justice.
L2	Apply critical understanding of the principles of sustainability and circular economy in the development and application of complex environmental challenges.
L3	Demonstrate and implement an extensive and detailed understanding of sustainability and the circular economy.
L4	Critically evaluate circular economy activities and the relationship to sustainability and be able to communicate this to others.

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 **11** Gain a critical understanding of the principles of sustainability. Evaluate the effectiveness of sustainable waste and pollution reduction initiatives.
Practice: Applied Knowledge and Understanding	SCQF Level **11** Identify sustainability and circular economy issues and potential for resource management in a range of industrial settings. Synthesis information and gain a coherent understanding of theories and practices in managing resources in a variety of industries.

Generic Cognitive skills	SCQF Level **11**
	Develop and demonstrate an ability to communicate effectively in a variety of professional settings.
	Demonstrate an understanding of an issue and develop a solution to an industrial problem.
Communication, ICT and Numeracy Skills	SCQF Level **11**
	Gain a full understanding of the process of preparing oral and written reports, using IT.
	Communicate results in a professional setting.
Autonomy, Accountability and Working with others	SCQF Level **11**
	Work as part of a professional team to analyze information from a case study situation for an industrial application, formulate a solution and present it back to the group.
	Work independently to create innovative solutions to complex environmental issues.

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	
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	18
Tutorial/Synchronous Support Activity	18
Independent Study	164
	200 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:

Dresner, S. (2008) *Principles of Sustainability*, 2nd edn, Routledge

Rayman-Bacchus, L. and Walsh, P.R. (2020) *Corporate Responsibility and Sustainable Development*, 1st edn, Routledge

NetRegs: Environmental guidance for Northern Ireland and Scotland: https://www.netregs.org.uk/

Scottish Environment Protection Agency: https://www.sepa.org.uk/

UN Sustainable Development Goals: https://sdgs.un.org/goals

Zero Waste Scotland: https://www.zerowastescotland.org.uk/

UWS class notes on the Virtual Learning Environment

(**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.

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.

(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	Physical Sciences
Assessment Results (Pass/Fail)	Yes ☐No ☒
School Assessment Board	Physical Sciences
Moderator	Prof Andrew Hursthouse
External Examiner	Dr A. Oke

Accreditation Details	
Changes/Version Number	V1.1 Module coordinator updated.

Assessment: (also refer to Assessment Outcomes Grids below)
Assessment 1 - Written component worth 40% of the overall mark
Assessment 2 - Critical analysis worth 40% of the overall mark
Assessment 3 - Oral presentation worth 20% of the overall mark
(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)**	**Weighting (%) of Assessment Element**	**Timetabled Contact Hours**
Essay	X	X			40	0

Component 2						
Assessment Type (Footnote B.)	**Learning Outcome (1)**	**Learning Outcome (2)**	**Learning Outcome (3)**	**Learning Outcome (4)**	**Weighting (%) of Assessment Element**	**Timetabled Contact Hours**
Review/ Article/ Critique/ Paper			X	X	40	0

Component 3						
Assessment Type (Footnote B.)	**Learning Outcome (1)**	**Learning Outcome (2)**	**Learning Outcome (3)**	**Learning Outcome (4)**	**Weighting (%) of Assessment Element**	**Timetabled Contact Hours**
Presentation		X		X	20	3
Combined Total for All Components					**100%**	**3 hours**