University of the West of Scotland

Module Descriptor

Session: 2022/23

Last modified: 26/10/2022 14:08:55
Status: Pending

Title of Module: Sustainability Principles

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

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**	**HybridO**	**Work-based Learning**
			✓		

Face-To-Face
Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.

Blended
A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Fully Online
Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.

HybridC
Online with mandatory face-to-face learning on Campus

HybridO
Online with optional face-to-face learning on Campus

Work-based Learning
Learning activities where the main location for the learning experience is in the workplace.

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)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
✓						

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1		Term 2	✓	Term 3	

Learning Outcomes: (maximum of 5 statements)

On successful completion 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 analyse 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
This module covers a wide variety of theoretical, conceptual and practical areas, which requires you to show a thorough and deep understanding of the material we present. Delivery of its syllabus content therefore involves a diversity of teaching and assessment methods suitable to the learning outcomes of the module; these include classes, workshops / breakout groups, and flipped class teaching directly related to assessment tasks and your further independent study. Class materials, research resources, exercises, class communications, administrative information and assignment handling will be supported by a Virtual Learning Environment.

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: (in alphabetical order). As the University moves towards e-books, these will be updated on a regular basis on the VLE. In addition:

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

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

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

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

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

UWS class notes on the Virtual Learning Environment

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

(**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)

Engagement Requirements

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: Academic engagement procedure

Supplemental Information

Programme Board	Physical Sciences
Assessment Results (Pass/Fail)	No
Subject Panel	Physical Sciences
Moderator	Prof Andrew Hursthouse
External Examiner	TBC
Accreditation Details	
Changes/Version Number	1 New version

Assessment: (also refer to Assessment Outcomes Grids below)

Written component worth 40% of the overall mark

Critical analysis worth 40% of the overall mark

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 Handbook.)

Assessment Outcome Grids (Footnote A.)

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	✓	✓			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			✓	✓	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		✓		✓	20	0
Combined Total For All Components					100%	0 hours

Footnotes
A. Referred to within Assessment Section above
B. Identified in the Learning Outcome Section above

Note(s):
1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
   This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. This module has lab-based / site visit teaching and as such you are advised to speak to the Module Co-ordinator to ensure that specialist assistive equipment, support provision and adjustment to assessment practice can be put in place, in accordance with the University's policies and regulations. More information on the University's EDI policies can be accessed at:
https://www.uws.ac.uk/about-uws/uws-commitments/equality-diversity-inclusion/
 UWS Equality and Diversity Policy

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)