Module Descriptor

Title	Introduction to Sustainability and Environment		
Session	2025/26	**Status**	Published
Code	ENG08038	**SCQF Level**	8
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	TBC		

Summary of Module

It is recognised that we are living in a climate emergency, with human reliance on fossil fuels creating levels of greenhouse gases that are causing our climate to heat uncontrollably. A key approach to minimising emissions is to use our resources more sustainably.

This module takes a holistic approach to how the principles of sustainability (society, environment, and economy) can help reduce human's impact on the environment. It gives a broad introduction to earth systems which sets the module to explore human activity, pollution, and sustainability. You will consider the behaviour and fate of substances within the environment, and how and why the UN Sustainable Development Goals can help mitigate human impact on our resources.

The Graduate Attributes relevant to this module are:

- Academic: critical thinker, environmental problem solving, autonomy
- Personal: motivation, time keeping, effective written and oral communicator
- Professional: collaboration, research-minded, case studies

Module Delivery Method	**On-Campus[1]**	**Hybrid[2]**	**Online[3]**	**Work -Based Learning[4]**
	☒	☐	☐	☐

Campuses for Module Delivery	☐ Ayr ☐ Dumfries	☐ Lanarkshire ☐ London	☐ Online / Distance Learning

[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

			☒ Paisley		☐ 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	Understand core principles of sustainability and their application to urban planning.
L2	Identify and assess environmental challenges related to urbanisation, including climate change, pollution and resource depletion.
L3	Apply sustainability frameworks to urban planning projects and policies, integrating social, economic, and environmental dimensions.
L4	Critically analyse the effectiveness of environmental policies, strategies, and tools such as Environmental Impact Assessments (EIA).
L5	Communicate sustainability concepts effectively in both written and oral formats, demonstrating problem-solving and decision-making skills in the context of urban and environmental planning.

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 8** You will demonstrate a knowledge of the environment, the principles of sustainability and how the UN Sustainable Development Goals can contribute to a reduced human impact on the environment. You will be aware of relevant regulation and policy.
Practice: Applied Knowledge and Understanding	**SCQF 8** Use a selection of skills, techniques and practices in identifying, analysing and evaluating environmental hazards and appropriate techniques that will create a more sustainable use of resources.
Generic Cognitive skills	**SCQF 8** Undertake critical analysis, evaluation and synthesis of ideas, concepts and information related to the climate and sustainability. You will draw on a range of sources in making judgments on the environment and sustainability.
Communication, ICT and Numeracy Skills	**SCQF 8** You will make formal presentations on complex environmental and sustainability issues using different techniques to communicate your findings (presentations, reports, data analysis). You wil evaluate numerical data to achieve your goals.
Autonomy, Accountability and Working with Others	**SCQF 8** Exercise autonomy and initiative in investigations and in information acquisition through research of complex environmental and sustainability challenges.

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. The module will be delivered through a combination of lectures, which will develop the theoretical underpinning for the module content, and workshops, which will enable to apply theoretical concepts and frameworks to understand environmentally sustainable urban outcomes at local and regional levels. In the workshop activities, students will be introduced a real-world problem where they will present approprite inteventions to achieve sustainable outcomes.	
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	24
Laboratory / Practical Demonstration / Workshop	12
Independent Study	164
n/a	
n/a	
n/a	
TOTAL	200

Indicative Resources
The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Adams, B. (2020) Green Development: Environment and Sustainability in a Developing World. 4th ed. Taylor & Francis Dick, J., Carruthers-Jones, J., Carver, S., Dobel, A.J. and Miller, J.D., 2020. How are nature-based solutions contributing to priority societal challenges surrounding human well-being in the United Kingdom: a systematic map. Environmental Evidence, 9, pp.1-21. Li, W. and Yi, P., 2020. Assessment of city sustainability—Coupling coordinated development among economy, society and environment. Journal of Cleaner Production, 256, p.120453. United Nations (2015) Sustainable Development Goals (SDGs). Available at: https://sdgs.un.org/goals (Accessed: 22 April 2024).
(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:** The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. You will scan your attendance via the scanners each time you are on-campus and you will login to the VLE several times per week. Where you are unable to attend a timetabled learning session due to illness or other circumstance, you should notify the Programme Leader that you cannot attend. Across the School an 80% attendance threshold is set. If you fall below this, you will be referred to the Student Success Team to see how we can best support your studies.

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 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 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.
(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	**Engineering Physical Sciences**
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	Engineering
Moderator	
External Examiner	TBC
Accreditation Details	None
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	

Assessment (also refer to Assessment Outcomes Grids below)

Assessment 1
A group project and presentation (50%).
Assessment 2
An essay along with reflective journal (50%).
Assessment 3
n/a
(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**
Group project and presentation	☒	☐	☒	☐	☒	50	2

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Essay along with reflective journal	☒	☒	☐	☒	☐	50	0

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
n/a	☐	☐	☐	☐	☐		
Combined total for all components						100%	2 hours

Change Control

What	**When**	**Who**