

MODULE DESCRIPTOR

Module Title

Environment, Innovation and Sustainability

Reference	EN2201	Version	1
Created	September 2023	SCQF Level	SCQF 8
Approved	February 2024	SCQF Points	15
Amended		ECTS Points	7.5

Aims of Module

To develop a comprehensive understanding of the interplay between environmental challenges, innovation, and sustainable practices in the context of the United Nations Sustainable Development Goals (UNSDGs) as related to engineering as a discipline.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Show a critical understanding of major environmental challenges and their implications for society.
- 2 Distinguish the role of innovation in driving environmentally responsible solutions and sustainable practices.
- 3 Use the principles of the relevant United Nations Sustainable Development Goals to analyse, design, and advocate for sustainable solutions in different contexts.
- 4 Report the ideas generated to address complex environmental problems and identify innovative solutions.

Indicative Module Content

United Nations Sustainable Development Goals, Pillars (People, Prosperity, Planet, Peace, and Partnership), Dimensions (Economic, Social, and Environmental), Environmental Challenges, Innovation for Sustainability, Innovation and Technology, Sustainability in Business, Wicked Problems, Policy and Governance, Sustainable Development, Climate Change Science

Module Delivery

This module will be delivered through lectures, seminars, and workshops.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	35	35
Non-Contact Hours	115	115
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	Individual report.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 comprises of 100% of the module grade. To pass the module, a D grade is required.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 LEAL-MILLAN, A., PERIS-ORTIZ, M., and LEAL-RODRIGUEZ, A. L., 2017. Sustainability in innovation and entrepreneurship: policies and practices for a world with finite resources. Cham, Switzerland: Springer.
- 2 CHICK, A. and MICKLETHWAITE, P., 2018. Design for sustainable change. Lausanne: AVA Publishing, SA.
- 3 SHARMA, N. and DE, P.K., 2022. Towards Net-Zero Targets: Usage of Data Science for Long-Term Sustainability Pathways. Springer Nature.