



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Environmental Impacts and Mitigation		
Module Code	USSKN8-15-2	Level	Level 5
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Health & Applied Sciences	Field	Applied Sciences
Department	HAS Dept of Applied Sciences		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Educational Aims:</b> See learning outcomes.</p> <p><b>Outline Syllabus:</b> We are currently entering a period of time representing dramatic global environmental change. This period of time or epoch has been termed the Anthropocene to emphasize the impact that humans have had on local and regional environments as well as the Earth System as a whole. On a planetary scale, we are losing biodiversity due to land use change, polluting ecosystems with artificial fertilizers, and altering our climate that will all affect food and water supplies. This module builds on introductory material from Level 1 modules to further develop the students understanding of these complex issues. Specifically students will describe and discuss the impact and interaction between human society and the environment as well as potential mitigation strategies that involves knowledge of environmental science, social-economics and political ideology. In particular this module will align closely with the United Nation's Sustainable Development Goals (SDGs).</p> <p>Students will study:</p> <p>Planetary Boundaries and the Anthropocene Introduction to the module and important concepts, definitions etc</p>

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Sustainable Development Goals, Millenium Development Goals and the Millenium Ecosystem Assessment

Concepts and reports that have defined recent thinking in Sustainability

Economics and the SDs

Sebastian Berger will discuss work and sustained economic growth

Clean Energy

Current technologies such as fossil fuels require rapid phase out with a switch to zero carbon renewable energy such as solar, wind, hydropower and nuclear fission and fusion.

Life Cycle Assessment (workshop)

A Life Cycle Assessment is defined as the systematic analysis of the environmental impact of products during their entire life cycle.

Water and Sanitation

Water scarcity, flooding and lack of proper wastewater management hinder social and economic development. Increasing water efficiency and improving water management are critical to balancing the competing and growing water demands from various sectors and users

Climate Mitigation and Adaptation

The year 2019 was the second warmest on record and the devastating fires in Australia were predicted in 2009. This calls for urgent and accelerated action by countries as they implement their commitments to the Paris Agreement on Climate Change.

AFOLU (Agriculture, Forestry and Other LandUse)

The complex and interaction impacts of intensive agriculture, livestock practices and other landuses on deforestation, biodiversity loss and sustainability – discussing the recent IPBES and IPCC land reports

Responsible Consumption and Production

Decoupling economic growth from resource use is one of the most critical and complex challenges facing humanity today. Doing so effectively will require policies that create a conducive environment for such change, social and physical infrastructure and markets, and a profound transformation of business practices along global value chains.

Sustainable Cities

Many cities around the world are facing acute challenges in managing rapid urbanization— from ensuring adequate housing and infrastructure to support growing populations, to confronting the environmental impact of urban sprawl, to reducing vulnerability to disasters.

Policy and the SDs

Laura De Vito will discuss the SDGs in relation to national and international policy

**Teaching and Learning Methods:** See assessment strategy.

### Part 3: Assessment

The Assessment Strategy has been designed to support and enhance the development of both subject-based and generic key skills as described in the Learning Outcomes. The focus is on assessment strategies that underpin and inform employability skills in the areas described in the syllabus outline (Part 2).

Component A.

This will be assessed via a 24 hour online written examination (equivalent to a 2 hour exam). The written examination will be used to assess the student's key knowledge and understanding of the Sustainable Development Goals in relation to impacts and mitigation of global environmental change. In addition to this, students will be assessed on their understanding on contemporary environmental techniques for measuring and monitoring environmental change (e.g. air, water or land).

Component B

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<b>Report</b> This coursework will develop analytical, data handling and analysis skills and will involve the analysis of scientific data. This coursework is designed to develop analytical skills and to encourage students to critically evaluate and interpret environmental change data and further their understanding and appreciation of the technical and scientific challenges of measuring environmental change through time and space.			
<b>First Sit Components</b>	<b>Final Assessment</b>	<b>Element weighting</b>	<b>Description</b>
Report - Component B		50 %	Data collection and analysis (1500 words)
Examination (Online) - Component A	✓	50 %	Online examination (24 hours)
<b>Resit Components</b>	<b>Final Assessment</b>	<b>Element weighting</b>	<b>Description</b>
Report - Component B		50 %	Data analysis (2500 words)
Examination (Online) - Component A	✓	50 %	Online examination (24 hours)

Part 4: Teaching and Learning Methods			
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:		
	<b>Module Learning Outcomes</b>		<b>Reference</b>
	Describe and discuss the impact that human activities have on the environment (including land, water and atmosphere) and living organisms		MO1
	Describe and discuss the impact that local, regional and global environmental change is having on human society		MO2
	Describe and discuss strategies and technologies for mitigating local, regional and global environmental change		MO3
	Gain practical experience in analytical data analysis and laboratory techniques for understanding the presence and/or movement of pollutants in the environment		MO4
Contact Hours	<b>Independent Study Hours:</b>		
	Independent study/self-guided study		117
	<b>Total Independent Study Hours:</b>		117
	<b>Scheduled Learning and Teaching Hours:</b>		
	Face-to-face learning		33
	<b>Total Scheduled Learning and Teaching Hours:</b>		33
	<b>Hours to be allocated</b>		150
	<b>Allocated Hours</b>		150

## STUDENT AND ACADEMIC SERVICES

Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p><a href="https://uwe.rl.talis.com/modules/usskn8-15-2.html">https://uwe.rl.talis.com/modules/usskn8-15-2.html</a></p>
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### Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Environmental Science {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2018-19

Environmental Science {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2018-19

Environmental Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2018-19

Environmental Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2018-19