UWE Bristol | University of the West of England

MODULE SPECIFICATION

Part 1: Information			
Module Title	Sustainable Food Production		
Module Code	USSKNB-15-3	Level	Level 6
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

Educational Aims: This module will provide you with the fundamental knowledge you need to help humanity confront one its most urgent environmental challenges – meeting the food demands of humans for the rest of the 21st century, and beyond, without causing intolerable environmental damage.

Outline Syllabus: The approach taken will focus on; a) the sustainable use of key natural resources, b) anthropogenic environmental changes that endanger food production, and c) key environmental impacts of global food production. The module will enable you to understand why current food production systems are breaching planetary boundaries and what has to be done to remedy this.

You will cover:

Natural Resources: food production and the global freshwater crisis; impending 'peak P' and closing the P gap; nitrogen use and 'fertilising the Earth to death'.

Environmental Change: agriculture and the 'salinity crisis'; food production and global warming; food production and the acidification of the Earth;

Environmental Impact: agrochemicals and the poisoning of the biosphere; food production and the mass extinction of biodiversity.

Feeding within our means: what is necessary for Sustainable Food Production.

Teaching and Learning Methods: Your learning on the module will be supported by podcasts for each topic, a set of online MCQs for each topic, an online image gallery of key food and forage crops for each topic, an extensive set of bespoke (often animated) figures/diagrams for each topic, a dedicated textbook. Each topic will be dealt with using seminar sessions based on prior reading and there will be two interactive workshop sessions.

Part 3: Assessment

Component A

Online exam with a 24 hour window for submission. This assessment will provide students with an opportunity to demonstrate in depth knowledge on the module subject matter, with the expectation that students will be required to show evidence of critical analysis.

Component B.

Data Interpretation Exercise. The data of a key current paper on one of the topics dealt with in the module will be used to set a series of short questions and calculations focusing on data interpretation. This will enable students to develop the skills necessary to interpret the type of data underpinning debate about the sustainability of food production systems and provide them with insights necessary for engaging with debates surrounding all the topics. This will help them with the fundamental knowledge listed as learning outcomes. Environmental Science uses probabilistic statistics very significantly and students need opportunities to practice using their statistical and data interpretations skills on real environmental issues.

One of the workshop exercises will be entitled 'marking your own coursework', which will be an exercise to develop an understanding of the key concepts of the assessment criteria within an interactive environment. Some pieces of dummy coursework will be marked by students. This exercise will carry no marks but will highlight to students the skills that the module seeks to develop and how to self-assess whether they have been developed or not.

First Sit Components	Final Assessment	Element weighting	Description
Set Exercise - Component B		40 %	Data Interpretation Exercise
Examination (Online) - Component A	✓	60 %	Online Exam (24 hour submission window)
Resit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	60 %	Online Exam (24 hour submission window)
Set Exercise - Component B		40 %	Data Interpretation Exercise.

Part 4: Teaching and Learning Methods		
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	

Module Learning Outcomes	Reference
Understand key aspects of the global dynamics of natural resource use that underpin food production.	MO1
Synthesize knowledge of anthropogenic changes in the environment with that of the limits to food production.	MO2
Understand how key pollutants affect the quantity and quality of food produced in agricultural systems	MO3
Statistically manipulate data of the type used to study food production systems.	MO4
Discuss the science underpinning global food security	MO5
Comprehend the environment impact of food production	MO6

Contact Hours	**Independent Study Hours:**	
	Independent study/self-guided study	117
	Total Independent Study Hours:	117
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	33
	Total Scheduled Learning and Teaching Hours:	33
	Hours to be allocated	150
	Allocated Hours	150
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/index.html	

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Environmental Science [Sep][FT][Frenchay][4yrs] MSci 2018-19

Wildlife Ecology and Conservation Science [Sep][FT][Zoo][3yrs] BSc (Hons) 2018-19

Wildlife Ecology and Conservation Science [Sep][FT][Frenchay][4yrs] MSci 2018-19

Environmental Science [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Biological Sciences [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Biological Sciences [Sep][FT][Frenchay][4yrs] MSci 2018-19