



MODULE SPECIFICATION

Part 1: Information			
Module Title	The Microbial World		
Module Code	USSKN7-15-2	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	Life on Earth 2020-21		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See learning outcomes.</p> <p>Outline Syllabus: The indicative content of this module will focus on the role of microorganisms in the environment</p> <p>Roles of microorganisms in terrestrial and marine ecosystems: students will develop an understanding of the role and significance of microorganisms in marine and terrestrial ecosystems and their importance in biogeochemical cycles.</p> <p>Microbial cell-to-cell communication: students will develop knowledge of microbial cell-cell communication, polymicrobial communities and the phenomenon of bacterial bioluminescence, including their roles in the environment and in human disease.</p> <p>Eukaryotic microbiology: students will develop an understanding of the diversity and role of the fungi and protozoa in the environment, and the contribution these environmental organisms make to human activities.</p> <p>Microbial biotechnology: students will develop an understanding of the utility of microorganisms in everyday life from historical uses including brewing and baking through to modern recombinant</p>

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technologies including microbial energy.

The changing world: students will develop an understanding of the changing relationship between mankind and microbes in the environment as humans continue to exploit the planet. This will include emerging and re-emerging disease, damage to the biogeochemical cycles which microbes underpin and how microbial biotechnology can be exploited to mitigate these processes, for example bioremediation and microbial fuel cells.

Teaching and Learning Methods: See assessment strategy.

Part 3: Assessment

Component A will consist of an online exam over a 24 hour period. This assessment will provide students with an opportunity to demonstrate their knowledge and understanding of environmental microbiology and their ability to identify, interpret and evaluate evidence from the published literature in a time-limited framework. This assessment will test a range of the learning outcomes and will provide a valuable learning experience through utilising skills which will be of benefit when progressing to final year modules.

Component B comprises a research review which will require students to complete a 1500 word written account on a beneficial environmental aspect of microorganisms. This assessment will test a range of learning outcomes and will provide a valuable learning experience through applying knowledge of microbiology in the field of environmental science and supporting this through evidencing the published literature.

First Sit Components	Final Assessment	Element weighting	Description
Written Assignment - Component B		50 %	1500 word research review
Examination (Online) - Component A	✓	50 %	Online examination (24 hours)
Resit Components	Final Assessment	Element weighting	Description
Written Assignment - Component B		50 %	1500 word research review
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:	
	Module Learning Outcomes	Reference
	Understand the role and diversity of microorganisms in the environment in a variety of ecological niches	MO1
	Evaluate the significance of a microorganisms in environmental cycling	MO2
	Understand the role of environmental change in influencing how microbes interact with humans and the environment	MO3
	Analyse data derived from laboratory study of microorganisms	MO4
Contact Hours	Independent Study Hours:	
	Independent study/self-guided study	117

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	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	<p>The reading list for this module can be accessed via the following link: https://uwe.rl.talis.com/modules/usskn7-15-2.html</p>	

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][5yrs] MSci 2018-19

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

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