



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Meteorology		
Module Code	UBGMWN-15-2	Level	Level 5
For implementation from	2018-19		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Environmental Mgmt		
Contributes towards			
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Features:</b> Module Entry requirements: 60 credits at level 1.</p> <p><b>Educational Aims:</b> See Learning Outcomes</p> <p><b>Outline Syllabus:</b> Topics to be covered:</p> <p>Composition and structure of the Earth's atmosphere.</p> <p>The energy budget at the local and global scale, and the natural greenhouse effect.</p> <p>General circulation of the Earth's atmosphere, climate and weather systems (e.g. mid-latitude frontal systems).</p> <p>Water in the atmosphere and precipitation formation.</p>

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Plant/soil/atmospheric interactions at a range of scales (e.g. global, valley).

Links between these different components will be identified and examined within a systems framework.

Modelling of atmospheric responses to inputs/outputs of energy and materials at a range of scales i.e. from the local to the global.

Forecasting of short term to longer term (monthly/seasonal) weather events. Links between regional weather and larger scale events (e.g. El Nino may be considered here). Distinguishing of weather forecasting from longer term climate change predictions.

### Practical Topics

These will be delivered in a variety of formats such as:

Campus based field work – change over time and over different surfaces.

Exploring models that deal with climate system behaviour e.g. simple energy balance model. (pc lab based).

Paper based practicals on a range of topics.

Seminars to critically review key papers.

**Teaching and Learning Methods:** Students will receive – on average- 3 hours' contact time per week. This will be in a range of formats, including weekly keynote lectures, paper or computer-based practical sessions and fieldwork.

### Hours

Contact time 36

Assimilation and development of knowledge 60

Exam preparation 36

Coursework preparation 18

Total study time 150

Scheduled learning on this module includes lectures, practical classes and fieldwork.

Independent learning includes time engaged with essential reading, further reading, practical completion and assessment preparation and completion.

## Part 3: Assessment

### Strategy

The assessment for this module is designed to assess:

Theoretical understanding of the range of atmospheric processes and features and their interaction with the Earth's surface covered across the module lectures.

This will be assessed using an examination in which students answer one essay from a selection of unseen questions.

Application of theoretical content from module lectures through a range of practical exercises. The exercises will comprise: field data collection, paper based practicals, analysis of online data bases, application of basic climate/atmospheric models. Students will demonstrate their practical, technical and communication skills through submission of a portfolio. Additionally, the portfolio is designed to demonstrate an engagement with relevant theory and also critical evaluation of the utility and effectiveness of the measurement techniques and models being applied.

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### Summative Assessment

Component A- Examination (1 hour). Learning outcomes 1,2,3 and 5.

#### Written examination

Students will answer one unseen essay question from a selection.

Answers will be assessed according to the following criteria:

Relevance of the content of the essay to the question set  
 Grounding in literature, and use of evidence and supporting material  
 Clarity, coherence and depth of argument  
 Standards of literacy and presentation.

Component B- Portfolio of practical work. Learning outcomes 4 - 6.

A selection of pieces of work drawn from practicals completed throughout the module.

Equivalent to 1,500 words.

Portfolios will be assessed according to the following criteria:

Relevance of the content of the work to the question set  
 Depth of interpretation of data  
 Standards of literacy and presentation.

First Sit Components	Final Assessment	Element weighting	Description
Portfolio - Component B		50 %	Portfolio of practical work
Examination - Component A	✓	50 %	Examination (1 hour)
Resit Components	Final Assessment	Element weighting	Description
Portfolio - Component B		50 %	Portfolio of practical work
Examination - Component A	✓	50 %	Examination (1 hour)

### Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will be able to:	
		<b>Module Learning Outcomes</b>
	MO1	Describe and explain: the composition and structure of the atmosphere; the processes that transfer energy and materials within the atmosphere and across its boundaries; and the relationships between different types of land surface and atmospheric characteristics and features.
	MO2	Define and distinguish between the terms 'climate', 'weather' and 'meteorology'.
	MO3	Demonstrate a critical awareness of different ways of conceptualising atmospheric features and processes.

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	MO4	Demonstrate a critical awareness of academic literature describing the functioning of atmospheric features, processes and surface/atmosphere interactions.	
	MO5	Apply a range of field and practical techniques to record atmospheric and ground surface conditions.	
	MO6	Demonstrate an understanding of the character and applicability of models which represent land/atmosphere interactions and atmospheric features and processes.	
	MO7	Accurately and professionally present outputs from a range of field and practical exercises to describe atmospheric features and processes.	
Contact Hours	<b>Contact Hours</b>		
	<b>Independent Study Hours:</b>		
	Independent study/self-guided study		114
	<b>Total Independent Study Hours:</b>		114
	<b>Scheduled Learning and Teaching Hours:</b>		
	Face-to-face learning		36
	<b>Total Scheduled Learning and Teaching Hours:</b>		36
	<b>Hours to be allocated</b>		150
	<b>Allocated Hours</b>		150
Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p><a href="https://uwe.rl.talis.com/modules/ubgmwn-15-2.html">https://uwe.rl.talis.com/modules/ubgmwn-15-2.html</a></p>		