



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Managing Air Quality		
Module Code	UBGMT4-15-3	Level	Level 6
For implementation from	2019-20		
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		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Overview:</b> According to the United Nations, air pollution is the single biggest environmental health risk, causing roughly 7 million deaths annually. Short-lived pollutants, such as those arising from the burning of diesel, coal, kerosene or biomass, are reported to be responsible for about one third of deaths from stroke, chronic respiratory disease and lung cancer and one quarter of deaths from heart attacks. Long-lived particles of dust, such as those carried over long distances by sand and dust storms, can also contribute to air pollution and can lead to premature death by cardiovascular and respiratory disease, lung cancer, eye and skin infections and acute lower respiratory infections. In addition to impacting on health, air pollution can contribute to global warming, and impact on such things as water and food supply. This module recognises the significance of these impacts and equips students with appropriate scientific knowledge to understand the nature and sources of air pollution.</p> <p><b>Educational Aims:</b> See Learning Outcomes.</p> <p><b>Outline Syllabus:</b> Students will be introduced to a distinction between both household and outdoor (ambient) forms of air pollution, with the module explaining how the latter is generated from emissions caused by power generation, transport, industrial activity, wildfires, agriculture, and dust and sand storms. Case studies from across the world will be used to show the nature of the challenge. The module will also allow students to engage with their local context to understand the type of pollution that is occurring in their own city or neighbourhood, and how this</p>

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has changed with time. Students will be exposed to some of the policy and legislation that is being used to help tackle air pollution, with examples being drawn from a range of spatial scales (from the local to the international). Key drivers and ambitions will be critically reviewed, while the module will also seek to identify the necessary pre-conditions for the successful achievement of policy and legislation. Key stakeholders in the delivery of this activity will also be identified. The module will expose the methods and techniques for measuring and monitoring air pollution, and the type of responses that are being pursued to ensure air remains healthy now and into the future. As part of this, the module considers the role of technology in cleaning up polluted air, and how technological innovation is being used to help reduce emissions from a range of sources and sectors (such as from cars and planes). The inter-relationships between development and air quality will be revealed, with the module highlighting how the form of a development can impact on, or be influenced by, local air pollution.

**Teaching and Learning Methods:** Scheduled learning will comprise assessment and lectures. Lectures will provide a framework for understanding the reading and key issues covered by the module. Where possible, scheduled learning will be enhanced with guest lecturers and / or site visits to help identify how air quality can be measured and improved through appropriate management.

Independent learning will use directed reading via the online reading list and a selection of online resources, including appropriate case studies.

### Part 3: Assessment

This module is assessed by a single component, Component A, that comprises an examination of 3-hours. This method of assessment has been chosen on the basis that it complements the other coursework focused modules of the year. An examination provides an opportunity for students to refine skills in argumentation and will allow them to synthesise, and apply, knowledge gained from across the module. Feedback on exam technique will be provided in advance of the assessment and will allow for a reinforcement of guidance provided at level two. Mock questions will be provided in advance of the examination and will be used as a formative assessment tool. The resit examination will take a similar format.

First Sit Components	Final Assessment	Element weighting	Description
Examination - Component A	✓	100 %	Examination (3 hours)
Resit Components	Final Assessment	Element weighting	Description
Examination - Component A	✓	100 %	Examination (3 hours)

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<b>Part 4: Teaching and Learning Methods</b>																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th style="text-align: left;"><b>Module Learning Outcomes</b></th> <th style="text-align: left;"><b>Reference</b></th> </tr> </thead> <tbody> <tr> <td>Differentiate between the different sources and effects of selected air pollutants and critically evaluate how these have changed over the last century</td> <td>MO1</td> </tr> <tr> <td>Provide examples, and offer critical reflection, on the use of policy and legislation for the purposes of managing air quality</td> <td>MO2</td> </tr> <tr> <td>Demonstrate a critical understanding of methods of air quality assessment</td> <td>MO3</td> </tr> <tr> <td>Critically evaluate how development and city management can either increase, or reduce, emissions and ambient concentrations of pollutants</td> <td>MO4</td> </tr> <tr> <td>Critically discuss the history of the development of emission controls on motor vehicles and assess likely future scenarios for abatement technologies</td> <td>MO5</td> </tr> </tbody> </table>	<b>Module Learning Outcomes</b>	<b>Reference</b>	Differentiate between the different sources and effects of selected air pollutants and critically evaluate how these have changed over the last century	MO1	Provide examples, and offer critical reflection, on the use of policy and legislation for the purposes of managing air quality	MO2	Demonstrate a critical understanding of methods of air quality assessment	MO3	Critically evaluate how development and city management can either increase, or reduce, emissions and ambient concentrations of pollutants	MO4	Critically discuss the history of the development of emission controls on motor vehicles and assess likely future scenarios for abatement technologies	MO5				
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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/index.html">https://uwe.rl.talis.com/index.html</a></p>																

<b>Part 5: Contributes Towards</b>
This module contributes towards the following programmes of study: