



MODULE SPECIFICATION

Part 1: Information			
Module Title	Renewable Energy		
Module Code	UBGML5-30-3	Level	Level 6
For implementation from	2019-20		
UWE Credit Rating	30	ECTS Credit Rating	15
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>Overview: Renewable energy in the context of global sustainable development and climate change mitigation.</p> <p>Features: Module Entry Requirements: 60 credits at level 2</p> <p>Educational Aims: See Learning Outcomes.</p> <p>Outline Syllabus: The syllabus includes:</p> <p>Large-scale integration of renewable energy sources: generation, transmission and storage. Examples will be drawn from: Physical principles, technologies, economic and environmental considerations Solar thermal energy Solar voltaics Biofuels Tidal power Wave energy Hydropower Geothermal energy</p>

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Domestic integration of renewable energy, to be drawn from:
 Domestic energy dynamics (insulation, energy efficiency, thermal efficiency, energy management)
 Micro-hydro energy
 Passive solar heating
 Heat pumps
 and other technological innovations.

Basic economic analyses of proposed or existing renewable energy projects.

Simulation of a planning inquiry. Students will present arguments either for an against a renewable energy proposal.

Teaching and Learning Methods: Scheduled learning will comprise coursework and lectures, together with practical tasks, guest speakers and possible field visit(s). Lectures will provide a framework for understanding the reading and the key issues covered by the module.

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

Part 3: Assessment

Summative Assessment:

Component A is assessed by an unseen 2-hour examination that will require students to demonstrate knowledge on key ideas, concepts and practices encountered during the module. The assessment will allow them to build upon the skills developed at levels one and two. The form of assessment is considered to be the most appropriate on the basis that it will allow students to develop clear and coherent arguments. They will need to refer to appropriate reading and demonstrate appropriate standards of literary and presentation.

Component B is delivered in the form of a role-play exercise that revolves around a mock planning enquiry centred on a renewable energy technology (such as a tidal barrage). Students will work collaboratively in groups to share and pool knowledge but group members will present their own specialism via a pitch of 10 minutes. The assessment creates a scenario that students may find themselves in within practice and allows them to synthesise key skills in debate, augmentation and the synthesis and communication of complex information. They will need to respond to questions and challenges arising from their presentation, thereby providing an opportunity to demonstrate personal resilience. The role-play offers the kind of interactivity that may be difficult to achieve via other assessment tools. Contributions will need to be grounded in literature and be informed by relevant data and research. Students will need to demonstrate effective visual and verbal communication.

Formative feedback will be in the form of discussion and activities based on set readings and exercises as the module progresses. Formative feedback for the examination may include the use of past papers or mock questions.

Resit:

The resit of Component A will require students to take a further unseen examination. The resit to Component B takes a different format as it is potentially difficult to host a role-play exercise under resit conditions. Instead, students will submit a presentation, with embedded audio, on the same theme that they were allocated in the initial role-play. Presentation length will be the same at ten minutes.

First Sit Components	Final Assessment	Element weighting	Description
Presentation - Component B		50 %	Individual Presentation (10 minutes)
Examination - Component A	✓	50 %	Examination (2 hours)

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Examination - Component A	✓	50 %	Examination (2 hours)

Part 4: Teaching and Learning Methods																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th>Module Learning Outcomes</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>Explain the physical principles and the technologies involved in deriving energy from key renewable sources</td> <td>MO1</td> </tr> <tr> <td>Critically discuss the economic and environmental viability of renewable energy sources</td> <td>MO2</td> </tr> <tr> <td>Explain the integration of renewable energy sources at a variety of scales and critically consider the role that technology can play in energy generation and conservation</td> <td>MO3</td> </tr> <tr> <td>Critically evaluate the current and future potential of renewable energy sources to meet the demands from energy supply and global climate change mitigation</td> <td>MO4</td> </tr> <tr> <td>Demonstrate critical engagement with academic and policy-based literature</td> <td>MO5</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Explain the physical principles and the technologies involved in deriving energy from key renewable sources	MO1	Critically discuss the economic and environmental viability of renewable energy sources	MO2	Explain the integration of renewable energy sources at a variety of scales and critically consider the role that technology can play in energy generation and conservation	MO3	Critically evaluate the current and future potential of renewable energy sources to meet the demands from energy supply and global climate change mitigation	MO4	Demonstrate critical engagement with academic and policy-based literature	MO5				
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Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/ubgm15-30-3.html</p>																

Part 5: Contributes Towards
This module contributes towards the following programmes of study: