



MODULE SPECIFICATION

Part 1: Information			
Module Title	Water and Energy Futures		
Module Code	UBGMME-30-3	Level	Level 6
For implementation from	2020-21		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Student and Academic Services	Field	Geography and Environmental Management
Department	SAS Policy Development & Student Experience		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See syllabus and module learning outcomes.</p> <p>Outline Syllabus: The module progressively develops three integrated themes, namely:</p> <p>Theme 1: Introduction to water and energy services in the 21st century: UK and global scales.</p> <ul style="list-style-type: none"> - Key debates – The water-energy-food nexus <p>Theme 2: Managing water sustainably: national and international perspectives.</p> <ul style="list-style-type: none"> - History and evolution – From natural water to hydro-social water – Water, economics and policy Integrating water resource management – Water management and land management – Key technical, economic and policy challenges – Technological solutions: opportunities and challenge <p>STUDENT & ACADEMIC SERVICES 2018-19</p> <p>2</p> <ul style="list-style-type: none"> - The ecosystems services approach – Payment for ecosystems services – Water-related ecosystems services

STUDENT AND ACADEMIC SERVICES

Theme 2: National and international sustainable energy futures: options, opportunities and challenges.

– Large-scale generation of energy, through nuclear, solar thermal energy, solar voltaic, biofuels, tidal power, wave energy, hydropower and geothermal energy – Domestic integration of renewable energy, including domestic energy dynamics (insulation, energy efficiency, thermal efficiency, energy management), micro-hydro energy, passive solar heating, heat pumps and other technological innovations. – Transmission and storage of energy – Promotion and implementation of smart energy systems

Teaching and Learning Methods: Scheduled learning will comprise lectures and workshops that will comprise 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

Comp A- Individual seminar contributions (equivalent to two 10 minute presentations) .

Comp B - Portfolio.

First Sit Components	Final Assessment	Element weighting	Description
In-class test - Component A	✓	50 %	Individual seminar contributions (equivalent to two 10 minute presentations)
Portfolio - Component B		50 %	Individual Portfolio (3,500 words equivalent)
Resit Components	Final Assessment	Element weighting	Description
Presentation - Component A	✓	50 %	Individual Presentation (20 minutes)
Portfolio - Component B		50 %	Individual Portfolio (3,500 words equivalent)

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
	Discuss the historical background of utility provision in UK, European and world contexts (Components A & B)	MO1
	Articulate the challenges of and constraints on improving efficiency in consumption of water and energy services in domestic, commercial and agricultural sectors (Components A & B)	MO2
	Critically appreciate the economic, policy and regulatory frameworks, nationally and internationally, within which decisions on energy and water management are made (Components A & B)	MO3
Demonstrate a general knowledge of the real-time problems of water and energy networks and the constraints on present distribution systems (Components A & B)	MO4	

STUDENT AND ACADEMIC SERVICES

	Evaluate options for sustainable energy and water supply, distribution, utilisation, including demand side management, smart systems and efficiency modelling (Components A & B)	MO5
	Critically consider the form that future energy and water infrastructure will take and appraise the potential social, economic and environmental implications that selected interventions or technologies could give rise to (Component A & B)	MO6
Contact Hours	Independent Study Hours:	
	Independent study/self-guided study	228
	Total Independent Study Hours:	228
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	72
	Total Scheduled Learning and Teaching Hours:	72
	Hours to be allocated	300
	Allocated Hours	300
Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://uwe.rl.talis.com/modules/ubgmme-30-3.html</p>	

Part 5: Contributes Towards

This module contributes towards the following programmes of study: