MODULE SPECIFICATION

Part 1: Information			
Module Title	Researching Environmental Technology and Management		
Module Code	UBGMKR-30-2	Level	Level 5
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 & Envrnmental Mgmt		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Overview: This module builds upon the level one 'Analysing Environmental Change' and will develop knowledge, skills and competencies in planning, conducting and analysing research projects.

Educational Aims: The module provides an important foundation for the level three Final Year Project that will require students to undertake individual research in an area of concern linked to the aims of the programme. Students will be given flexibility as to their exact approach, but they will need to consider the role of technological solutions for managing environmental issues.

Outline Syllabus: The syllabus to the module will be framed around the following topics:

Developing a programme of research:
Defining an approach to research / research philosophy
Formulating a research question
Setting aims and objectives
Using fixed / flexible modes of research

Quantitative methods for research:
Questionnaire design
Sampling techniques

Data analysis
Statistical techniques

Qualitative methods of research:
Interviews
Focus groups
Observation
Visual approaches

Practical issues associated with research:
Health and safety issues
Ethical issues

Application of GIS and remote sensing:
The nature of spatial data
Georeferencing
Spatial data models / databases
Inputting and manipulating spatial data
Spatial analysis and visualisation
Spatial decision making

Teaching and Learning Methods: Students will be expected to engage with a series of lectures and workshops that will help them to develop as a confident and ethical researcher. Importantly, the module develops skills in Geographic information Systems and Remote Sensing. Students will use these via a group research project.

Students will prepare a research proposal that will help them to prepare for the dissertation provided at level 3. The proposal will require students to reflect on relevant literature and to formulate a research question and a supporting list of aims and objectives. Students will also need to think about data sampling, collection and analysis.

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

The module is assessed by two components, namely Component A and Component B. Both are equally weighted. Component A requires students to use Geographic Information Systems / Remote Sensing, approaches that are widely used in practice. The group task that will need completing will re-introduce students to software first introduced at level 1. Results will need to be communicated via a presentation which is considered to represent the best format for communicating visual material. It will also allow students to improve communication skills. Component B requires the development of a research proposal which will provide a solid grounding for research activity at Level 3. The assignment takes the form of a report which is conventional way for proposals to be presented. It will also supplement writing skills developed at level 1.

Component A requires students to work collaboratively with colleagues to answer a research question. The resulting presentation should explain the approach taken, analyse results and consider relevant literature. Research projects should be made relevant to the aims of the programme. Students will be able to discuss their research project with staff in advance of the presentation to allow time for changes in response to feedback received. Group size will ideally be two to three people. A single group mark will be awarded with mechanisms incorporated to ensure any variability in individual performance is recognised.

Component B requires students to write a research proposal built around a question and a series of supporting objectives, that students should set themselves. The proposal should extend to 2,500 words and be supported by relevant references. Support for the essay will come from lectures and workshops attached to the module. Students will also be able to discuss their intended research, and a plan of their proposals, with module staff.

The resit to Component A will be based around the same group project but students will need to deliver an individual presentation on the elements of work that they completed or were originally responsible for.

The resit to Component B requires the resubmission of the same proposal, taking into account the feedback provided on the first sit (where appropriate).

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Written Assignment - Component B		50 %	Individual research proposal (2500 words)
Presentation - Component A	✓	50 %	Group gis/remote sensing presentation (6 mins per person)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Written Assignment - Component B		50 %	Individual research proposal (2500 words)
Presentation - Component A	✓	50 %	Group gis/remote sensing presentation (6 mins per person)

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**
Utilise geographic information systems and remote sensing in the context of being an environmental manager	MO1
Search, organise and critically evaluate academic literature	MO2
Formulate relevant and realistic research questions, based upon academic literature	MO3
Develop, critically evaluate and carry out a variety of methods appropriate to research relevant to environmental technology and management	MO4
Execute a programme of research in response to an agreed project plan	MO5
Orally and visually present the findings of a research project	MO6
Recognise the importance of taking an ethical approach to research and adhering to appropriate health and safety safeguards in conducting a programme of research	MO7

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	200
Total Independent Study Hours:	200
Scheduled Learning and Teaching Hours:	
Face-to-face learning	100

	Total Scheduled Learning and Teaching Hours:	100
	Hours to be allocated	300
	Allocated Hours	300
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/index.html	

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