



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Hydrogeology 1		
Module Code	UBGML8-15-2	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> The syllabus includes:</p> <p>Principal theories and concepts, hydrological cycle, water budgets.            Aquifer properties, porosity and permeability.            Flow in porous media (Darcy's Law).            Groundwater in relation to geological processes and rock types.            Groundwater and catchment processes.            Water management issues.</p> <p><b>Teaching and Learning Methods:</b> Scheduled learning on this module includes lectures, demonstrations and practical classes. Local fieldwork sessions will aid knowledge and skills</p>

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development.

Independent learning includes hours engaged with essential reading, completion of practical work, assignment preparation and completion. These sessions constitute an average time as indicated:

Activity:

Contact time (lectures, field and laboratory sessions): 36 hours

Assimilation, development of knowledge and independent reading: 65 hours

Exam preparation: 24 hours

Coursework preparation: 25 hours

Total study time: 150 hours

Students will receive, on average, 3 hours' contact time per week during one Teaching Block. This will be predominantly in the form of keynote lectures to introduce the principal theories and concepts and practical sessions for students to gain hands-on experience of map work in hydrogeological contexts and of using particular instruments. The practical sessions will be introduced by demonstrations and there will be local field excursions. One-to-one support will be provided during practical sessions and via email.

### Part 3: Assessment

Summative assessment:

Component A – Examination (2 hours):

Written examination.

This will assess students' understanding of key hydrogeological concepts and theories and how they are applied to water resource issues and problems.

Students will be able to demonstrate their engagement with academic literature.

Component B – Portfolio of practical work:

Equivalent to 1500 words.

Students will construct this portfolio during the module and will receive formative feedback during the practical sessions.

The portfolio will assess students' ability to use geological resources, numerical and analytical methods in groundwater studies.

Formative work:

Formative work will be set weekly during practical sessions for students' self assessment. Students will receive preparation exercises for the summative assessment that may include a mock exam.

First Sit Components	Final Assessment	Element weighting	Description
Portfolio - Component B		50 %	Portfolio of practical work (1500 words)
Examination - Component A	✓	50 %	Written exam (2 hours)
Resit Components	Final Assessment	Element weighting	Description
Practical Skills Assessment - Component B		50 %	Practical exercises (1500 words)
Examination - Component A	✓	50 %	Written exam (2 hours)

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<b>Part 4: Teaching and Learning Methods</b>		
Learning Outcomes	On successful completion of this module students will be able to:	
	<b>Module Learning Outcomes</b>	
	MO1	Evaluate and use standard techniques for measurement of hydrogeological parameters
	MO2	Use numerical data to solve issues in hydrogeology
	MO3	Employ analytical and graphical techniques to predict movement of groundwater
	MO4	Evaluate the importance of underlying geology on groundwater distribution
	MO5	Apply hydrogeological knowledge to a critical analysis of water management issues
	MO6	Demonstrate independent engagement with academic literature
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/index.html">https://uwe.rl.talis.com/index.html</a></p>