

<b>Module code</b>	AW-4316		
<b>Module Title</b>	Environmental Modelling		
<b>Degree/Diploma</b>	Bachelor of Arts (Geography, Environment and Development Studies)		
<b>Type of Module</b>	Major Option		
<b>Modular Credits</b>	4	<b>Total student workload</b>	8 hours/week
		<b>Contact hours</b>	4 hours/week
<b>Prerequisite</b>	None		
<b>Anti-requisite</b>	None		
<b>Aims</b>			
To acquaint students with the fundamentals of environmental modelling and its application, from conceptualisation, to model development and validation of model outputs.			
<b>Learning Outcomes:</b>			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	30%	<ul style="list-style-type: none"> <li>- Understand fundamentals of environmental modelling</li> <li>- Understand the importance of models for environmental issues</li> <li>- Understand the life cycle of modelling exercise</li> <li>- Gain knowledge of different types of models</li> </ul>	
Middle order :	40%	<ul style="list-style-type: none"> <li>- Identify appropriate models as per requirement and application</li> <li>- Define environmental problem and developing models</li> <li>- Analyse output of model data and observed data</li> </ul>	
Higher order:	30%	<ul style="list-style-type: none"> <li>- Compute using different models on different platforms.</li> <li>- Evaluate the accuracy of models</li> <li>- Work independently or in a group towards policy development based on model outputs.</li> </ul>	
<b>Module Contents</b>			
<ul style="list-style-type: none"> <li>- Environmental models</li> <li>- Types of models</li> <li>- Scale of models</li> <li>- Modelling methodology</li> <li>- Design, develop and testing of models</li> <li>- Validation of models</li> <li>- Refining models</li> <li>- Environmental data analysis</li> <li>- Hands-on exercise with different models and datasets</li> </ul>			
<b>Assessment</b>	Formative assessment	Weekly tests, class discussions & tutorials	
	Summative assessment	Examination: 50%	
		Coursework: 50% - 5 modelling exercises (50%)	