

Module code	SC-2401		
Module Title	Chemistry of the Environment		
Degree/Diploma	Bachelor of Science (Chemistry)		
Type of Module	Breadth		
Modular Credits	4	Total student workload	10 hours/week
		Contact hours	4 hours/week
Prerequisite	None		
Anti-requisite	SC-1401 Chemistry of the Environment		
Aims			
To identify and explain the underlying chemical principles involved in environmental processes and to apply these principles in understanding various man-made and natural environmental problems such as global warming, air pollution, water pollution, volcanic eruption, landslides, and solid wastes and so on.			
Learning Outcomes:			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	40%	- Identify and explain the underlying chemical principles involved in environmental processes	
Middle order :	40%	- Apply these principles in understanding various man-made and natural environmental problems such as global warming, air pollution, water pollution, volcanic eruption, landslides, and solid wastes and so on	
Higher order:	20%	- Critically work on the solutions to environmental problems	
Module Contents			
<ul style="list-style-type: none"> - Biogeochemical cycles - Pollution: sources, scales and effects in the atmosphere and air, the hydrosphere and water, the lithosphere and soil - Air pollution: urban smog, regional haze, acid rain, ozone layer, global warming, long range transport by the air - Pollution control of freshwater and seawater chemistry - Water pollution: metals, nutrients, inorganic and organic substances, dissolved gases, biochemical and chemical oxygen demands - Environmental water monitoring, sampling methods, quality standards - Treatment: wastewater and potable water - Pollution modelling - Solid waste: effects on ecological and health - Effects of chemical pollutions and managing environmental quality. 			
Assessment	Formative assessment	Weekly PBL And Group Discussion	
	Summative assessment	Examination: 60%	
		Coursework: 40% <ul style="list-style-type: none"> - 3 Group Reports (15%) - 3 Class Tests (15%) - 2 Group Presentations (10%) 	