COURSE CONTENT
(Free Elective)

Date	June 2010
:	
Academic Year	2010/2011
:	
Study Year (if applicable)	-
:	
Course Code & Title	EM5102 Environmental Management
:	
Academic Unit	3
:	
Pre-requisite	Nil
:	
Course Description	
:	

EM9102 Environmental Management
[Lecture: 26 hrs; Tutorial: 13 hrs; Lab: 0 hr; Pre-requisite: Nil; Academic Unit: 3]

Learning Objective :

To provide an overall understanding of some environmental problems and examples of how they can be managed.

Course Content :

This is an introductory course on environmental management. Topics include management of impacts due to water pollution, wastewater discharges, noise, air pollution, solid waste. Society and ecology, assessment indices, environmental legislation, regulations, environmental planning and assessment.

Course Outline :

S/N	Topic	Lecture Hrs	Tutorial Hrs

1.	Introduction to environmental management. The basics of environmental science: concepts, definitions and terminology. Introduction to Environmental Impact Assessment. Environmental law. Managing the environment: systems approaches.	4	2
2.	Water quality and wastewater management. The water cycle; the chemistry of water environments. The river and lake environment. Introduction to modeling of stream properties. Overview of water and wastewater treatment, re-use concepts. The management environment for rivers and lakes. Some solutions to problems and possible future approaches.	4	2
3.	Noise pollution: the science of noise, measuring noise; loudness, noise measurement scales, the psychology of noise. Management of environmental noise.	3	1
4.	Air pollution: the atmosphere, air mass movements, adiabatic lapse rate and inversion layers.	3	2
5.	Integrated solid waste management: solid waste generation, characterization, collection, transformation, disposal, waste minimization, industrial productivity.	4	2
6.	Land resources management: subsurface contamination and remediation, industrial estate environmental management	4	2
7.	Environmental management tools and case studies: EIA, LCA, RA	4	2
	Total:	26	13

Learning Outcome :

To enable the students to understand the scientific basis for some environmental problems, their historic significance, and some examples of how the problems are managed and how they may be managed in the future.

Student Assessment : Continual Assessment (up to 50%); Examination (min 50%)

Textbooks :

Cairns, J. and Crawford, T.V., “Integrated Environmental Management”, Lewis Publishers, 2000.

References :

Nil