

Course Code : ENCM 31552
Title : Hazardous Waste Management
Pre-requisite : ENCM 22572
Co-requisite : None
Status : Compulsory, Theory cum Practical

Learning outcomes:

After completion of the course unit, the student will be able to;

- state the characteristics of different types of hazardous waste,
- describe the treatment and disposal techniques,
- discuss the impacts of hazardous waste contamination, and
- develop basic management plans for handling domestic, municipal, industrial and medical/infectious hazardous waste.

Course content:

Hazardous Waste: definition and classification, sources, fate and transport of contaminants, effects, Current management practices: waste audits, pollution prevention, waste minimization, reuse and recycling, Treatment and disposal methods: Physical, chemical, physico-chemical, biological and thermal methods, Land disposal: site selection, liners, landfill stability, closure and post closure care, monitoring methods, surface impoundments, deep well injection, Legal aspects, Workplace management of hazardous materials and hazardous waste, Site remediation and remedial technologies, Guidelines for the management of scheduled waste, scrap tires, lead acid batteries (Sri Lankan context), Medical/ biomedical/ infectious waste management, Radioactive waste management, Case studies.

Method of teaching and learning:

A combination of lectures, field studies, computer based learning, assignments and small group discussions.

Assessment Strategy: Continuous assessment and end of semester examination. Percentage given for each sub component indicates the percent contribution to the final marks.			
Continuous Assessment 30 %		Final Assessment 70 %	
Details:		Theory	Practical
Field Study	10	70	-
Awareness resource design	10		-
Group presentations	05		
Quiz	05		
			Other

Recommended reading:

1. Blackman, W.C. (2001). Basic hazardous waste management. 3rd edition CRC Press.
2. LaGrega, M. D., P. L. Buckingham & J. C. Evans (2010). Hazardous Waste Management. Reissue edition, Waveland Press, INC.
3. www.cea.lk- publications