**EHS 2108 SOLID WASTE MANAGEMENT (4 CU)**

**Course description:** The course describes the principles of waste collection, segregation, storage, transport, treatment and disposal and provides skills on how to manage solid wastes in the community so as to prevent their associated diseases. It also covers national and international policies and legislation relating to solid waste management.

**Course Objectives**

By the end of this course, the student should be able to:

1. Define solid waste and its management and related terminologies.
2. Explain solid waste management as a problem in developing countries especially in the East African Community, and its importance in environmental health management.
3. Describe the categories, composition, sources and quantity of waste.
4. Describe different methods of waste collection and segregation, storage, transport, treatment and disposal.
5. Demonstrate ability to plan, implement and evaluate safe management of solid wastes and the disposal of the dead.
6. Explain to the communities benefits associated with proper management of refuse and the disposal of the dead.
7. Constructively participate in community solid waste management.

**Detailed Course Outline**

* Introduction of solid waste, its management and related terminologies
* Categories, composition, sources and quantity of solid waste, e-waste
* Nuisances associated with indiscriminate disposal of solid waste and their prevention
* Wastes Audits, analysis
* Wastes storage, segregation, collection, treatment and disposal
* Health hazards and hazardous waste management
* Methods of disposal of the dead
* Principles of waste minimization, recycling and reuse
* Problems associated with improper management of refuse and the disposal of the dead
* Solid waste management plan
* Practical/field work

# Mode of delivery:

* Lectures, seminars and practical/field work.

**Mode of Assessment**

- Continuous assessment **(40%)**

- End of semester exam: MCQ’s, short answer and long assay questions **(60%)**.

**Suggested Reading List**

1. Lecture handouts and additional materials on reserve at the MUSPH Resource Centre.

2. Nadakavukavien. A; *Man and Environment- A Health Perspective* 3rd Edition

3. Ponofsky. H; “*Earth’s endangered ozone” Environmental magazine* , vol.20 No.3, 1978

4. Jackson H.H & Moris G. P. et al. *Environmental Health*; Reference book; Butterworths, London. 1989.

5. Sandy Cairncross and Feachem Richard G; *Environmental health- an introductory text*; John Wiley & sons, N.Y., 1982

6. Sandy Cairncross and Feachem Richard G; *Environmental Health Engineering in the Tropics* John Wiley & sons, N.Y., 2002

7. Salvato Joseph, Nemerow N. L. and Argady, F. J *Environmental Engineering & Sanitation* 5th Ed; John Wiley & sons, 2003.

8. Nyang’echi, G. N. *Management of Solid and Liquid Wastes*. 1993