

AEN 3209 ENVIRONMENTAL ENGINEERING

Lecturers Mr. Allan Komakech (B.Sc. Agric, MSc. AgricEng)
Miss FildahAyaa (B.Sc. AgricEng)

Course Type: CORE (B.Sc. Agric. Engineering)

1. COURSE DESCRIPTION

Course Credits (CU): 3 CU i.e. 60 Contact Hours per semester

Course Duration: 15 weeks (45 hours) i.e. 30 LH, 30 PH

COURSE DESCRIPTION

Industry and environment. Waste disposal methods. Introduction to air pollution control. Introduction to industrial wastewater treatment. Agricultural solid waste management. Occupational health and safety. Identification and assessment of environmental impacts.

2. COURSE OBJECTIVES

The specific objectives are to:

3. RECOMMENDED REFERENCES FOR READING

1. Envirosense' website; <http://wastenot.inel.gov/envirosense/>
2. Cleaner Production Self Assessment Guide: Published by Queensland Cleaner Production Taskforce, 1996 Queensland, Australia.
3. Australian National Environment and Industries Database's website; <http://www.erin.gov.au/net/environet.html>
4. Vision 2025: A Strategic Framework for National Development, 1999.
5. Harvard Business Review, Sept- Oct 1995

4. COURSE CONTENT, METHODS OF INSTRUCTION, TOOLS AND EQUIPMENT REQUIRED

TOPIC	CONTENT	METHOD OF INSTRUCTION / Time allocated	TOOLS / EQUIPMENT NEEDED
Lecture 1. Industry and environment	<ul style="list-style-type: none">• Definitions• Waste management hierarchy• Cleaner production in industry	Interactive lectures (4 hrs) Tutorial (2 hrs)	Chalk / BB or LC-projector and laptop for instructor
Lecture 2. Waste disposal methods	<ul style="list-style-type: none">• Landfills• Incineration	Interactive lectures (6 hrs) Tutorial(2hrs)	Chalk / BB or LC-projector and laptop
Lecture 3. Air pollution	<ul style="list-style-type: none">• Effects, types and sources of air pollution• CFC, global warming• Particulate Matter and control (esp, cyclones,	Interactive lectures (8 hrs)	Chalk / BB or Markers / Flip charts

	<ul style="list-style-type: none"> filters) Automobile Emissions and control Indoor air quality + Odour control 	Tutorial(2 hrs)	
Lecture 4 Recycling technology:	<ul style="list-style-type: none"> definitions plastics recycling paper recycling 	Interactive lectures (8 hrs) Tutorial(4 hrs)	Chalk / BB or Markers / Flip charts
Lecture 5 Conservation and management of resources	<ul style="list-style-type: none"> definitions energy: choices for environment and development sustainable industry development 	Interactive lectures (6 hrs) tutorial (2 hrs)	Chalk / BB or Markers / Flip charts
Lecture 6 Environmental policy issues	<ul style="list-style-type: none"> Institutional policy and legal setting 	Interactive lectures (8 hrs) Tutorial (4 hrs)	Chalk / BB or Markers / Flip charts. Projector and laptop
	<ul style="list-style-type: none"> Evaluation 	Tests(6 hrs)	

5. SUMMARY OF TIME NEEDED

Interactive lectures covering theory	48 hrs
Tutorials	18 hrs
Tests	06 hrs

6. OVERALL COURSE EVALUATION

Continuous Assessment Test and assignment	20%
Final examination	60%