## AEN 4109 INDUSTRIAL CASE STUDY

Lecturers Mr. Allan Komakech (B.Sc. Agric, MSc. Agric Eng) Miss Fildah Ayaa (B.Sc. Agric Eng)

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

#### **1. COURSE DESCRIPTION**

Course Credits (CU): 2 CU i.e. 30 Contact Hours per semester

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

#### COURSE DESCRIPTION

Within the outlined Industrial Training III the candidate chooses an engineering problem. The topic may be chosen by the candidate and discussed with the Engineer under whom the candidate is training. Problems which might be tackled may range from technical feasibility to modification of existing production processes. A Technical Report is prepared: Investigations and discussion of current problems in Agricultural Engineering.

#### 2. COURSE OBJECTIVES

The main objective of the course is to equip students with problem solving and technical report writing skills

The specific objectives are to:

- Aid students to Identify Engineering problems in an industry/ community
- To appreciate Engineering Knowledge and its application in solving Engineering challenges
- Write a technical report at the end of the course unit.

## 3. RECOMMENDED REFERENCES FOR READING

1.AGORA :http://www.aginternetwork.org/en/

2.American Chemical Society: http://pubs.acs.org/about.html

3. American Society of Agricultural & Biological Engineers (ASABE): http://asae.frymulti.com/

4. American Society of Civil Engineers:

http://ascelibrary.aip.org/journals/doc/ASCERL-home/jrnls/top.jsp

5.Blackwell-Synergy/Wiley InterScience: http://www3.interscience.wiley.com

6.Cambridge Journals Online: http://journals.cambridge.org

7.Emerald Group Publishing Limited: http://www.emeraldinsight.com/login

8.Institute of Electrical and Electronics Engineers http://ieeexplore.ieee.org/xpl/periodicals.jsp

9. The Royal Society of London: http://www.pubs.royalsoc.ac.

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

TOPIC	CONTENT	METHOD OF INSTRUCTION / Time allocated	TOOLS / EQUIPMENT NEEDED

Lecture 1. Introduction	<ul> <li>Identifying a problem in an industry</li> <li>Writing objectives and scope of a project</li> <li>How to write an introduction of the report</li> </ul>	Interactive lectures (4 hrs) Tutorial (2 hrs)	Chalk / BB or LC-projector and laptop for instructor
Lecture 2. Executive Summary	Guidelines to writing an executive summary	Interactive lectures (6 hrs) Tutorial(2hrs)	Chalk / BB or LC-projector and laptop
Lecture 3. Literature Review	<ul> <li>Literature review</li> <li>How to search for data to include in a report</li> </ul>	Interactive lectures (8 hrs) Tutorial(2 hrs)	Chalk / BB or Markers / Flip charts
Lecture 4 Methodology	Parameters to consider to meet objectives Experimentation	Interactive lectures (8 hrs) Tutorial(4 hrs)	Chalk / BB or Markers / Flip charts
Lecture 5 Analysis of results	Software that can be used How to make conclusions	Interactive lectures (6 hrs) tutorial (2 hrs)	Chalk / BB or Markers / Flip charts
	Evaluation	Presentation (6 hrs)	

## 5. SUMMARY OF TIME NEEDED

Interactive lectures	48 hrs
seminars	

# 6. OVERALL COURSE EVALUATION

Presentation

60%