

## AEN 1108 AGRICULTURAL ENGINEERING IN DEVELOPMENT

Lecturer Dr. Levi L. Kasisira, BSc. MSc, PhD (Agric. Eng)

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

### 1. COURSE DESCRIPTION

Course Credits (CU): 3 CU i.e. 45 Contact Hours per semester

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

### COURSE DESCRIPTION

### 2. COURSE OBJECTIVES

To introduce students to the perspective of Agricultural Engineering Profession and its role in Development  
The **specific objectives** are to:

1. Explore the role and responsibility of the Agricultural Engineer in sustainable development of the agricultural sector
2. Acquaint students with the ethics of the engineering profession
3. Acquaint students with the functions of professional bodies/societies

### 3. RECOMMENDED REFERENCES FOR READING

- i. "Plan for modernizing Agriculture: Eradicating Poverty in Uganda-Government Strategy and Operational framework" MAAIF, MFPED, 2000.
- ii. Uganda Bureau of statistics: The National Household Survey 2002/2003
- iii. The Uganda National Council for Science and Technology Statute, 1990
- iv. Internet (use Google search engine)

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

TOPIC	CONTENT	METHOD OF INSTRUCTION / Time allocated	TOOLS / EQUIPMENT NEEDED
Lecture 1. Engineering Profession	<ul style="list-style-type: none"><li>● Introduction to engineering profession and its branches</li><li>● Agricultural engineering profession and definition of an agricultural engineer</li><li>● Agricultural Engineer's role in:<ul style="list-style-type: none"><li>○ Land and water development</li><li>○ Enhancing agricultural mechanization</li><li>○ Development of farm structures</li><li>○ Environmental protection</li><li>○ Storage and crop-processing</li></ul></li></ul>	Interactive lectures (6 hrs)  Tutorial (3 hrs)	Chalk / BB or LC-projector and laptop
Lecture 2. Dept of Agricultural Eng. (MAK)profile	<ul style="list-style-type: none"><li>● Historical background</li><li>● Vision, mission and objectives</li></ul>	Interactive lectures (4 hrs)  Tour MUARIK &	Chalk / BB or LC-projector and laptop

	<ul style="list-style-type: none"> <li>• Programmes</li> <li>• Students Extracurricular Activities</li> <li>• Academic regulations</li> <li>• Employment opportunities</li> </ul>	Namalere (6 hrs)	
<b>Lecture 3.</b> Professional practice	<ul style="list-style-type: none"> <li>• Code of ethics</li> <li>• Role of profession bodies such UIPE</li> <li>• Fundamental Principles of Engineering</li> <li>• Rules or Canons in Engineering</li> </ul>	Interactive lectures (4 hrs) Guest speaker (3 hrs)	Chalk / BB or LC-projector and laptop
<b>Lecture 4.</b> Introduction to communication skills	<ul style="list-style-type: none"> <li>• Independent learning</li> <li>• Academic expectations</li> <li>• Presentation and academic writing skills</li> <li>• Formal letters, emails &amp; memos</li> <li>• Application and CV</li> </ul>	Interactive lectures (4 hrs) Tutorial (6 hrs)	Chalk / BB or LC-projector and laptop
<b>Lecture 5</b> Science and technology	<ul style="list-style-type: none"> <li>• Definition</li> <li>• National policy and objective</li> <li>• Sectors and Sector strategies</li> </ul>	Interactive lectures (3 hrs)	Chalk / BB or LC-projector and laptop
<b>Lecture 6</b> National development	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Characterizing Indices</li> <li>• Poverty and its measurement</li> <li>• Role of agricultural Engineer</li> </ul>	Interactive lectures (4 hrs)  Tutorial (6 hrs)	Chalk / BB or LC-projector and laptop
<b>Lecture 7</b> Agricultural modernization in Uganda	<ul style="list-style-type: none"> <li>• Background</li> <li>• Strategies for modernisation of agriculture</li> <li>• National Agricultural mechanisation strategy formulation</li> <li>• Role of an Agricultural Engineer</li> </ul>	Interactive lectures (5 hrs)  Tour Agro-based Industries (6 hrs)	Chalk / BB or LC-projector and laptop
	<ul style="list-style-type: none"> <li>• Evaluation</li> </ul>	Tests(3 hrs)	

## 5. OVERALL COURSE EVALUATION

Continuous Assessment Test and assignment	40%
Final examination	60%