

**LANDMARK UNIVERSITY OMU-ARAN**

**DEPT. OF AGRICULTURAL AND BIOSYSTEM ENGINEERING**

**COURSE COMPACT**

**College:** College of Science and Engineering

**Department:** Agricultural and Bio-Systems Engineering

**Programme:** Agricultural Engineering

**Course code:** ABE529                      **Unit:** 2 Units

**Course Title:** Renewable Energy Engineering

**Course Lecturers:** Dr Moses Olumuyiwa Isaac

**Semester:** Omega Semester

**Time of Lecture:**

**Location:** Rm.

- A. **Brief Overview of the course:** Renewable energy resources; development, utilization and environmental impact assessments. Design processes; Equipment for biomass, biofuel and biogas production. Storage and distribution of biogas for domestic and industrial uses. Laboratory experiments.
- B. **Course Objectives /Goals:** To acquaint the students with the relevant knowledge of renewable energy engineering concept.
- C. **Method of lecture delivery/ Teaching Aids:** The general method of lecturing ; use of writing board, marker etc.
- D. **Course Outlines:**
  - Module 1 & 2:**  
Renewable energy resources
  - Module 3 & 4:**  
Development, utilization and environmental impact assessment of renewable energy engineering
  - Module 5:**  
Design processes
  - Module 6 &7:**  
Equipment for biomass, biofuel and biogas production

**Module 8:**

Practical/Laboratory experiment

**Module 9 & 10:**

Storage and distribution of biogas for domestic and industrial uses

**Module 11:**

Practical / Laboratory experiment

**Module 12 & 13:**

Revision

**Tutorials:** Tutorial questions drawn from each module

**Structure of programme/ Method of grading:** Continuous assessments, tutorial assignments, tests and projects

**Ground Rules and Regulations:** General maintenance of discipline during the lecture (no eating, drinking in the lecture room, absolute silent during lectures and tutorial classes)

**Alignment with Goals and Vision of Landmark University:** To impart the relevant and required knowledge that will produce highly skilled individuals which will cause the changes and developments required in our nation building and make global impact.

**Contemporary Issues/ Industry relevance:** The course is relevant for the improvement of skilled agriculture engineers to enhance the energy output requirement of the country

**Recommended reading:** Renewable Energy and Environment for Sustainable Development – V.K. Vijay, H.P. Garg; Introduction to Renewable Engineering – Vaughn Nelson