# AOU EEE Renewable Energy — Curriculum

5-year B.Eng. · 205 units · RE option · CCMAS alignment · Draft

AKPAKIP ORO UNIVERSITY (AOU)
Faculty of Engineering — Department of Electrical and Electronics Engineering
CURRICULUM (Draft)
Electrical and Electronics Engineering: Renewable Energy Option

1. Preamble
Five-year B.Eng. Electrical and Electronics Engineering — Renewable Energy Option. Meets NUC CCMAS and COREN requirements. Codes/units provisional until reconciled with official CCMAS.

2. Aims and Objectives
• Electrical and electronics engineers competent in power systems, power electronics, control and renewable energy.
• Strong foundations in mathematics, physics, circuit theory and electromagnetics.
• Design, standards, safety and sustainability skills for renewable energy projects.
• Preparation for COREN registration, employment or postgraduate study.

3. Graduate Competencies
Circuit and electronics analysis · Power systems · Power electronics · Control and instrumentation · Renewable energy systems · Energy storage and grid integration · Electrical machines and drives · Design, standards and safety · Sustainability and economics · Professional practice.

4. Programme Structure
80 courses · 205 units across 10 semesters.
Year 1: 35 · Year 2: 43 · Year 3: 44 · Year 4: 43 · Year 5: 40.

Track: Core (all students) · RE (Renewable Energy option).

5. Option Emphasis
RE courses: Renewable Energy Fundamentals; Solar Photovoltaic Systems; Wind Energy Systems; Energy Storage and Battery Systems; Hydro and Bioenergy Systems; Grid Integration of Renewable Energy; Smart Grids and Microgrids; Solar Energy Systems Design; Renewable Energy Policy and Economics; Advanced Power Electronics for Renewables; Integrated Renewable Energy System Design; Energy Efficiency and Auditing.

6–9. Assessment framework · Industrial training & projects · Resource requirements · Quality assurance & CCMAS alignment
Companion documents: Students' Handbook and Lecturers' Handbook.

**Draft for departmental, Faculty and Senate review.**
**Ojei Bari Avañ Ki**