AOU EEE Renewable Energy — Student Handbook

B.Eng. Electrical & Electronics · Renewable Energy Option · COREN · Draft

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

1. Welcome
This handbook explains the EEE Renewable Energy Option programme: what you will study, how you will be assessed, and where to get help.

2. About the Programme
The programme trains engineers to design and operate electrical systems across power generation, transmission, distribution, electronics and renewable energy. Years 1–2 build shared foundations; Years 3–5 add power, control and renewable energy specialisation, culminating in an integrated design project and defence.

Graduate profile
• Analyse and design electrical circuits, electronic systems, machines and power networks.
• Design renewable energy systems and their grid connection to applicable standards.
• Assess electrical safety, quality and standards.
• Consider sustainability, economics and policy in energy projects.
• Work ethically and communicate effectively in teams.

Professional registration: COREN pathway. Keep SIWES records and project reports.

3. Programme Structure (5 years / 10 semesters · ~205 units)
Renewable Energy (RE) option courses from Year 3 onward.

Year 1 — Engineering Foundations
Year 2 — Core Engineering (circuits, electronics, machines, signals, electromagnetics)
Year 3 — Specialist Foundations (power systems, control, power electronics, Renewable Energy Fundamentals)
Year 4 — Advanced Design + SIWES (Solar PV, Wind, Energy Storage, Hydro/Bioenergy, Grid Integration)
Year 5 — Specialisation, Integration & Final-Year Design Project and Defence (Smart Grids, Solar Design, Advanced PE for Renewables)

Key courses: EEE 314 Renewable Energy Fundamentals · EEE 401 Solar PV · EEE 402 Wind Energy · EEE 409 Energy Storage · EEE 411 Grid Integration · EEE 501 Smart Grids · EEE 515 Final-Year Design Project

Draft for Faculty approval. Codes/units provisional pending NUC CCMAS reconciliation.
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