AOU Computer Engineering — Student Handbook

B.Eng. · Embedded Systems & Software/Networks pathways · COREN · Draft

AKPAKIP ORO UNIVERSITY (AOU)
Faculty of Engineering — Department of Computer Engineering
STUDENTS' HANDBOOK (Draft)
Computer Engineering

1. Welcome
This handbook explains the Computer Engineering programme: what you will study, how you will be assessed, and where to get help.

2. About the Programme
The programme trains engineers who design the hardware, software and networks that make computing systems work. Years 1–2 build foundations; Years 3–5 add pathway specialisation, culminating in an integrated design project and defence.

Graduate profile
• Design digital hardware, embedded systems and software.
• Design, configure and secure computer networks and distributed services.
• Apply algorithms, data management and software engineering practice.
• Assess security, reliability and quality in computing systems.
• Work ethically and communicate effectively in teams.

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

3. Programme Structure (5 years / 10 semesters · ~207 units)
Two pathways:
• Embedded Systems (ES) — hardware-near and real-time systems
• Software and Networks (SN) — distributed systems and network infrastructure

Year 1 — Engineering Foundations
Year 2 — Core Engineering (digital logic, architecture, OOP, OS, microprocessors)
Year 3 — Specialist Foundations (Embedded Systems Design, Networks, Real-Time, Microcontroller Interfacing / Network Programming, Mobile Apps)
Year 4 — Advanced Design + SIWES (IoT, WSN, Network Security, Distributed Systems, ML, Hardware-Software Co-design)
Year 5 — Specialisation, Integration & Final-Year Design Project and Defence

Key courses: CPE 301 Embedded Systems Design · CPE 302/309 Computer Networks · CPE 401 IoT · CPE 403 Network Security · CPE 405 Machine Learning · CPE 413 AI · CPE 515 Final-Year Design Project

Draft for Faculty approval. Codes/units provisional pending NUC CCMAS reconciliation.
Ojei Bari Avañ Ki