AOU Computer Engineering — Curriculum

5-year B.Eng. · 207 units · ES & SN options · CCMAS alignment · Draft

AKPAKIP ORO UNIVERSITY (AOU)
Faculty of Engineering — Department of Computer Engineering
CURRICULUM (Draft)
Computer Engineering — with Embedded Systems and Software & Networks options

1. Preamble
Five-year B.Eng. Computer Engineering. Meets NUC CCMAS and COREN requirements. Codes/units provisional until reconciled with official CCMAS.

2. Aims and Objectives
• Computer engineers who design hardware, embedded systems, software and networks as an integrated whole.
• Two pathways: Embedded Systems · Software and Networks.
• Strong foundations in mathematics, digital electronics, algorithms and programming.
• Preparation for COREN registration, employment or postgraduate study.

3. Graduate Competencies
Programming and software · Digital and computer architecture · Electronics · Algorithms and data · Operating systems and real-time systems · Embedded systems · Networks and communications · Security and reliability · Design and integration · Professional practice.

4. Programme Structure
80 courses · 207 units across 10 semesters.
Year 1: 37 · Year 2: 45 · Year 3: 44 · Year 4: 43 · Year 5: 38.

Track: Core (all students) · ES (Embedded Systems) · SN (Software and Networks).

5. Option Emphasis
Embedded Systems: real-time, microcontrollers, sensors, IoT, hardware-software co-design, industrial embedded, edge AI.
Software & Networks: network design, security, distributed systems, cloud, mobile, DevOps, enterprise deployment.

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