AOU Mechanical Engineering Options — Student Handbook

B.Eng. · Manufacturing · Naval Architecture · Materials & Corrosion · COREN · Draft

AKPAKIP ORO UNIVERSITY (AOU)
Faculty of Engineering — Department of Mechanical Engineering
STUDENTS' HANDBOOK (Draft)
Mechanical Engineering (Manufacturing & Production; Naval Architecture & Boat Building; Materials & Corrosion options)

1. Welcome
This handbook explains the Mechanical Engineering programme with three specialised options: what you will study, how you will be assessed, and where to get help.

2. About the Programme
The programme trains engineers who design, make and maintain machines, materials and vessels. Years 1–2 build foundations in mathematics, mechanics, thermodynamics, fluid mechanics and materials. Years 3–5 add the option specialisation, culminating in an integrated design project and defence.

Graduate profile
• Design machines, components and systems to applicable standards.
• Select materials and processes for service and manufacturing conditions.
• Plan, control and improve production and quality systems.
• Assess corrosion, failure and integrity of engineering assets and vessels.
• 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)
Three options:
• Manufacturing and Production (MP) — with Additive Manufacturing (AM) track
• Naval Architecture and Boat Building (NA)
• Materials and Corrosion (MC)

Year 1 — Engineering Foundations
Year 2 — Core Engineering (mechanics, thermo, fluids, materials, manufacturing processes)
Year 3 — Specialist Foundations (machine design, heat transfer, metrology, option starters)
Year 4 — Advanced Design + SIWES (advanced manufacturing / additive / naval architecture / corrosion control)
Year 5 — Specialisation, Integration & Final-Year Design Project and Defence

Key courses: MEC 402/409/501 Additive Manufacturing · MEC 404/411/503 Naval Architecture & Ship Design · MEC 311/405/505 Corrosion & Asset Integrity · MEC 515 Final-Year Design Project

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