AOU Chemical Engineering — Student Handbook

B.Eng. · Petroleum Refining & Petrochemical option · COREN · Draft

AKPAKIP ORO UNIVERSITY (AOU)
Faculty of Engineering — Department of Chemical Engineering
STUDENTS' HANDBOOK (Draft)
Chemical Engineering (Petroleum Refining and Petrochemical option)

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

2. About the Programme
The programme trains chemical engineers who design, operate and improve the plants that turn raw materials into fuels, chemicals and materials. Years 1–2 build foundations; Years 3–5 add the option specialisation, culminating in an integrated plant design project and defence.

Graduate profile
• Apply chemistry and engineering principles to process design and operation.
• Design and analyse process equipment and plants to safe and applicable standards.
• Manage process safety, environmental impact and risk.
• Optimise plant performance and product quality.
• 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)
Petroleum Refining (PR) and Petrochemical (PT) tracks within the option.

Year 1 — Engineering Foundations
Year 2 — Core Engineering (organic/physical chemistry, material & energy balances, thermo, heat/fluid transfer)
Year 3 — Specialist Foundations (mass transfer, reaction engineering, unit operations, process equipment design; PR/PT starters)
Year 4 — Advanced Design + SIWES (refining processes, petrochemicals, polymers, catalysis, process simulation, plant design, gas processing)
Year 5 — Specialisation, Integration & Final-Year Design Project (advanced refinery/petrochemical technology, process optimisation, plant design)

Key courses: CHE 313/314/401 Petroleum Refining · CHE 315/403/502 Petrochemicals · CHE 404 Polymers · CHE 411 Gas Processing · CHE 509 Integrated Process Plant Design · CHE 515 Final-Year Design Project

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