AOU Chemical Engineering — Curriculum

5-year B.Eng. · 207 units · PR/PT option · CCMAS alignment · Draft

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

1. Preamble
Five-year B.Eng. Chemical Engineering — Petroleum Refining and Petrochemical option. Meets NUC CCMAS and COREN requirements. Codes/units provisional until reconciled with official CCMAS.

2. Aims and Objectives
• Chemical engineers who design, operate and improve process plants.
• Option applies process engineering to crude oil, refined products and petrochemicals.
• Strong foundations in chemistry, thermodynamics, transport phenomena and reaction engineering.
• Preparation for COREN registration, employment or postgraduate study.

3. Graduate Competencies
Chemistry foundations · Process calculations and thermodynamics · Transport phenomena · Reaction engineering · Separation and unit operations · Equipment and plant design · Process control and optimisation · Refining and petroleum processing · Petrochemicals and polymers · Professional practice.

4. Programme Structure
80 courses · 207 units across 10 semesters.
Year 1: 35 · Year 2: 43 · Year 3: 45 · Year 4: 44 · Year 5: 40.

Track: Core · PR (Petroleum Refining) · PT (Petrochemical).

5. Option Emphasis
PR: petroleum chemistry, refining processes I/II, product quality & blending, gas processing, advanced refinery operations, refinery plant design.
PT: petrochemical processes I/II, polymer science, petrochemical process analysis, advanced petrochemical technology, petrochemical plant design.
Shared core: reaction engineering, unit operations, process equipment design, process safety, simulation, plant design & economics.

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.
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