

Decision No. EI-2024-30 on the accreditation of the M.Sc. Chemical Engineering, delivered by Ahmadu Bello University, Zaria, Nigeria

The President of the High Council for the Evaluation of Research and Higher Education,

Considering the Research Code, in particular Articles L. 114-3-1 to L. 114-3-6;

Considering the Board's deliberation of 29th September 2022 on the accreditation criteria for courses abroad (excluding doctoral/PhD programmes);

Considering the Decision No. 2023-9 of 16th March 2023 on the international accreditation procedure of the High Council for the Evaluation of Research and Higher Education;

Considering the agreement DEI_2023_CONV17 of 14th June 2023 for the evaluation/accreditation of fourteen training courses, delivered by six Centres of Excellence in Nigeria;

Considering the opinion issued by the Accreditation Commission on 18th June 2024;

Decides:

Article 1

Noting that the M.Sc. Chemical Engineering delivered by Ahmadu Bello University in Nigeria meets the four accreditation criteria, voted by the Board of the High Council on 29th September 2022, as follows:

ACCREDITATION CRITERION 1: TRAINING POLICY AND CHARACTERISATION

The M.Sc. programme in Chemical Engineering is perfectly integrated and complementary to the other programmes offered by the Faculty of Engineering at Ahmadu Bello University. It is clearly positioned within the national and international landscape and has been awarded the "African Centre of Excellence" label (African Centre of Excellence on New Pedagogies in Engineering Education, ACENPEE). It has a highly effective research base, comprising numerous research laboratories and research projects for students to engage in over the course of their two-year program.

International partnerships have been forged, with both incoming and outgoing mobility for teaching staff and students. There are also numerous links with socio-economic partners, as the economy linked to chemical engineering (oil and gas, for example) is very dense in Nigeria. These links enable socio-economic partners, for example, to work with students, welcome them and offer them placements. The programme would nevertheless gain in strength and visibility by developing and formalising international and socio-economic partnerships further.

ACCREDITATION CRITERION 2: THE PEDAGOGICAL ORGANISATION OF THE STUDY PROGRAMME

The structure of the curriculum is very well-designed and clearly defined, enabling students to specialise gradually. A wide range of pedagogical approaches is employed both within the University and in collaborating companies. Key highlights include the opportunity to enroll in courses offered by other Departments, especially those in the Faculty of Engineering; the two-year research placement, which provides valuable learning experiences for students; and the mandatory industrial internship for students in the ACENPEE programme. It is also worth highlighting the opportunities for transdisciplinary and diversified online conferences offered by membership of the Nigerian Society of Chemical Engineers. Although various elements of soft skills are offered to students, these trainings are often scattered and informal. It appears essential to develop and systematise them to better prepare students for incoming and outgoing mobility, to help them acquire additional skills relevant to their job-market integration, and to master information and communication tools.

ACCREDITATION CRITERION 3: ATTRACTIVENESS, PERFORMANCE AND RELEVANCE OF THE STUDY PROGRAMME

The programme's information system, mainly based on the programme and Ahmadu Bello University websites, is accessible. The attractiveness of the programme is measured by the various universities that

host students, both in Nigeria and neighbouring countries. The Chemical Engineering M.Sc. programme has greatly enhanced its attractiveness. Student success and integration into the labour market are well-monitored but could be improved by a more systematic approach.

ACCREDITATION CRITERION 4: MANAGEMENT AND CONTINUOUS IMPROVEMENT OF THE ACADEMIC PROGRAMME

The programme is perfectly organised around the Head of Department and the M.Sc. programme leader. The sharing of responsibilities within the teaching team is also well managed. The team consists of numerous research professors covering the broad spectrum of Chemical Engineering disciplines. The programme offers students a wide range of teaching tools, with laboratories equipped with chemical engineering equipment combining teaching and research activities, videoconference rooms, access to physical and online libraries, and mathematical and process simulation software. However, it is important to stress that a significant financial contribution would allow for the renewal of several equipment items and the provision of access to expensive simulation software licences for students. The different procedures for recruitment and examinations are well detailed and explained. The process of continuous assessment of the courses is effective but could be more systematic. Except through class representatives and students' unions, students are not part of different bodies (as the department council). Their contribution to these bodies would be a good way of strengthening their involvement and taking their suggestions into account in the programme.

Article 2

The M.Sc. Chemical Engineering delivered by Ahmadu Bello University in Nigeria, is accredited for a period of five years from the date of this decision.

Article 3

The decision is accompanied by the following recommendations and comments:

- To obtain more substantial funding, strengthen and multiply responses to calls for projects, solicit the partners from public institutions, and strengthen partnerships with the socio-economic world, including alumni.
- Develop the number of collaborations with programmes and research units abroad, to further increase the number of incoming and outgoing mobilities, as well as the involvement of foreign academics.
- Develop more ongoing and formal follow-up of students and alumni, and strengthen the programme with training on soft skills to promote integration into the job market.
- Make the internship period in companies mandatory for all students of the Master and increase its duration, with related scholarships, and thus strengthen links with socio-economic partners.
- Set up courses, seminars, and workshops on scientific integrity and ethics, and communication.

Article 4

This decision will be published on the Hcéres website.

Paris, 27th June 2024.

The acting President
signed

Stéphane Le Boulter