

Decision No. EI-2024-35 on the accreditation of the Ph.D. Electronic and Electrical Engineering, delivered by Obafemi Awolowo 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 a doctorate/PhD abroad;

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 Ph.D. Electronic and Electrical Engineering delivered by Obafemi Awolowo 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: DOCTORAL POLICY

The doctoral programme aligns with the institution's teaching and research strategy. It is consistent with the institution's scientific orientations and thematic priorities: telecommunications and electrical energy, which are strategic sectors for Nigeria. Following the M.Sc. programmes, the doctoral programme aims to enable students to develop high-level scientific and technological skills in electronic and electrical engineering to master the issues associated with reliable, sustainable, and affordable electricity production and electronic communication technologies. There are four specialised areas: Power Systems, Communications, Control and Instrumentation, and Materials and Devices. The programme is therefore supported by four research units which scientific activities are conducted in collaboration with socio-economic partners. It should be noted that one of the research units is co-directed by an academic from an international university.

The Ph.D. programme includes participative training for doctoral students in research methodology, basic and elective courses, laboratory sessions and research projects. It benefits from academic partnerships, in particular agreements with foreign higher education establishments that offer mobility opportunities for lecturers preparing a doctorate. The programme is encouraged to enhance student participation in international conferences and improve its international visibility with publications in top-ranked journals and conferences. Strengthening relations with alumni, mainly through their greater involvement in training, could create the conditions for self-evaluation. The ACE ICT OAK Park Advisory Board could help establish the evaluation framework.

ACCREDITATION CRITERION 2: TRAINING, HOSTING AND SUPERVISION ARRANGEMENTS FOR DOCTORAL STUDENTS

The University provides a handbook that clearly describes the conditions for recruiting and welcoming students. The rules and criteria for defending a doctoral degree guarantee the quality of the doctorate. They are well-defined and communicated to all parties. Research teams of national and international academics provide high-quality supervision for Ph.D. students. The programme has established a framework that enables students to conduct their research activities, be assessed and defend their thesis within a predictable and reasonable timeframe.

Even though doctoral students can access several platforms with up-to-date equipment, such as 3D printers and PCB design, the electronic and electrical equipment should be renewed and increased. The

capacity of computer rooms should also be improved, in particular with the increasing use of optimisation and machine learning techniques. The programme is encouraged to provide funding for all students and promote outgoing mobility for all students, not only lecturers.

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

The programme has implemented an effective strategy to ensure the success of its students: the research topic is defined jointly by the student and the prospective supervisory team and then assessed by a departmental committee. Students are then monitored regularly and present the progress of their work at two compulsory seminars before all Department members to ensure their ability to defend their doctoral thesis within the required timeframe. The doctoral programme boasts some success stories, including in the international academic world. However, it would benefit from developing its national and international appeal, and more generally its attractiveness, as no doctorate student has integrated the programme since 2021. The doctoral programme is also encouraged to improve student progress monitoring, from registration to professional integration. The strengthening of the alumni network could help keeping track of students.

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

An experienced team of national and international teaching and research staff leads the doctoral programme. It is supported by a technical staff and benefits from training provided by industrial partners or alumni. Regarding the financial resources, besides the input from the University, there can be research grants for supervisors and scholarships for students from national agencies (TETFund). The staff members benefit from outgoing mobility in foreign universities (MIT, USA) to improve their pedagogical skills and update their knowledge. Industrial experts also train them on the new scientific equipment of the Department. Therefore, they contribute to the institution's capacity-building efforts. A quality policy defined at the university level is implemented in the Department.

Although there is an assessment process involving doctoral students, the programme is encouraged to make it formal and follow a more rigorous pathway. The postgraduate committee, the Centre's Advisory Board, and the doctoral supervisors could analyse the survey results to propose corrective actions. This would strengthen the programme's continuous improvement process. It should also be relevant to offer more lifelong education opportunities to the non-teaching technical staff members who play a key role in the experimental activities.

Article 2

The Ph.D. Electronic and Electrical Engineering delivered by Obafemi Awolowo University in Nigeria, is accredited for a period of three years, which may be extended for two years, subject to a follow-up that may include an on-site visit.

Article 3

The decision is accompanied by the following recommendations and comments:

- Increase the financial resources with more applications to national and international project calls. Partners in public institutions and companies could also be approached through an alumni network.
- Develop collaborations with foreign programmes and laboratories, to facilitate increased incoming and outgoing mobility for both students and staff.
- Strive to publish regularly with the students in top-ranked journals and conferences.
- Expand relations with companies with more collaborative research works.
- Institute a formalised follow-up of students and alumni and strengthen the programme with courses and seminars on soft skills to enhance integration into the job market.



Article 4

This decision will be published on the Hcéres website.

Paris, 27th June 2024

The acting President

signed

Stéphane Le Bouler