

## ACCREDITATION DECISION

### M.Sc. Chemical Engineering

Africa Centre of Excellence in New Pedagogies  
on Engineering Education (ACENPEE)

Ahmadu Bello University

Zaria, Nigeria

**June 2024**

## SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

HCÉRES has based its evaluation process on a set of objectives that study programmes must pursue to ensure recognised quality within France and Europe. These objectives are divided up into four accreditation criteria.

The Accreditation Commission issues an opinion about the accreditation of the study programme after examining the file. The Hcéres President takes the decision based on the Commission's opinion and the final evaluation report of the programme. This accreditation decision, taken in plenary session, is the result of a collegial and reasoned process.

The decision issued by Hcéres regarding the accreditation of the study programme corresponds to the awarding of a label to the evaluated entity.

This decision is independent of the accreditations carried out by the French State and therefore does not entail recognition in France of the institution or the diplomas delivered by it.

**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 29<sup>th</sup> September 2022 on the accreditation criteria for courses abroad (excluding doctoral/PhD programmes);

Considering the Decision No. 2023-9 of 16<sup>th</sup> 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 14<sup>th</sup> 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 18<sup>th</sup> 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 29<sup>th</sup> 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:

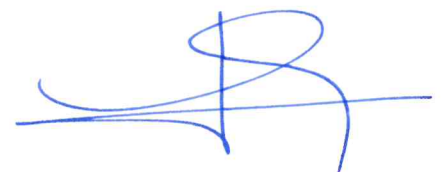
- To obtain more substantial funding, strengthen and multiply responses to calls for projects, solicit the partners from public institutions, and strengthen partnerships with the socio-economic world, including alumni.
- Develop the number of collaborations with programmes and research units abroad, 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, 27<sup>th</sup> June 2024.

The acting President



Stéphane Le Bouler



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# High Council for the Evaluation of Research and Higher Education



## Accreditation Certificate

After the external evaluation implemented by the High Council for Evaluation of Research and Higher Education (HCÉRES) in December 2023, and according to the accreditation criteria adopted by the HCÉRES Board on 29<sup>th</sup> September 2022,

### The M.Sc. Chemical Engineering

ACENPEE  
Ahmadu Bello University  
Zaria, Nigeria

**is accredited for 5 years  
(27<sup>th</sup> June 2024 – 26<sup>th</sup> June 2029)**

Paris, 27<sup>th</sup> June 2024



Stéphane Le Bouler  
Acting President of the HCÉRES

## ACCREDITATION DECISION

### M.Sc. Civil Engineering

Africa Centre of Excellence in New Pedagogies  
on Engineering Education (ACENPEE)

Ahmadu Bello University

Zaria, Nigeria

**June 2024**

## SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

HCÉRES has based its evaluation process on a set of objectives that study programmes must pursue to ensure recognised quality within France and Europe. These objectives are divided up into four accreditation criteria.

The Accreditation Commission issues an opinion about the accreditation of the study programme after examining the file. The Hcéres President takes the decision based on the Commission's opinion and the final evaluation report of the programme. This accreditation decision, taken in plenary session, is the result of a collegial and reasoned process.

The decision issued by Hcéres regarding the accreditation of the study programme corresponds to the awarding of a label to the evaluated entity.

This decision is independent of the accreditations carried out by the French State and therefore does not entail recognition in France of the institution or the diplomas delivered by it.



**Decision No. EI-2024-31 on the accreditation of the M.Sc. Civil 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 29<sup>th</sup> September 2022 on the accreditation criteria for courses abroad (excluding doctoral/PhD programmes);

Considering the Decision No. 2023-9 of 16<sup>th</sup> 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 14<sup>th</sup> 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 18<sup>th</sup> June 2024;

**Decides:**

**Article 1**

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

**ACCREDITATION CRITERION 1: TRAINING POLICY AND CHARACTERISATION**

The M.Sc. Civil Engineering is in line with the university's strategy and the socio-economic needs. This M.Sc. is complementary to the other programmes offered by the university's Faculty of Engineering and has been awarded the "African Centre of Excellence" label. The programme tackles the challenges associated with building construction and infrastructure in a comprehensive and engaging manner, with due consideration to environmental concerns. To reach out the objectives, the programme proposes numerous strong links with research and socio-economic partnerships at the national level. To carry on research work, the required facilities (equipment, library, and software) are available within the Department, allowing the students to develop their one-year research project. Other national laboratories complement their research needs, for example in materials characterisation.

The students can pursue a Ph.D. programme in the same Department. It would be interesting to add core courses on ethics and research integrity. Links with socio-economic partners are long-standing and well-established, thanks to several effective partnerships with public institutions and private companies, which add value to the programme. It would be beneficial to engage these partners more actively by having them to contribute to the development of the programme and offer additional professional seminars. MoUs have been signed at the University level, allowing outgoing mobility with foreign universities and international partnerships. Despite the local situation, these international exchanges could be improved, in particular regarding the incoming of foreign students.

**ACCREDITATION CRITERION 2: THE PEDAGOGICAL ORGANISATION OF THE STUDY PROGRAMME**

The curriculum of the M.Sc. programme is consistent and set in a comprehensive manner. Over a two-year period, on the basis of well-chosen and organised courses, students take the core and elective courses required for building and infrastructure construction. Interdisciplinarity and multidisciplinary are proposed through courses available in other Departments of the University. The knowledge and skills are well-defined and address the main challenges of the socio-economic domain of Constructions. The teaching methods are well diversified. It is recommended for the acquisition of information and communication skills to be further developed.

A one-month work placement is only compulsory for students on the ACENPEE programme, which is a second stage of professional immersion. It appears actually that all students have already completed a six-month work placement during the B.Sc. programme. A one-year research project combining practical and theoretical work is proposed. Students are strategically connected with socio-economic partners.

They only have access to international opportunities through social networks and communication with alumni, although a holistic approach is taken by the Policy Assurance Committee at the university level. In addition, even if they are partially addressed, additional skills useful for their integration into the labour market could be more formally offered to M.Sc. students.

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

The attractiveness of the programme is conveniently monitored. The number of applicants is high compared to the available opportunities. The choice has been made to remain selective in recruiting students, with 30 to 50% enrolled to take account of capacity and the availability of supervisors. The monitoring is done using a simple and accessible Google form. This survey is also a tool for evaluating the M.Sc. programme, and the results are sent to the Quality Assurance Committee, which makes recommendations to the Department. Monitoring job market integration shows that graduates are very well integrated, with 91% employed, mainly in the business sector or doctoral programmes. Modern social media are also used by the programme to stay in contact with graduates.

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

The contributors to the programme have a high level of expertise covering the full scope of the M.Sc. in Civil Engineering programme. The number of teaching, technical and administrative staff is adequate and satisfying. The programme organisation is clearly defined and efficient, and high-level pedagogical resources are available in the department, the faculty or the university. A significant financial contribution would allow for the renewal of specific equipment and provide access to costly simulation software licenses to benefit students and contractors (private companies).

The different procedures for recruitment and examinations are well-detailed and explained in an extensive way in the PG Handbook. Continuous assessment of the courses is performed through a systematic process, and feedback is considered. The integration of newly recruited staff is efficient, in particular with the introduction of a mentoring strategy.

## Article 2

The M.Sc. Civil 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:

- Add much more laboratory work and incorporate real-life case studies presented by outside speakers. More professional seminars on new challenges can also be offered. This will make it even easier to prepare graduates to enter the job market and get them up and running in companies more quickly.
- It would be interesting and efficient to further involve external contributors and students in the Department bodies and to open the discussion concerning the curriculum evolution.
- Financial support is needed to maintain and renew the equipment. To this end, it is suggested to apply for more funding by agencies and propose new services to companies.
- A determined policy using modern tools and media (Internet, social media) would make it possible to reach students in foreign countries.
- More financial support is needed to provide scholarships, stipends or research grants to more students. Applying for more funding is highly recommended.



**Article 4**

This decision will be published on the Hcéres website.

Paris 27<sup>th</sup> June 2024.

The acting President

Stéphane Le Bouler



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# High Council for the Evaluation of Research and Higher Education



## Accreditation Certificate


After the external evaluation implemented by the High Council for Evaluation of Research and Higher Education (HCÉRES) in December 2023, and according to the accreditation criteria adopted by the HCÉRES Board on 29<sup>th</sup> September 2022,

### The M.Sc. Civil Engineering

ACENPEE  
Ahmadu Bello University  
Zaria, Nigeria

**is accredited for 5 years**  
**(27<sup>th</sup> June 2024 – 26<sup>th</sup> June 2029)**

Paris, 27<sup>th</sup> June 2024



Stéphane Le Bouler  
Acting President of the HCÉRES



International evaluation and accreditation

## ACCREDITATION DECISION

### M.Sc. Mechanical Engineering

Africa Centre of Excellence in New Pedagogies  
on Engineering Education (ACENPEE)

Ahmadu Bello University

Zaria, Nigeria

**June 2024**

## SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

HCÉRES has based its evaluation process on a set of objectives that study programmes must pursue to ensure recognised quality within France and Europe. These objectives are divided up into four accreditation criteria.

The Accreditation Commission issues an opinion about the accreditation of the study programme after examining the file. The Hcéres President takes the decision based on the Commission's opinion and the final evaluation report of the programme. This accreditation decision, taken in plenary session, is the result of a collegial and reasoned process.

The decision issued by Hcéres regarding the accreditation of the study programme corresponds to the awarding of a label to the evaluated entity.

This decision is independent of the accreditations carried out by the French State and therefore does not entail recognition in France of the institution or the diplomas delivered by it.

**Decision No. EI-2024-32 on the accreditation of the M.Sc. Mechanical 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 29<sup>th</sup> September 2022 on the accreditation criteria for courses abroad (excluding doctoral/PhD programmes);

Considering the Decision No. 2023-9 of 16<sup>th</sup> 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 14<sup>th</sup> 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 18<sup>th</sup> June 2024;

**Decides:**

**Article 1**

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

**ACCREDITATION CRITERION 1: TEACHING POLICY AND CHARACTERISATION**

The programme of M.Sc. in Mechanical Engineering is perfectly in line with the University strategy as well as the socioeconomic needs. Indeed, this M.Sc. is perfectly integrated and complementary to other programmes of the Faculty of Engineering of the University. The programme addresses the challenges associated with Production, Mechatronics, and Renewable Energy in a comprehensive and engaging manner.

The programme proposes longstanding partnerships with research and socioeconomic actors at both the local and the national levels. The required facilities (equipment, library, software) for research are available. The environment is favourable for the students to develop their one-year research project. More national laboratories complement their research needs, as for material characterisation purpose for instance (Shell Office Lab. or Umaru Musa Yaradua University Central Lab).

These students can pursue a Ph.D. within the same Department. It would be interesting to add core courses on ethics and research integrity. There are well-established links with the socio-economic partners through several effective partnerships with public institutions and private companies, which present a real added value to the programme. MoUs have been signed at the University level, allowing outgoing mobility with foreign universities. These international exchanges could be improved in particular regarding incoming foreign students.

**ACCREDITATION CRITERION 2: THE PEDAGOGICAL ORGANISATION OF THE STUDY PROGRAMME**

The curriculum of the M.Sc. programme is consistent and set out in a comprehensive manner. Students attend core and electives courses required in Production, Mechatronics and Energy Studies, based on dedicated and well-organised courses. Interdisciplinarity and multidisciplinary are proposed through courses available in other Departments of the University. The expected knowledge and skills are well-defined and help to address society's main challenges. The teaching methods are diversified even though online courses are rare.

A one-month internship is mandatory for ACENPEE students' programme, which is insufficient even though they have already completed a six-month internship during the B.Eng. programme. A research project running for two years mixing practical and theoretical works is proposed. Formal lectures supported by laboratory work, studio practices, seminars and case studies constitute the framework of teaching in the Department. Partnerships with foreign universities have been signed and have benefited to two students for an outgoing mobility but international opportunities are mainly available to students thanks



to Alumni through social networks, even though a global approach is given by the Policy Assurance Committee at the University level. Even if partially addressed, additional skills relevant to their job-market integration might be more formally proposed to the M.Sc. students. The acquisition of language skills required for a good job-market preparation and integration is implicit within the programme and not clearly proposed.

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

The attractiveness of the programme is monitored. The number of enrolled students is adequate compared to the hosting capabilities. The monitoring process is not detailed. However, the number of foreigners hosted in the programme is increasing. A survey as a tool for assessing the M.Sc. programme exists at the Department level to comply with the Policy of the University and results should be sent to the Quality Assurance Committee which in turn, gives recommendations to the Head of Department. The job-market integration monitoring highlights a good integration of the graduates mainly in the economic sector or in Ph.D. programmes, but the number of unemployed is high. Modern social media are also used by the programme to stay in contact with graduates.

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

The contributors to the programme have a very good level of expertise covering the full scope of the M.Sc. in Mechanical Engineering programme. The number of teaching staff, technical staff and administrative staff is adequate and satisfying. The programme organisation is clearly defined and efficient, and the pedagogical resources available at the department, the faculty or the university are of a high level. It is important to indicate that a significant financial contribution would make it possible to renew certain equipment for the benefit of students, as well as providing access to costly simulation software licences.

The different procedures for recruitment and examination are well detailed and explained in an extensive way in the PG Handbook. Continuous assessment of the courses is performed, this process is systematic, and the feedback is taken into account. However, no information is provided in terms of the number of responses received or the tool used to perform this assessment. The integration of newly recruited staff is efficient, and a mentoring strategy is organised.

## Article 2

The M.Sc. Mechanical 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:

- Monitor the success rate closely to understand better a high number of students are not graduating. Increased tutoring and the formation of levels groups can be beneficial for students. For students who currently lack financial support, providing grants or research grants would be highly valuable.
- Better prepare students for their job-market integration. In addition to informal current practices, dedicated course can be provided for a better skill language, writing CV and covering letter and preparing the interviews. An annual monitoring is a good way to check whether the actions taken are sufficient or not.
- Labs are well-equipped; however, there is a need to renew and complement them with up-to-date equipment that corresponds to the latest standards.
- The outgoing mobility can be very useful for second year students and new staff members. By increasing the numbers of international partnerships, it would be possible to increase the outgoing mobility. The possibility offered should be publicised.
- Involve external contributors currently who are working in partnership to participate in bodies within the Department. They can provide fair yet objective view on the actual Curriculum and propose



complements to better match with the socio-economic needs. The same approach could also be beneficially extended to students.

**Article 4**

This decision will be published on the Hcéres website.

Paris, 27<sup>th</sup> June 2024.

The acting President

A handwritten signature in blue ink, consisting of several fluid, overlapping strokes, is positioned below the text 'The acting President'.

Stéphane Le Bouler



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# High Council for the Evaluation of Research and Higher Education



## Accreditation Certificate

After the external evaluation implemented by the High Council for Evaluation of Research and Higher Education (HCÉRES) in December 2023, and according to the accreditation criteria adopted by the HCÉRES Board on 29<sup>th</sup> September 2022,

### The M.Sc. Mechanical Engineering

ACENPEE  
Ahmadu Bello University  
Zaria, Nigeria

**is accredited for 5 years  
(27<sup>th</sup> June 2024 – 26<sup>th</sup> June 2029)**

Paris, 27<sup>th</sup> June 2024

A blue ink handwritten signature of Stéphane Le Boulter, consisting of a stylized 'S' and 'L'.

Stéphane Le Boulter  
Acting President of the HCÉRES

## ACCREDITATION DECISION

### M.Sc. Water Resources and Environmental Engineering

Africa Centre of Excellence in New Pedagogies on Engineering Education (ACENPEE)

Ahmadu Bello University

Zaria, Nigeria

**June 2024**

## SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

HCÉRES has based its evaluation process on a set of objectives that study programmes must pursue to ensure recognised quality within France and Europe. These objectives are divided up into four accreditation criteria.

The Accreditation Commission issues an opinion about the accreditation of the study programme after examining the file. The Hcéres President takes the decision based on the Commission's opinion and the final evaluation report of the programme. This accreditation decision, taken in plenary session, is the result of a collegial and reasoned process.

The decision issued by Hcéres regarding the accreditation of the study programme corresponds to the awarding of a label to the evaluated entity.

This decision is independent of the accreditations carried out by the French State and therefore does not entail recognition in France of the institution or the diplomas delivered by it.

**Decision No. EI-2024-33 on the accreditation of the M.Sc. Water Resources and Environmental 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 29<sup>th</sup> September 2022 on the accreditation criteria for courses abroad (excluding doctoral/PhD programmes);

Considering the Decision No. 2023-9 of 16<sup>th</sup> 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 14<sup>th</sup> 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 18<sup>th</sup> June 2024;

**Decides:**

**Article 1**

Noting that the M.Sc. Water Resources and Environmental Engineering delivered by Ahmadu Bello University in Nigeria meets the four accreditation criteria, voted by the Board of the High Council on 29<sup>th</sup> September 2022, as follows:

**ACCREDITATION CRITERION 1: TEACHING POLICY AND CHARACTERISATION**

The M.Sc. in Water Resources and Environmental Engineering is perfectly aligned with the university's priorities and socio-economic needs. Indeed, this M.Sc. is perfectly integrated and complementary to other programmes of the Faculty of Engineering of the University and has been awarded the "Africa Centre of Excellence" label. The programme offers a comprehensive and engaging exploration at water management and preservation challenges.

To reach its objectives, the programme proposes strong links with national research and socio-economic partners. As far as research is concerned, the programme has, within the Department, the facilities (equipment, library, and software) necessary for the students to develop their two-year research project. Other national laboratories complement their research requirements, as for analytical purpose, for instance. Students can attend a Ph.D. programme in the same department. It would be interesting to add core courses on ethics and research integrity. Regarding the relations with the socio-economic partners, they are significant through several effective partnerships with public institutions and private companies, which present a real added value to the programme. It would be valuable to further engage these partners in curriculum development and offer more professional seminars.

There is outgoing and incoming mobility with foreign universities, as well as numerous international partnerships. This aspect of international exchanges could be improved, especially for an academic Master's degree. To maximise the programme's strong national positioning, it is advised to foster more international partnerships, which would benefit both students and Faculty.

**ACCREDITATION CRITERION 2: THE PEDAGOGICAL ORGANISATION OF THE STUDY PROGRAMME**

The curriculum of the programmes is designed in a comprehensive manner and the two years are well-organised. Students receive courses on all important aspects related to water management issues, from water pollution and water treatment up to economic and law concerns. It is also interesting to note that interdisciplinarity is provided through courses run by other Departments of the University. The knowledge and skills are well-identified and address the main concerns of water socio-economic world. The pedagogical practices are well-diversified. To go further, it is recommended that more practical work on industrial cases be developed, as well as the acquisition of additional skills related to communication tools.

Professional immersion, which is one of the strengths of the programme, is ensured through the research project, which is carried out over the two years. Moreover, an internship is mandatory for students enrolled in the ACENPEE programme. This requirement, coupled with incentives for students' engagement with the socio-economic and international spheres, could be extended to all students for a more extended duration.

Although various elements of soft skills are offered to students, these are often scattered and informal. They should be developed and systematised to better prepare students for incoming and outgoing mobility. It would help them acquire additional skills relevant to their job-market integration and have a greater mastery of information and communication tools.

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

The attractiveness is well-followed by the programme, with a consequent number of applicants (217 applications over four years), a significant part (55%) of them coming from other universities. Therefore, the programme is well-known in the field of Water Management. This attractiveness has increased with the launch of the ACENPEE programme. The students' follow-up during their programme could be enhanced. The integration of graduates into the labour market is also well-monitored, owing to the identification of the companies and institutions that employ them.

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

The programme organisation is clearly defined and efficient. The contributors to the programme have an excellent level of expertise covering the different objectives of the programme in the field of water management and resources. The number of teaching staff and technical staff is satisfactory. The pedagogical resources of the department are at a good level, from equipped classrooms, libraries to technological halls for the several aspects of water issues. It is important to emphasise that a significant financial contribution would enable the renewal of some of the equipment that could benefit the students, as well as providing access to costly simulation software licences. The integration of newly recruited staff is efficient. It would be interesting to develop outgoing mobility possibilities.

The different procedures for recruitment and examinations are well-detailed and explained. Continuous assessment of the courses is done. This process is effective but could be more systematic. The students, except through class representatives and students' unions, are not part of the different bodies (such 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. Water Resources and Environmental 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:

- For greater substantial funding, enhance and diversify responses to calls for projects, seek out partnerships with public institutions, and strengthen connections with the socio-economic sphere, including alumni.
- Increase the number of collaborations with programmes and research units abroad, and propose formal training and seminars to provide information on international opportunities. This would also further increase the number of incoming and outgoing mobility.
- Ask for additional financial support to institutions, universities, and companies to enable students to complete their studies within two years of enrolment.
- Develop a more systematic and formalised follow-up of students and alumni, and strengthen the programme with courses and seminars that focus on soft skills to facilitate integration into the job market.
- 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, 27<sup>th</sup> June 2024.

The acting President

A handwritten signature in blue ink, consisting of a series of loops and a long horizontal stroke, representing Stéphane Le Bouler.

Stéphane Le Bouler



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# High Council for the Evaluation of Research and Higher Education



## Accreditation Certificate

After the external evaluation implemented by the High Council for Evaluation of Research and Higher Education (HCÉRES) in December 2023, and according to the accreditation criteria adopted by the HCÉRES Board on 29<sup>th</sup> September 2022,

### The M.Sc. Water Resources and Environmental Engineering

ACENPEE  
Ahmadu Bello University  
Zaria, Nigeria

**is accredited for 5 years**  
**(27<sup>th</sup> June 2024 – 26<sup>th</sup> June 2029)**

Paris, 27<sup>th</sup> June 2024

  
Stéphane Le Bouler  
Acting President of the HCÉRES