

## EVALUATION AND ACCREDITATION DOCUMENTS

### **Ph.D. Food Chemistry**

Centre for Food Technology and Research  
(CEFTER),  
Benue state University,  
Makurdi

**September 2019**

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## EVALUATION REPORT

### **Ph.D. Food Chemistry**

Centre for Food Technology and Research  
(CEFTER),  
Benue state University,  
Makurdi

**JULY - 2019**

Benue State University has mandated Hcéres to perform its Food Chemistry doctoral program evaluation. The evaluation is based on the "External Evaluation Standards for doctorates out of France", adopted by the Hcéres Board on March 26, 2018. These standards are available on the Hcéres website ([hceres.fr](http://hceres.fr)).

**For the Hcéres<sup>1</sup> :**

Michel Cosnard, President

**On behalf of the experts committee<sup>2</sup> :**

Carole Molina Jouve, President of the committee

In accordance with the decree n°2014-1365, November 14th, 2014,

<sup>1</sup> The president of Hcéres "contresigne les rapports d'évaluation établis par les comités d'experts et signés par leur président." (Article 8, alinéa 5) – « countersigns the assessment reports made by the experts'committees and signed by their president »(article8, alinéa 5)

<sup>2</sup> The evaluation reports "sont signés par le président du comité". (Article 11, alinéa 2) – « are signed by the president of the committee » (article11, alinea 2)

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# I. NATIONAL CONTEXT AND INSTITUTION IDENTITY SHEET

## GENERAL CONTEXT AND HIGHER EDUCATION

Benue State University was established by the Benue State Government with the enactment of the Benue State University Edict No. 1 of 1991. The University took off in the 1992/93 academic year with four faculties, namely, Arts, Education, Science and Social Sciences. Two Faculties, Law and Management Sciences came on stream in the 1993/94 academic year. A post graduate school took off in the 1998/1999 academic year while the College of Health Sciences was established in the 2003/2004 academic session. The student number is close to 21 000

The objectives of the University is to be a Centre of Excellence in creating knowledge and developing a complete person who is capable of not only responding to the cultural, social, political and economic needs of the environment but also setting the agenda for change. The mission of the University was clearly defined in the stated objectives as contained in the Edict establishing the University thus:

1. To encourage and promote advancement of knowledge and to hold out to all persons without discrimination of race, creed or political conviction, the opportunity of acquiring University education;
2. To encourage the effective application of higher education to the needs of the State through research and extension and consultancy
3. To provide ready access for Benue State Citizens to higher education for self reliance
4. To promote, preserve and propagate the social and cultural heritage of the diverse people of the state and
5. To engage in any other activities of a developmental University of the highest standard.

In 1992/93 academic sessions, admission of students into the six faculties was estimated at 700 to rise steadily to 2,100 in 1996/97 session. Today in addition to the existing six faculties, student population is near 21 000.

## INSTITUTION

1. University/institution: **Benue State University (BSU), Makurdi, Nigeria**
2. Component, faculty or department concerned: **Centre for Food Technology and Research (CEFTER), Department of Chemistry**
3. Programme's title: **PhD in Food Chemistry**
4. Training/speciality: **Food Chemistry**
5. Year of creation and context: 2014, to mitigate post-harvest loses and guarantee quality products and food security
6. Site(s) where the programme is taught (Town and campus): Makurdi, CEFTER
7. Programme director:
  - a. Surname, first name: **Anhwange, Asen Benjamin**
  - b. Profession and grade: HOD, Chemistry and Senior Lecturer
  - c. Main subject taught: Analytical Chemistry

## METHODS AND RESULTS OF THE PREVIOUS ACCREDITATION(S)

8. Methodology and agency

In 2017, the report of the National Universities Commission panel members mentioned that the PhD Food Chemistry program, in Benue State University, was accredited.

## 9. Results

In 2017, the National Universities Commission has accredited the PhD Food Chemistry programme with a total score of 78.7%. Related to the maximum level, the score was up to 85.7% in academic content, 60% in course evaluation, 80% in staffing, 87.5% in course delivery and facilities, 70% in library and 100% in funding. 4 deficiencies were identified by the experts and the remedies were well adjusted in order to improve the formation.

## HUMAN AND MATERIAL RESOURCES DEDICATED TO THE PROGRAMME

### 10. Human resources

The Centre Management is composed of 6 persons with 14 administrative and support staff. 24 teachers are involved in the PhD program, including lecturers, assistant professors, professors (tenure and visiting). The complete list of the management and teaching teams is updated every year and an organizational chart is provided to explain the structure of the Center within the University.

### 11. Material resources

The PhD Food Chemistry benefits from CEFTER facilities.

Concerning the digital resources for education:

- One laptop per student is available
- All lecture rooms have interactive white boards installed for whole class instruction.
- E-Library: The e-library has a capacity of 30 students with e-books installed on the laptops given to the students.

Digital resources for document management include Office 365, share point, one drive, Teams and email. Free internet connection is available for all faculty members and students.

6 well equipped laboratories, numerous fully air-conditioned lecture rooms including rooms for lecture, seminar, examination, conference and one library are available for the formation. A central store is used to stock different kinds of solvents for research and teaching needs.

A virtual visit of lecture rooms and laboratories, showing equipment and staff involved in the trainings and researches, was presented to the committee. This video allows to assess the quality of the accommodation, material resources, teaching and training conditions of the establishment and.

## STUDENT POPULATION: EVOLUTION AND TYPOLOGY OVER THE LAST 4 YEARS

YEAR	FEMALE	MALE	NATIONAL	FOREIGN	TOTAL
2015/2016	01	04	5	NIL	<b>05</b>
2016/2017	01	02	3	NIL	<b>03</b>
2017/2018	NIL	04	4	NIL	<b>04</b>
2018/2019	01	02	3	NIL	<b>03</b>
<b>TOTAL</b>	<b>3</b>	<b>12</b>	<b>15</b>	<b>NIL</b>	<b>15</b>

## II. EVALUATION PROCEDURE

### COMPOSITION OF THE COMMITTEE

President:

- Carole Molina Jouve, Professor, Institut National des Sciences appliquées de Toulouse

Experts:

- Christophe Bressac, Assistant Professor, Université de Tours
- Delphine Latour, Assistant Professor, Université de Clermont-Auvergne
- Mathilde Colas, PhD Student (Student Expert), Université de Technologie de Troyes

Hcéres was represented by Pierre Courtellemont, Science Advisor.

### ON-SITE VISIT DESCRIPTION

- Date of the visit: July the 3<sup>rd</sup>, 2019
- Organisation of the visit: the visit was made the 3<sup>rd</sup> of July, on the NUC site, during one day with on-site meetings with the management team, academic staff, and closed meetings by videoconferencing with partners, alumni and students.
- Cooperation of study programme and institution to be accredited: perfect cooperation by all stakeholders
- People met (NUC site):  
 Daniel Kparevfa Adedzwa, Former Centre Leader  
 Barnabas Achakpa Ikyo, Deputy Director/Project Manager (presently New Centre Leader)  
 Sylvester Obaike Adejo, Deputy Director (R&D)  
 Scholarstica Banka, Centre Secretary  
  
 Toryina Ayati Varvar, Dean of Postgraduate School, Professor  
 Benedict Iorzer Labe, HOD Vocational and Technical Education, Associate Professor  
 Ogbene Gillian Igbum, former HOD Chemistry, Associate Professor, (presently Deputy Director/Project Manager)  
 Solomon Ogebe Aligba, Deputy Director of Academic Planning  
 Daniel Momngu Tiough, Associate Professor  
 Benjamin Asen Anhwange, Senior Lecturer, (presently HOD Chemistry)  
 P.I. Utange, Principal Technologist  
 Victor Tarnongo, Translator  
  
 Daniel Elaigwu Enenche, PhD Food chemistry Alumni  
 James Flomo Gaydaybu, MSc Post Harvest Student  
 Tyokula Mbaihangewe, MSc Food chemistry Alumni, PhD Food chemistry Student



### III. PRESENTATION OF THE STUDY PROGRAMME

#### 1 – PRESENTATION OF THE STUDY PROGRAMME

The PhD programme in Food Chemistry from the Benue State University (BSU) of Makurdi, Nigeria is designed to prepare students to become specialists in Food Chemistry. The programme is delivered by the Center for Food Technology and Research (CEFTEP) dedicated to the control of post-harvest food losses. The Center has been successfully selected among the 150 Universities in the Region with 16 programmes accredited by the National Universities Commission including the PhD Food Chemistry. Training involves professors, assistant professors, lecturers and industry based experts. Students coming from West and Central Africa Regions can candidate to the formation. Within the Chemistry Department, the objectives of the formation are:

- (i) To train high level graduates to work in food industries, create self-employment and job opportunities, as well as get high qualified job in universities and other government or non-government establishments;
- (ii) To equip graduates for careers in food research;
- (iii) To explore Nigeria's natural resources with a view to prevent post-harvest losses;
- (iv) To focus on research that has direct impact on the socio-economic well-being of Nigerians and the wider society;
- (v) To encourage interdisciplinary and collaborative research with other scientists at local and global levels.

The PhD programme duration is three years minimum for full time and five years for part time students. The programme is designed with two components: course works, during the first year, and research works during two years with a thesis defence at the end. Core courses, all delivered in English, cover the main fields in Food Chemistry and 4 elective courses are proposed in addition.

#### 2 - PRESENTATION OF THE PROGRAMME'S SELF-EVALUATION APPROACH

No information was given about the way the self-evaluation approach was conducted by the staff. Self-evaluation report was transmitted to the HCERES committee with supporting documents related to students and the center in general.

### IV. EVALUATION REPORT

#### AREA 1 – THE POSITIONING OF THE DOCTORATE

##### Area 1-1: The doctorate's distinct features and objectives are clearly defined

The programme clearly focuses on food chemistry, postharvest sciences and food industrial process to face the major challenges of reducing loss in Benue State, West and Central Africa sub regions and stop malnutrition, diseases and children death. This is in perfect agreement with the World Bank objectives. The objective of the doctorate is clear, the programme content and duration are well defined. Improvements are needed to specify the repartition between theoretical courses and practical works; the evaluation methodology should also be added for each course.

The doctorate content can be easily identified as it is described in the CEFTEP handbook. The courses are listed with a brief description and the number of credits is detailed. For the courses, the repartition between theoretical courses and practical works could be added. The evaluation methodology should also be noted in the CEFTEP handbook. In a very constructive way, lecturer and course evaluation questionnaire is available for all students in order to gather their opinions and improve teachings.

The doctorate is in keeping with the institution's scientific policy. Benue State University underlines its ambition to be among the top 200 universities in Africa in science, technology and human capacity according with the Benue State University's Strategic plan 2016-2020. A student booklet, updated for the period 2017-2020,

detailed statute for Benue State University Postgraduate School and general regulations governing postgraduate school programmes. They clearly communicate to the attention of all students, staff and stakeholders.

This programme is provided on full-time basis with a minimum duration of three academic sessions and a maximum duration of five academic sessions. This study programme is able to accommodate students with special needs as candidates can be enrolled on part-time. In that case, they shall spend a minimum of five academic sessions and a maximum of seven academic sessions.

The curriculum includes seminars that are shared with all the Centre's programmes. Seminars give the opportunity to the students to present their research and interact with experts of their field. In addition, the Centre organizes the "food week", where students showcase their ability to process various food produces into different products for value addition and extension of shelf-life. The PhD students usually participate in formulating products from indigenous crops and processing same to add value and extend shelf life. They also develop business plant for start-ups.

PhD students are required to complete a bimonthly progress form. Together with the Annual Review it provides formal reporting of the progress of the student's research and an opportunity to report any perceived problems or training needs. Students are graduated only if they have one scientific publication; they have to submit a final report of the thesis to a panel of examiners; it will also conduct oral examination where the PhD students will defend the thesis.

## Area 1-2: The positioning of the doctorate is consistent with its environment

The positioning of the doctorate and its interactions with its lead institution and partners (academic and private) are relevant, formally set out and effective. Nine African academic partners, two international universities and 6 economic partners are involved in curricula development, support teaching, research and industrial training. The partner contribution could be extended, in the future, to student co supervision to reinforce research collaborations.

Nine African academic partners are active including University of Bamenda and University of Buea, in Cameroon, University of Cape Coast and Wa Polytechnic, Upper West Region in Ghana. However all students come from Nigeria since 2015. Efforts are needed to open up recruitment to students of different nationalities. The expected contribution of the University of Bamenda and Buea in Cameroon is exchange of faculty and students for the purpose of teaching and research. Among the 22 students recruited since 2015, there is no mention of the students or faculty members who benefited from this opportunity to exchange.

The doctorate interacts with the economic environment, which has a role in training doctoral students and integrating doctoral graduates into the job market. 6 partners are listed: Teragro Commodities Limited, Makurdi, Agudu Farms, Gboko, Seraph Oil Company, Makurdi, Hule and Sons Limited, Wuanune, Benue State, Benue Agricultural and Rural Development Authority Makurdi and Nigeria Stored Products Research Institute, Ilorin. They confirm their interest in the formation by hosting students on internship. They also provide industrial training to the students and give them access to their facilities.

Through two international links with foreign institutions, Liverpool John Moores University, UK and University of Copenhagen, Denmark, the doctorate has a clear and operational policy on international orientation which benefits doctoral students and staff. Liverpool John Moores University supports the international accreditation of the Center by the United Kingdom. Partnership agreements between universities, with local authorities or international agreements are mentioned to ensure the future of the programme, as they are involved in curricula development. University of Copenhagen, Denmark gave training in PhD supervision and in pedagogic methods. 9 teachers were trained in 2018 after a workshop held in Abudja. The results were very satisfactory for the teachers.

The contribution of the two foreign universities in research and student co-supervision is expected but not clearly expressed.

## AREA 2 – ORGANIZATION AND MANAGEMENT OF THE DOCTORATE

### Area 2-1: Effective organization and management is in place for the doctorate

The doctorate's organizational structure is based on a scientific teaching, technical and administrative team that successfully manages and coordinates it. The roles and responsibilities of each team member are clearly defined.

Governance of the doctorate (directors, any co-directors, board, committees, etc.) is very well described in the CEFER handbook and well adapted to its context and objectives; teaching, technical and administrative staff are listed with the competences. The scientific program is well structured with two components, a course work and research works. Some courses are shared with Master Formations.

### Area 2-2: There is an explicit policy for recruiting and funding doctoral students, which is adapted to the PhD program

The admission level and requirements, application and registration processes, work progress monitoring and evaluation are well defined in the CEFER handbook and student booklet. 15 PhD students were enrolled since 2015 from very various backgrounds, in a very interesting way and must be encouraged. 3 PhD students were graduated in 2019. As all students are Nigerian, certainly no scholarships from World Bank could be awarded; grants were mentioned but the allocation method and amount need to be specified. An increase in the number of students is recommended as well as an increase in the number of students recruited beyond Nigeria

15 PhD students were enrolled since 2015, 3 were graduated in 2019 and 1 voluntary withdrawal. Funding for doctoral students is available from the World Bank for foreign students only; as they all are Nigerian, certainly no scholarships from World Bank could be awarded. The background of PhD students is various. The diversity of recruitment is very interesting and must be encouraged. With an average student number of 4 recruited per year, an increase in the number of students is recommended as well as an increase in the number of students recruited beyond Nigeria.

Financial support is more difficult to get for Nigerian students. Grants were mentioned but the allocation mode, the grant number and amount are unclear. Alternative solutions may be found to support registration fees, food and accommodation for Nigerian support. Extension of study period is planned as mentioned on the student booklet with an excess limited to one year that could be granted by Senate. Work progress monitoring tools are in place within the doctorate. The evaluation of the doctorate is based on a clearly identified procedure with a minimum of two academic sessions through internal and external seminars. Project reports are written after each session, used as an activity indicators for students and supervisors. Guidelines for Supervisors and PhD students are very clear in terms of duties, responsibilities, roles, relationship.

## AREA 3 – SUPERVISION AND TRAINING FOR DOCTORAL STUDENTS

### Area 3-1: The doctorate applies a strict doctoral student supervision and follow-up policy

The reciprocal commitments of doctoral students and thesis supervisors are clearly defined and brought to their attention in the student booklet. The follow up policy is well constructed including seminars, meetings, regular reports.

Criteria for authorizing thesis defense are explicit and communicated to doctoral students and supervisors. Organization rules for thesis defense are very well explained: the composition of the examination board mentions the participation of an external examiner. Follow up policy involves academic session through internal and external seminars, meetings with the supervisors, regular reports to assess research progress.

The university has a code of ethics where anti-fraud, relationship with staff, conduct on the campus are recorded.

### Area 3-2: The doctorate offers diverse teaching and organizes supplementary events

Doctoral students have access to scientific teaching suited to their profile and career plans. Doctorates raise awareness of research ethics and scientific integrity. Students are invited to take part in scientific events (seminar, congress) and to choose two elective courses per semester, during the first academic session. However as only two elective courses are proposed, the choice does not exist. Added courses could be proposed to improve professional skills and help find jobs.

Courses are linked to the expertise of universities, research units and private partners associated with the doctorate. The required score for core courses and thesis defense is clearly defined and known by users.

The doctorate invites students to take part in supplementary actions, such as scientific events. Two elective courses are also proposed for each semester. As students have to choose two elective courses, there is no real choice. The number of elective courses could be increase, linked to the professional insertion of student, for instance. For each courses, the evaluation mode for elective courses need to be specified and communicated in the student booklet.

### Area 3-3: The doctorate is based on explicit rules for thesis duration and defense

According to the CEFER Handbook and Student Booklet, the student rules, the thesis duration and the criteria for authorizing thesis defense, are explicit and clearly communicated to doctoral students and supervisors.

All the information on thesis defense are clearly expressed in the student booklet: the thesis duration is clear (normally three years for full time and five years for part time candidates). PhD student shall present a seminar, based on the research results, before being permitted to submit the thesis for evaluation. The composition and rules of the panel of examiners for oral and report evaluation are specified including the mention of an external examiner participation. The format of the report and the synopsis for registration of thesis title is explicit.

## AREA 4 – INTEGRATION OF DOCTORS INTO THE JOB MARKET

### Area 4-1: The doctorate includes mechanisms to promote the integration of doctors into the job market

The doctorate among local, national and international partners (public and private sector) is promoted through embassies, web site of the university, congresses and workshop organization.

The Center organized the first west and central Postharvest Congress and Exhibition in 2018: this event is a real opportunity for students to meet potential employers.

### Area 4-2: The doctorate has effective monitoring of the integration of doctors into the job market

few ongoing actions - to be strengthened - are mentioned concerning support for students in their professional integration: course in management and entrepreneurship, interactions with private partners, creation of alumni network, workshops

Course in management and Entrepreneurship is included in the first semester programme; this course covers different areas to understand how businesses work and then facilitate job integration. Elective courses could

be added to further prepare professional projects after graduation. With the participation of doctoral students/doctors, the doctorate and its institutional partners create an "alumni" directory or network of former doctoral students. However, no alumni was met during the meeting.

### Area 4-3: The data collected is analyzed, communicated and used

Data (student name, origin, background including professional experience, employment status, year of graduation) are collected and need to be analyzed to assess the quality of the doctorate, its economic impact, and the adequacy of training to expectations and objectives. As the doctorate recruitment started in 2015, the number of data is still low and data treatment will certainly start later.

Student name, origin, background including professional experience, employment status, year of graduation are collected and were provided. Data collection is very interesting in order to assess the quality of the doctorate and its economic impact, to follow doctoral students, to analyze employment data, follow doctoral students after the thesis defense. The analysis should be carried out on a regular basis. The data communication to local, national and international partners (institutions and socio-economic partners) should be a key factor to increase attractiveness and benefits to meet African challenges.

## V. CONCLUSION

The PhD programme in Food Chemistry of the Benue State University (BSU) of Makurdi, Nigeria is designed to prepare students to become specialists in Food Chemistry. The programme is delivered by the Center for Food Technology and Research (CEFTER) dedicated to the control of post-harvest food losses. This is in perfect agreement with the local needs and the World Bank objectives. The network of public and private partners is relevant. Contribution of academic partners could be extended to co-supervision of students to strengthen research collaborations. Effective organization and management is in place for the doctorate.

The objective of the doctorate is clear, the programme content and duration are well defined as well as the admission level and requirements, application and registration processes, work progress monitoring and evaluation. Allocation method and amount of grants need to be specified in the Handbook or student booklet. Theoretical and practical works of courses must be described and the number of elective courses increase in order to offer students real choices. The valuation mode for courses need to be specified and communicated in the student booklet.

An increase in the number of students is also recommended as well as an increase in the number of students recruited beyond Nigeria, so that they could also benefit from World Bank scholarships. The follow up policy is well constructed including seminars, meetings, regular reports. Elective courses could be expanded to facilitate professional integration of student. The creation of an alumni network must be encouraged as it will provide a forum to form new friendships and business relationships with people of similar background.

The attractiveness of the doctorate programme must be increased and the promotion through embassies, web site of the university, congress participation and workshop organization is necessary. Doctorate started well and further work is needed to achieve the objectives.

### PAST ACHIEVEMENTS

- The training program that was put in place really started and the first graduate students found work
- With the partners of the doctorate, public and private expectations are successfully integrated to perform high level teaching and research, well adapted to the objectives

## TODAY'S CHALLENGES

- Continue recruitment and promote employment of graduate students
- Finish thesis in the laps and enhance results with international reviewed publications and international congresses
- Enhancing links with Master programmes

## OUTLOOK TO THE FUTURE

- Increase the number of students and extend the student recruitment to regional countries
- Increase attractiveness of the doctorate

## STRENGTHS

- Relevant field in accordance with local concerns
- High level education for students in both courses, applied research and technology
- Appropriate teaching staff number and composition, and teaching facilities for this curriculum
- Numerous partnerships both academic and industrial with internship program
- Learning environment (lecture halls, laboratories, internet connectivity, etc.) and very conducive students' accommodation

## WEAKNESSES

- Recruitment of students
- Grant allocation rules
- Untimely graduation of students

## RECOMMENDATIONS

- Increase the number of students with reinforced links with MSc programs, promote the doctorate, and extend the recruitment to regional countries
- Increase the student exchanges with regional universities and industries
- Increase the number of elective courses and promote employment of graduate students
- Set up a skills portfolio so that students can record skills acquired during the training

## VI. COMMENTS OF THE INSTITUTION

# BENUE STATE UNIVERSITY MAKURDI NIGERIA

## CENTER FOR FOOD TECHNOLOGY AND RESEARCH

### VICE-CHANCELLOR

*PROF. Moses Msugh Kembe*

*B.Sc. (Jos) , M.Sc (UNN)& Ph.D (UAM), PGDM (UMM)*

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2019 23<sup>rd</sup> August,

**Prof. François PERNOT**

Directeur/Director

Département Europe et International

Europe and International Department

Sir,

### COMMENTS ON PHD FOOD CHEMISTRY EVALUATION REPORT

We have received and reviewed your draft evaluation report in respect of our application for International accreditation in **PhD. Food Chemistry**. This is one of the programs that were set up to support the implementation of the World Bank funded Africa Centres of Excellence for which our centre CEFTER, Benue State University is part of. Our focus is on control of postharvest food losses.

Our interaction with the HCERES has been quite useful; we used your self-evaluation documents/guidelines to carry out the self-evaluation of the PhD program and other programs in the department.

During the onsite meeting, your team lead by **Prof. Carole Molina Jouve**, made very valid contributions that have provided more insight into developing a program that will rate very high in an international accreditation. Some of the lessons learnt will form our program review this next year.

Just like the report rightly mentioned, **PhD. Food Chemistry** program is a relevant field in accordance with local concerns and offers high level education for students in applied research and technology. The program draws appropriate teaching staff and teaching facilities from both academic and industrial partnerships. There is also decent accommodation for students. We are excited that your team noted these.

Your team observed rightly that we have low number of regional students. The centre took note of this and has allocated more funds to provide studentships to women and regional students in the upcoming academic sessions. This we believe will improve the student numbers and promote



student international mobility. We also note your concerns on lack of a real student's monitoring system; although there exist a standard system of information dissemination involving face-to-face approach and social media, we shall review our student handbook and incorporate areas that were suggested during our interaction with your team. ,

Generally, your recommendations are valid and will be used to improve on the program. But more specifically, we will promote the program and encourage teachers to recruit more students, improve on progress monitoring during the research to ensure timely completion and to fix temporal objectives of acquired skills and have more lessons given by partners to increase professional skills. At the next review, we will increase the number of elective courses and promote employment of graduate students among partners and other relevant sectors. We will also set up a skills portfolio so that students can record skills acquired during the training.

The University is already developing programs that will make up complete training from bachelor to PhD in order to form a sufficient pool of students.

Finally, we appreciate the detail and thorough nature of your accreditation process and believe that the outcome will be a fair rating of our current status and taking into account the huge prospects for improvement based on your valid points so that we will continue to implement a top quality PhD Food Chemistry program that will serve its purpose of filling the skills gap in the sub region. This we believe will contribute to solving a regional developmental challenge of controlling postharvest food losses.

### **CORRECTIONS/CLARIFICATIONS ON PhD FOOD CHEMISTRY EVALUATION REPORT**

Please find below, corrections on your draft evaluation report on Food Chemistry. Corrections and clarifications arranged according the report sections. For the purpose of further clarifications we have attached more documents and referenced them accordingly.

#### **PRESENTATION OF THE STUDY PROGRAMME**

“No information was given about the way the self-evaluation approach was conducted by the staff” Just for clarification and additional information, we have outlined the stages followed in the Self-Evaluation documents development. This process applies to all other programs.

- i) Program review was carried out between 6<sup>th</sup> and 8<sup>th</sup>, December 2016 at the University of Mkar, MKar-Gboko (Appendix I - Report of Review Exercise).
- ii) Report of the review exercise submitted to Departmental Postgraduate Committee which considered its relevance to the objectives of CEFTER project and forwarded to Faculty Postgraduate Committee.
- iii) The Faculty Postgraduate Committee after consideration of the report forwarded to the Postgraduate Board of the University for Content Assessment in compliance with university and National Universities Commission's guidelines for postgraduate programmes.
- iv) The Postgraduate Board then sent the review to Academic Program and Quality Assurance Committee for assessment of curriculum in compliance with the University's mandate.



- v) The Academic Program and Quality Assurance Board prepared the final report and submit to the University Senate for approval.

Kind regards

A handwritten signature in black ink, appearing to be 'B. Achakpa Ikkyo', written over a light blue rectangular background.

Dr. Barnabas Achakpa Ikkyo  
*Director/Centre Leader*

## ACCREDITATION DECISION

### **Ph.D. Food Chemistry**

Centre for Food Technology and Research  
(CEFTER), Benue state University, Makurdi,  
Nigeria

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**September 2019**

## SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

Hcéres has built its evaluation process based on a set of objectives that Higher Education Institution must pursue to ensure recognised quality within France and Europe. These objectives are divided up into six fields among which are the accreditation criteria.

As for the « External Evaluation Standards », the accreditation criteria have been specifically designed for foreign HEI. The accreditation criteria were adopted by the Board on June 2016 and are available on the Hcéres website ([hceres.fr](http://hceres.fr)).

The accreditation committee, meeting his accreditation decision, has wholly taken into account the final evaluation report of the HEI. This accreditation decision is the result of a collegial and reasoned process.

The accreditation decision issued by Hcéres shall not grant any rights whatsoever, whether in France or abroad. The decision to accredit an institution confers an accreditation label and does not infer recognition in France of the qualifications issued by the accredited institution. The Hcéres accreditation process therefore has no impact on the qualifications recognition process in France.

# ANALYSIS OF THE ACCREDITATION CRITERIA

## AREA 1: THE POSITIONING OF THE DOCTORATE

### Accreditation criterion

The positioning, the content and the objectives of the doctorate are clearly defined. Its interactions with the stakeholders (lead institution(s), foreign partners, socio-economic environment) are formally set out and effective. Its links with the research units and the institution's scientific policy are effective.

### Criterion assessment

The programme clearly focuses on food chemistry, postharvest sciences and food industrial process to face the major challenges of reducing loss in Benue State, West and Central Africa sub regions and stop malnutrition, diseases and children death. This is in perfect agreement with the World Bank objectives. The objective of the doctorate is clear, the programme content and duration are well defined. Improvements are needed to specify the repartition between theoretical courses and practical works; the evaluation methodology should also be added for each course.

The positioning of the doctorate and its interactions with its lead institution and partners (academic and private) are relevant, formally set out and effective. Nine African academic partners, two international universities and 6 economic partners are involved in curricula development, support teaching, research and industrial training. The partner contribution could be extended, in the future, to student co supervision to reinforce research collaborations.

## AREA 2: ORGANIZATION AND MANAGEMENT OF THE DOCTORATE

### Accreditation criterion

The doctorate's organisation and management are clearly defined and rely on material and human resources adapted to the requirements of programmes at ISCED level 8. Internal quality assurance mechanisms are in place and effectively used in order to improve continuously the doctorate. The doctoral students recruiting is formally set out, their funding is fair and sustainable.

### Criterion assessment

The doctorate's organizational structure is based on a scientific teaching, technical and administrative team that successfully manages and coordinates it. The roles and responsibilities of each team member are clearly defined.

The admission level and requirements, application and registration processes, work progress monitoring and evaluation are well defined in the CEFER handbook and student booklet. 15 PhD students were enrolled since 2015 from very various backgrounds, in a very interesting way and must be encouraged. 3 PhD students were graduated in 2019. As all students are Nigerian, certainly no scholarships from World Bank could be awarded; grants were mentioned but the allocation method and amount need to be specified. An increase in the number of students is recommended as well as an increase in the number of students recruited beyond Nigeria.

## AREA 3: SUPERVISION AND TRAINING FOR DOCTORAL STUDENTS

### Accreditation criterion

A strict policy of supervising and follow-up of doctoral students is set. Doctoral students have access to various teaching and professional trainings and take part in scientific/professional actions. Explicit rules are defined concerning the thesis duration and defence. Measures to combat fraud, plagiarism and corruption are applied within the doctorate.

### Criterion assessment

The reciprocal commitments of doctoral students and thesis supervisors are clearly defined and brought to their attention in the student booklet. The follow up policy is well constructed including seminars, meetings, regular reports.

Doctoral students have access to scientific teaching suited to their profile and career plans. Doctorates raise awareness of research ethics and scientific integrity. Students are invited to take part in scientific events (seminar, congress) and to choose two elective courses per semester, during the first academic session.

However as only two elective courses are proposed, the choice does not exist. Added courses could be proposed to improve professional skills and help find jobs.

According to the CEFER Handbook and Student Booklet, the student rules, the thesis duration and the criteria for authorizing thesis defense, are explicit and clearly communicated to doctoral students and supervisors.

## AREA 4: INTEGRATION OF DOCTORS INTO THE JOB MARKET

### Accreditation criterion

The doctorate implements systems to promote the doctorate and the integration of doctors into the job market. The integration monitoring and analysis are effective and used to perform the continuous improvement of the doctorate.

### Criterion assessment

The doctorate among local, national and international partners (public and private sector) is promoted through embassies, web site of the university, congresses and workshop organization.

few ongoing actions - to be strengthened - are mentioned concerning support for students in their professional integration: course in management and entrepreneurship, interactions with private partners, creation of alumni network, workshops.

Data (student name, origin, background including professional experience, employment status, year of graduation) are collected and need to be analyzed to assess the quality of the doctorate, its economic impact, and the adequacy of training to expectations and objectives. As the doctorate recruitment started in 2015, the number of data is still low and data treatment will certainly start later.

## ACCREDITATION DECISION

Considering the accreditation criteria analysis detailed above, the accreditation commission takes the following decision:

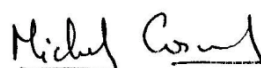
### **“Five-year unreserved accreditation decision”**

and draws attention to the various recommendations made by the committee of experts in its evaluation report:

- Increase the number of students with reinforced links with MSc programs, promote the doctorate, and extend the recruitment to regional countries.
- Increase the student exchanges with regional universities and industries.
- Increase the number of elective courses and promote employment of graduate students.
- Set up a skills portfolio so that students can record skills acquired during the training.

### **SIGNATURE**

For HCERES and on behalf of



Michel COSNARD,

President

Date: Paris, September 4<sup>th</sup>, 2019

The evaluation reports of Hceres  
are available online : [www.hceres.com](http://www.hceres.com)

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