



**Sub-Saharan Africa
University Rankings 2023**

Ranked 1st in Nigeria, 1st in West Africa and 7th Best in Africa

August 08, 2024

The Center Leader,
Covenant Applied Informatics and Communication - Africa Centre of Excellence (CApIC-ACE)
Covenant University,
Ota, Ogun State.

Dear Sir,

IMPACT OF CApIC-ACE ON ELECTRICAL AND INFORMATION ENGINEERING DEPARTMENT

I hereby write with utmost pleasure to highlight the impacts of the CApIC-ACE on the Department of Electrical and Information Engineering (EIE) since this World Bank-funded project began in 2019. It is worthy of note that although the specific programme in the EIE department that is associated with the centre is Information and Communication Engineering (ICE), CApIC-ACE has also impacted the other two programmes (Electrical and Electronics Engineering and Computer Engineering) that the Department of EIE hosts. The specific impacts are mentioned hereafter.

1. Teaching and Research Infrastructure

The aim of the FEDerated GENeral "Omics" (FEDGEN) project of CApIC-ACE is to develop groundbreaking research artefacts on federated cloud computing, artificial intelligence, and general "omics" for precision medicine in Africa. Pursuing this aim has provided research and training infrastructures such as the FEDGEN Datacentre, FEDGEN Testbed, and the Edge Computing Testbed. As a result, faculty and students across various levels of study and programmes in the department have access to High-Performance Computing (HPC) infrastructure, bringing about ease, speed, and strong productivity in various research endeavours. In addition, the department received a smart board from CApIC-ACE in one of our lecture halls, facilitating a state-of-the-art instructional and learning method.

2. Increased Enrolment Rates into the ICE Postgraduate Programme

The students' enrolment rate into the Master's and Doctoral ICE PG programmes has been positively impacted by the CApIC-ACE scholarship. In addition, the availability of world-class research facilities and competent faculty to support good tutelage in using the available resources has been a strong point of attraction of students to the ICE programme and, consequently, the department of EIE. So far, CApIC-ACE, through the ICE programme, has produced ten (10) M.Eng. Information and Communication Engineering graduates, and two others are about to join this number, having successfully defended their dissertations. In addition, two doctoral students in ICE are about to wrap up their research work and are expected to defend their theses in a few months.

This number of students represents a remarkable achievement for the department. Notably, the programme/ department has enjoyed diversity due to attracting students from other African countries, such as the Democratic Republic of Congo and Tanzania.

3. Capacity Building and Community Impact

The CApIC-ACE Deputy Director and Co-PI of the FEDGEN project organises a Monthly Advanced Research Tutorial (MART) intending to dive deep into the mathematical foundations of Artificial Intelligence (AI), thereby bridging the AI knowledge and skills gaps in Africa and beyond. This tutorial also equips attendees with HPC techniques, speeding up research activities and yielding strong outputs. The tutorial is attended compulsorily by the CApIC-ACE-funded ICE PG students and is open to every other person who desires to attend. These tutorial sessions attract learners across various countries who go on to apply the knowledge and skills gained in their different projects.

4. High-Impact Research Outputs

As a result of the points mentioned above, faculty and students in the ICE programme and the department, by extension, can conduct cutting-edge research and attract high-profile external collaborations, resulting in increased publications in high-impact journals.

5. National Accreditation of the Information and Communication Engineering Programme

The participation of the ICE postgraduate programmes in CApIC-ACE necessitated the accreditation of these programmes by the National Universities Commission (NUC). The M.Eng. and Ph.D programmes in ICE gained full accreditation status in April 2022, reflecting the seasoned faculty and high academic standards supported by the world-class research infrastructure. As a result of this accreditation, the programme has experienced more student enrolments into the ICE PG programme, which the CApIC-ACE fund does not cover.

6. Innovation and Entrepreneurship

CApIC-ACE supports innovation and entrepreneurship. Students with projects with potential commercial applications have benefitted from the CApIC-ACE innovation fund, which is separate from the regular scholarship. One of the CApIC-ACE ICE PG students won this fund and was able to develop his project further.

7. Quality of Graduates

Over the years, the quality of our graduates in the ICE programme and the Department of Electrical and Information Engineering has improved significantly, with CApIC-ACE playing a major role. This quality is evidenced by the knowledge and skills gained throughout their studies, which is a major attraction in academia and professional climes. All our students are gainfully employed in the industry or PhD programmes locally and internationally.

In conclusion, the CApIC-ACE project has deeply impacted the Electrical and Information Engineering Department. This project has advanced every faculty member and student in the department, directly or otherwise, and has enhanced each one's profile. The department desires to build on this strong relationship foundation with CApIC-ACE for an even brighter future.

Yours Faithfully,



Dr. Isaac A. Samuel

Associate Professor and Head of the Department of Electrical and Information Engineering.