DEPARTMENT OF ELECTRONIC ENGINEERING

POSTGRADUATE DEGREE PROGRAMMES

BACKGROUND

The Department of Electronic Engineering was approved to develop and execute a world-class electronic engineering postgraduate programme intended to provide sound theoretical and practical training for graduate students in 1986. This intention was born out of the national drive to be part of the digital revolution and the information society, as well as an institutional strive to be at the cutting edge of global developmental trends in the research and development in Information and Communication Technology (ICT).

The postgraduate programmes of the Department of Electronics Engineering are being offered at two levels, namely: Masters and Doctoral levels. The Master degree is in two forms: Master of Engineering (M.Eng.) and Master of Science (M.Sc.) both in Electronic Engineering. The Masters and Doctoral (Ph.D) programmes lay emphasis on both theoretical and practical (project) aspects of postgraduate work especially as it relates to the technological needs of the nation. Both programmes offer specialization in the following areas:

- Communication,
- Digital Electronic and Computer and
- Control Engineering.

PHILOSOPHY

These Masters programmes prepare students for professional works in academic, industrial and military applications of electronic engineering, in any one of the areas of specializations. The programmes aim at preparing graduate students to be able to understand and analyze electronic materials, components and complete electronic systems, and simulate their behaviours on computers in other to specify new sub-systems and effect adaptation and development. The students are also trained to be able to specify, design, develop and commission hardware and instruments of varying degrees of complexity in their special areas.

The M.Sc and M.Eng degrees are obtained through coursework and dissertation. All candidates for Masters in Electronic Engineering pass through individualized remedial programme approved by the Departmental Postgraduate Studies Committee. The core courses are intended to harmonize the students' diverse academic backgrounds and equip them with the necessary tools for meaningful work in their various areas of specialization.

The Doctoral programme is intended to prepare students for creative teaching and research and development (R&D) works in academic, industrial and military applications of electronic engineering, in any one of the areas of specializations. The Doctoral programme is expected to probe much deeper into issues than the master programme. The programme should be able to develop/design techniques in electronic engineering in the pursuit of new principles and new or better engineering materials and techniques.

The Ph.D degree is obtained through course work and comprehensive research to be embodied in a thesis which is defended orally before a constituted panel. The PhD research must show incontrovertibly satisfactory level of originality and creativity and shall generally result in the

development of a new technique processes or correlation and in the advancement of knowledge beyond the current frontier.

OBJECTIVES

The Department of Electronic Engineering masters programme is intended to achieve the following objectives:

- Prepare graduate students to be able to understand and analyze electronic materials, components and complete systems through modeling and simulation;
- Train postgraduate students to be able to design, develop, install and maintain hardware and instruments of varying degrees of complexity in their special area;
- Obtain high levels of graduate student achievement in Electronic Engineering through reliance on laboratory hands-on activities thereby producing graduates with the requisite expertise for satisfying career with Educational Institution, Industry, Business and Government;
- Promote technology transfer, continuing engineering education training and re-training in the specialized areas in Electronic Engineering;

While the Doctoral programme is intended to achieve the following objectives:

- Produce doctoral candidates capable of initiating and leading Research and Development (R & D) works in the areas of specialization,
- Prepare candidates to be able to design, develop and test efficient electronic systems in real time.
- Produce the highest educated and trained manpower that will ameliorate and eventually reverse the acute shortage of academics;
- Produce the highest level of consultants capable of providing technical solutions to Governments, Industry and Business, and
- Promote collaboration between specialists/experts in the area of Communication Engineering.

POSTGRADUATE EXPERIENCE

The masters and doctoral postgraduate programmes were approved for the Department of Electronic Engineering in 1986 and recently reviewed in 2014. Since the programmes inception, the department has graduated more than 20 doctoral and 200 masters students. Currently the department is running a collaborative postgraduate programme with Digital Bridge Institute Abuja (a subsidiary of Nigeria Communications Commission). This collaboration resulted from the visibility of the Departments postgraduate programmes within the nation and internationally.

ENTRY REQUIREMENTS

The applicant for masters programme must possess B.Sc or B.Eng. Degree certificate with 2.50 GPA and above. The applicants must have Electronic Engineering background or other related discipline. The applicants are, in addition, expected to satisfy the current postgraduate programme admission requirements in the department/faculty.

In the case of doctoral programme, the applicants must possess the minimum of M.Sc., or M.Eng. degree certificate with 3.5 GPA on a five point scale minimum requirement. The applicant must have

Electronic Engineering background and any other minimum requirement as in the current postgraduate programme in the department/faculty.

LIST OF APPROVED SUPERVISORS

PROFESSOR
O. U. Oparaku
B. Eng (Nig), PhD (Newcastle UT), MNSE
Solid State/Semiconductor Electronics and Solar Energy

PROFESSOR
C. I. Ani
M.Sc. (Moscow), M.Phil (Sussex), PhD (Wales), MNSE
Data Communication and Networks Resource Management

SENIOR LECTURER
Dr. O. N. Iloanusi
B. Eng (Nig.). M.Sc. (Nig.), PhD (Nig.), MNSE
Biometrics, Digital System Design, Digital Signal Processing, and Logic Design

SENIOR LECTURER
Dr. M. A. Ahaneku
B.Eng(FUTO), M.Sc (FUTO), Ph.D (Nig.) MNSE
Microwave and Satellite Communications, Radio and Telecommunication

LECTURER I
Dr. O. E. Okonor
B.Eng(Nig.), M.Sc (Delft), Ph.D (Surrey)
Communication Networks

LECTURER I
Dr. V. C. Chijindu
B.Eng(ESUT), M.Eng (ESUT), Ph.D (Awka)
Digital Electronics

LECTURER I
Dr. U. A. Nnolim
B.EE(USA), M.Sc (Kent, UK), Ph.D (Kent, UK)
Electronic and Computer Engineering

LECTURER I
Dr. C. C. Udeze
B.Eng(Awka), M.Eng. (Awka), Ph.D (Awka)
Computer and Control Systems Engineering

AREA OF SPECIALIZATION

A. COMMUNICATION

B. DIGITAL ELECTRONICS AND COMPUTERS

C. CONTROL SPECIALIZATION