
Email: iied@fupre.edu.ng

# DOCTORATE (PhD) PROGRAMMES

**PHILOSOPHY**

This programme is a short-term programme designed fundamentally to bridge the gap for those who have academic deficiencies or who cannot obtain their desired kind of jobs with their present degrees to change without starting all over from undergraduate level in related or relevant fields.

The programme will help lower qualification degree and HND holders facilitate their admission into Master's Degree Programme in the College of Postgraduate Studies.

**AIM/OBJECTIVES**

The aim and objectives of the Postgraduate programme are to:

1. Produce high level man power in the Environmental sciences through the acquisition of requisite skills and knowledge, for national development.
2. Develop in science graduates a sense of inquiry, capacity for independent research and motivation to extend the frontiers of science and technology.
3. Produce graduates who will be adequately equipped for relevance in the global knowledge economy.
4. Produce graduates who are capable of applying appropriate scientific principles for solving problems for the promotion of human wellbeing.
5. Produce manpower with optimal competencies and skills to function effectively in the academia and the private sector.

**RATIONALE/JUSTIFICATION**

i. Compatibility of programme with institutional mission:

The mission of the Federal University of Petroleum Resources is to train graduates who shall be responsive to the manpower needs of the petroleum industry, allied industries and environmental issues among others. The programmes here proposed are in line with the above mission of the institution.

ii. The programme has also be designed to meet national needs as graduates will be able to compete favourably in resolving environmental global issues.

iii. The presence of the Petroleum Training Institute (PTI) that trains middle manpower (HND) for the oil and gas industries located in same region readily makes their student available for the programme as there is the demand for them to improve their career.

**Table 1: List of Academic Staff**

| S/N | Name | Qualifications | Status | Area of Specialization |
|---|---|---|---|---|
| 1 | Prof. Rim-Rukeh Akpofure | B.Sc. M.Sc. Ph.D. | Professor | Environmental studies and Biocorrosion/ Biochemical Engineering, |
| 2 | Prof. Prekeyi Tawari-Fufeyin | B.Sc. M.Sc. Ph.D. | Professor | Hydrobiology & Fish Biology & Toxicology |
| 3 | Prof. Christopher Onosemuode | B.Sc., PGD GIS, M.Sc, Ph.D. | Professor | Geoinformatics |
| 4* | Prof. B.J.O Efiuvwevwere | B.Sc. M.Sc. Ph.D | Professor | Microbiology (Food Microbiology/ Biodeterioration |
| 5* | Prof. I.E Agbozu | B.Sc, MSc, Ph.D, | Professor | Environmental/Analytical Chemistry and Waste Management |
| 6 | Dr. Olalekan Adeyemi | B.Sc., MSc., Ph.D. | Associate Professor | Biochemical Toxicology/ Environmental Biochemistry |
| 7 | Dr. David Allenotor | B.Sc., MSc., Ph.D. | Associate Professor | Software Eng., HPC. HVL &Finanacial Options Modelling |
| 8 | Dr. D.F. Ogeleka | B.Sc., MSc., Ph.D. | Associate Professor | Analytical/Environmental Chemistry |
| 9 | Dr. (Mrs) L.E. Tudararo-Aherobo | B.Sc., MSc., Ph.D. | Senior Lecturer | Environmental & Public Health Microbiology |
| 10 | Dr.Asibor, Godwin | B.Sc., MSc., Ph.D. | Senior Lecturer | Hydrobiology, Safety and Occupational Health |
| 11 | Dr. Edjere, Oghenekohwiroro | B.Sc., MSc., Ph.D. | Senior Lecturer | Analytical/Environmental Chemistry |
| 12 | Dr. (Mrs)Adeyemi, Oyeyemi | B.Sc., MSc., Ph.D. | Senior Lecturer | Toxicology/Biochemical synthesis/Bioremediation |

* Adjunct Lecturer

**List of Non-Academic Staff**

**Table 2: Laboratory Technologists**

| S/N | Name | Qualifications | Status | Area of Specialization |
|---|---|---|---|---|
| 1 | Esemedafe Josephine | OND<br>HND<br>PGD in view | Principal Technologist | Chemistry/Biochemistry |
| 2 | Enakireru Davis Bobby | OND, HND | Technologist 1 | Environmental Technology |
| 3 | Ibezim Esther Nkem | OND, HND | Technologist 1 | Environmental Technology |
| 4 | Makun, Omowumi Jayeola | OND, HND, M.Sc | Technologist 1 | Biochemistry |

**Table 3: List of Administrative Officers**

| | | |
|---|---|---|
| Etinosa Omo Ahanor | Bachelor (LL.B.) Degree in Law (UNIBEN, 2015) | Administrative Officer II |
| Ekure Oghenevwede Lucy | ND, Science laboratory technology (Delta State Polytechnic, Otefe, 2014) | Executive Officer. |
| Goddey Akpevwe Onojakpor | ND, Banking and Finance (Kings Polytechnic, Edo State,2013). | Clerical Officer |

## Doctor of Philosophy (Ph.D.) Programmes

**Areas of specialization**

i) Ph.D. in Environmental Management and Control (EMC)

ii) Ph.D. in Waste Management (WMT)

iii) Ph.D. in Integrated Environment and Development Studies (IED)

### A. ADMISSION REQUIREMENTS

**Basic Admission Requirements for Doctoral Programme**

i. All candidates must have five credit passes including English, Mathematics, and three other relevant science subjects at 'O' Level as required by the department.

ii. Candidates with an M.SC. Degree with a CGPA of at least 3.5 of a 5.0 point scale or 60% weighted average.

iii. A candidate who has satisfied the requirements for the award of the M.Sc., shall normally be eligible to proceed to a research-based Ph.D. programme in the area of specialization on meeting the required level prescribed by the Postgraduate School viz:

>60% for Ph.D.

iv. All candidates must demonstrate adequate intellectual capacity, maturity, effective decision making and problem-solving potentials possibly through a selection process.

C. **Duration of Programme**

i. A full time Doctoral programme shall run for a minimum of 6 semesters and maximum of 8 semesters.

ii. Part-time Doctoral programmes shall run for a minimum of 8 semesters and maximum of 10 semesters.

**GRADUATION REQUIREMENT**

**Section 8: GRADUATION REQUIREMENTS**

(i) Doctorate (Ph.D.) programmes are primarily by Research. The departmental Postgraduate Committee **may** prescribe some courses of not more than 12 credit units to be taken by the candidates in the areas of deficiencies. A Doctoral (Ph.D.) thesis of 12 units credits must be defended (compulsorily) before a panel of internal and external examiners.

A student shall also present at least two semesters, submit and defend a thesis before graduation.
**(**ii) Minimum Earned Credit Units for graduation shall be 24.
(iii) Minimum years for graduation: Three (3) years.
(iv) Minimum residency requirement in years: Three (3) years
(v) Minimum CGPA for graduation: 3.50/5.0 or 60% weighted average.
(vi) Other requirements shall be specified.

**COURSE CONTENT FOR Ph.D. PROGRAMMES**

Doctorate (Ph.D.) programmes are primarily by Research and seminar presentation. However, Departmental Postgraduate Committee may prescribe some courses of not more than 12 credit units to be taken by the candidates in areas of deficiencies. The courses shall be taken before the student shall be eligible for project defense.

Ph.D. Courses to be taken as applicable to the area of specialization shall include the underlisted;

| COURSE CODE | COURSE TITTLE | CREDIT UNIT | COURSE STATUS |
|---|---|---|---|
| COS 801 | ICT, Research Methods and Proposal Writing | 2 | C |
| COS 802 | Management and Entrepreneurship | 2 | C |
| IED 901 | Seminar on Current topics | 2 | C |
| IED 902 | Environmental Policy, Social and Management Impacts | 2 | C |
| IED 903 | Pre-data Seminar | 3 | C |
| IED 904 | Post-Data Seminar | 3 | C |
| IED 999 | Dissertation | 12 | C |
| | Core courses | 26 | |
| | Electives | 8 | |
| IED 905 | Ecological issues and biodiversity conservation | 3 | E |
| IED 906 | Contemporary issues in environmental Geoscience | 3 | E |
| IED 907 | Advanced Environmental Management Systems | 3 | E |
| IED 908 | Environmental Forensics | 2 | E |
| IED 909 | Advanced Natural Resources Management and Advocacy | 2 | E |
| | Total Credits | 34 | |

Note: COS 801 and 802 shall be taken only by students who have not credited or attempted the courses during their M.Sc. programme.

## PHD COURSE DESCRIPTION

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### CORE COURSES

**COS 801 – ICT, Research Methods and Proposal Writing (2credits) -** Spreadsheets – Microsoft Excel, Basic computing knowledge/window 2008; Internet Technology; Statistical packages; precision and accuracy estimates; principles of scientific research; basics of PowerPoint Presentation; concepts of hypothesis formulation and testing; and organization of research and technical report writing.

**COS 802 - Management and Entrepreneurship (2 credits)**. – This course develops practical abilities and skills in entrepreneurship. It examines the broad areas of entrepreneurial business creation and management and historical perspective. Topics include: history and development of entrepreneurship theory, types of and characteristics of entrepreneurs, creativity and innovation, entrepreneurial process, feasibility study, business plans, pricing and bookkeeping, human resource management and marketing. Business environment and bioenterpises; basics of business and financial management; entrepreneurship development; feasibility studies; marketing and managerial problem solving.

**IED 901 – Seminar on Current topics**

The student shall conduct a literature review on a current topic that highlights an environmental challenge or proffers a solution to an environmental challenge. It Shall be presented before the department and the student shall be evaluated accordingly.

**IED 902 - Environmental Policy, Social and Management Impacts (2 credits) -** Research in sustainability science and public policy and rural/urban development practices; Technical, economic, social barriers to the development of sustainability energy practices (e.g. solar, geothermal etc.)

Constructing indicators and establishing models for monitoring urban systems; Enhancing sustainability, equity, and vulnerability reduction in communities and institutions.

**IED 903: Pre-data Seminar 3 Units**

Designed to give practice in critical reading of research articles in journals, method of data collection, analysis and presentation as it relates to the student interest of research.

**IED 904: Post data Seminar 3 Units**

The student is expected to present seminar in his/her field findings as it relates to data collected from the field.

**IED 999: Dissertation (12 credits) -** This is a supervised advanced research intended to solve problems and will usually involve experiment, fieldwork, statistical analysis or simulation studies. Independent research in selected areas of research interest of the student as it relates to his/her area of specialization. Students will be required to carry out literature survey on the topic, perform experiment and produce dissertation. The submitted project report shall be defended before a panel of internal and external examiners.

**Elective Courses:**

**IED 905 - Ecological issues and biodiversity conservation (3 credits) –**Ecological footprints; energy development and biodiversity; integrating biodiversity considerations into impact assessment; biodiversity and risk assessment; biodiversity hotspots and early warning signals – environmental sensitivity index mapping.

**IED 906 - Contemporary issues in environmental Geoscience (3 credits) -** Integrated water resources management; Groundwater Resources Assessment and Management; Waste water treatment technologies; engineered sanitary landfills and solid waste handling; Ground water Risk Assessment and Remediation; Integrated Coastal Zone Management (ICZM).

**IED 907 - Advanced Environmental Management Systems (3 credits) -** Waste characterization, Waste Disposal and Management Methods; - Hazardous and Toxic Wastes; drilling wastes, radioactive and medical wastes etc.

**IED 908 - Environmental Forensics (3 Credits) -** Tracing environmental contaminants back to their point of origin. Methods of contaminants identification; This is important for the Niger Delta region which contains hundreds of Brownfield sites and their restoration/reclamation often involves public debate and law suits over the nature of contaminants on the site; identifying the party or parties responsible for those contaminants, and determining legal consequences and financial liability of the clean-up costs.

**IED 909 - Advanced Natural Resources Stewardship and Environmental Advocacy (2 credits)** –Environmental auditing and management Systems; national and international environmental laws, treaties, conventions and regulations; Public participation & Citizen group action in Environmental management; etc.