

**NATIONAL UNIVERSITIES COMMISSION**

**SELF-STUDY FORM**

**UNIVERSITY OF PORT HARCOURT**

.....  
**Name of University submitting the Form**

**MSC IN PETROLEUM ENGINEERING & PROJECT DEVELOPMENT**

.....  
**Title of the Programme/Department**

**Duration of Programme**

**ONE**

.....  
**Full-time (Years)**

**NIL**

.....  
**Part-time (Years)**

**15<sup>th</sup> March,2017**

**Date Form is completed.....**

**CONFIDENTIALITY OF INFORMATION**

**The information supplied in this form is solely for the confidential use of the  
National Universities Commission and its authorized agents**

## SECTION A The University

### A.1. Name and Address of the University:

University of Port Harcourt, Choba, P.M.B 5323, Port Harcourt, Rivers State, Nigeria  
Website: [www.uniport.edu.ng](http://www.uniport.edu.ng)

### A.2. Date Established: 1977

The University of Port Harcourt was founded as a College of the University of Lagos in 1975 and gained the status of a University in 1977.

### A.3. Name and Qualification of Vice Chancellor:

Professor N. E. S. Lale  
[ndowa.lale@uniport.edu.ng](mailto:ndowa.lale@uniport.edu.ng)

### A.4. Mission, Vision Philosophy and Objectives of the University

#### **Mission**

The Mission of the University of Port Harcourt is the pursuit of academic excellence, advancement of knowledge and community service through quality teaching, life-long learning, social inclusion, strengthening civil society and policy-relevant research that addresses the challenges of contemporary society. To achieve this Mission, the University is guided by the spirit of enquiry, self-reliance, fairness, ethical and professional standards of the disciplines.

#### **Vision**

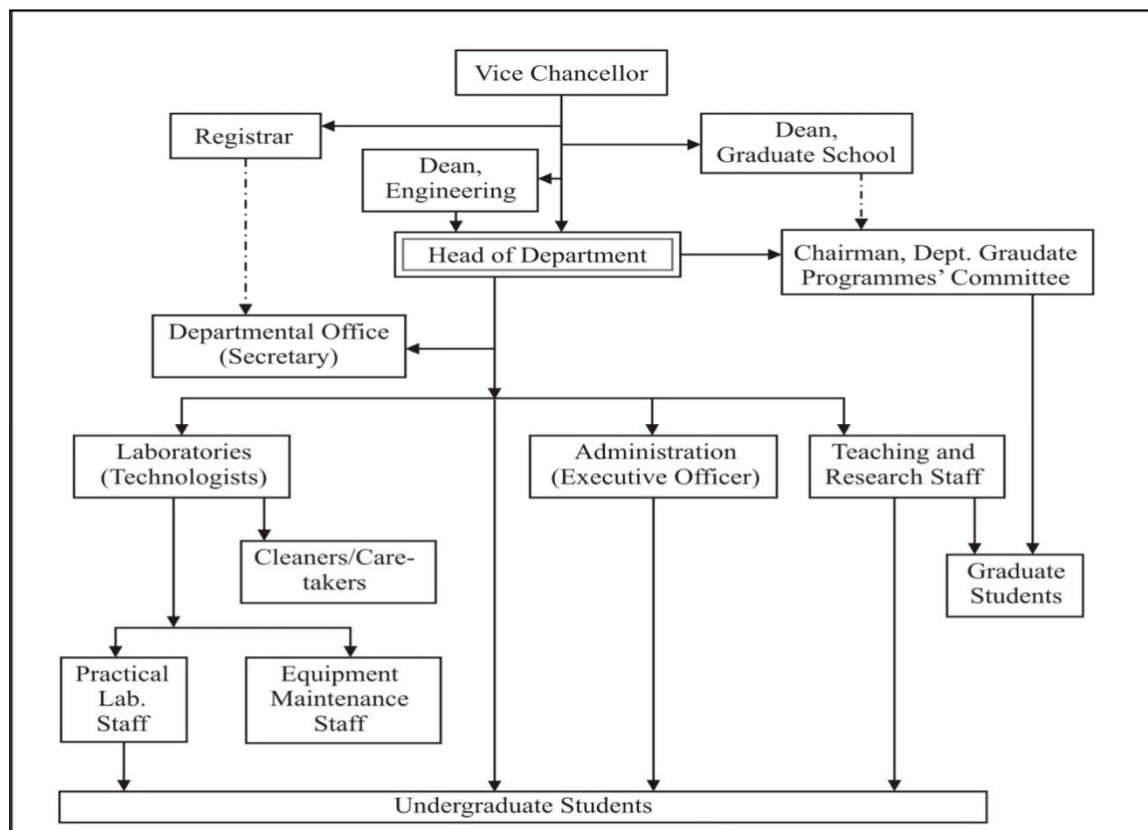
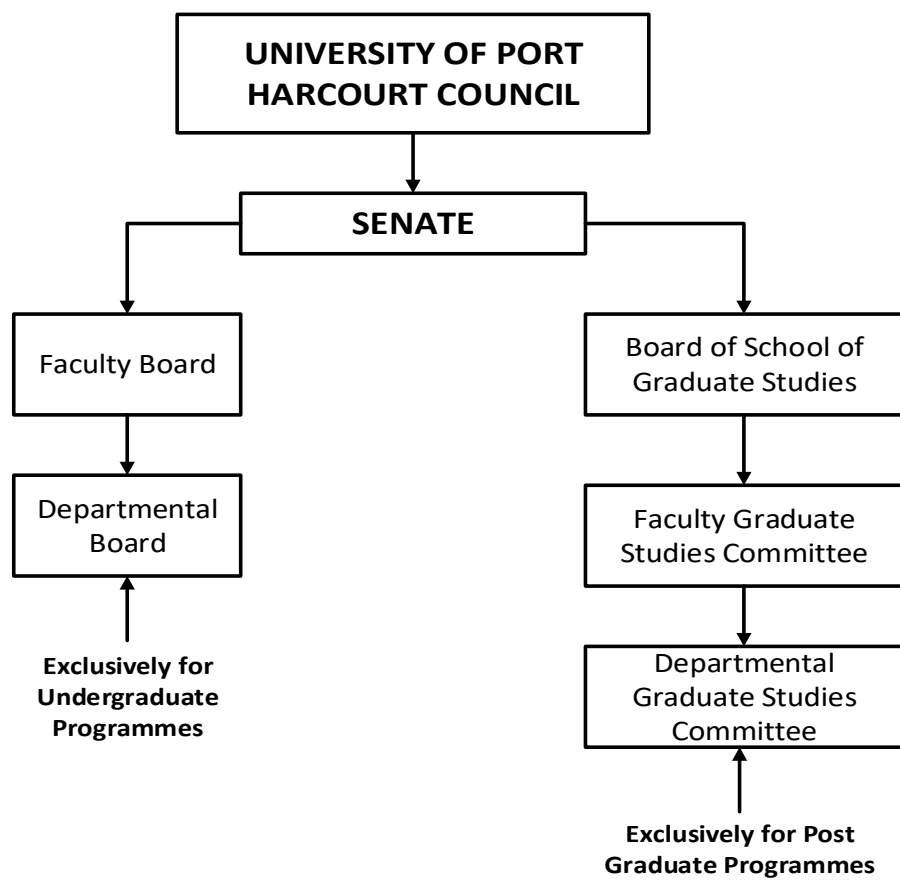
*“The University of Port Harcourt aims to be ranked among the best Universities in Africa, renowned for its teaching, **research, innovation and knowledge transfer.**”*  
(Not a limited vision but deliberately focused on Africa)

#### **Philosophy**

*“The University of Port Harcourt is committed to academic freedom, tolerance, probity, equal opportunity and respect for cultural diversity”*

### **Organization, Administration and Control**

- a) Describe the ownership and system of control of the University including the administrative structure, and the membership and role of component committees and units in such a structure (e.g. The Council, Senate/Academic Board/Board of Studies).



**Figure 1:**UniPortOrganizational Structure, Administration and Control

## **B. ACADEMIC MATTERS**

1. Names of the College/Faculty/School and Department in which the Postgraduate programme is domiciled and Postgraduate College/School.

**FACULTY:**FACULTY OF ENGINEERING, UNIVERSITY OF PORT HARCOURT

**POST GRADUATE SCHOOL:**SCHOOL OF GRADUATE STUDIES, UNIVERSITY OF PORT HARCOURT

2. **Brief history of the programme:**

Please provide information on the programme including its date of establishment, the administrative structure including committees, the total student enrolment and graduates, graduation and attrition rates, and uniqueness of the programme.

### **HISTORY OF INSTITUTE OF PETROLEUM STUDIES:**

The Institute of Petroleum Studies (IPS), University of Port Harcourt, was established in 2003 in the University of Port Harcourt as a sustainable development joint venture of Total Exploration and Production Nigeria Limited (TEPNG) and the Nigerian National Petroleum Corporation (NNPC). University of Port Harcourt and the IFP School France are the collaborating institutions with the responsibility of producing world class manpower, grown locally, that will be industry-ready on graduation.

The institute started with the M.Sc. in Petroleum Engineering and Project Development, which ran for five years; 2003-2008 before the inclusion of the Postgraduate Diploma in Petroleum Technology in 2009. The Institute is organised to run 12-month M.Sc. Programmes which begin in November and end in the next November. The courses are delivered in a modular pattern and examinations are held weekly. The teaching responsibility is shared between UniPort (40%), IFP School France (40%), and Industry (20%).

Since its inception, the programme has enrolled and graduated 267 international standard professional young men and women who are thriving in the oil and gas industry. The programme is designed to meet the human capacity development needs of the 21<sup>st</sup> century oil and gas industry. The programme also offers diverse certifications that further enhance the marketability of its graduates.

### **MODE OF THE PROGRAMME**

The programme is organized in weekly modular forms, where examinations are held for each completed module at the end of the week it was taught. All lecture materials are provided by the centre and students also evaluate their lecturers for quality assurance and quality control. The course content comprises weekly modules, certifications, and field trips.

### **ADMISSION REQUIREMENTS**

Candidates must possess a bachelor's degree with a minimum of second class honours (upper division) or company sponsored staff with between 2 and 5 years relevant work experience with a minimum of second class honours (lower division)

## DURATION OF PROGRAMME

12 Months Full Time

## DEGREE AWARDED

After successful completion of the course, graduates will receive a master of science in Petroleum Engineering and Project Development degree jointly awarded by UniPort and IFP school.

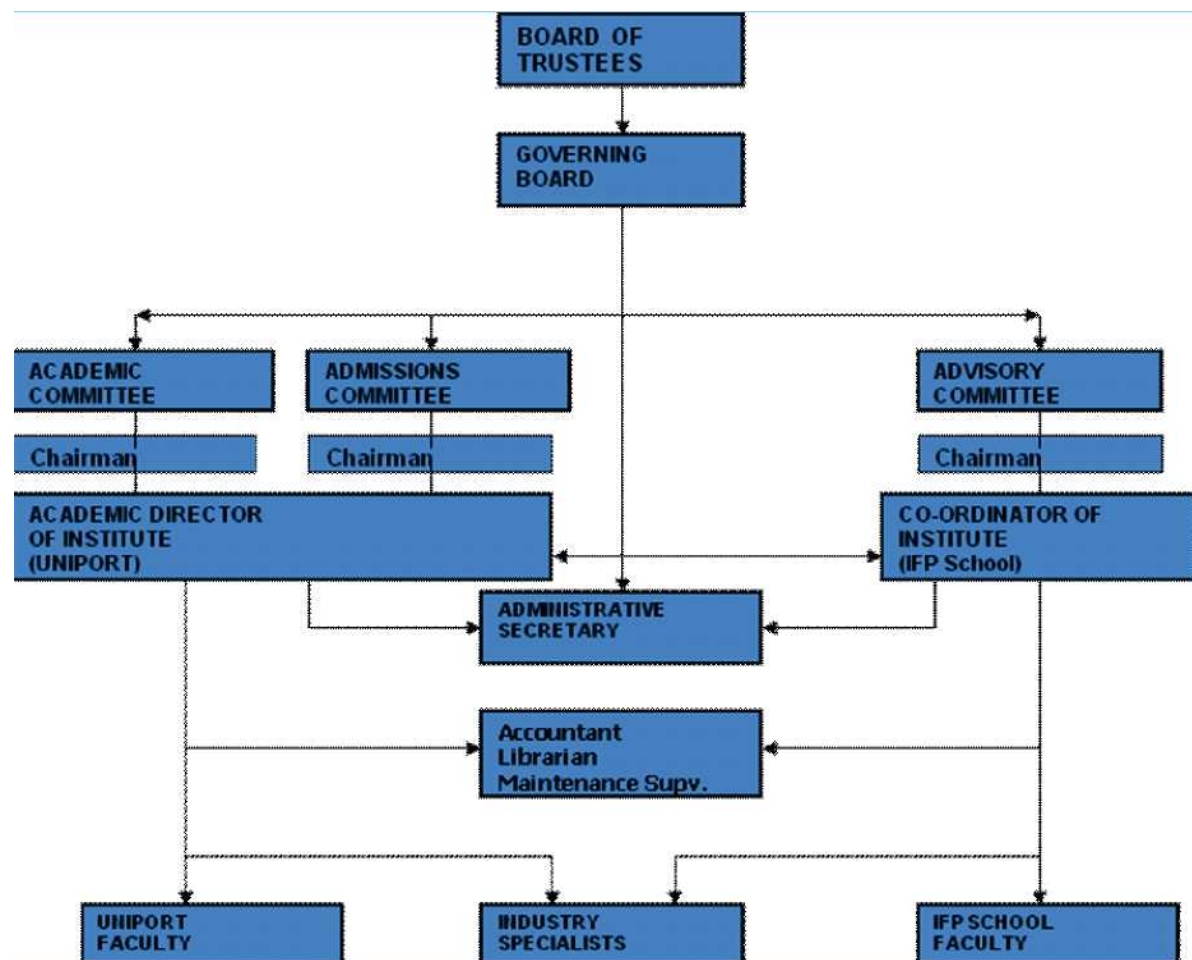


Figure 2:IPS Governance Structure

## COMMITTEES WITHIN IPS

### GOVERNING BOARD OF IPS

#### Chairman

**1. Mr. AbiodunAfolabi**

Executive Director, Human Resources & Corporate Affairs, TEPNG

#### Members

**2. Vincent Nnadi**

Executive General Manager,  
Corporate Services, TEPNG

**3. Prof. DuluAppah**

Director, Institute of Petroleum Studies

**4. Prof. O. M. O. Etebu**

Dean, Faculty of Engineering

University of Port Harcourt

5. **Prof. Henry E. Alapiki**  
Director, University of Port Harcourt Foundation  
University of Port Harcourt
6. **Group Executive Director, Refineries and Petrochemicals, NNPC**
7. **Benoit Rabaud**  
Coordinator and Chairman,  
Advisory Committee of IPS & IFP Training
8. **Jean Claude Heidmann**  
Director, Centre for Exploration & Production,  
IFP School
9. NAPIMS/NNPC

#### **ADVISORY COMMITTEE BOARD**

##### Chairman

1. **Benoit Rabaud**  
Coordinator, IFP School

##### Members

2. **Prof. DuluAppah**  
Director, Institute of Petroleum Studies
3. **Mr. AzuAzubuike**  
Manager, CSR Education, TOTAL
4. **Dr. K. Ojoh**  
EGM Geosciences & Reservoir Engineering, TOTAL
5. **Patrick Ngene**  
EGM, JV Asset (Offshore)TOTAL
6. NNPC
7. NAPIMS
8. OPTS Group SPDC
9. Exxon Mobil
10. Chevron Texaco
11. NAOC
12. DEEP OFFSHORE Group Statoil

##### SERVICE INDUSTRY

13. Schumberger (Measurements)
14. Global (Drilling)

##### OTHERS

15. PETAN
16. PTDF
17. IPS Alumni

#### **ACADEMIC COMMITTEE**

##### Chairman

1. **Prof. DuluAppah**  
Director, IPS

##### Members

1. Jean Claude Heidmann (IFP School)

2. Benoit Rabaud (IFP School)
3. **Prof. R.E. Ogali**  
Dean School of Graduate Studies UNIPORT
4. Dr. (Mrs.) Susan N. Umeozor  
University Librarian, UNIPORT

5. **Prof. (Mrs.) O. M. O. Etebu**  
Dean, Faculty of Engineering, UNIPORT

6. **Dr. B. Oriji**  
Head of Department  
Petroleum & Gas Engineering

Faculty of Engineering

7. Prof. IfyNwaogazie
8. Prof. Ayo Kuye
9. Prof. M. O. Onyekonwu
10. Prof. J. A. Ajienka
11. Prof. A. Dosunmu
12. Prof. J. U. Okoli
13. Prof. Ogbonna Joel
14. Prof. A. O. Ibe
15. Prof. C. Ekweozor (Consultant)

Industry (Representative Lecturers)

16. EvaristusUzamere (SEFC)
17. Franck Egbon (TOTAL)
18. PatrickSomiri (TOTAL)
19. Mr. Akiode
20. Dr. N. Attah (TOTAL)
21. Edith Akwaeke (ANSETT)

Faculty of Science

22. Prof. G. C. Obute
23. Dr. F. T. Beka
24. Prof. V. U. Ukaegbu
25. Dr. G. J. Udom

Faculty of Management

26. Dr. G. N. Ogbonna

Members of Board of Examiners (Uniport)

27. Prof. B. E. Okoli
28. Prof. O. Akaranta
29. Prof. I. Joe

**RESEARCH ADVISORY BOARD**

Chairman

1. Dr. Jude Amaefule -Vice Chairman/MD, Emerald Energy Resources Limited

Members

2. Prof. (Mrs.) A. R. Nte - Director, CEREM UNIPORT
3. Mr. Chukwuma I. Uguru - Manager SPDC Nig. Ltd.
4. Mrs. SolateOvundah-Akarolo - DMD, MoniPulo Limited
5. Engr. Franck Egbon- Manager Total E & P Nig. Ltd.

6. Mr. I. I. Orugbani- NAPIMS PSG-PED Manager
7. Mr. Cletus Egbuzie - Mobil Exploration & Production Nig. Ltd. General Manager
8. Mr. Andrew Olotu- Managing Director Schlumberger Oilfield Services Ltd.
9. Engr. OsaOwieadolor- Chief Operating Officer Platform Petroleum Ltd.
10. Prof. O. Akaranta - Director Science Institute, Uniport
11. Prof. Mrs. G. C. Obute- Faculty of Science, Uniport
12. Prof. Regina Ogali - Dean, Graduate Studies, Uniport
13. Prof. Adewale Dosumu-UNIPORT
14. Dr. Johnson Olajuyigbe- Manager Nigerian Content Development
15. Dr. C. E. Ubani- Research Fellow, Faculty of Engineering, Uniport
16. Mr. Muhammad Haruna - Deputy Manager, Education Department PTDF
17. Dr. Musa M. Zagi - Ministry of Pet. Resources – DPR
18. Dr. Charles Dawari- Chevron Nigeria Limited
19. Dr. Obiora Okeke- NNPC (R & D)
20. Prof. Dulu Appah- Director, IPS
21. Prof. Ogbonna Joel - Director CPRT UNIPORT
22. Mr. Francis Fusier - IFP School, IPS Coordinator
23. Dr. B. Oriji- Coordinator, PGDPT, IPS
24. Mr. Eleazar I. Ogbonda- Administrative Secretary, IPS
25. Prof. G. A. Chukwu- TonciaNig, Ltd.
26. Aloysius Okere - Nigerian Agip Oil Company
27. Solomon Inikori Overseas Supervisor
28. Charles Ohaeri Overseas Supervisor
29. Prof. Ekwere J. Peters Overseas Supervisor
30. Dr. Nnaemeka J. Ezekwe Overseas Supervisor
31. Dr. Henry Ohen Overseas Supervisor
32. Dr. Babs Oyeneyin Overseas Supervisor
33. Dr. Michael Adewumi Overseas Supervisor
34. Dr. David Ogbe - AUST, Abuja
35. Engr. Igweka Uche Executive Director, Weltek Limited, Trans Amadi, PH
36. Engr. Emeka Ene - Managing Director Oil Data Limited
37. Dr. Oduola - Ag. Director, Centre for Gas, Refining and Petrochemicals



### 3. **Philosophy, aims and objectives of the programme**

The philosophy, aims and objectives of the programme as related and distinct from the general institutional philosophy, aims and objectives.

**PHILOSOPHY:**The culture of excellence in sustained learning, leadership, internationalism and professionalism advancement and propagation of knowledge in the petroleum industry.

**OBJECTIVE:**The aim of the M.Sc. programme in Petroleum Engineering and Project Development is to provide graduates in engineering with broad-based training required for onshore and offshore oil and gas field development. The students are taught jointly by lecturers from the university of Port Harcourt, Nigeria, IFP School, France, and experts from the industry, as well as visiting professors from other universities in Nigeria and abroad. On completion of the programme, the graduates will among other skills, be able to:

- Evaluate and manage oil and gas fields
- Design and supervise the drilling of exploration and development wells and carry out drilling optimization programmes
- Design, supervise, and evaluate well completion, workover and well simulation programmes
- Design and operate onshore and offshore oil and gas production facilities
- Carry out production optimization and well performance enhancement programmes
- Participate effectively in multidisciplinary oil and gas field review and field development teams

### 4. **Process of Curriculum Design**

- a) Explain the process of development of the curriculum for the Postgraduate programme of the University.
- b) Confirm the extent to which the Postgraduate programme curriculum in use has approximated the Benchmark Minimum Academic Standards (BMAS) for the Postgraduate programme. Please state the main differences.

## **Modules Description**

### **1. General Module (6 weeks)**

The goal of this general module is a reminder and should bring to the same level all the students on mathematics, computational, thermodynamic, presentation and communication skills

This module is divided into 2 courses: PPD 801 and PPD 802.

**PPD 801: Introduction to Petroleum Industry HSE and Communication Skills (3 weeks)**

This Program includes the following subjects:

PPD 801-1	Oil and Gas Industry Overview
PPD 801-2	HSE and EIA
PPD 801-3	Communication (Writing and Presentation)

**PPD 802: Computational Skills (3 weeks)**

This Program includes the following subjects:

PPD 802-1	Programming Skills
PPD 802-2	Applied Mathematics for Petroleum Engineers
PPD 802-3	Applied Statistics for Petroleum Engineers

## **2. Geosciences and Reservoir Module (12 weeks)**

The Reservoir Module part aims to give students the ability to:

- Initiate acquisition, processing and interpretation of data used in reservoir characterisation.
- Evaluate the quantities of hydrocarbon in place by means that include probabilistic methods.
- Analyse Hydrocarbon reserves and drainage mechanisms, propose improved recovery systems
- Develop a plan to efficiently produce a reservoir with an optimum production profile, optimise the number of well, and predict production decline and secondary or tertiary recovery with associated work-over.

This Module is composed of 4 Courses: PPD 803, PPD 804, PPD 805 and PPD 806.

**PPD 803: Petroleum Geosciences (3 weeks)**

This Program includes the following subjects:

PPD 803-1	Fundamentals of Geosciences
PPD 803-2	Geology Field Trip
PPD 803-3	Reservoir Geology and Geophysics

**PPD 804: Introduction to Reservoir Analysis (3 weeks)**

This Program includes the following subjects:

PPD 804-1	Well Logging and Interpretation
PPD 804-2	Rock and Fluid Properties
PPD 804-3	Fundamentals of Reservoir Engineering

**PPD 805: Reservoir Modelling (3 weeks)**

This Program includes the following subjects:

PPD 805-1	Well Testing and Interpretation
PPD 805-2	Reservoir Characterization & Reservoir Modelling
PPD 805-3	OOGIP Calculation with uncertainties

**PPD 806: Applied Reservoir Engineering and Simulation (3 weeks)**

This Program includes the following subjects:

PPD 806-1	Reservoir Production Mechanisms and EOR
PPD 806-2	Reservoir Simulation
PPD 806-3	Reservoir Simulation Project

Project: The Reservoir Project involves an actual field case with Reservoir Simulation and Determination of a production profile including uncertainties and comparison with observed field performance.

**3. Drilling Module (12 weeks)**

**PPD 807: Well Construction, Casing Design and Drilling Fluids (3 weeks)**

This course aims to give the students the necessary knowledge to be able to:

Analyse the geological section of the formation and design the architecture of a well, including drilling program, drilling fluids program, casing calculations and cementing programs.

Supervise the construction of the well and face drilling, fishing and trajectory problems, control abnormal pressure behaviour.

Select a drilling rig, issue an invitation to tender and analyse a contract.

This course includes the following subjects:

PPD 807-1	Drilling Field Trip & Geomechanics
PPD 807-2	Well Architecture and Well Design
PPD 807-3	Drilling Fluids and Cementing Operations

**PPD 808: Directional drilling and well control (3 weeks)**

This course module provides the students with all the information required for successfully preparing, executing and controlling the drilling of a directional and horizontal well, and ensuring thorough knowledge of modern calculation techniques in relation to the use of different

types of bottom hole assemblies. It also acquaints the students with conventional and advanced well control techniques for both onshore and offshore well control procedures

This course includes the following subjects:

PPD 808-1	Drilling operations, equipment and optimisation
PPD 808-2	Directional drilling
PPD 808-3	Well control

**PPD 809: Well Completion, Interventions and Performance (4 weeks)**

This course module gives the main characteristics of Well Completions. At the end of the course the student will be able to manage the concept of Productivity Index and Inflow Performance Relationship. It also gives to the student knowledge of the completion equipment and artificial lift

This course includes the following subjects:

PPD 809-1	Test, Completion design and equipment
PPD 809-2	Artificial Lift Systems – Design and Operations
PPD 809-3	Specific Operations (Stimulation, Perf. Sand Control, WO)
PPD 809-4	Well Performance with Software

**PPD 810: Offshore Drilling and Drilling Project (2 weeks)**

This course module gives the necessary knowledge of offshore drilling and HPHT drilling operations. It incorporate a drilling project which aims to synthetize the whole module.

This course includes the following subjects:

PPD 810-1	Offshore Drilling and New Challenges
PPD 810-2	Drilling and Completion Project – Design of an Optimized Well

**4. Production Module (11 weeks)**

This module aims to prepare students for designing surface oil and gas treating facilities from the well head to the unloading terminal on both land and marine environment. Safety and pollution free operations will be a very important part of this module.

**Field Trip:** During the duration of this Module a **Production Field Trip** will be organized in order for the students to observe the functioning of a complete flow station with Oil, Gas and Water treatment facilities

**The Module:** This module is composed of 4 courses PPD 811 PPD 812 PPD 813 and PPD 814

**PPD 811: Production Engineering/Process Engineering (4 weeks)**

During this course students will be prepared to:

- Understand the functioning all the elements composing the surface process: Test Separators, Production Separators, Heaters, Water Treaters, Pumps, Tanks,....
- Design and size all the element of the process installation.(Including power requirement and instrumentation)

This course includes the following subjects:

PPD 811-1	Production Operations and Equipment Design Part 1
PPD 811-2	Production Operations and Equipment Design Part 2
PPD 811-3	Utilities and Instrumentation
PPD 811-4	Process Simulation with Software (HYSYS)

**PPD 812: Production Optimisation (3 weeks)**

At the end of this course, the student will be familiar with the problems associated with gas production (NLG plan, Gas compression and gas injection, Turbines). He will be able to design a production pipeline taking into account structure problems and fluid mechanics issues.

This course includes the following subjects:

PPD 812-1	Multiphase Flow in Pipe and Flow Line Design
PPD 812-2	Flow Assurance
PPD 812-3	Well Surveillance and Production Enhancement

**PPD 813: Terminals and Gas Utilization (2 weeks)**

These courses will cover the oil and gas export. Students will be able to understand the major issues in the problems of Oil export and Gas processing and Gas Utilization

PPD 813-1	Terminals and Receiving Facilities
PPD 813-2	LNG and Natural Gas Utilization

**PPD 814: Introduction to Offshore Engineering and Subsea Architecture (2 weeks)**

This Course will introduce the problems associated with the offshore oil and gas Production. Students will be able to:

- Knowledge of marine environment (Wind, Waves, Streams, Corrosion)
- Knowledge in the sizing and erecting of Steel Platforms
- Be familiar with the newest Production Technology used in Deep Water Production

- Understand the problems associated with field development using subsea wells

This course includes the following subjects:

PPD 814-1	Introduction to Offshore Production Engineering
PPD 814-2	Subsea Architecture and New Production Techniques

### **Project Module (7 Weeks)**

This module has two goals:

- Presents the Petroleum economics and project Management
- Supervise the students during their 5 weeks project

This module is composed of 2 courses PPD 815 and PPD 816

#### **PPD 814: Petroleum Economics and Project Management (4 weeks)**

This module has the following objectives:

- Present the economic aspect of an oil field development.
- Introduce the risk analysis and the Project Management using a field example
- Familiarise students with cost analysis, cost control and budget preparation
- Provide the students with the concepts of Corporate Governance, business ethics and CSR

This course includes the following subjects:

PPD 815-1	E&P Development Process -
PPD 815-2	Contract, Planning & Project Management
PPD 815-3	Ethics, Corporate Social Responsibility, Governance & Entrepreneurship
PPD 815-4	Petroleum Economics & Case Study

#### **PPD 816: Field Development Project (3 weeks)**

During This course the students will be in small groups. They will study an oil or gas field development project using different scenarios (number of wells, horizontal or vertical, type of completion, type of producing facilities, economics). Then each group will be assigned a scenario for which they will draw the drilling, the evaluation and completion Program. They will design the producing facilities and prepare a financial report based on the computed recoverable reserves.

PPD 816-1	Presentation Scenarios
PPD 816-2	Process
PPD 816-3	Structure / HSE / Economy

### **PPD 817: Industrial Project (1 weeks)**

Presentation of the Personal Thesis given at the beginning of the year and presentation of the Production Final Project developed in PPD 816.

## **5. Student Admission, Retention and Graduation Policy.**

- a) Describe the admission, retention and graduation policy for the programme.

### **ADMISSION**

Candidates must possess a minimum of bachelor's degree Second Class Honours (Upper Division) in any branch of Engineering and Sciences to be admitted into the programme.

- b) Describe the grading system and the policy on students' probation, withdrawal and expulsion.

After successful completion of the course, graduates receive a Master of Science in Petroleum Engineering and Project Development. This degree is jointly awarded by UNIPORT, Nigeria and IFP School, France and is credited 51 credit hours corresponding to 92 ECTS (European Credit Transfer System).

One course corresponds to 1 credit hours. Using the European standards one course is also called UE (Unit of Education). The European Credit Transfer System (named ECTS) is used for European students. It is based on the student's workload required for completing successfully the academic program objectives. These objectives are based on examination results and competencies gained.

Summary of the requirements to get the Master of Science in Petroleum Engineering and Project Development in IPS is presented in Table 1.

Table 1: Minimum requirements for the degree of MSc in Petroleum Engineering at IPS

	Number of weeks	Credits	
		Credit hours	ECTS
General Module	6	6	6
Geosciences and Reservoir (GSR) Module	12	12	24
Drilling Module	12	12	24
Production Module	11	11	22
Project Module and FDP report and presentation. Industrial Project/Thesis	7	13	21
<b>Total</b>	<b>48</b>	<b>54</b>	<b>97</b>

## **Policy on Withdrawal and Expulsion**

A student may be asked to withdraw or expelled on grounds of the following:

- I. Unsatisfactory academic performance such as having a CGPA of less than 2.75 at the end of first year course work.
- II. Failing a course twice.
- III. Poor and irregular lecture attendance.
- IV. Ill health
- V. Misbehaviour
- VI. Examination Malpractice

A student may also voluntarily withdraw his/her studentship.

## **Definition of Examination Malpractice**

Examination malpractice shall be defined as all forms of cheating, which directly or indirectly falsify the ability of the students. These shall include cheating within an examination hall, cheating outside an examination hall and any involvement in all examination related offences. Forms of cheating are categorized as follows:

### **Cheating Within an Examination Hall/Room**

- Copying from one another or exchanging questions/answer sheets.
- Bringing in prepared answers, copying from textbooks, notebooks, laboratory specimens and any other instructional aids smuggled into the hall.
- Collaboration with Invigilator/Lecturer, where it involves the lecturer-invigilator providing written/oral answers to a student in the examination hall.
- Oral/written communication between and amongst students.
- Bringing in prepared answer written on any part of the body.
- Receiving information whether written or oral from any person(s) outside an examination hall.
- Refusal to stop writing at the end, within half a minute in an examination.
- Impersonation.
- Illegal removal of answer scripts from the examination hall.



## 6. Enrolment and Graduation Data

- a) Using the Table below, please provide the enrolment statistics for the last five sessions.

Year	Enrolment						Total No. at Graduation
	Full Time		Part Time		Nationalities		
	Male	Female	Male	Female	Nigerians	Non Nigerian	
2016	19	5	0	0	24	0	24
2015	18	5	0	0	20	3	23
2014	19	4	0	0	20	3	23
2013	17	3	0	0	20	0	20
2012	17	4	0	0	21	0	21

- b) Using the Table below, please provide the graduation statistics for the last five sessions.

YEAR	GRADUATE						TOTAL NO. AT GRADUATION
	FULL-TIME		PART-TIME		NATIONALITIES		
	Male	Female	Male	Female	Nigerian	Non-Nigerian	
2016	19	5	0	0	24	0	24
2015	18	5	0	0	20	3	23
2014	19	4	0	0	20	3	23
2013	17	3	0	0	20	0	20
2012	17	4	0	0	21	0	21

## 7. Students' Workload

Please complete the table below in order to show the work load of students in the programme. Arrange per semester, if possible.

Grouping	Course Codes	Course Titles	Pre-requisite	Credit Units	Contact Hours Per Week			Total Hours per Week
					Lecture	Tutorial	Practical	
a) GENERAL	For example MBA 50X	Computer Literacy	Nil	2	2	1	1	4
b) Core/Compulsory Courses								
c) Elective/Optional Courses								
d) Thesis/dissertation Research/Project								

## **8. Examination**

The normal university procedure is observed. Examination questions are vetted before the exams are conducted. Results are generally moderated at the board meeting conveyed specifically for examination results consideration at academic advisory board meeting. It takes an average of one (one) to two (2) weeks, after examinations before the results are released.

Appraise the standard of examination based on the:

- |  |           |
|--|-----------|
| a) Coverage of the syllabus content  | Very Good |
| b) Quality of students' answers to the various question                      | Very Good |
| c) Quality of practical work, continuous assessment/degree projects          | Very Good |
| d) Students' readiness for the level of manpower he/she is being trained for | Very Good |
| e) External examination or moderation scheme                                 | Very Good |

Matters arising from examinations are handled by the academic advisory board.

## **Research/Project**

### **B.9.1. Research/Project Policy, Methodology and Thrust of the Programme**

Research is an integral part of the programme and is aimed at solving real life problems in Petroleum and Gas Engineering applications. Research proposal is submitted, which details the aim, objectives, statement of problems to be solved and methodology to be applied. The students are assigned to supervisors to guide on the accomplishment.

- a) List titles of postgraduate projects/theses/dissertations in the programme in the last three years

**M.Sc. in Petroleum Engineering & Project Development Project Topics for 2016**

S/N	NAME	PROJECT
1	ADENIRANYE Daniel Ifeoluwa	Effect of Tubing size sensitization on oil well productivity using PERFORM
2	AJIBOYE MayowaAbolaji	Economic Analysis of Sand Control Techniques for Unconsolidated Reservoirs in Niger Delta
3	AKHILOR Joshua Osasele	Economic Analysis of Oil Recovery Methods for Mature Fields
4	AKU Anayochi Michael	Development of Drilling Suits with Hole Cleaning Performance
5	AKUNNE Gideon	Development of diagnostic flow charts for gas wells surveillance
6	ALIEZI Ugwochukwu Sampson	Multiple LinearRegression using Excel and MATLAB for field verification of drilling model using data from oilfiledin the Niger Delta
7	AVBUERE Joshua Nosakhare	Economic Analysis of Developing aDomestic Gas Pipeline in Nigeria
8	EZEJI Adaora	Choke Optimization for Ageing Wells
9	FADOYENI Tunji	Development of a new mixed refrigerant composition for Optimization of the Liquefaction Process of Natural Gas
10	Hart AlaidanengiaDagogo	Optimization of TEG Gas Dehydration Process in Gas Plant
11	JINADU ShereefOlayinka	Demulsification of water in oil emulsion by microwave heating technology
12	MOBOLAJI James O.	ObafemiAwolowo University
13	MUSTAPHA Usman	Comparative Analysis of Single and Multi feed amine in a gas sweetening absorber using ASPEN HYSYS
14	OBOH Stephen O.	Developing a mathematical model and software to predict LOP and Hmin in Niger Delta Fields
15	OFFOR Chinyere Princess	Economic Analysis and Modelling of Natural Gas Utilization for Petrochemical Industry in Nigeria
16	OGUNDIMU OluwatobiOlaotan	Design Template for Flow Assurance in Shallow/Deep Offshore
17	OHAZURUIKE Lotanna Vitus	Analysis of Reservoir Transients. A wave physics approach

18	OKORO Solomon U.	Fracture with Prediction and LPM particle sizing using Artificial Intelligence
19	OLASOJI Jacob Abimbola	Scaling Tendency due to Incompatible Water and its Management
20	ONABULE LukmonOlalekan	Oil Wells Surveillance using Diagnostic plot
21	OSAJELE Odegua	Comparative Analysis of Well Trajectory Computation Methods
22	UDOGADI Uyodhuzhiniye	Well Performance Optimization using Artificial Lift
23	UFERE Peace Kalu	Development of Tubing Movement Analysis Software
24	UWOGHIREN Osayomwanbo	Evaluation of Rheological Model for Drilling Fluids Hydraulics in Deviated Wells
25	UZOAGBA Chidiebele E.J.	Practical Approach to Effective Sand Control Management

**M.Sc. in Petroleum Engineering & Project Development Project Topics for 2015**

<b>S/N</b>	<b>NAME</b>	<b>PROJECT TOPIC</b>	<b>SUPERVISORS</b>
1	Adebimpe, Ademola Isaac	Viscosity Prediction Model for Niger Delta Crude using Artificial Neural Network Approach.	Dr. S. S. Ikiensikimama
2	Agbi, Stephen Ohimai	Exploitation of Thin Oil Rims with Large Associated Gas Caps.	Prof. M.O. Onyekonwu
3	Akakuru, Chukwuchetam A.	Exploitation of Thin Oil Rims with Large Associated Gas Caps.	Wilson-Air Erayanmen/ Emeka Okafor Dr.
4	Attah, Reuben Ileanwa	Comparing the Tecchnical and Economic benefits of GTL and LNG in gas monetization	Wilson-Air Erayanmen/ Dr. S.S. Ikiensikimama
5	Aunde, Emmanuel Liambee	Determination of Appropriate Well Spacing for Gas Reservoir	Prof. M.O. Onyekonwu
6	Awujoola, AkinwonuolaOlatokunbo	Comparative Evaluation of Cascade Refrigeration in C3-MR and Philips Cascade Liquefaction Processes	Dr. S.S. Ikiensikimama/ Mr.Wilson-Air Erayanmen
7	Bamisebi, Adetiloye	Quick Permeability Determination of Niger Delta Sands using a Correlation from the LPSA and Routine Data.	Mrs Edith Akwaeke/ Prof Onyekonwu
8	Coulibaly, Ibrahim	Improving on Cascade Liquefaction Process Through Refrigeration: Thermodynamic Approach	Wilson-Air Erayanmen/ Emeka Okafor Dr.
9	Fadoyeni, Tope Stephen	Development of Software for Casing and Cement Design for Well Construction	Prof. A. Dosunmu/ Prof. Ogbonna Joel
10	Ijeh, Isijokelu Gift	Optimization of Mud Weight Prediction for Wellbore Stability Management Using 2D and 3D Models	Prof. A. Dosunmu/ Prof. Ogbonna Joel
11	Ikpeka, Princewill M.	Virtual Pipeline Technology In Nigeria: Technical and Economic Analysis	Dr. S. S. Ikiensikimama
12	Kokogho, Oyonvwike	Zero Flare: Gas Utilization Selection for Marginal Fields	Dr. S. S. Ikiensikimama/ Dr. Emeka Okafor
13	Kudayisi, Ayopo	Production Prediction and Back-Allocation for Intelligent Well	Prof. J. A. Ajienska/ Dr. Ikiensikimama

		Systems Using Composite IPR Model	
14	Mea, Affoua Corinne	Predicting and Enhancing Reservoir Performance Using Material Balance: Case Study of a Multitank Reservoir	Prof. M.O. Onyekonwu
15	Molokwu, Victor Chinemelu	Prediction of Performance Potential Using Advanced Decline Curve Analysis	Prof. M.O. Onyekonwu
16	Nwosu, Dixon	Increasing Value from Nigerian Crude Oil: Design, Technology and Economics of a Modular Refinery	Prof. Godwin Igwe/ Prof. Wumilledare
17	Oji, Enemaku Austin	Analysis and Evaluation of Downhole Vibrations during Drilling Operations in Niger Delta	Prof. Dosunmu/ Engr. F. Egbon
18	Oladunni, Oluwatobiloba	Steam Alternating CO2 Processes for Heavy Oil Recovery	Prof. M.O. Onyekonwu
19	Omodolor, Ibeh	Modelling and Simulation of CR-MR Process for Energy Efficiency	Dr. S.S. Ikiensikimama /Mr.Wilson-Air Erayanmen
20	Salako, TosinFunmi	Optimization of Natural Gas Dehydration in LNG Plants	Dr. S.S. Ikiensikimama /Dr. Emeka Okafor
21	Soumahoro, Amara	Development of Intelligent and Artificial Neural Network Models to Optimize Oil Production	Dr. S.S. Ikiensikimama
22	Sunday, Nsidibe	Software for Predicting Temperature and Pressure Profiles in Flowlines	Dr. S.S. Ikiensikimama
23	Umeh, Ubaka Stanley	Reducing Foaming and Optimizing Acid Gas Removal from Natural Gas	Wilson-Air Erayanmen/ Dr. S.S. Ikiensikimama

**M.Sc. in Petroleum Engineering & Project Development Project Topics for 2014**

S/N	NAME	PROJECT TOPIC	SUPERVISORS
1	Adepitan, AdedipoAdekunle	Investigating the Influence of Mixed Refrigerant Composition in the Liquifaction of Natural Gas	Dr. S.S. Ikiensikimama
2	Agomoh, Ndubuisi Emmanuel	The U.S. Shale Revolution: Implication for Sustainable Oil and Gas Production in Nigeria.	Engr. Anthony Abolarin
3	Ajao, TobilolaSimbiat	Optimization of Process Parameters in NGL Recovery	Dr. S.S. Ikiensikimama
4	Anyanwu, Nkechi Rita	Modeling the Effect of KCl on the Rheological Properties of Shale Contaminated Water Based Mud	Prof. Joel Ogbonna
5	Ayodeji, AtofaratiOlufunmbi	Draft Petroleum Industry Bill ("PIB")- An Economic Evaluation	Prof. A. Dosunmu
6	Balogun, OmokovieSeun	Development of a Software for Evaluating Selected Rheological Models of Drilling Fluids	Prof. Joel Ogbonna
7	Dibiagwu, Emmanuel Ugo	Well Completion Efficiency Evaluation in Horizontal Oil Wells	Prof. J.A. Ajienka
8	Eye Okoro, Grace	Enhancing Drilling Performance using Rotary Steerable Systems	Engr. Franck Egbon
9	Fadipe, Opeyemi	Modeling of Hydrate Dissociation in Natural Gas Production Flowlines	Prof. A. Dosunmu
10	Igbokwe, ChidozieLoveday	Application of Integrated Pressure Maintenance using Water Injection and Production Optimization in Mature Waterflooded Reservoir.	Prof. M.O. Onyekonwu
11	Jattoh, Emmanuel Okona	Gas-To-Liquid: Technology and Economics	Prof. M.O. Onyekonwu
12	Kambere, Mwesigwa	Best Reservoir Surveillance Practices	Prof. M.O. Onyekonwu
13	Muonagor, Chukwuemeka	Gas PVT Correlations for the Niger Delta	Dr. S. S. Ikiensikimama
14	Nelson, Mwije	Comparative Study of Different Retarders and Sensitivity in Cement Slurry Design for High Pressure High Temperature Operations.	Prof. Joel Ogbonna
15	Nambasa, Jacinta	Economic Model for Water Shut Off Treatment	Prof. Wumilledare

16	Nwala, Karl Uzodinma	Automating Well Test Interpretation (Software Development)	Prof. M.O. Onyekonwu
17	Obatoki, Oluwasetemi	Economic Analysis of Hydrate Prediction Models	Prof. Wumilledare / Dr S.S.Ikiensikimama
18	Obumse, Chukwuebuka Michael	Preliminary Evaluation of Thin Oil rims with Large Associated Gas Caps: Strategies for development and Proposed Recovery Efficiency Model	Prof. M.O. Onyekonwu
19	Ogundipe, AdeniyiAdedotun	Validation of the Economic Analysis of Liquid Loading Solutions in Gas Wells	Prof. Wumilledare
20	Obinna, Okongwu Emmanuel	Marginal Field Development Strategies for Sustainable Development: The Nigerian Case	Engr. Anthony Abolarin
21	Okorigwe, London Wome	Optimization of Natural Gas Dehydration in LNG Plant	Dr. S.S. Ikiensikimama
22	Sholola, Abraham	Assessment of Performance and Completion Efficiency of Gas Wells	Prof. J.A. Ajienka

- b) i. List the publications resulting from this programme in the last three years.  
ii. List the publications from Postgraduate Thesis/Dissertation

Mmata, B. and Onyekonwu, M.: (2014) “Estimation of Anhydrous Oil Density for Accurate Multiphase Flow Measurement: A Comparative Case Study.” Presented at 37<sup>th</sup> Nigeria Annual International Conference and Exhibition. *Proceedings Nigeria SPE 172369*

Ebona, M. and Onyekonwu, M.: (2014) “Determination of Cutoffs and Implications in Integrated Reservoir Studies.” Presented at 37<sup>th</sup> Nigeria Annual International Conference and Exhibition. *Proceedings Nigeria SPE 172436*

Ukwu, A. K. and Onyekonwu, M. O.: (2014) “Advancement in Material Balance Analysis.” Presented at 37<sup>th</sup> Nigeria Annual International Conference and Exhibition. *Proceedings Nigeria SPE 172415*

Ubani, C. E., Ikiensikimama, S. S and Onyekonwu, M.O.: (2014) “Experimental Determination of Relative Permeability from Unconsolidated Core Samples from the Niger Delta.” Presented at 37<sup>th</sup> Nigeria Annual International Conference and Exhibition. *Proceedings Nigeria SPE 172478*



- Ogolo, N. A., Isebor, J. O. and Onyekonwu M. O. (2014): “Feasibility Study of Improved Gas Recovery and Water Influx Control in Water Drive Gas Reservoirs.” Presented at 37<sup>th</sup> Nigeria Annual International Conference and Exhibition. *Proceedings Nigeria SPE 172364*
- Ogolo, N. And Onyekonwu, M. “Effect of Nanoparticles on Migrating Fines in Sand.” *Nigerian Oil Field Technology Review, June 14, Vol 2, 29-34.*
- Dosunmu, Adewale, Odagme, B.S., Fekete, Paul, Anyanwu, Chimaroke, Ekeinde, Evelyn and Odusegun, Olufela C. (2014) “Comparative Analysis of Geomechanical Parameters Using Cores, Sonic and Gamma Ray Logs for Optimal Well Design”. 172392-MS *SPE Conference Paper.*
- Ekeinde, Evelyn, Dosunmu, Adewale, Anyanwu, Chimaroke, Esop, Banny Banny and Odagme, Baridon (2014) “Rheological Characterisation of Pseudo Oil Base Mud From Local Materials”. 172348-MS *SPE Conference Paper.*
- Bassey, Akong, SPDC, Dosunmu, Adewale, University of Port Harcourt, Otutu, Friday, SPDC (2014) “An Integrated Approach to Understanding Wellbore Stability in Faulted and Depleted Sands While Drilling Challenging XYZ Well Niger Delta”. 172461-MS *SPE Conference Paper.*
- Anumadu, Ugochi Stella, Dosunmu, Adewale, Anyanwu, Chimaroke, Ekeinde, Evelyn and Odagme, Baridor (2014) “Evaluation of Safety Performance and Compliance of Workers in Selected Oil and Companies in Nigeria”. 172347-MS *SPE Conference Paper.*
- Fekete, Paul, University of Calgary, Dosunmu, Adewale, Anyanwu, Chimaroke, Odagme, Samuel B. and Ekeinde, Evelyn (2014) “Wellbore Stability Management in Weak Bedding Planes and Angle of Attack in Well Planing”. 172361-MS *SPE Conference Paper.*
- Anyanwu, Chimaroke, Dosunmu, Adewale, Fekete, Paul, Ekeinde, Evelyn and Odagme, Baridon (2013) “Analysis of Wellbore Stability in Multilateral Well Design and Construction”. 167546-MS *SPE Conference Paper.*
- Okwu, Alaekwe Ewelike, Institute of Petroleum Studies and Dosunmu, Adewale (2013) “A Risk Based Model to Quantify Differential Sticking Risk in Drilling Depleted Reservoir Formations”. 167584-MS *SPE Conference Paper.*
- Fekete, Paul O., Dosunmu, Adewale, Kuerunwa, Anthony, Ekeinde, Evelyn B., Chimaroke, Anyanwu, Baridor, Odagme S.(2013) “Wellbore Stability Management in Depleted and Low Pressure Reservoirs” 167543-MS *SPE Conference Paper.*
- Okoro Emeka Emmanuel and Adewale Dosunmu (2014) “Experimental Analysis of Shale for Evaluating Shale Drilling Fluid Interaction in Agbada Formation”. *British Journal of Applied Science & Technology, Vol.4 (35): 3879 – 4907.*

- Eme C., Dosunmu A., Anyanwu C., Okoro E.E. and Ekeinde E. (2015) “Experimental model for the determination of hydration potential of Niger-Delta shales for drilling mud design” ***SPE 178293 Conference Paper.***
- Babagbemi Adetoye.S., Adewale.Dosunmu and Oriji.Boniface.A. (2015) “Field Application of a Real-Time Integration of 3D Geo-Mechanical Model to Optimize Mud Weight across Weak Bedding Plane” ***SPE 178369 Conference Paper.***
- Mkpoikana, R., Dosunmu, A. and Eme, C. (2015) “Prevention of Shale Instability by Optimizing Drilling Fluid Performance” ***SPE 178299 Conference Paper.***
- Adewale Dosunmu, Nse-Obong Udoh, Evelyn Ekeinde, Chimaroke Anyanwu and Emeka Okoro (2015) “Economics of heat loss material design in transportation of stranded gases as hydrates” ***SPE 178397 Conference Paper.***
- Odesa David E. and Adewale Dosunmu (2015) “Analyzing Lateral and Torsional Vibrations Models and their effect on Drilling Efficiency Using PDC Bits in Directional and Multilateral Wells” ***SPE 178266 Conference Paper.***
- Adewale Dosunmu, Cosmas Orun, Chimaroke Anyanwu and Evelyn Ekeinde (2015) “Optimization of Hole Cleaning using Dynamic Real-time Cuttings Monitoring Tools” ***SPE 178373 Conference Paper.***
- Paul Fekete, Bruno. Lopez A, Adewale Dosunmu, Samuel Odagme, Adewale Sanusi and Ediri Bowe (2015) “The Effect of Wellbore Stability in Naturally Fractured Reservoir” ***SPE 178267 Conference Paper.***
- Okoro E.E., SPE, Dosunmu A., Oriji B. and Iyuke S. (2015) “Impact of Reversible Invert Emulsion Drilling Fluid Rheology on Productivity” ***SPE 178308 Conference Paper.***
- Ihejirika, B, Dosunmu, A. and Eme, C. (2015) “Performance Evaluation of Guar Gum as a Carrier Fluid for Hydraulic Fracturing” ***SPE 178297 Conference Paper.***
- Paul Fekete, Adewale Dosunmu, Richard Ekpedekumo and Daniel Ayala (2015) “Estimation of Net Pay In Unconventional Gas Reservoirs” ***SPE 178262 Conference Paper.***
- Adewale Dosunmu, Nse-Obong Udoh, Evelyn Ekeinde, Chimaroke Anyanwu, and Emeka Okoro (2015) “Theoretical Model for The Transportation of Stranded Gases as Hydrates” ***SPE 178415 Conference Paper.***
- Amiebenomo Hauwa Christiana and Adewale Dosunmu (2015): “Sand Control using Geomechanical Techniques: A case study of Niger Delta, Nigeria”. ***International Journal of Science Inventions Today***, Vol. 4, Issue 5; September – October.

## SECTION C STAFFING

### C.1 Academic Staff

**Table C1:** List of Academic Staff in the Programme

In addition to the Academic staff from the industry and IFP France, below are staff from University of Port Harcourt indicating their qualification and field of specialization.

S/No	Name(s)	Qualification	Field of Specialization	Designation	GL/STEP
1	A. Ajienka	B.Sc (Ibadan), M.Eng, Ph.D. (Uniport), R.Eng (5285)	Petroleum Production Engg/ Multiphase Fluid Flow in Pipes	Professor	CONUASS 7/10
2	M. O. Onyekonwo	B.Sc. (Ibadan), M.S, Ph.D (Stanford), R.Eng (3536)	Reservoir & Gas Engineering	Professor	CONUASS 7/10
3	A. Dosunmu	B.Sc (Ibadan), M.Eng Ph.D (Uniport),MNSE, R.Eng (3562)	Drilling & Gas Engineering	Professor	CONUASS 7/10
4	D. Appah	M.Sc Mining, Eng., Dip. Edu. (Baku) Ph.D (Uniport), MNSE, R.Eng (7961)	Formation Evaluation	Professor	CONUASS 7/10
5	O. F. Joel	B.Tech, Chem. Engg. (UST), M.Sc Eng Mgt. (Uniben), Ph.D Pet./Chem. UST)	Drilling & Environmental Engineering	Professor	CONUASS 7/4
6	O. O. Iledare	B.Sc Pet Engg. (Ibadan)MS Energy Resources Pittspurgh Ph.D Pet Econs (West Virginia)	Oil & Gas Economics, Petroleum Economics	Professor	CONUASS 7/10
7	S.S. Ikiensikimama	B.Eng., M.Eng. (Chem), M.Eng (Pet), (Uniport), Ph.D. Chem. (Unilag), R.Eng (10595)	Reservoir Engineering Petroleum Economics, Petroleum Refining	Associate Professor	CONUASS 6/4
8	B. S. Kinigoma	B.Sc (RSUST), M.Eng., (Uniport) Ph.D (Uniport)	Energy and Environmental Engineering	Senior Lecturer	CONUASS 5/7
9	A. B. Oriji	B.Eng Pet. M.Eng. Pet. (Uniport) Ph. D (Uniport)	Drilling Engineering/Drilling Fluid	Senior Lecturer	CONUASS 5/3
10	C. E. Ubani	B.Eng, M.Eng. Ph. D; Pet. Engg. (Uniport)	Formation Evaluation	Senior Lecturer	CONUASS 5/2
11	J. Amiebibama	B.Eng Pet. (Uniport), M.Eng Gas (Uniport), M.Sc. Oil & Gas Enterprise Management; P. hD (Aberdeen)	Reservoir Engineering	Lecturer I	CONUASS 4/6
12	E. Okafor	B.Eng Chem. (ESUT), M.Sc Mech.& Process Eng. (T.U.D. Germany), Ph. D. Pet. Engg. (London)	Gas Engineering	Lecturer I	CONUASS 4/5
15	U. Osokogwu	B.Eng, M.Eng. Pet.Engg (Uniport) Ph.D(in view, Cranfffield University,UK)	Production Engineering	Lecturer I	CONUASS 4/6

**Table C 2.1:** List of Courses Presently Being Taught

<b>804</b>	<b>Course Title</b>	<b>Lecturer</b>	<b>Affiliation</b>
PPD 801-1	Oil and Gas Industry Overview	Prof. A. Dosunmu	UniPort
PPD 801-2	HSE & EIA	Dr. J. N. Ugbebor	UniPort
PPD 802-3	Applied Statistics for Engineers	Prof. Nwaogazie	UniPort
PPD 802-1	Programming Skills	Pringle Egbe	Industry
PPD 801-3	Communication Skills (Writing & Presentation)	Prof. G. A. Chukwu	UniPort
PPD 802-2	Applied Mathematics for Petroleum Engineers	Prof. Adewole & Thankgod Egbe	UniPort/Industry
PPD 803-1	Fundamentals of Geosciences	Prof. Ukaegbu, Dr. A. Jones, Prof. Ehirim, Dr. Beka	UniPort
PPD 803-2	Geology Field Trip	Prof. Ukaegbu	UniPort
PPD 803-3	Reservoir Geology & Geophysics	Arnaud Torres	IFP School
PPD 804-1	Well Logging Interpretation	Francis Fusier	IFP School
PPD 804-2	Rock & Fluid Properties + Lab Visits	Edit Akwaeke/ Bella Mmata	Industry
PPD 804-3	Fundamentals of Reservoir Engineering – MBAL	Engr. Alex Neyin/ Austin Ukwu	Industry/UniPort
PPD 805-1	Well Testing & Interpretation	Prof. Onyekonwu/ Obi Ekeh	UniPort/Industry
PPD 805-2	OOGIP Calculation – Uncertainties	Bernard Michaud	IFP School
PPD 805-3	Geo-statistics & Reservoir Modelling	Bernard Michaud	IFP School
PPD 806-1	Enhanced Oil Recovery	Prof. Olafuyi/ Prince Nwachuku	UniPort
PPD 806-2	Reservoir Simulation	M. Aguilera	IFP School
PPD 806-3	Reservoir Simulation Project	M. Aguilera	IFP School
PPD 807-1	Introduction to Drilling, Drilling Field Trip & Geomechanics	C. Emuchay & Prof. Dosunmu	Industry/UniPort
PPD 807-2	Well Architecture & Casing Design	Francis Fusier	IFP School
PPD 807-3	Drilling Fluids & Cementing Operations	Patrick Somiari	Industry
PPD 808-1	Drilling Operations, Equipments & Optimisation	Francis Fusier	IFP School
PPD 808-2	Directional Drilling	Francis Fusier	IFP School

### Appraisal

- a. Adequacy in number, qualification and experience (Staff to Student Ratio is 1: 7)  
*Adequate*
- b. Effectiveness of Lecturers Very Good
- c. Professional Achievements Excellent
- d. Past and on-going research efforts in the last three years Excellent
- e. Major research output of the programme in the last three years Very Good
- f. List of academic publications in reputable journals in last three sessions Very Good

### C. 3: Non - Academic Staff

**Table C.3.1. List of Senior Technical Staff**

<b>LABORATORY STAFF LIST</b>				
<b>S/No</b>	<b>NAME OF STAFF</b>	<b>DESIGNATION</b>	<b>QUALIFICATION</b>	<b>RESPONSIBILITY</b>
1	Mr. Gbarale, John Nwika	Chief Tech	HND, AISLT	In charge of departmental laboratory
2	Mrs. Uwajingba, Ebineppre C.	Assist. Chief Tech	HND	Assisting Chief Technologist
3	Mrs. Suwari, Caroline Preteowei	Senior Technologist	HND, B.Eng, M. ENG	Assisting Asst. Chief Technologist
4	Mr. Fulalo, Lucky Donatus	Senior Technologist	HND	Assisting Asst. Chief Technologist
5	Mr. Amukwo, James Bide	Senior Technologist	HND	In charge of Gas Eng. Laboratory.
6	Mr. China Kelvin Esor	Technologist I	HND	Assisting Snr. Tech.
7	Mrs. Ndubuisi, Elizabeth C.	Technologist II	B.Eng, M.Eng	Assisting Snr. Tech.
8	Mr. Isaiah, Samuel	Technologist II	HND, B.Eng	Laboratory Supervisor
9	Elkanah, Konye Kalio	Technologist II	B. Tech	Laboratory Supervisor
10	Mr. Ojikpo, Felix	Technologist II	HND	Laboratory Supervisor
11	Mrs. Ovwromoh, Blessing	Technologist II	B.ED, M.ED	Laboratory Supervisor

**Table C 3.2 : Thesis/Dissertation Supervision**

<b>Names of Staff</b>	<b>Category</b>	<b>Number of Students Currently being Supervised</b>	<b>Total Number of Students Supervised in Last 3 Years</b>
A. Ajenka	Professor	7	23
M. O. Onyekonwu	Professor	7	25
A. Dosunmu	Professor	7	22
D. Appah	Professor	5	18
G. J. Igwe	Professor	Nil	10
O. F. Joel	Professor	6	20
O. O. Iledare	Professor	5	15

G. A. Chukwu	Professor	4	14
S. S. Ikeinsikimama	Associate Professor	3	19
B. S. Kinigoma	Senior Lecturer	5	13
A. B. Oriji	Senior Lecturer	5	12
C. E. Ubani	Senior Lecturer	4	12
J. Amiebibama	Lecturer I	4	6
E. Okafor	Lecturer I	4	11

#### C.4 : Non - Academic Staff

**Table C.4.1. List of Senior Technical Staff**

LABORATORY STAFF LIST				
S/No	NAME OF STAFF	DESIGNATION	QUALIFICATION	RESPONSIBILITY
1	Mr. Gbarale, John Nwika	Chief Tech	HND, AISLT	In charge of departmental laboratory
2	Mrs. Uwajingba, Ebineppre C.	Assist. Chief Tech	HND	Assisting Chief Technologist
3	Mrs. Suwari, Caroline Preteowei	Senior Technologist	HND, B.Eng, M. ENG	Assisting Asst. Chief Technologist
4	Mr. Fulalo, Lucky Donatus	Senior Technologist	HND	Assisting Asst. Chief Technologist
5	Mr. Amukwo, James Bide	Senior Technologist	HND	In charge of Gas Eng. Laboratory.
6	Mr. China Kelvin Esor	Technologist I	HND	Assisting Snr. Tech.
7	Mrs. Ndubuisi, Elizabeth C.	Technologist II	B.Eng, M.Eng	Assisting Snr. Tech.
8	Mr. Isaiah, Samuel	Technologist II	HND, B.Eng	Laboratory Supervisor
9	Elkanah, Konye Kalio	Technologist II	B. Tech	Laboratory Supervisor
10	Mr. Ojikpo, Felix	Technologist II	HND	Laboratory Supervisor
11	Mrs. Ovwromoh, Blessing	Technologist II	B.ED, M.ED	Laboratory Supervisor

### 3. Staff Development Programme

Describe the Staff Development Scheme by the University for upgrading and updating academic and other staff of the programme in order to enhance teaching, research and community service.

List the benefitting Staff of the programme in the last three years with specific indication of the support received.

**Policy and Practice on Staff Development:**

This is a central university policy. Provisions are made for non-terminal degree holders and technical staff to pursue further studies with pay. Applications are processed through the University Registrar for consideration of HOD and Dean’s recommendation on such candidates for University approval for study leave with (out) pay. There is strong staff development programme in the Department. The Department runs a viable graduate programme and all the young non PhDs are enrolled in the department. General University scholarships through its partners such as MacArthur Foundation, Fulbright, Alexander von Humboldt, SPDC, Schlumberger, Institute of Petroleum, IFP (France)/Elf collaboration, NDDC scholarship, PTDF scholarship, World Bank Africa Centre of Excellence in Oilfield Chemical Research, etc, are available to upgrade and update staff competence. Different oil companies and the Society of Petroleum Engineers (SPE) sponsor our staff to the SPE Annual Conference, COREN Engineering Assembly, etc. the department has largely benefited from their contributions. There is a functional university staff development programme through the University Advancement Centre (UAC). The university intensifies efforts in training its own staff within and outside the country for this unique programme.

**Table C.3.1:** List of Academic Staff Development Beneficiaries

S/No	Name(s)	Designation	Category of Staff Development	Duration/Date
1	A. Ajienka	Professor	SPE NAICE conference, Oil Flow Conference	Annual
2	M. O. Onyekonwu	Professor	SPE NAICE conference, Oil Flow Conference	Annual
3	A. Dosunmu	Professor	SPE NAICE conference, Oil Flow Conference	Annual
4	D. Appah	Professor	SPE NAICE conference, Oil Flow Conference	Annual
5	O. F. Joel	Professor	SPE NAICE conference, Oil Flow Conference	Annual
6	B. S. Kinigoma	Senior Lecturer	SPE NAICE conference, Oil Flow Conference	Annual
7	A. B. Oriji	Senior Lecturer	SPE NAICE conference, Oil Flow Conference	Annual
8	C. E. Ubani	Senior Lecturer	SPE NAICE conference, Oil Flow Conference	Annual
9	Dr. E. Okafor	Lecturer I	SPE NAICE conference, Oil Flow Conference, Study Leave, Train the Trainers	Sep 2015 – Dec 2015
10	J. Amiebibama	Lecturer I	SPE NAICE conference, Oil Flow Conference	Oct 2012 – Sept 2015
11	U. Osokogwu	Lecturer I	Study Leave – PhD , UK.	

**Table C.3.2:** List of Non - Academic Staff Development Beneficiaries

S/No.	Non – Academic Staff	Category of Staff Development	Duration/Date
1	Mrs. Caroline P. Suwari	Study Leave/ M. Eng	May 2014 – April 2016
2	Ndubuisi Elizabeth	Technical workshop/Lab Management	Sept. 2016
3	Kufre Daniel Akpan	Technical workshop/ Lab Management	Oct. 2016
4	Chimele Deborah	Technical workshop/ Lab Management	Oct. 2016
5	Loveday Tonwee	Technical workshop/ Lab Management	Oct. 2016
6	Amukwo James Bide	Technical workshop/ Lab Management	Oct. 2016
7	Samuel Isaiah	Technical workshop/ Lab Management	Oct. 2016

#### **D. PHYSICAL FACILITIES RELEVANT TO PROGRAMME**

##### **1. Academic Facilities**

- a)** Comment on the availability and adequacy of lecture theatres, class rooms, seminar rooms and others.

The Institute of Petroleum Studies and has

- i.A building
- ii.Library with relevant books and journals
- iii.Teaching aids – multimedia projectors/electronic manuals.
- iv.Petroleum software
  - Some were developed by IPS as products of applied research
  - Some acquired by IPS
- v.Workstations and computers
- vi.Accommodation for visiting Lecturers/Researchers
- vii. Laboratories facilities
- viii.Internet Facilities



- b) Comment on the availability and adequacy of laboratories, studios and clinics/wards for the programme.

The institute is expanding its facilities to include extra class rooms and research laboratories, however, she has other laboratory facilities with the department of Petroleum and Gas Engineering and also in collaboration with other third party laboratories, like Nigerian National Petroleum Research laboratory, Laser Engineering and POCEMA Limited, as well as the Engineering faculty departmental laboratories.

The laboratories resident in the departmental building are:

1. Reservoir Engineering
2. Production Operations
3. Well Engineering
4. Gas Technology

The laboratories are equipped with university funds, substantial donations from Petroleum Technology Development Fund (PTDF), Education Tax Fund (ETF) and demonstration facilities from various Service Companies, such as Schlumberger, BJ Services, Baroid. The Research Laboratory consists of computers and software for advanced petroleum engineering work. Research software in department include:- PETROCALC 3, 6,7,8; PVT/Reservoir Sim, Saphir Advanced, CSNG Optimum Casing String Design, Z-factor for Windows, etc.

The laboratories resident in department of Petroleum and Gas include:

1. Reservoir Engineering
2. Production Operations
3. Well Engineering
4. Gas Technology

#### **Core Analysis Laboratory**

The laboratory was set up to measure rock properties where are required to compute reserve and flow properties of reservoir rocks under varying pressures and temperature. Key properties measured in the laboratory include.

- Porosity
- Permeability
- Fluid saturations
- Capillary pressure curves.

### **PVT Laboratory**

The Pressure, Volume, Temperature laboratory was set up for the measurement of oil, gas and water properties as functions of pressure, volume, and temperature.

These properties provide critical information required for understand and efficient management of petroleum oil and gas reservoirs. Key parameters measured and calculated in the laboratory include;

- Bubble point pressure
- Dew point pressure
- Oil formation volume factor
- Gas formation volume factor
- Water formation volume factor
- Solution gas-oil ration, among others

### **Drilling Fluids Laboratory**

The drilling fluid laboratory was set up to measure the properties of fluids used in drilling oil and gas wells. Information obtained from the laboratory assists the petroleum engineer to design the drilling of each well for optimal technical and economic performance. The key parameters measured in the laboratory include the following.

- Mud density (weight)
- Mud viscosity.
- Gel strength
- Plastic viscosity
- Yield value
- Filtration rate
- Sand content
- Hydrogen + ion concentration (pH)
- Resistivity
- Salt contamination
- Calcium contamination

**Table D.1.2:** List of Laboratory Equipment

<b>S/NO</b>	<b>NAME</b>	<b>USES</b>
1	Gas Permeameter	Measurement of Permeability of consolidated core section
2	Porosimeter	Measurement of Porosity of consolidated core Sample
3	Core Holder for Resistivity meter	Measurement of Resistance to flow of Core Samples in an Electrical Current
4	Variable Viscometer	Measurement of Viscosity of fluids
5	High Pressure, High Tem. Filter Press	Testing Mud at Elevated Temperature and Pressure
6	Retort Kit (Oil and Water)	Solid and Liquid Content Determination
7	Core Dresser/Cutter	Cutting of Cores to the reqd. length and uniform dressing
8	Hot wire cutter	Cutting Wires to length

9	Multi Mixer	For Homogenous Mixing of Drilling Fluids Chemicals
10	Labline (Double Heater)	Heating and the Increasing of Fluid Temperature
11	Permeameter (Liquid)	Measurement of Liquid Permeability
12	Hamilton Beach Mixer	Mixing of Drilling Fluid
13	Fann Viscometer	Viscosity of fluids
14	Filter Press 4 Units	Mud Test
15	PH Meter	Determination of PH of Drilling Fluids
16	Mud Balance	Density of Drilling Fluids
17	Marsh Funnel	Density of Drilling Fluids
18	Sand Content	Measurement Oil Percentage of Sand in Mud
19	Resistivity Meter	For Measurement of Resistance to flow
20	Sand Drill Press	For Core Analysis
21	Stop Watch	Timer
22	Hydrometer	Specific Gravity Determination
23	Sieve Shaker (Motorized)	Sieving Analysis
24	Sieve Shaker (Manual)	Sieving Analysis
25	Oven	Drying
26	Air Compressor	Natural air Generating System
27	Penetrometer	Penetration of Butimenous Material
28	Lab. Distillation Unit (3 DWS-(1))	Practical Distillation of Crude Oil
29	Lab. Centrifuge Model	Centrifugal Strength
30	Hot Plate	Heating
31	Flash Point Equip	To Maintain Temp. of Petroleum Production
32	Pour Point Equip	Cooling Temp. of Petroleum Product
33	Soxhlet Extractor	Extraction Process

**Table D.1.3:** List of Chemicals for PVT Laboratory/Drilling

S/NO	QTY	DESCRIPTION	UNIT PRICE	AMOUNT
1	5	Bentonite 1 bag 25 kg	4,500.00	22,500.00
2	10	Thermometer 0 to 500 <sup>oc</sup>	3,500.00	35,000.00
3	10	Thermometer 25 <sup>oc</sup> to 1000 <sup>oc</sup>	6,000.00	60,000.00
4	4	Stop clock with alarm	12,000.00	48,000.00
5	6	Stop watch	7,000.00	42,000.00
6	10	Graduated Measuring cylinder 100ml	500.00	5,000.00
7	10	Graduated Measuring cylinder 250ml	1,000.00	10,000.00
8	10	Graduated Measuring cylinder 500ml	1,500.00	15,000.00
9	10	Graduated Measuring cylinder 1000ml	3,500.00	35,000.00
10	10	pH indicator paper (pH 1 – 14)	1,500.00	15,000.00
11	3	Specific gravity bottles 50ml	2,000.00	6,000.00
12	4	Homogenizer Mixer Kenwood	48,000.00	192,000.00
13	2	Analytical Weighing Balance AC/DC (0 to 400gms)	160,000.00	320,000.00

14	5	Sodium Acid Pyrophosphate Solution 1 lit.	4,300.00	21,500.00
15	5	Caustic Soda 500g	2,500.00	12,500.00
16	4	Sodium Bicarbonate 1kg	2,300.00	9,200.00
17	4	Soda Ash 1kg	1,800.00	7,200.00
18	3	Sodium Chloride 1kg	1,600.00	4,800.00
19	4	Lime 1kg	2,000.00	8,000.00
20	5	Calcium Carbonate 1kg	3,000.00	15,000.00
21	20	Phenolphthalein 50gm	2,000.00	40,000.00
22	6	Calcium sulphate 500g	3,500.00	21,000.00
23	5	Barium chloride 500g	2,800.00	14,000.00
24	2	Nitric Acid 2.5 lit conc.	3,500.00	7,000.00
25	4	EDTA Solution 500ml	2,000.00	8,000.00
26	4	Ammonia Buffer Solution	2,500.00	10,000.00
27	5	Potassium Chromate 30% 100mg	2,800.00	14,000.00
28	4	Sodium Carbonate 1kg	2,200.00	8,800.00
29	3	Absolute Ethanol 2.5 lit	3,000.00	9,000.00
30	3	CMC High 25kg	3,500.00	10,500.00
31	3	CMC Low 25kg	3,500.00	10,500.00
32	4	Total Hardness Indicator Tabs 10gm	6,000.00	24,000.00
33	2	Calcium Hardness Tablets 50gm	7,000.00	14,000.00
34	3	Methyl Orange Indicator Sol. 100ml	3,500.00	10,500.00
35	4	Potassium hydroxide Solution 26.87% WW	2,600.00	10,400.00
36	4	Carbon Tetrachloride 2.5 lits	12,000.00	48,000.00
37	2	Toluene 2.5 lit	6,000.00	12,000.00
38	2	Xylene Sulphur Free 2.5 lt	4,000.00	8,000.00
39	3	Sulphuric Acid 2.5 lit conc.	3,500.00	10,500.00
40	3	Sodium Hydroxide 500gm	1,800.00	5,400.00
41	4	Barium Chloride 500g	3,500.00	14,000.00
42	3	Hydrogen Peroxide 2.5 lits	4,000.00	12,000.00
43	2	Ferrous Sulphate 500g	2,500.00	5,000.00
44	12	Whatman Filter paper 12.5cm	1,800.00	21,600.00
45	12	Oil Testing Hydrometer	4,600.00	55,200.00
46	12	Burettes 0 – 50 ml English	3,500.00	42,000.00
47	10	Beakers 250ml x 10	600.00	6,000.00
48	10	Beakers 500ml x 10	800.00	8,000.00
49	10	Beakers 1000ml x 10	1,500.00	15,000.00
50	24	Retort Stand (Complete)	5,000.00	120,000.00
51	24	Bossheads	1,950.00	46,800.00
52	24	Clamps	2,000.00	48,000.00
53	12	Erlenmayer Flask 1/lit	3,800.00	45,600.00
54	12	Conical Flask 500ml	3,000.00	36,000.00
55	5	Condensers	6,000.00	30,000.00
56	2	Silver Nitrate Ample N/10/500ml	9,000.00	18,000.00
				<b>N1,702,500.00</b>

**Table D.1.4:** List of Principal Tools, Machines, instruments and Equipment Available

S/NO.	NAMES OF EQUIPMENT	FUNCTION
1.	Air Compressor	To Supply Compressed air
2.	Dean Stark Distillation Assembly	
3.	Advanced resistivity System	To determine flow resistance in an electric current
4.	Resistivity Cell	To measure resistance to flow
5.	Centrifugal Retractor W/Still	For separation of samples
6.	Programmable Automatic Rcl Meter	
7.	Core Milling Machine	For cutting of Cores
8.	Diamond Tooled Drill Press	For cutting of Cores
9.	Core Stabbing Sand	To Cut Cores to Sizes
10.	Plastic Coating Melting Pots	For Coating of Core
11.	Soil Moisture Capillary Pressure Apparatus	To Determine Moisture Content
12.	Soil Moisture Cell	To Determine Moisture Content
13.	Manually-Operated Gas Porosimeter	To Determine Porosity of Samples
14.	Manually-Operated Liquid Permeameter	To Determine the Permeability of Samples
15.	Manually-Operated Gas Permeameter	To Determine the Gas
16.	CO <sub>2</sub> /Toluene Core Cleaner	For Cleaning of Core
17.	Gas Chromatograph	To Detect Hydrocarbons and Gases.
18.	Analog Meter	
19.	Gyroscopic Unit	

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## 2. Office Accommodation

- a) Comment on the office accommodation available for academic staff, stating the size of accommodation, list of furniture items and how many lecturers share the rooms.

Office accommodation for each lecturer is spacious, well ventilated and provided with fan and air-conditioner. Each staff has his own computer and accessories, table, chairs, cabinet and bookshelf. The office accommodation conforms to NUC guidelines. There is guest house for visiting lecturers and decent hostel accommodation for students.

- b) Complete the table indicating the disposition of offices for staff.

<b>RANK</b>	<b>SINGLE OCCUPANCY</b>	<b>SHARED BY 2</b>	<b>SHARED BY 3</b>	<b>SHARED BY 4 OR MORE</b>	<b>TOTAL OFFICES</b>
<b>Professors</b>	1	nil	nil	nil	
<b>Associate Prof/Readers</b>	1	nil	nil	nil	
<b>Senior Lecturers</b>	1	nil	nil	nil	
<b>Lecturer 1</b>	1	nil	nil	nil	

### 3. Appraisal of Facilities

Appraise other existing facilities in terms of quality and quantity for the current and projected enrolment period e.g., PG common room and offices.

*The quality of facilities are excellent and compares with global standards.*

### E. LIBRARY FACILITIES RELEVANT TO PROGRAMME

#### 1. 1) Physical Library Holdings for the programme:

- (i) Number of Textbooks .....765.....
- (ii) Number. of Academic Journals .....17.....
- (iii) Number of other Periodicals (e.g. Newsletters, News Bulletin, etc)
- (iv) Number of Monograms/off prints .....

11. Currency of materials

#### 2. e-library

- (i) Subscription/ Registration to e-books and e-journals
- (ii) Accessibility of subscribed e-resources

#### 3. Library Space (m<sup>2</sup>):

- (i) For Books: .....
- (ii) For Reading: .....

#### a) Library Seating Capacity:

- (iii) Seating Capacity for Users: .....
- (iv) Others (specify): .....

**F. FUNDING**

Has excellent funding opportunities. Major funder comes from Total Exploration and Production Nigeria Limited (TEPNG). Benefits from the World bank grant of the Africa Centre of Excellence, Petroleum Technology Development Fund (PTDF), Nigerian Content Development Management Board (NCDMB) and sponsorship of students.

**1. Recurrent Expenditure**

Complete the table for availability of funds for the past three years

Category	Year One		Year Two		Year Three	
	Provision	Expenditure	Provision	Expenditure	Provision	Expenditure
1. Staff Remuneration	183,234,630	179,751,041	175,433,000	161,005,887	157,889,700	NOT AVAILABLE
2. Staff Development						
3. Library materials						
4. Laboratory consumables						
5. Studio consumables						
6. Office/classroom soft Furniture						
7. Research						
8. Maintenance						
9. Supplies/Training consumables						
10. Vehicle maintenance						
11. Utilities services						
12. Others (specify)						

**2. Capital Expenditure**

Complete the table for availability of funds for the past three years.

Category	Year One		Year Two		Year Three	
	Provision	Expenditure	Provision	Expenditure	Provision	Expenditure
1. Expansion of physical facilities.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
a) Classroom/lecture theatre						
b) ICT Facilities						
c) Library						
2. Machines &						

Equipment 3. Others (specify)						
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### 3. Assets and Liabilities

State below the current Assets and Liabilities with regard to the programme.

### 4. Financial Appraisal

Appraise the adequacy of the operating Funds for the programme.  
For recurrent expenditure, also indicate the expenditure per annum per student.

### G. EMPLOYMENT INDEX

Employers' rating of graduates of the Programme

Year of Graduation	Percent that is self-employed	Percent that got jobs within 1 year	Summary of Employers' Remarks.
2004	-	65	Very Productive Staff
2005	-	66	Very Productive Staff
2006	-	73	Very Productive Staff
2007	-	73	Very Productive Staff
2008	-	65	Very Productive Staff
2009	-	95	Very Productive Staff
2010	-	100	Very Productive Staff
2011	-	95	Very Productive Staff
2012	-	80	Very Productive Staff
2013	=	68	Very Productive Staff

### H. STATE THE CONTRIBUTIONS OF THE ALUMNI OF THE PROGRAMME.

Alumni of the programme contributed generously towards building a 45-room students hostel for students of the Institute of Petroleum Studies (IPS), between 2015 and 2016. The hostel has since been occupied and has saved the Institute money. The alumni are also extensively involved in reach-out programmes e.g., career pep talks, involving current students enrolled in the programme.



**I. Name of officer completing the Form:**

.....  
.....

**Rank:** .....  
.....

**Signature:** .....