



COVENANT UNIVERSITY

ACADEMIC HANDBOOK

For

THE DEPARTMENT of CHEMICAL ENGINEERING

COLLEGE OF ENGINEERING

2021-2026

COVENANT UNIVERSITY

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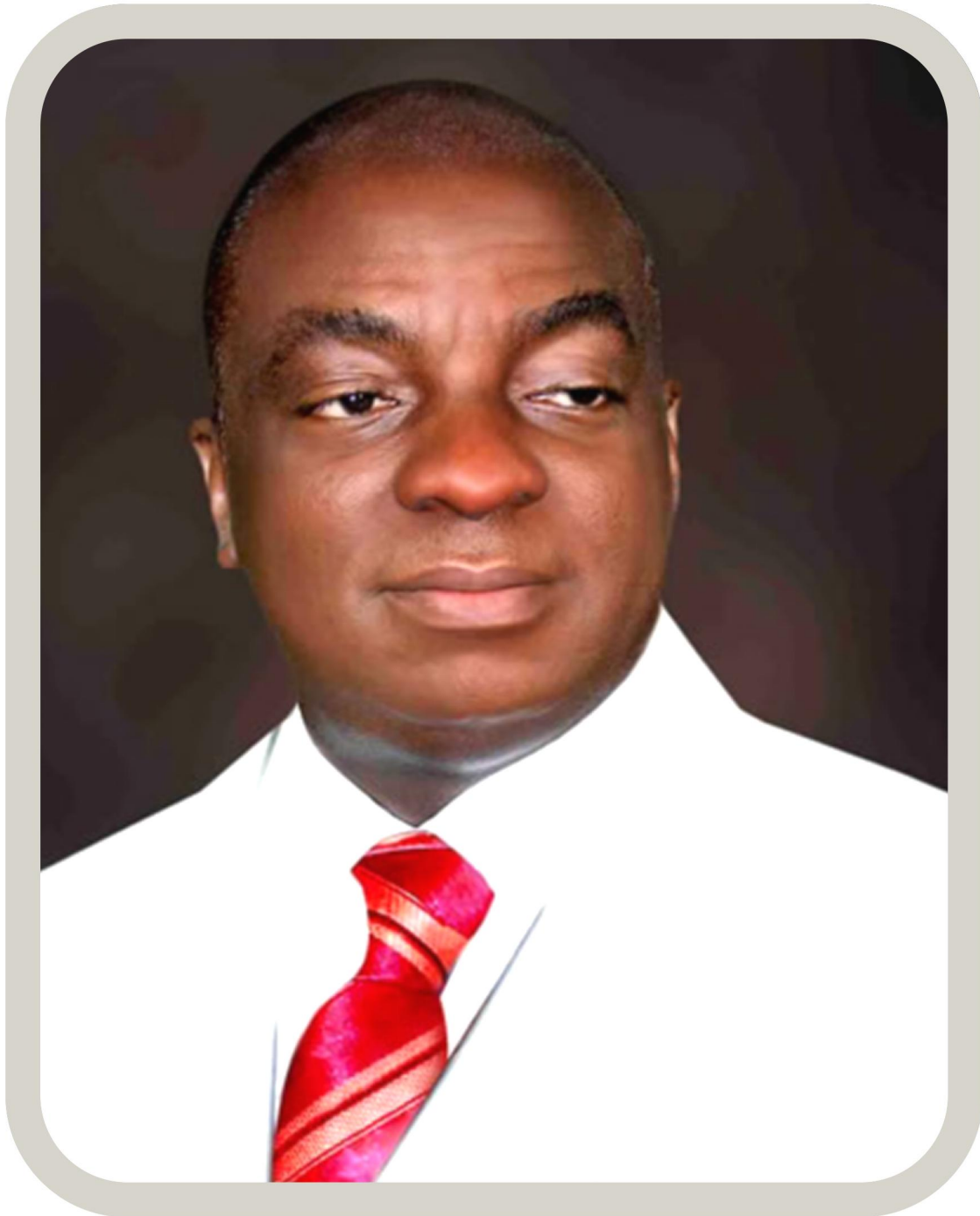
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WELCOME MESSAGE FROM THE CHANCELLOR

“Seest thou a man diligent in his business? He shall stand before kings; he shall not stand before mean men”. (Proverbs 22:29 - KJV)

Covenant University is a Royal Academy birthed on the platform of a compelling vision to raise a new generation of leaders, especially for the Continent of Africa. It is indeed the birthplace of "kings and queens". I do believe that the greatest need of the 21st Century is that of Leadership, whereas leadership is not an endowment, it is a commitment to the future that makes a leader.

Our mission at Covenant University is to develop the man who will, in turn, develop his world. We see character as the anchor of leadership. Ability makes a manager, but integrity makes a leader.

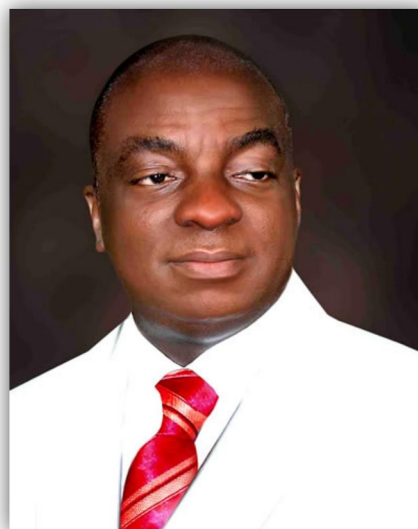
Our experience over the last twelve years strongly indicates the great potential we have as a University in instituting a world class learning context that is rich in educational opportunities, research and scholarship. The heart-warming positive feedback from employers on the excellent and exemplary conducts of our graduates is indeed, one of the many concrete validations of the University's unique vision. We are however, looking ahead to the future we envision in driving excellence across all our programmes by ensuring that the stage is well anchored to actualize our set vision of raising a new generation of leaders.

Only a serious approach guarantees a glorious result. There is no short cut to any place worth going. Edmund Hilary, the first man that conquered Mount Everest, said, "It is not the mountain that we conquered but ourselves ... Covenant University is indeed a place where you are taught how to conquer yourself as part of the process of becoming outstanding in life. Therefore, if leadership and excellence are your goal, then Covenant University is the right place for you.

Starting from the 2013/2014 Academic Session, every student at the University shall be made to undertake at least a Certificate Diploma Course in Leadership in addition to his/her major discipline.

Therefore, the currency of the curriculum and the inclusion of Leadership Certificate will be one of the unique selling points

You are welcome to Covenant University, a Royal Academy, a Leadership Training Varsity.



Dr. David O. Oyedepo

Chancellor, Covenant University

VICE-CHANCELLOR'S WELCOME



It is my great delight to welcome you to Covenant University where “*Eaglets*” are nurtured into “*Eagles*” as transformational leaders in their respective vocations and the society. Covenant is a vision-birther University with a compelling vision to raise a new generation of leaders in all fields of human endeavour, noting that leadership is a fundamental challenge to the advancement and development of Africa. We are on a mission to change the educational landscape of Africa through our departure philosophy; to create knowledge and restore the dignity of the black man through our curricula and pedagogy that are designed to be life-applicable. Our programmes are unique and in consonance with the unique products that we produce.

In our pursuit of this vision, our core values are the crucibles of our quality assurance processes in teaching, research, and community service. These core values—Spirituality, Possibility Mentality, Capacity Building, Integrity, Responsibility, Diligence, and Sacrifice—are the building blocks of our enterprise.

Further to our drive towards producing employable and industry ready graduates, our students continue to enrich their knowledge-base with respect to industry expectations through interaction with the Industry offered by the Town and Gown seminar series. Our custom built programmes—Entrepreneurial Development Studies (EDS), Total Man Concept (TMC) and Towards a Total Graduate (TTG), equip our students with unique skills to navigate life and becoming a total man.

In making the decision to pursue your undergraduate education at Covenant, you have chosen a distinctive institution with a rich spiritual heritage and academic prowess. Within a short period of 18 years, Covenant has demonstrated great potentials in instituting a world-class learning context that is rich in educational opportunities, research and scholarship. As a university acclaimed to be scholarly vibrant; with attestation of eight different rankings of Times Higher Education (THE) in one year, it is our desire to share and disseminate latest knowledge and ideas that are essential in driving the future of society and humanity.

During your time here, I encourage you to take an active role in your own academics, and understand that education at Covenant is as much about character, values, morals, and social responsibility as it is about intellectual development and critical thinking. Take the time to reflect on your total development as you pursue your dreams aspirations and vision. We will assist and support you in the process of becoming what God has destined for you. In doing so, we will also challenge you to stretch your mind, heart and spirit.

This Handbook contains vital information and instructions that will help you to enjoy a most rewarding academic journey through your willing and delightful obedience.

Prof. Abiodun H. Adebayo
Vice-Chancellor

WELCOME NOTE FROM THE HEAD OF DEPARTMENT

Welcome to the Department of Chemical Engineering. The Department contributes to the mission of the University in training qualified engineers with the requisite skills and technical know-how needed to exploit the abundant natural resources and manpower for the growing industries of the nation, solve complex technological problems of modern society, the attainment of Vision 10:2022 and the Sustainable Development Goals (SDGs). The major areas of study include Chemical Processing, Thermodynamics, Bio-Chemical and Kinetics & Reaction Engineering amongst others.

The Chemical Engineering Department offers degree programmes leading to the award of B.Eng, M.Eng. and Ph.D. in Chemical Engineering. The Department is adequately staffed with qualified and experienced faculty and staff to impart quality education on students. Also, there are well-equipped laboratories with the state-of-the-art facilities including batch reactor, continuous stirred tank reactor, fluid flow equipment, distillation and absorption columns, cooling tower amongst others that will help place our graduates on the same pedestal as their counterparts in the developed countries.

The HOD's Profile



Engr. Professor Vincent E. Efevbokhan is a Professor in the Department of Chemical Engineering, College of Engineering, Covenant University, Ota, Ogun State. He holds a B.Sc Tech, M.Eng, and Ph.D. degrees in Chemical Engineering from reputable universities in Nigeria. His research interests include Energy and Renewable Energy-biodiesel, biogas, bioethanol, Product formulations (De-emulsifiers for crude oil treatment; Corrosion inhibitors; Cosmetic products; Car care products; Soaps and detergents; Yoghurt drink etc); Environmental pollution control (Bio-remediation). He is a Corporate member, Nigerian Society of Chemical Engineers (NSChE), Corporate member, Nigerian Society of Engineers.(NSE) and a Registered Engineer, Council for the Regulation of Engineering in Nigeria.(COREN). Prof. **Efevbokhan** reviews for international journals. He has successfully supervised numerous undergraduate and

graduate projects including Masters dissertations and Ph.D theses. Prof. **Efevbokhan** has served in different capacities in the Department as level adviser, examination officer, Chairperson Departmental laboratory committee, Member, University Equipment Purchasing Committee, Prof. **Efevbokhan** is an astute researcher and has more than seventy published high-impact, top quality peer-reviewed articles in international, Scopus and ISI indexed journals.



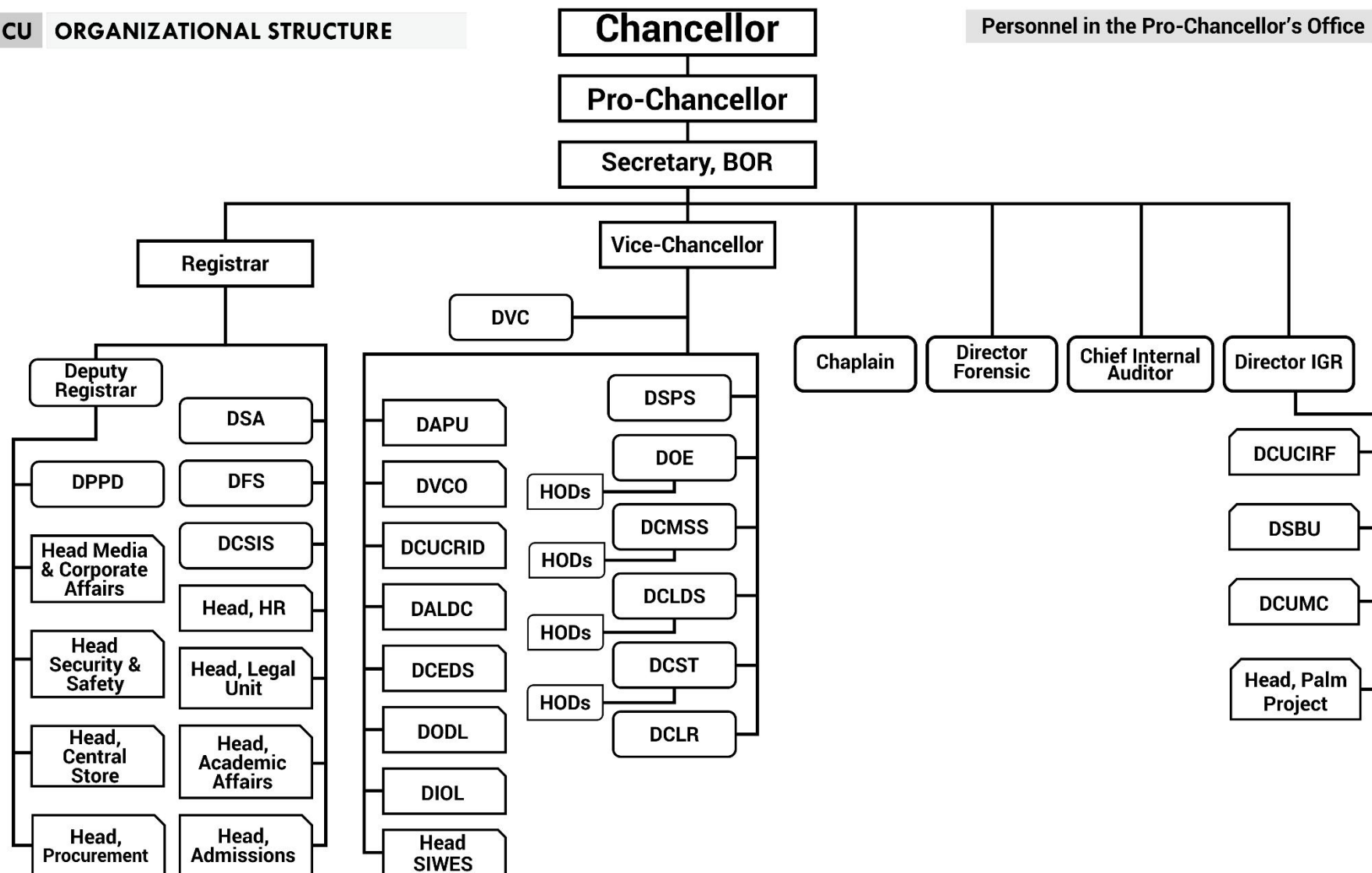
Covenant University, African Leadership Development Centre



Students Performing Experimental Work in the Laboratory



Senate Building



1 ACADEMIC CONTENT

1.1 PHILOSOPHY AND OBJECTIVES OF THE PROGRAMME

1.1.1 VISION

The Department aspires to a world-class status by the year 2022, with her products well versed, not only in the theoretical principles but also in the practical applications of the discipline.

1.1.2 MISSION

To create knowledge and restore the dignity of the Black man via a Human Development Total Man Concept-driven curriculum employing innovative, leading edge teaching and learning methods, research and professional services that promote integrated, life-applicable, life-transforming education relevant to the context of Science, Technology and Human Capacity Building

1.1.3 PHILOSOPHY

Nigeria is becoming an industrialized nation. Many industries are either oil-based or gas-based. Though the chemical and food industry is still in its infancy in Nigeria, especially in the area of local content, a number of industries are springing up utilizing the various agro and mineral raw materials available in the country. Internationally, there is a projection of a dearth of qualified chemical engineers in the next decade. The chemical engineering programme in Covenant University aims at training qualified engineers that can operate and manage industries in Nigeria and fill the international vacuum in the very near future. The training is to produce graduates, who are producers of goods and services, and who, upon graduation, are functional engineers in industries, researchers, scholars in academia, or successful entrepreneurs in chemical engineering-propelled ventures. The training is designed to place the graduates on the leading edge of technology.

The Chemical Engineering programme is designed to train graduates who are producers rather than mere consumers. The programme emphasizes not only the processing of materials in general but also the optimal utilization of locally available raw materials for the production of goods for local consumption and export. This is in support of a major target of the Sustainable Development Goals which aim to end poverty, protect the planet, and bring peace and prosperity to all by the year 2030. For this purpose, the nation must have a very vibrant and sustainable industrial sector that will provide gainful and sustainable employment for the citizens as well as provide the goods and services for sustainable modern societies. It is expected that the Chemical Engineers from the Department will play a major role in achieving some or all the 17 SDGs. Thus the programme is designed to address the following industrial sectors namely:

- i. Renewable Energy Systems and Products
- ii. Wood and Wood Products;
- iii. Pulp, Paper and Paper products, Printing and Publishing;
- iv. Domestic and Industrial Rubber, Plastic and Foam;
- v. Non-Metallic Minerals Products;
- vi. Textile, Wearing Apparel, Leather and Leather Products;
- vii. Chemicals and Pharmaceuticals;
- viii. Motor Vehicles and Miscellaneous;
- ix. Food Beverages and Allied Products;

- x. Base Metals, Iron and Steel, and Engineering Services; and
- xi. Electrical and Electronics.

The course contents address subjects of herbicides, fungicides and pesticides which are critical for the agricultural (especially food production) programme emphasized in the vision 2030 as well as the Sustainable Development Goals. Similarly, foundation technologies for drug manufacturing are taught in the Biochemical Engineering module of the programme.

1.2 AIM AND OBJECTIVES

1.2.1 AIM

To train graduates with desirable chemical engineering skills to design, produce and process locally available raw materials into value added products. This will provide a catalyst for industrial revolution which will create industries and employment opportunities our growing population.

1.2.2 OBJECTIVES

The specific objectives are to:

- i. Put in place curriculum that covers dynamic engineering principles.
- ii. Empower our students with necessary skills to create value and bring solutions needed to tackle challenges in the chemical and allied industries.
- iii. Make our graduates foremost Chemical engineers in the country and internationally through well-designed competency-based training programmes of teaching and research.
- iv. Facilitate acquisition of practical work experience in the industries.
- v. Inculcate discipline in research and development to chemical engineering graduates.

1.3 THE CURRICULUM

1.3.1 GRADUATING REQUIREMENTS

To graduate from the 5-year Bachelor Engineering (B.Eng.) degree programme in Chemical Engineering, each student must successfully complete a total of 235 Credit Units as shown in the Table 1.1:

Table 1.1: Graduating Required Units for B.Eng. Chemical Engineering Programme

Level	Core Courses	University Courses	General Courses	Elective Courses	SWEP/ SIWES	Total
100	35	4	10	0	0	49
200	39	4	6	0	0	49
300	44	4	0	0	0	48
400	23	2	0	0	18	43
500	34	6	0	6	0	46
Total	175	20	16	6	18	235

The courses and course contents that a student of Chemical Engineering department must offer successively before the student can graduate with B.Eng Chemical Engineering from the Department are discussed in Table 1.2 (i – v).

Table 1.2(i) : 100 Level Engineering Courses by Semesters

100 LEVEL ENGINEERING										
	ALPHA SEMESTER					OMEGA SEMESTER				
Core Courses	Course Code	Course Title	Status	Units	Pre-Requisite	Course Code	Course Title	Status	Units	Pre-Requisite
	GEC117	Technical Drawing	C	1		MAT121	Mathematics V: Calculus	C	3	
	MAT111	Mathematics I: Algebra	C	3		MAT122	Mathematics VI: Vector Algebra	C	3	
	MAT112	Mathematics II: Trigonometry and Geometry	C	3		PHY121	Electricity and Magnetism	C	2	
	PHY111	Mechanics and Properties of Matter	C	3		PHY122	Atomic and Nuclear Physics	C	2	
	PHY112	Heat, Sound and Optics	C	3		PHY129	Physics Practical II	C	1	
	PHY119	Physics Practical I	C	1		CHM121	General Organic Chemistry	C	3	
	CHM111	General Physical Chemistry	C	3		CHM122	General Inorganic Chemistry	C	2	
	CHM119	General Chemistry Practical I	C	1		CHM129	General Chemistry Practical II	C	1	
		Sub-Total		18			Sub-Total		17	
University Courses	EDS111	Entrepreneurial Development Studies I	C	1		EDS121	Entrepreneurial Development Studies II	C	1	
	TMC111	Total Man Concept I	C	1		TMC121	Total Man Concept II	C	1	
	TMC112	Total Man Concept – Sports	C	0		TMC122	Total Man Concept – Sports	C	0	
		Sub-Total		2			Sub-Total		2	
General Courses	CST111	Use of Library, Study Skills and Information Communication Technology I	C	2		CST121	Use of Library, Study Skills and Information Communication Technology II	C	2	
	GST111	Communication in English I	C	2		GST121	Communication in English II	C	2	
						GST122	Communication in French	C	2	
		Sub-Total		4			Sub-Total		6	
		TOTAL		24			TOTAL		25	49

Table 1.2(ii): 200 Level Engineering Courses by Semesters

200 LEVEL ENGINEERING

	ALPHA SEMESTER					OMEGA SEMESTER				
	Course Code	Course Title	Status	Units	Pre-Requisite	Course Code	Course Title	Status	Units	Pre-Requisite
Core Courses	CHE211	Introduction to Chemical Engineering I	C	1		CHE221	Introduction to Chemical Engineering II	C	2	
	GEC210	Engineering Mathematics I	C	3	MAT111, MAT112	GEC220	Engineering Mathematics II	C	3	MAT121 MAT122
	GEC211	Fundamentals of Electrical Engineering I	C	2		GEC221	Thermodynamics	C	3	
	GEC212	Engineering Graphics	C	2	GEC117	GEC222	Computer Aided Design & Manufacture	C	2	
	GEC213	Material Science & Engineering	C	2		GEC223	Fluid Mechanics	C	3	
	GEC214	Applied Mechanics	C	4		GEC224	Strength of Materials	C	3	
	GEC215	Applied Computer Programming I	C	2	CST111	GEC225	Applied Computer Programming II	C	1	GEC215
	GEC216	General Engineering Laboratory I	C	1		GEC226	General Engineering Laboratory II	C	1	GEC216
	GEC217	Engineer-In-Society	C	1		GEC228	Fundamentals of Electrical Engineering II	C	2	GEC211
	GEC218	Workshop Technology	C	2		GEC229	Student Workshop Experience Program (SWEP) *See 400 Level Omega	C	0	
		Sub-Total		20			Sub-Total		19	
University Courses	EDS211	Entrepreneurial Development Studies III	C	1	EDS111	EDS221	Entrepreneurial Development Studies IV	C	1	EDS121
	TMC211	Total Man Concept III	C	1	TMC111	TMC221	Total Man Concept IV	C	1	TMC121
	TMC212	Total Man Concept – Sports	C	0	TMC112	TMC222	Total Man Concept – Sports	C	0	TMC122
		Sub-Total		2			Sub-Total		2	
General Courses	GST211	Logic, Philosophy and Human Existence	C	2	GST111	GST221	Nigerian People and Culture	C	2	GST121
						GST222	Peace Studies and Conflict Resolution	C	2	GST121 GST122
		Sub-Total		2			Sub-Total		4	
		TOTAL		24			TOTAL		25	49

NOTE:

*GEC229 (SWEP – done during the long vacation is registered as 6 Units in 400 Omega Semester and used in CGPA computation

Table 1.2(iii): 300 Level Chemical Engineering Courses by Semesters

300 LEVEL ENGINEERING										
Core Courses	ALPHA SEMESTER					OMEGA SEMESTER				
	Course Code	Course Title	Status	Units	Pre-Requisite	Course Code	Course Title	Status	Units	Pre- Requisite
	GEC310	Engineering Mathematics III	C	3	GEC210	GEC320	Engineering Mathematics IV	C	3	GEC220
	CHE331	Chemical Process Engineering Analysis I	C	2		GEC324	Technical Communication	C	1	
	CHE332	Chemical Engineering Practical I	C	2		GEC321	Engineering Economics	C	3	
	CHE333	Chemical Engineering Transport Phenomenal I	C	4	GEC223	CHE340	Separation Processes II	C	3	
	CHE315	Chemical Reaction Kinetics	C	3		CHE341	Particle Technology	C	2	
	CHE334	Process Modeling and Simulation	C	2		CHE342	Chemical Engineering Practical II	C	3	
	CHE335	Separation Processes I	C	4		CHE324	Introduction to Biochemical Engineering	C	3	
	CHE336	Process Instrumentation	C	2		CHE345	Chemical Engineering Process Thermodynamics I	C	3	
						CHE346	Reaction Engineering I	C	2	CHE315
						GEC329	SIWES I*	C	0	
		Sub-Total		22			Sub-Total		22	44
University Courses	EDS311	Entrepreneurial Development Studies V	C	1	EDS211	EDS321	Entrepreneurial Development Studies VI	C	1	EDS321
	TMC311	Total Man Concept V	C	1	TMC211	TMC321	Total Man Concept VI	C	1	TMC221
	TMC312	Total Man Concept – Sports	C	0	TMC212	TMC322	Total Man Concept – Sports	C	0	TMC222
		Sub-Total		2			Sub-Total		2	
		TOTAL		24			TOTAL		24	46

NOTE: * GEC329 (SIWES I – done during the long vacation is registered as 6 Units in 400 Omega Semester and used in CGPA computation

Table 1.2(iv): 400 Level Chemical Engineering Courses by Semesters

400 LEVEL ENGINEERING										
ALPHA SEMESTER						OMEGA SEMESTER				
Core Courses	Course Code	Course Title	Status	Units	Pre-Requisite	Course Code	Course Title	Status	Units	Pre-Requisite
	GEC410	Engineering Statistics	C	3		GEC429	Student Industrial Work Experience Scheme SIWES [2]	C	6	
	CHE418	Chemical Process Engineering Analysis II	C	2	CHE331					
	CHE432	Separation Processes III	C	3						
	CHE437	Chemical Engineering Laboratory III	C	2	CHE342					
	CHE433	Transport Phenomena II	C	4						
	CHE434	Fundamentals of Plant Design I	C	2						
	CHE435	Chemical Engineering Process Thermodynamics II	C	2	CHE345					
	CHE436	Reaction Engineering II	C	2	CHE346					
	CHE417	Polymer Process Engineering	C	2						
						GEC427	SWEP	C	6	
						GEC428	SIWES-1	C	6	GEC427
		Sub-Total		22			Sub-Total		18	41
University Courses	EDS411	Entrepreneurial Development Studies VII	C	1	EDS311					
	TMC411	Total Man Concept VII	C	1	TMC311					
	TMC412	Total Man Concept – Sports	C	0	TMC312					
				2						2
		TOTAL		24			Total		18	43

Table 1.2(v): 500 Level Chemical Engineering Courses by Semesters

500 LEVEL ENGINEERING										
Core Courses	ALPHA SEMESTER					OMEGA SEMESTER				
	Course Code	Course Title	Status	Units	Pre-Requisite	Course Code	Course Title	Status	Units	Pre-Requisite
	GEC517	Engineering Law	C	2		GEC527	Engineering Management	C	3	
	CHE531	Biochemical Engineering Processes	C	3		CHE525	Polymer Science and Technology	C	3	
	CHE532	Process Dynamics and Control	C	4	CHE336	CHE544	Chemical Engineering Process Optimization	C	3	
	CHE533	Process Design in Chemical Engineering I	C	3		CHE543	Process Design in Chemical Engineering II	C	2	CHE533
	CHE534	Environmental Engineering	C	3		CHE549	Chemical Engineering Research Project II	C	6	CHE549
	CHE536	Fundamentals of Plant Design II	C	2	CHE434					
	CHE539	Chemical Engineering Research Project I	C	0						
		Sub-Total		17			Sub-Total		17	34
ELECTIVES	Note: Select ONLY 3 credit units from these Electives for each semester									
	CHE514	Corrosion of Metals and Alloys	E	3		CHE527	Sugar Technology	E	3	
	CHE515	Industrial Chemical Processes	E	3		CHE528	Petroleum Refining and Petrochemical Technology	E	3	
	CHE530	Pulp and Paper Processing Technology	E	3		CHE542	Reservoir Engineering	E	3	
		Sub-Total		3			Sub-Total		3	6
University Courses	EDS512	Cost Engineering	C	2	EDS512	EDS522	Engineering Valuation	C	2	
	TMC511	Total Man Concept IX	C	1	TMC211	TMC521	Total Man Concept X	C	1	
	TMC512	Total Man Concept – Sports	C	0	TMC512	TMC522	Total Man Concept – Sports	C	0	
		Sub-Total		3			Sub-Total		3	6
		TOTAL		23			TOTAL		23	46

**(CHE542) Reservoir Engineering is a compulsory elective course.

Detailed Course Description

Alpha Semester – 100 Level

GEC117: Technical Drawing I

(1 Unit: PH 45)

Introduction to engineering drawing as a means of communication, use of drawing instruments, drawing paper format, types of lines and their uses in engineering drawing, plane geometry, circles and tangents, conic sections, Loci (cycloid, epicycloids, hypocycloid, involute, Archimedean spiral, Eclipse, hyperbola, parabola, including approximate method), theory of projection, parallel projection, orthographic projection, axonometric projection, perspective projection multiview representation, 1st and 3rd angle projection, isometric drawings, oblique drawings, Freehand sketching.

MAT111: Mathematics I

(3 Units: LH 45)

Algebra of set theory: Definition of concepts, laws of algebra of sets, Venn diagram and application. Real Numbers: Rational numbers, theory of surds, sequences and series (including AGP), binomial theorem, theory of quadratic, cubic and quartic equations, indices and logarithms, mathematical induction, partial fractions, theory of equations, inequalities and polynomials (including factor and remainder theorems). Complex Numbers: Algebra of complex numbers, Argand diagram, multiplication and division of numbers in polar form, nth root of unity, and DeMoivre's theorem, expansion of $\sin n\theta$, $\cos n\theta$, $\tan n\theta$.

MAT112: Mathematics II

(3 Units: LH 45)

Trigonometry and analytic geometry in (2-D & 3-D): Elements of trigonometry, circular measure, elementary treatment of circles, coordinate geometry: straight lines in (2B-D); plans. Functions and relations: permutation and algebra of functions, Binary operations, Permutations and combinations, elementary treatment of logic.

PHY111: Mechanics and Properties of Matter

(3 Units: LH 45)

Units and dimensions, scalars and vectors, particle kinematics, Newton's laws, friction, work, energy, centre of mass, simple harmonic motion, rigid body dynamics, Kepler's laws, pressure in fluids, intermolecular forces, Hooke's law, Young's modulus, fluid flow streamline turbulence, Stokes's law, surface tension.

PHY112: Heat, Sound and Optics

(3 Units: LH 45)

Temperature, thermometers, heat transfer, PVT –surfaces, Kinetic theory, first and second laws of thermodynamic, transverse and longitudinal waves, standing waves, intensity, beats. Doppler Effect, Electromagnetic spectrum. Huygen's principle, images formed by a single surface thin lenses, aberrations, the eye, optical instruments, interface, single slit, diffraction grating, polarization, Malus' law.

PHY119: Physics Practical I

(1 Unit: PH 45)

A selection from the following experiments use of measuring instruments, viscosity, surface tension oscillations about an equilibrium position, Hooke's law, moment of inertia, focal lengths of lenses, refractive index, optical instruments, the sonometer heat capacity, volume expansion and latent heat.

CHM111: General Physical Chemistry

(3 Units: LH 45)

Historical development of the atom: atoms, Dalton's atomic theory, atomic masses. Fundamental particles of the atom atomic structure. Modern electronic theory of atoms. Periodicity of the elements. Stoichiometry mole concept, chemical formulas, equations and

calculations. State of matter; gas, liquid and solid. Chemical energetics and thermochemistry. Chemical kinetics, equilibria and electrochemistry.

CHM119: General Chemistry Practical

(1 Unit: PH 45)

Quantitative inorganic and organic analysis for elements in Groups I, II, IIIA, IIIB, IV. Chemical analysis for functional groups: acidic, ketonic carboxylic, etc.

EDS111: Entrepreneurial Development Studies I

(1 Unit: LH 15)

Approach: Resource persons will be drawn from the academics and industries as a way of bridging the gap between town and gown. Students are exposed to actual industrial environment.

Objective: -This is a foundation course that is aimed at imparting entrepreneurial orientation and skill to the students.

Topics covered include the following: Some basic concepts and definitions of Entrepreneurship. Entrepreneurial equation, historical background of Entrepreneurship. Definition of Entrepreneurship and Entrepreneur. Characteristics of Entrepreneurship. Qualities of successful entrepreneur, Entrepreneurship and Economic growth, Environment of Entrepreneur Development, what entrepreneurship involves, Elements of Entrepreneurship, Components of entrepreneurial ventures, Fundamental changes that stimulate entrepreneurship, The Entrepreneurial process, Benefits of being an Entrepreneur, Contributions of memorable early Entrepreneurs, Time Management. Students are also expected to submit a term paper on Entrepreneurship from some selected areas of SMEs (Small and Medium Scale Enterprise) operations.

TMC111: Total Man Concept I

(1 Unit: LH 15)

This course provides explanatory constructs for TMC as a course of study in understanding life and development of a total man. It provides a basic introduction to the fundamental aspects of the Total Man Concept, exploring life from the biblical, philosophical and experiential perspectives. It also sets out to explore the purpose and pursuit of life with a view to identifying the foundational anchors of life, the place of visions, dreams, goals and the foundational principles for making the most of life.

TMC112 - Total Man Concept – Sports I

(0 Unit)

Jogging: This helps in many ways, our focus here on the benefit of jogging is for physical fitness that reduced risk of Osteoporosis. Osteoporosis is the condition when the bones become increasingly porous and brittle. It can result to bone fractures and deformities.

Aerobics exercise: This is said to be any activity that can get the heart rate going and keeps it at a sustained rate over a period of time e.g. twenty minutes. An aerobic activity helps to increase cardiorespiratory fitness, which is one of the fine essential components of physical fitness. Being aerobically fit you can feel it as you go about.

Swimming (safety measures): the importance of swimming lessons for water safety cannot be overstated. Everyone and especially young people should be able to swim. Swimming has a lot of benefits which include health benefit, psychological benefit, most importantly safety benefit which involved discipline that is adhering to the rules governing swimming and learning of basic skills

GST111: The Use of English (Part 1)

(2 Units: LH 30)

This course focuses on developing effective study skills, the library and other information sources, communication skills, listening and speaking skills.

CST111: Use of Library, Study Skills and Information Communication Technology I
(2 Units: LH 15, PH 30)

Identification of PC parts and peripheral devices: functions, applications, and how to use them. Safety precautions. Procedure for booting a PC. Filing system: directory, sub-directory, file, path, and how to locate them. Word processing: principle of operation, application, demonstration and practical hands-on exercises in word processing using a popular word processing package. Internet: services available, principle of operation, application, demonstration and hand-on practical exercises on e-mail and www using popular packages.

Omega Semester -100 level

PHY121: Electricity and Magnetism **(3 Units: LH 45)**

Coulomb's law, ohm's law, Gauss' Law, capacitors, Ohm's law, Kirchoff's laws, Electrical energy, DC bridges, potentiometer, magnetic effect of current, electromagnetic induction, moving coil and ballistic galvanometers, multi-meters, DC and AC motors and generators, hysteresis, power in AC circuits, semiconductors, conductivity and mobility, rectification.

PHY122: Atomic and Nuclear Physics **(2 Units: LH 30)**

Theory of atomic structure., Thompson, Rutherford and Bohr's theories, the hydrogen atom, properties of the electron, e/m , CRO, Millikan's experiment, properties of the nucleus, natural radioactivity, wave particle duality of light, x-rays, photo electricity, thermionic emission, diode valve.

PHY129: Physics Practical II **(1 Unit: PH 45)**

A selection from the following experiments, potential difference and internal resistance of cells, uses of potentiometer circuit, the meter bridge, simple direct current measuring instruments, Planck's constant, radioactivity.

MAT121: Mathematics V – Calculus **(3 Units: LH 45)**

Functions of Real Variables: Graph, Limits and Concepts of Continuity. Techniques of Differentiation of Algebraic and Trigonometric Functions, Higher Order Derivates, Maxima and Minimal, Leibnitz Rule , Application of Differentiation. Integration as Inverse of Differentiation, Methods of Integration, Definite Integra. Application to Areas, Volumes, Moment of Inertial. Approximate Integration: Trapezoidal and Simpson's Rule. Taylor's and McLaurin's Theorems, partial Differentiation and Implicit Differentiation.

MAT122: Mathematics VI - Vector Algebra **(2 Units: LH 30)**

3-Dimensional Cartesian Coordinate Systems. Definition and Representation of Vectors, Algebra of Vectors, Multiplication of a Vector by a Scalar, Addition of Vectors, Scalar Products of two Vectors, Direction Cosines, Calculus of Vector Functions, Differentiation of Vector Function, Integration of Vector Function. Conic: Circles, Parabola, Ellipse and Hyperbola.

CHM121: General Organic Chemistry **(3 Units: LH 45)**

Historical survey of the development and importance of organic chemistry. Nomenclature and classes of organic compounds. Homologous series, functional groups, isolation and purification of organic compounds. Qualitative and quantitative organic chemistry, stereochemistry, determination of structure of organic compounds. Electron theory in organic chemistry; saturated hydrocarbons, unsaturated hydrocarbons.

CHM122: General Inorganic Chemistry**(2 Units: LH 30)**

Periodic table and periodic properties, chemical bonding, structures of solids. The chemistry of selected representative elements. Quantitative analysis, hybridization.

CHM129: General Practical Chemistry II**(1 Unit: PH 45)**

Qualitative inorganic and organic analysis for elements in Groups I, II, IIIA, IIIB, IV. Chemical analysis for functional groups: acidic, ketonic, carboxylic, etc.

CST121: Computer Application II**(2 Units: LH 15, PH 45)**

Spreadsheet: principle of operation, application, demonstration and practical hand-on exercises in spreadsheet using a popular spreadsheet package. Database Management: principle of operation, application, demonstration and practical hand-on exercises in using a popular relational Database Management package. Report presentation software package: principle of operation, application, demonstration and practical hand-on exercises in using a popular report presentation package such as Power Point package. Mini-Project to test proficiency in use of the software packages.

EDS121: Entrepreneurial Development Studies I**(1 Unit: LH 15)**

Topics covered include the following: Generating Entrepreneurial ideas and translating same with action, The source and approaches to the study of Entrepreneurship, constraints of launching Business, Youths and Money Management, Investment, Introduction to Capital Market, Classification of Entrepreneurs, Economic Importance of Entrepreneurship, Entrepreneurial Windows. Factors that influence Entrepreneurship. The practice of Entrepreneurship Productivity, Salaried Employment Vs Entrepreneurship, Introduction to Marketing Management, Forms of Business Organizations, their advantages and disadvantages. Introduction to International Trade. Students are also expected to submit a term paper on Entrepreneurship from some selected areas of SMEs (Small And Medium Scale Enterprise) operations.

TMC121: Introduction to the Total Man Concept II**(1 Unit: LH 15)**

This course focuses on the exploration of self as it relates to self-discovery and the context of the changing life course and stages. It attempts to help students have some understanding of who they are in relation to God and the context of human systems. The spiritual, physical, psychological, cultural and ecological dimensions of self and the development of positive self-image, self-esteem and self-actualisation parameters are also explored.

TMC122 - Total Man Concept – Sports II**(0 Unit)**

Jogging: This helps in many ways, our focus here on the benefit of jogging is for physical fitness that reduced risk of Osteoporosis. Osteoporosis is the condition when the bones become increasingly porous and brittle. It can result to bone fractures and deformities.

Aerobics exercise: This is said to be any activity that can get the heart rate going and keeps it at a sustained rate over a period of time e.g. twenty minutes. An aerobic activity helps to increase cardiorespiratory fitness which is one of the fine essential components of physical fitness. Being aerobically fit you can feel it as you go about.

Athletic (track & short quarter mile races): Institutional athletics programme represent a multi financial industry and are generally linked to school branding and reputation. Athletic programme drive enrolment and heightens institutional profile, and often resulting in financial windfall for those whom their students engaged in

GST121: The Use of English (Part II)**(2 Units: LH 30)**

This course focuses on introducing basic aspects of English grammar, developing effective reading and writing skills across disciplines. Style in communication. Revision and self-editing strategies.

GST122: The Use of English (Part II)**(2 Units: LH 30)**

Introduction to French, Alphabets and numeracy for effective communication (written and oral), Conjugation and simple sentence construction based on communication approach, Sentence construction, Comprehension and reading of simple texts.

Alpha Semester – 200 Level

CHE211: Introduction to Chemical Engineering I

(1 Unit: LH 15)

Chemical engineering functions, bench scale to industrial scale; Units and dimensions; temperature; pressure; the chemical equation and stoichiometry; (limiting reactants, excess reactants, degree of completion); Material balances. The gas laws (Charles', Boyle's, Gay-Lussac's, Dalton's and Amagat real gas relationships);

GEC210: Engineering Mathematics I

(3 Units: LP 45)

Functions, inverse trigonometric functions and principal values, hyperbolic & its inverse, graphs. Concepts of continuity and differentiability. Mean-value theorem. Taylor's series expansion. Integration by parts. Sequences: real numbers, monotone, convergence, limits. Infinite series: convergence tests, addition, multiplication. Power series, radius of convergence, integration, differentiation. Real and imaginary parts, the complex plane, terminology and notation. Complex algebra, DeMoivre's theorem, powers and roots of complex numbers. Euler formula. Elementary functions of a complex variable, polynomials, rational, exponential, trigonometric, hyperbolic, logarithmic, inverse trigonometric and inverse hyperbolic functions. Vectors in R_n space, addition and scalar multiplication, linear combination of vectors, idea of linear dependence and independence. Dot and cross products, triple products, lines and planes.

GEC211: Fundamentals of Electrical Engineering I

(2 Units: LH 30)

Fundamentals of electric, electromagnetic and electrostatic circuits. Transients in RC and RL dc circuits. Steady-state dc circuit analysis: Source conversion, Kirchoff's laws, Mesh analysis, nodal analysis, Thevenin and Norton theorems, superposition principle, star-delta transformation, Maximum power transfer. Steady-state ac circuit analysis: Phasors and phasor diagrams, Power triangle, power factor and power factor improvement, frequency response of RLC circuits, resonance. Introduction to simple diode and transistor circuits and characteristics: Amplification & rectification. Introduction to digital systems.

GEC212: Engineering Graphics

(2 Units: LH 15, PH 45)

Introduction, Uses and types of Engineering drawing, Dimensioning, Principle of Tangency, Orthographic projection, Isometric projection, Oblique projection (with harder examples), Auxiliary Views, Sectioning, True length of Lines and shapes, Interpenetration of Solids, Development of Surfaces, Introduction to Electronic drafting and Architectural drawings. Freehand or Technical drawings (with harder examples), Machine Drawing, Graphical calculus, electrical and communication, and IT symbols and introduction to assembly drawing, working drawings.

GEC213: Materials Science & Engineering

(2 Units: LH 30)

Introduction, Atomic structure & interatomic bondings. The structure of crystalline solids. Imperfections in solids. Diffusion. Mechanical properties of metals. Dislocations and strengthening Mechanisms. Corrosion; effects and control. Failure phase diagrams. Phase transformations in metals. Development of microstructure and alteration of mechanical properties. Thermal processing of metal Alloys. Metal alloys. Structure, Properties, characteristics, applications and processing of polymers, ceramics and composites. Electrical properties.

GEC214: Applied Mechanics**(4 Units: LH 45, PH 45)**

Statics: Principles of mechanics. Forces, Moment Couples, Laws of Mechanics. Coplanar forces and their resultants. First and Second Moments of area. Centroids. Distributed line loads and their resultants. Application of vectors to resolution of forces. Equilibrium of particles. Free body Diagrams.

Dynamics: Kinematics of particles and rigid body kinematics in plane motion. Application of Newton's laws of motion. Rigid body translation, rotation about fixed axis and the velocity and acceleration of general plane motion. Relative motion of two particles. Dependent motion of particles. Instantaneous centre of rotation. Kinetics of particles, kinetic energy; principles of work and energy impulse and momentum analysis.

GEC215: Applied Computer Programming I**(2 Units: LH 15, PH 45)**

Software development life cycle (SDLC): Definitions, SDLC models: Waterfall model, V-shaped model, Incremental Model, Spiral Model. Program Design: Algorithms: Key features of algorithms and different ways of presenting algorithms. Flow charting of algorithms.

Linux System Architecture: Determine and configure hardware settings, boot the system and shutdown system using run levels. Linux installation and Software management: design hard disk layout and install software using the Debian, RPM and Yum package managers. GNU and UNIX commands: work on the command line for text streaming and file management. Device and Linux File Systems: Create and manage file systems and file permissions. Shell Programming: customise environment using shell scripts.

Introductory C Programming concepts: operators and expression, data input and output, control statements, functions, arrays, pointers, structures and unions, data files and low level programming, create and solve simple science and engineering problems using C programming

GEC216: Engineering Laboratory 1**(1 Unit: PH 45)**

Laboratory investigations and report submission on selected experiments and projects drawn from introduction to Electrical Engineering, Materials Science, Applied Mechanics, Applied Computer Programming I and Workshop Technology Courses.

GEC217: Engineer-In-Society**(1 Unit: LH 15)**

Science, Technology and Development: Ethical concepts of development. Indicators of development, and the role of science and technology. The contribution of the Government to the process of development and the Nigerian experience in the process of economic development (Nigerian Five Year Development Plans, successes and setbacks). Limits of growth, appropriate technology and a new world of science and technology. Science, Technology and Society: The inter-relationship of social ethics and values, and science and technology. Societal needs and resources in the genesis and development of science and technology. Social problems, impact assessment, and control of science and technology. Responsibilities of engineers. Science, Technology and Environment: Disruption or enhancement of environmental quality through harmful or sound science and technology in relation to air, space, water, land, populations, agriculture, industry, wild life, human settlements, culture, education, etc. Ethics and Professionalism: Theistic and secular concepts of personal, social and professional ethics. Codes of conduct of engineers. Motivation, control, responsibility, rewards and accountability of engineers and development of an ethical engineering professionalism. Council of Engineers and Engineering Societies.

GEC218: Workshop Technology**(2 Units: LH 15, PH 45)**

Introduction to engineering workshop practice covering mechanical, electrical, information engineering, civil, chemical, and petroleum engineering. Machine operation practice. Use of hand tools, and safety measures in these fields.

EDS211: Entrepreneurial Development Studies III**(1 Unit: LH 15)**

Objective: This course is the continuation of EDS 1. The course is aimed at exposing students to the opportunities in Entrepreneurship and the basic characteristics required for successful performance as entrepreneurs using some related biographical studies of entrepreneurs and management giants as case studies.

Topics covered include the following: Relevance of Entrepreneurial and SMEs to the Nations and Societies and Individuals, More on biographical studies of business thinkers, Entrepreneurs and Management Giants, Introduction to International Entrepreneurship, Entrepreneurship and globalization, accelerated industrialization through active promotion and development of SMEs, SMEs: Definitions, Advantages and Disadvantages, Management Challenges of SMEs. Managing the Business Growth. Students are also expected to submit a term paper on Entrepreneurship from some selected areas of SMEs (Small and Medium Scale Enterprise) activities, operations etc.

TMC211: Total Man Concept III**(1 Unit: LH 15)**

The focus of this course is on the identification of building blocks of self-development in the context of personal visions, mission and personal capacity building. Major self-motivational blocks, the power and place of focus, the place of the human thought process and how to enhance thinking and reasoning for creativity

TMC 212: Total Man Concept: Sports III**(0 Unit)**

Jogging: This helps in many ways, our focus here on the benefit of jogging is for physical fitness that reduces risk of Osteoporosis. Osteoporosis is the condition when the bones become increasingly porous and brittle. It can result to bone fractures and deformities.

Flexibility Exercise: Flexibility can be said to be the freedom and ease of motion performed within an individual normal anatomical range.

To improve one's flexibility, range at a joint or muscles, persons should engage in exercises that involves; flexion, adduction, extension and circumduction at the various joints.

Athletics (Field Events): Institutional athletics programme represent a multi financial industry and are generally linked to school branding and reputation. Athletic programme drives enrolment and heightens institutional profile, and often results in financial windfall for those whom their students engaged in

GST211: Introduction to Philosophy and Logic**(2 Units: LH 30)**

The aim of this course is to expose students to the meaning of philosophy and a brief survey of its branches. While discussing its major branches, emphasis will be on Logic. The topics to be taught in this respect will include Symbolic logic, Quantificational theory and Logical rules. Other sub-topics will include arguments and evidence, fallacies, statements and sentences, laws of thought, rules of inference and deduction and analogical reasoning. The course will also provide valuable insights into the origin and content of traditional logic.

Omega Semester – 200 Level

CHE221: Introduction to Chemical Engineering II

(1 Unit: LH 15)

Vapour-liquid equilibrium (Raoult's law, relative and percentage saturation, condensation, dew point); steam (enthalpy-temperature chart, steam tables, throttling, calorimetry). Combustion calculations (solid-liquid and gaseous fuels, excess air); Industrial Safety (hazardous chemicals, safety precautions).

GEC220: Engineering Mathematics II

(3 Units: LH 45)

Partial Differentiation: Functions of several variables, continuity and partial derivatives. Total differentials, approximate calculations using differentials. Chain rule. Implicit differentiation. Series representation of functions (Maclaurin & Taylor's), Taylor's Theorem. Extremum problems, (analytic method) without and with constraints, Lagrange multipliers, global extremum. Ordinary Differential Equations: Definition, degree, order, linear, non-linear, solution. First order equations, separable variables, equations reducible to separable form, exact equations, integrating factors, homogeneous differential equations. Modeling of engineering systems leading to first order differential equations- electric circuit, mixing/dilution, radioactive decay, bacterial culture. 2nd order differential equations with constant coefficients, homogeneous, non-homogeneous, complementary functions, particular integrals, D-operator method. General linear second-order differential equations (without using matrices). Power series solution, Legendre's differential equation. Modeling of engineering systems leading to 2nd order differential equations- electric circuit, mechanical oscillations-free and forced, resonance. Pre-requisites: MAT 121 and MAT 122. Matrices and Determinants: Solution of system of linear equations by determinants. Linear dependence and independence, rank of a matrix. General system of linear equations, existence and properties of solution, Gaussian elimination. Matrix inverse by elementary matrices, adjoint, and partitioning methods. Characteristic polynomial, characteristic equation, eigenvalues and eigenvectors.

GEC221: Thermodynamics I

(3 Units: LH 45)

Basic concepts, energy and energy conversions and surroundings, temperature of scales, quantitative relations of zeroth, first, second and third laws of thermodynamics. Steady flow energy equations. Heat and work. Behaviour of pure substances and perfect gases. Applications of the first law. Use of steam tables and charts.

GEC222: Computer Aided Design & Manufacture

(2 Units: LH 15, PH 45)

Introduction to CAD/CAM, Area of its applications and importance. How CAD/CAM works. Extensive introduction to CAD package i.e. AutoCAD. Hand-on practical approach is used especially for CAD application.

GEC223: Fluid Mechanics 1

(3 Units: LH 45)

Introduction: Properties of fluids: Density, Pressure, surface tension, viscosity, compressibility etc. Fluid statics. Buoyancy of floating bodies. Fluid dynamics. Basic conservation laws. Friction effects and losses in laminar and turbulent flows in ducts and pipes. Dimensional analysis and dynamic similitude.

GEC224: Strength of Materials

(3 Units: LH 45)

Forces, moments. Equilibrium of simple structures and machine parts. Hooke's law stresses and strains due to loading and temperature change. Stress circle. Deflection of beams. Shear forces and bending moments. Analytical and graphical methods for structures.

GEC225: Applied Computer Programming II (1 Unit: PH 45)

C Language Overview and Program Structure, Arduino C and Data types, PIC Microcontroller. Decision making in C. Program Loops in C. Functions in C. Storage Classes and Scope. Introduction to Pointers. Using Pointers Effectively. Structures, Unions and Data Storage. Arduino Libraries. Interfacing with the Outside World. Introduction to OOP C++.

The aims of this course are to acquire hand-on skills of C Programming for Computer Aided Engineering in the industry and to construct simple C programs using microcontrollers such as Arduino and Microchip PIC

GEC226: Engineering Laboratory II (1 Unit: PH 45)

Laboratory investigations and report submission on selected experiments and projects drawn from introduction to electrical Engineering, Materials science, Applied Mechanics, Applied computer Programming I, and Workshop Technology courses.

GEC228: Fundamentals of Electrical Engineering II (2 Units: LH 30)

Analysis of Magnetic circuits, Hysteresis and eddy currents, three phase circuits, three-phase power measurement, Transformer theory; short-circuit and open-circuit tests, voltage regulation, efficiency. Electrical machines; constructional features and operation of dc generators and motors; single-phase and 3-phase motors and generators, electric energy utilization for lighting and heating. Tariffs.

GEC229: Student Work Experience Programme (SWEP) (6 Unit: PH 90)

*** Course registered in 400 Level Omega Semester but conducted during the long vacation*

Introduction to practices and skills through supervised hands-on workshop exercises in each engineering departments: Mechanical Engineering (Fabrication, welding, Machining, Foundry, Automotive operations, etc), Chemical Engineering (bar and liquid soap, creams, paints, etc), Civil Engineering, Computer Engineering (soldering and desoldering, building of different circuits, etc), Petroleum Engineering, Electrical Electronics (surface and conduit wiring, etc), Information and Communication Technology (DSTV and Dish installation).

Working in the construction site if available during the period. Introduction to Networking Operation Center (Satellite Broad casting), Bakery Operation (Bread Production), Water Table, sachet and Hebron Juice Production, Printing Technology, Firefighting Exercise and other available related general engineering practice on campus. These exercises include familiarisation with basic tools, troubleshooting. Safety precautions in handling devices in each workshop.

EDS221: Entrepreneurial Development Studies IV (1 Unit: LH 15)

Topics covered include the following: More on biographical studies of business thinkers, Entrepreneurs and Management Giants in Nigeria, Africa and Europe. Theoretical Framework of Entrepreneurship, Feasibility studies, Marketing Management in Entrepreneurship, Impact of Modern Technologies on Entrepreneurial Ventures in Developing Countries. The SMEs: Challenges and Prospects, Financing of SMEs in Nigeria. Planning, SMEs and Capital Markets. Term paper on Entrepreneurship from some selected areas of SMEs (Small and Medium Scale Enterprise) operations.

TMC221: Total Man Concept IV (1 Unit: LH 15)

Understanding success, personal profile building and biographical analysis of some success giants forms the emphasis of this course. The role of wisdom in the context of success is explored along the lines of understanding, building and communicating wisdom. In addition, the place of self-identity building is explored along side with a focus on identifying personal measures and inches of self worth and self-appreciation in the context of success.

TMC 222: Total Man Concept: Sport IV

(0 Unit)

Jogging: This helps in many ways, our focus here on the benefit of jogging is for physical fitness that reduced risk of Osteoporosis. Osteoporosis is the condition when the bones become increasingly porous and brittle. It can result to bone fractures and deformities.

Games (Table – tennis): This centers on the mastery of basic skills, game situation as well as rules and regulation governing the various sports that will be attempted.

Focuses are also being on appreciation of various sports and the spirit of sportsmanship that is ‘win or loss’ taking it in good fate.

Athletic (Field Events): Institutional athletics programme represent a multi financial industry and are generally linked to school branding and reputation. Athletic programme drives enrolment and heightens institutional profile, and often results in financial windfall for those whom their students engaged in

GEC310: Engineering Mathematics-III**(3 Units: LH 45)**

Matrices and Determinants: Matrices, some special matrices, matrix operations. Determinants and some useful theorems. Laplace's development. Solution of system of linear equations by determinants. Linear dependence and independence, rank of a matrix. General system of linear equations, existence and properties of solution, Gaussian elimination. Matrix inverse by elementary matrices, adjoint, and partitioning methods. Characteristic polynomial, characteristic equation, eigenvalues and eigenvectors. Diagonalization of matrices, application to system of first order linear differential equations. Multiple Integrals: Iterated integrals, multiple integrals over elementary regions. Change of variables, Jacobians. Differentiation of integrals involving a parameter, Leibniz's rule.

Vector Algebra: Vector field, gradient and directional derivative, divergence, curl. Line and surface integrals, Stoke's theorem. Volume integrals, divergence theorem. Orthogonal transformations, scale factors, basis vectors. Cylindrical and spherical polar coordinate systems, gradient, divergence and curl in these systems. Fourier Series: periodic functions, trigonometric series. Fourier coefficients, Parseval's theorem, Functions of arbitrary period, even and odd functions. Half range expansion. Complex form of Fourier series. Integral Transform: Derivation of transforms and inverses (Fourier and Laplace). Applications of these transforms in boundary and initial value problems. Z transforms. Partial Differential Equations: Elementary properties of Gamma, Beta, Error, Bessel functions and Legendre polynomials. Basic concepts of partial differential equations. Classification of 2nd order linear partial differential equation into basic types. The principle of superposition. The wave, diffusion and Poisson's equations. Boundary and initial-value problems. D'Alembert's solution for wave equation. Method of separation of variables. Bi-harmonic equation

EDS311: Practical Side of Entrepreneurship I**(1 Unit: PH 45)**

Objective: To expose the students to a greater depth in the practical aspects of entrepreneurship, particularly the development of skills. The aim is to distinguish Covenant University graduates from graduates of other institutions of higher learning.

Practicum: All students are sent to the entrepreneurial village in-groups for skill acquisition in different specialization fields. Mini trade fairs will be organized where the students will display all their products. This program includes both theoretical and practical aspects of entrepreneurship. Production and Quality control of entrepreneurship material Management will be taught. These specialized fields include: tailoring, carpentry, millinery (hat making), mechanical, catering, shoe making, interior decoration, software development, candle and soap making, fishery, farming, snail rearing, poultry farming, piggery, textile development (tie & dye), cooking, paint manufacturing, photography, ice-cream making, saloon and barbing etc.

TMC311: Total Man Concept V**(1 Unit: LH 15)**

This course examines Man in different environmental contexts – the biblical, biological, cultural and ecological. The emphasis here is the civic and social responsibilities of man in society and the expectations of community living. The place of social relationships, diversity, issues of difference, conflict, family issues are explored looking at God's mandate and current trends and challenges.

TMC 312 - Total Man Concept: Sport V**(0 Unit)**

Aerobics (Cardio respiratory) Aerobics exercise: This is said to be any activity that can get the heart rate going and keeps it at a sustained rate over a period of time e.g. twenty minutes. An aerobic activity helps to increase cardiorespiratory fitness, which is one of the fine essential components of physical fitness. Being aerobically fit you can feel it as you go about.

Games (modified sports): Modified level of sports prepares student for the real activity itself and beyond. The philosophy of modified sports is to maximize participation and playing time for students. The level focuses on growth of basic skills and sportsmanship. During these events, we make every attempt to include as many students as possible teams.

Athletics (Field Events): Institutional athletic programmes represent a multi financial industry and are generally linked to school branding and reputation. Athletic programme drives enrolment and heightens institutional profile and often resulting in financial windfall for those whom their students engaged in

CHE315 - Chemical Reaction Kinetics

(3 Units: LH 45)

Measurement and analysis of wreathing reaction. Homogeneous reactions. Catalysis. Chain reactions. Kinetics of heterogeneous and catalytic reactions. Photochemistry. Adsorption of gases on solids. Application to gas chromatography.

CHE 331: Chemical Engineering Process Analysis

(3 Units: LH 45)

Introduction to Chemical Engineering Unit Operations and auxiliary facilities. Chemical Engineering Process flow charts and process symbols. Introduction to Material and Energy Balances: Units and Dimensions. The mole unit. Conventions in the method of analysis and measurement; Temperature; Pressure; physical and chemical properties and measurement. Techniques of solving problems. The chemical equation stoichiometry. Material Balances: Program of analysis of material balances. Problems involving components (elements). Recycle, Bypass, Purge; Effect of recycle and purge on mass and energy balances. Gases, vapours, liquid and solids. ideal gas law, Real gas relationships. Vapour pressure. Saturation. Partial saturation and humidity. Material balances involving condensation and vaporization phase phenomena. Energy Balances: Concepts and Units. Heat capacity. General Energy balance. Reversible process: the mechanical energy balance. Heat of reaction. Heat of solution and mixing, combined material and energy balances; Application of fundamental concept of mass and energy balances and mass transfer to unit operation in distillation. Simultaneous use of material and energy balances for the steady state. Enthalpy concentration chart. Humidity chart and their use. Complex problems; Lever rule Geometrical construction for mass. Energy balances for adiabatic and non-adiabatic process. Unsteady state material and energy balances.

CHE332: Chemical Engineering Practical I

(1 Unit: LH 45)

Laboratory session will be based on the courses to be taught during the session- these include: Distribution, Coefficient, cooling tower, Sedimentation, Fluid flow in packed columns, Flow Measuring Apparatus etc. All laboratory courses are compulsory. Overall grade will consist of 2 parts: (a) written exam at end of laboratory session 25% (b) laboratory report grading (75%). Any student absent from laboratory session with official permission will have to perform the session at suitable date. Average score of reports on all laboratory sessions.

CHE 333: Chemical Engineering Transport Phenomena I

(4 Units: LH 60)

Systems of units and dimensions. Force, momentum, energy, heat, work, power, pressure, temperature and concentration units. Conversion from one system of units to the other. Basic Transport. Classification of Transport Processes and Separation Processes. General molecular transport equation for momentum, heat and mass transport. Viscosity of fluids and the mechanism of momentum transport. Thermal conductivity and the mechanism of energy transport. Diffusivity and the mechanism of mass transport. Shell momentum balance and velocity profile in laminar flow. Shell energy balance and temperature profiles in solids. Shell mass balance and concentration profile in gases, liquids and solids. Design equations for laminar and turbulent flow in pipes. Compressible flow of gases. Flow past immersed objects and packed and fluidized beds.

CHE334 – Process Modelling and Simulation (2 Units: LH 45)

Introduction. Types of modelling techniques. Mathematical techniques in model development. Development of physical and mathematical models. Development of programmes and simulation of models. Introduction to process simulation using the HYSYS software, MATLAB and EXCEL or any other process simulation software.

CHE335: Separation Processes I (4 Units: LH 60)

Property differences exploited in separation processes. Stage-wise and continuous contact equipment (NTU and HTU). Hydrodynamics of plate and packed columns. Isothermal gas absorption. Multi-component gas absorption. Distillation. VLE data. Batch distillation. Binary distillation using McCabe-Thiele and Ponchon-Savarit methods. Plate efficiencies. Azeotropic and extractive distillation. Multi-component distillation. Liquid-liquid extraction.

CHE336: Process Instrumentation (2 Units: LH 45)

General principle and representation of instruments, Performance characteristics of instruments and data analysis, Equipment calibration, Transducer element, Pressure measurement, Moderate and high pressure measuring instruments, High vacuum measuring instrument, Temperature measuring instruments, Flow measurements, level measurements, Measurement of concentration, density, viscosity, pH, Control valves, Piping and instrumentation diagram.

Omega Semester – 300 Level

GEC320: Numerical Methods (3 Units: LH 45)

Numerical Methods: Finite difference. Interpolation. Numerical differentiation and integration. Numerical solution of ordinary differential equations, Trapezoidal, Simpson, Runge Kutta methods. Newton Raphson method for roots of equations. System of simultaneous linear equations. Linear simultaneous equations, Gaussian elimination, Gauss-Seidel iterative method, Jacobi Method, evaluation of determinant and inverse matrix. Eigensystem analysis: system stability, eigenvalue sensitivity, stability of Gauss-Seidel solution, amplitude and time scaling for model studies. Use of numerical analysis software packages to solve simple engineering problems.

GEC324: Technical Communication (1 Unit: LH 15)

Introduction to Communications: Principles of effective communication in interpersonal and mass communication process. Verbal, graphical and numerical communications. Written Communication: Principles of technical writing. Types of technical writing, referencing and

citation. Styles of writing. Graphs; diagrams presentation. Statistical information presentation. Macro level, and micro-level. Oral Communication: Public speaking skills, multi-media presentation skills. Facilitator and participant skills in meetings. Negotiating skills. Idea-generating skills. Manuscript speaking and presentation involving media and telecommunications. Reading skills: Effective reading skills: extracting main ideas and speed-reading, chunk/cluster-reading and word-attack techniques of technical reading materials. Equipment Manual Writing and Presentation: Component diagrams, assembling, description, and multi-language presentation. Basic troubleshooting information, and technical support information. Marketing strategy.

GEC321: Engineering Economics

(3 Units: LH 45)

The nature and scope of economics. Basic concepts of engineering economy. Interest formulae, Discounted cash flow, present worth, equivalent annual growth and rate of return comparisons. Replacement analysis. Breakdown analysis. Benefit-cost analysis. Minimum acceptable rate of return. Judging attractiveness of proposed investment.

GEC329: SIWES - Industrial Training II

(6 Units: PH 90)

During the SIWES each student will undergo practical on the job training in an engineering industry approved for its relevance to the student's major for a minimum of 14 weeks starting immediately at the end of Omega (second) semester examinations at 300 level. A programme of training will be drawn by the College and the Industry for each student, and a prescribed log book with daily recording of the student activities is to be kept by each student and appropriately signed. At the end of the programme, a written report is to be submitted to the college and each student to present a seminar on his/her industrial experience. Each student must pass a prescribed certification examination during the industrial training.

TMC321: Total Man Concept VI

(1 Unit: LH 15)

This course follows directly from TMC 311 and provides a further exploration of man and his specific civic, social and ecological and family responsibilities. The place of global trends, community service and family responsibilities vis-à-vis preparation for life in society and family context are explored closely. Focus will also be given to the demands of preparing for the context of the work place, job interviews and demands of world of work.

TMC322 - Total Man's Concept: Sport VI

(0 Unit)

Jogging: This helps in many ways, our focus here on the benefit of jogging is for physical fitness that reduced risk of Osteoporosis. Osteoporosis is the condition when the bones become increasingly porous and brittle. It can result to bone fractures and deformities.

Modified Sports Advance: Modified level of sports prepares student for the real activity itself and beyond. The philosophy of modified sport is to maximize participation and playing time for students. The level focuses on growth of basic skills and sportsmanship. During these events we make every attempt to include as many students on possible teams.

Basic Skills in Swimming: The importance of swimming lessons for water safety cannot be overstated. Everyone and especially young people should be able to swim. Swimming has a lot of benefits, which include health benefit, psychological benefit, most importantly safety benefit, which involved discipline that is adhering to the rules governing swimming and learning of basic skills

EDS321: Practical Side of Entrepreneurship VI**(1 Unit: LH 45)**

Objective: To expose the students to a greater depth in the practical aspects of entrepreneurship, particularly the development of skills. The aim is to distinguish Covenant University graduates from graduates of other institutions of higher learning.

Practicum: All students are sent to the entrepreneurial village in-groups for skill acquisition in different specialization fields. Mini trade fairs will be organized where the students will display all their products. This program includes both theoretical and practical aspects of entrepreneurship. Production and Quality control of entrepreneurship material Management will be taught. These specialized fields include: tailoring, carpentry, millinery (hat making), mechanical, catering, shoe making, interior decoration, software development, candle and soap making, fishery, farming, snail rearing, poultry farming, piggery, textile development (tie & dye), cooking, paint manufacturing, photography, ice-cream making, saloon and barbing etc.

CHE324 – Introduction to Biochemical Engineering I**(3 Units: LH 45)**

Introduction to microbiology and biochemistry. Classification and growth characteristics of micro-organisms. Enzymes in engineering. Microbial culture processes in manufacturing industries.

CHE 340: Separation Processes II**(3 Units: LH 45)**

Solid-liquid extraction. Adsorption. Drying: Drying mechanisms, estimation of drying periods, description and function of industrial drying. Evaporation. Multiple-effect evaporators. Pre-requisite - CHE319.

CHE 341: Particle Technology**(2 Units: LH 45)**

Properties of particles. Theory of particles separation and grinding. Nanoparticles and principles of developing nanotechnology. Motion of particles in a fluid, Stoke's and Newton's Laws. Flow through packed beds. Fluidization - Estimation of fluidization pressure drop, heat and mass transfer in fluidized beds. Sedimentation and flocculation. Filtration. Screening. Classification and Grinding. Centrifuging and electrostatic precipitation.

CHE342: Chemical Engineering Practical II**(2 Units: PH 45)**

Fluid circuit system, saponification in a batch reaction, vortex tube, fluid particle system, Double pipe heat exchange.

CHE345: Chemical Engineering Process Thermodynamics I**(3 Units: LH 45)**

Introduction (definition, scope and aims), Work (quasi - static process, PVT system, path dependency); First law of Thermodynamics (work and heat, adiabatic work, internal energy, enthalpy, heat capacity); Cycles, Carnot, Thermodynamic Turbines Steam and Gas, Refrigeration, General P-V-T Relations. The P-V-T behaviour of pure substances; Equation of state for gases; The principle of corresponding state; Compressibility relations; reduced volume; temperature; pseudo critical constants. P-V-T approximations for gaseous mixture ideal gas mixtures. Dalton's law of additive pressure; Amagat's law of additive volumes; Pseudocritical point method; Kay's rule, Gililand's method; Behaviour of liquids. Heat Effects. Heat capacities as a function of temperature, specific heats of liquids and solids; Heat effects accompanying phase change; Clausius-Clapeyron equation, standard heats of reaction formation and combustion effect of temperature on heat of reaction. Heat of mixing and solution, Enthalpy concentration diagrams for H₂SO₄, H₂O, etc., Partial enthalpies,

Single and Multiple effect evaporators with regards to heat effects. Thermodynamics of Flow Processes. Fundamental equations, Continuity Equation; equation of motion; energy equation; Bernoulli's equation; Flow in pipes, laminar and turbulent flows; Reynolds number, friction factor. Fanning equation; Flow meter, Nozzles; Compressors single stage and multistage, effect of Clearance.

CHE346: Reaction Engineering I

(2 Units: LH 30)

Classification and types of reactions. Methods of operation and design equations for single and multiple reactions. Kinetics of Homogeneous Technological Processes. Temperature and pressure effects. Fluid mixing and residence time distribution; Introduction to Chemical Engineering Reactors and Chemical Technological Systems.

GEC410: Engineering Statistics**(3 Units: LH 45)**

Probability and Statistics: Probability space, theorems. Conditional probability and independence. random variables, discrete and continuous distributions, mean and variance. Bernouli, Binomial, Poisson, hypergeometric, exponential, normal distributions and their characteristics. Examples of experimental measurement and reliability. Elementary sampling theory for normal population. Central limit theorem. Statistical inference (point and interval estimation and hypothesis testing) on means, proportions and variances. Power and operating characteristics of tests. Chi-squares test of goodness of fit. Simple linear regressions.

EDS411: Entrepreneurial Development Studies VII**(1 Unit: LH 15)**

Objective: To expose the students to more issues in entrepreneurship.

Topics covered include the following: Various functions of Entrepreneurship – such as financing, production, marketing and personnel management. Entrepreneurial succession, issues in succession: challenges and prospects. Taking Entrepreneur to the stock market. International Entrepreneurship. Funding of Entrepreneurial activities. Term paper on Entrepreneurship from some selected areas of SMEs (Small and Medium Scale Enterprise) operations.

TMC411: Total Man Concept VII**(1 Unit: LH 15)**

This course examines the building blocks for leadership development in the context of providing an overview of the broad dimensions of leadership. The course also explores the enhancement of leadership traits and how power and influence qualifies the dynamics of leadership.

TMC412: Total Man Concept: Sport VII**(0 Unit)**

Game (Soccer & Volleyball): This centres on the mastery of basic skills, game situation as well as rules and regulation governing the various sports that will be attempted.

Focuses are also being on appreciation of various sports and the spirit of sportsmanship that is 'win or loss' taking it in good fate.

Aerobics exercise: This is said to be any activity that can get the heart rate going and keeps it at a sustained rate over a period of time e.g. twenty minutes. An aerobic activity helps to increase cardiorespiratory fitness, which is one of the fine essential components of physical fitness. Being aerobically fit you can feel it as you go about. Muscle tone improves as you work on the proper running techniques

CHE 417: Polymer Process Engineering**(3 Units: LH 45)**

Introduction to the manufacture, processing and applications of organic polymeric materials. The chemistry of polymer manufacture, the molecular structure of polymers, and the structure-property relationships for thermoplastic and thermosetting polymers are covered.

CHE418: Chemical Process Engineering Analysis II**(2 units: LH 30)**

Applied ordinary and partial differential equations. Chemical engineering operations and their numerical solutions. Statistics: types of observation. Analysis of variance. Tests of significance. Regression analysis. Design of Experiments. Pre-requisite – CHE331.

CHE432: Separation Processes III**(3 Units: LH 45)**

Drying: Drying mechanisms, estimation of drying periods, description and function of industrial drying. Evaporation. Multiple-effect evaporators. Crystallization. Ion-exchange. Membrane separation processes – dialysis, gas separation by membranes, reverse osmosis, ultrafiltration and microfiltration membrane processes. Pre-requisite – CHE340.

CHE433: Transport phenomena II

(4 Units: LH 60)

Measurement of flow of fluids. Pumps and gas- moving equipment. Agitation and mixing of fluids and power requirements. Forced convection heat transfer inside pipes. Heat transfer outside various geometries in forced convection. Natural convection heat transfer. Boiling and condensation. Convective mass transfer coefficients. Molecular diffusion plus convection and chemical reaction. Differential equations of continuity and momentum transport and their applications. Non-Newtonian fluids. Heat exchangers. Radiation heat transfer. Differential equation of energy change. Diffusion of gases in porous solids and capillaries. Boundary layer flow and turbulence in momentum, heat and mass transport. Dimensional analysis in momentum, heat and mass transfer. Prerequisite- CHE333.

CHE434: Fundamentals of Plant Design I

(2 Units: LH 30)

Presentation and discussion of real process design problems; sources of design data; process and engineering flow diagram; process outline charts incorporating method study and critical examination; mechanical design of process vessels and piping. Environmental considerations site considerations; process services. Costing of design Process. Formulation of feasibility report evaluation. Economics and safety consideration must be stresses. Introduction of synthesis and analysis in process design. The pattern of discovery of process systems. Reaction path synthesis. Material balancing and species allocation. Separation technology. Separation task selection. Integration of auxiliary operations. Introduction to energy integration.

CHE 435: Chemical Engineering Process Thermodynamics II

(2 Units: LH 30)

Phase Equilibria; Criteria of equilibrium; Fugacity of pure component; General Fugacity relations for gases; Fugacity of gas mixtures, Effects of temperature and pressure of fugacity, pressure-temperature-composition relationship; phase behaviour at low and elevated pressure, Raoult's law, Henry's law, Equilibrium constant; Activity coefficient, Gibbs-Duhem equation; Margules and van Laar equations, Chemical Reaction Equilibria; Standard free energy change and equilibrium constant, Evaluation of equilibrium constants. Effects of temperature and pressure on equilibrium constants; calculation of conversion; Gas phase reactions, Percentage conversion; Liquid phase reaction, Heterogeneous reactions. Pre-requisite – CHE345

CHE 436: Reaction Engineering II

(2 Units: LH 30)

Fluidized bed trickle bed and slurry reactors. Factors affecting choice of reactors characterization of catalysis. Rate controlling regimes in gas solid reactions catalyzed by porous catalysts effectiveness factor scale up procedure catalyst decay and reactivation. Introduction to Designs for Homogeneous and Heterogeneous Reactions Systems. Introduction to Design for Catalyzed Reaction Systems. Pre-requisite - CHE346.

CHE437 - Chemical Engineering Practical III

(2 Units: PH 90)

Laboratory experiments designed to teach basic and advanced laboratory techniques and practices in Chemical Engineering. Selected experiments in Transport Phenomena: Heat Transfer, Mass Transfer, Separation Processes, Thermodynamics, Chemical Reaction Engineering, Biochemical Engineering, Process Dynamics and Control. Any student absent

from laboratory session with official permission will have to perform the session at suitable date. Average score of reports on all laboratory sessions. Pre-requisite – CHE342

Omega Semester – 400 Level

GEC429: SIWES - Industrial Training III

(6 Units: PH 270)

During the SIWES each student will undergo practical on the job training in an engineering industry approved for its relevance to the student's major for a minimum of 28 weeks starting immediately after the first semester examinations at 400 level. A programme of training will be drawn by the College and the Industry for each student, and a prescribed log book with daily recording of the student activities is to be kept by each student and appropriately signed. At the end of the programme, a written report is to be submitted to the college and each student to present a seminar on his/her industrial experience. Each student must pass a prescribed certification examination during the industrial training.

Alpha Semester – 500 Level

GEC517: Engineering Law**(2 Units: LH 30)**

Introduction and sources of law. Formation of contracts. Liabilities in torts: assaults, negligence and strict liability. Professional role and liabilities of Engineers. Contract of Employment: independent contractors, workmen compensation. Property law. Partnership. Intellectual property, copyright, trademarks and patent. Registration and incorporation of companies and effects. Case studies relating to professionals. Arbitration.

EDS512: Cost Engineering**(2 Units: LH 30)**

Cost and schedule management- an engineering function. Supporting skills and knowledge. Role of cost engineer during evaluation phase. Role of cost engineer during the basic design phase. Role of cost engineer in contractor selection. Role of cost engineer during detailed engineering design phase. Role of cost engineer during construction. Cost engineering function as distinct from Design engineering function. Canon of ethics for cost engineers. Basic capital cost estimating. Basic operating cost estimating. Basic project planning and scheduling. Cost engineering terminology. Cost engineering standards.

CHE514 - Corrosion of Metals and Alloys**(3 Units: LH 45)**

Introduction: Effects of corrosion with respect to appearance, performance, safety and cost. Principles of Corrosion; The different Forms of Corrosion; Corrosion Testing and Purposes of testing, Selection of Material; Corrosion Prevention, environment and use of inhibitors; Mineral Acids: Other Environments: organic acids, alkali solutions, seawater, fresh water, the petroleum industry, aerospace: biological corrosion and corrosion in the human body; materials degradation by liquid metals and fused salts. High Temperature Degradation of Materials

CHE515 - Industrial Chemical Processes**(3 Units: LH 45)**

Process Calculation on Management of materials and energy integration of processing steps and equipment on practice. Encyclopaedic Review of the manufacturing Process of various heavy chemical and intermediates. These include sulphuric, hydrochloric and nitric acids, ammonia, caustic soda and potash, soaps and detergents, petrochemical, fertilizers, pulp and paper, industrial fermentation processes and metal ore processing. **Coal Processing Technology:** Introduction to coal formation. Physical and chemical properties of coal. Carbonization of coal. Combustion and gasification and liquefaction of coal. Environmental aspects of coal utilization. **Detergent Technology:** Historical outline. Types of detergents. Mechanism of detergency. Oil and fats, manufacture of soap base by direct saponification of oils and fats. Manufacture of fatty acids. Production of solid soap, soap powders. Manufacture of non-soap detergents. **Cement and Cement Technology:** Introduction to Cement chemistry. Raw materials for cement production. Composition of cement raw mix. Sintering and chemistry of sintering. Technology of production of clinker and cement. Types of cement. Hydration of cement. Reactions of cement with gases, liquids and solids. Production of blended of cement and area of utilization. Role of cement in carbon sequestration.

CHE530 - Pulp and Paper Processing Technology (3 Units: LH 45)

Structural, physical and chemical properties of raw materials for the industry. Preparation of pulpwood. Mechanical, semi-chemical, chemical mechanical, sulphite, sulphite/Kraft pulping processes. Recovery processes of energy and chemicals from pulping processes residuals. Bleaching of pulps and stock preparation. Utilization of by-products. Paper making and finishing operations. Economics and ecological aspects of paper manufacture.

CHE531 - Biochemical Engineering Processes (3 Units: LH 45)

Introductory Biotechnology. Definition and principles of biotechnology; Areas of application in biotechnology. Methods of genetic modification of prokaryotic and eukaryotic organisms to optimize biochemical characteristics and to stabilize cellular structure transformation transduction; conjugation and protoplasm fusion. Natural DNA recombination; advantages and method of induced phage virus bacterial plasmid or vector DNA mapping techniques; present and future prospect of utilization of created gene pools is selected topics of application areas e.g. Microbial enzyme technology, bioreactor design; practice of postharvest technology and agricultural recycling.

CHE532 - Process Dynamics and Control (4 Units: LH 60)

Review of Mathematical concepts) Laplace Transform. Frequency Response analysis. Discrete events. Process Dynamics (Linear lumped and distributed parameter systems, non-linear system). Feedback control and experimental cases studies. Introduction to Computer Control. Cascade control. Introduction to multi-variable control. The control valve. Process Instrumentation - Measuring instruments for level, pressure, flow, temperature and physical properties. Chemical composition analysers. Measurement. Gas chromatograph. Mass Spectrometer. Sampling systems. Pre-requisite – CHE336

CHE533: Process Design in Chemical Engineering I (3 Units: PH 135)

A design problem involving the study of a process. It should consist of preparation of flowsheet and heat and mass balances of the process and a detailed design of plant or unit operation equipment used in the process. Due consideration must be given to economics and safety. Each student is expected to submit and orally defend a bound copy of technological/engineering design project. A design project should consist of introduction, literature review, process design, detailed design of some of the units of the process specification of the equipment required, specification of materials of construction, basic mechanical design and drawings, inclusion of process control, modern drawings of the process equipment including a good flowchart, economic and environmental consideration. Students prepare flow sheets, material and energy balances (to be submitted end of Alpha semester).

CHE534 - Environmental Engineering (3 Units: LH 45)

Environmental Engineering: Pollution and the environment definitions and inter-relationship; natural and manmade pollution; the economics of pollution. Air pollution; Gaseous and particulate pollutions and their sources; effects on weather vegetation materials and human health. Legislation relating to air pollution, methods of control of gaseous emission and destruction, cyclones, inertia separations, electrostatic precipitator, bag filters, wet washers etc. Dispersal from chimneys and method of calculating chimney height; Flare stacks, water pollution, river pollution by industrial effluent, Legislation and standards for effluent discharge; Impurities in natural water and their effects. Brief survey of ecology and the effects of effluent on the ecosystems; Treatment processes including precipitation, flocculation, coagulation, sedimentation, clarification and colour removal. Principles of biological treatment processes; cost of treatment; treatment for water re-use, ion exchange cooling water treatment. Land pollution; Disposal of solid wastes by incinerator and dumping, possible future trends including conversion of solid wastes into useful material or energy. Treatment of other types of pollution; noise; Thermal and nuclear pollution.

CHE536 – Fundamentals of Plant Design II (2 Units: LH 30)

Pinch Technology and Energy savings. Heat Exchanger Network (HEN) representation, Location of PINCH and significance of PINCH. Design for maximum energy recovery. Minimum number of Heat Exchanger Units. Threshold problems. Splitting of streams. Multiple utilities. Retrofit of processes designed without PINCH methods. Siting of plants. Process services. Materials handling - Pre-requisite CHE434

CHE539: Chemical Engineering Research Project I (0 Unit: PH 135)

Individual assigned projects under the supervision of an academic staff, projects should focus on national and state industrial problems. Students are expected to make the oral presentation of their proposals on Chapters 1 – 3 at a date and time to be decided by the Departmental Board of Studies during the Alpha Semester.

TMC511 - Total Man Concept IX (1 Unit: LH 15)

Profile Building (Part 1). The emphasis of this course is on experimental learning and it involves pulling together the main stands of TMC from 1st year to 4th year. It will introduce a personal dimension by exploring the idea of service from a student centered learning perspective. There will be practical exercises, workshops, projects, and journal keeping and detailed character study.

TMC512 - Total Man Concept: Sport IX (0 Units)

Game (Soccer & Volleyball): This centres on the mastery of basic skills, game situation as well as rules and regulation governing the various sports that will be attempted.

Focuses are also being on appreciation of various sports and the spirit of sportsmanship that is 'win or loss' taking it in good fate.

Aerobics exercise: This is said to be any activity that can get the heart rate going and keeps it at a sustained rate over a period of time e.g. twenty minutes. An aerobic activity helps to increase cardiorespiratory fitness, which is one of the fine essential components of physical fitness.

Being aerobically fit you can feel it as you go about. Muscle tone improves as you work on the proper running techniques.

Omega Semester – 500 Level

GEC527: Engineering Management

(3 Units: LH 45)

Organizational structure, formal and informal, definition of the term organization, development of organization from one-man business. Scientific organization. Why engineering management. Engineering to Engineering management. Assuming management responsibilities: management knowledge requirement. The engineering manager job: engineering management process, the management functions, engineering project manager, hierarchy structure and flow of information.

Hierarchy (scalar principle), scalar chain, gang plan, unity of command business organization, logic of organizing, the classical organizer, the behavioural organization, bureaucratic organization, centralization and decentralization. Network analysis, CPN, PERT, forecasting, controlling, budgeting, nature decision making, employer attitude to managerial leadership. Production, stages in production, factory location and design, factory layout and site selection, production method, mass production, unit, small and large batches.

Personnel management, safety consideration, training and apprenticeship and recruitment, trade unions and their functions, joint consultations, and collective bargaining, setting variable cost control, tendering and estimating, estimated costs for operational control, basic account, balance sheet development, marketing, market research-prediction by time series analysis, limitation of statistical analysis, questionnaires, advertising and sales promotions, export and import operations. Work study method. Research, characteristics of research design. What is a variable in research, operationalizing variables and types of variables? Financial management.

EDS522: Engineering Valuation/Appraisal

(2 Units: LH 30)

Objectives of valuation work/valuer's primary duty and responsibility. Valuer's obligation to his or her client, to other valuers, and to the society. Valuation methods and practices. Valuation reports. Expert witnessing. Ethics in valuation. Valuation/Appraisal standards. Price, cost and value. Depreciation and obsolescence. Valuation terminology. Appraisal reporting and review. Real property valuation. Personal property valuation. Machinery and equipment valuation. Oil and gas valuation. Mines and quarries valuation.

CHE525 – Polymer Science and Technology

(3 Units: LH 45)

Introduction to polymers and their characteristics. Source of monomers. Structure and physical properties of polymers: rheology, elasticity, solubility, molecular weight measurements, configuration and conformation, transition temperatures, solid-state properties, dynamics mechanical testing. Polymer characterization, molecular weight measurements, Plasticity and elasticity. The William Lander Ferry Equation, Polymer chemistry and polymerization reactions and manufacturing methods; Ziegler Natta catalysis. Processing and Technology of Polymers.

CHE527 - Sugar Technology

(3 Units: LH 45)

Description of the equipment and considerations of the process and unit operations involved in refined sugar from cane. Utilization of the by-products of the refining operation. Safety, economic and environmental considerations. Energy recovery.

CHE528 - Petroleum Refining and Petrochemical Technology (3 Units: LH 45)

Technology of Fossil Fuel Processing: Source, availability and characterization of fossil fuel (Petroleum, Natural gas, tar sands, coal). Introduction to petroleum refining – Refinery products and properties. Modern refining processing technology: Choice of product lines and products: Alternative product lines and products specification to be emphasized. Introduction to petro-chemical Technology. Petrochemical precursors, socio-economics, socio-political and geographical implication of the petrochemical industry. Petro-chemical precursors and the chemification of some of these. Planning petrochemical industries for a developing country.

CHE542 - Reservoir Engineering (3 Units: LH 45)

Petroleum geology. Petroleum exploration. Crude oil production. Pollution control. Natural gas production.

CHE543 - Process Design in Chemical Engineering II (2 units: PH 135)

Students to prepare flow sheets, material and energy balances, basic mechanical design and drawings, inclusion of process control, modern drawings of the process equipment including a good flowchart, economic and environmental consideration for grading- Pre-requisite CHE533

CHE544 – Chemical Engineering Process Optimisation .. (3 Units: LH 45)

A Chemical engineering treatment of the normal forms of the calculus of Variations, Maximum Principles, Dynamics programming. Optimization of staged System. Unconstrained peak-seeking methods – Single and multi-variable search techniques. Constrained optimization techniques. Linear Programming. Numerical optimization techniques. Discrete events. Network Analysis and Queuing Theory.

CHE549: Chemical Engineering Research Project II (3 Units: PH 135)

This is a continuation of CHE519. The project work is to be completed in this second phase. Each student is to submit a proper written report (3 bound hard copies, and a CD-ROM of electronic copy). The project is presented and defended at a seminar. Individual assigned projects under the supervision of an academic staff, projects should focus on national and state industrial problems.

TMC521 - Total Man Concept X (1 Unit: LH 15)

In this course, marriage and family issues are explored looking at God's mandate and current trends and challenges. The place of the family in societal, national and global development, community service and family responsibilities vis-à-vis preparation for life in society and family context are explored closely. Preparation for Marriage, Understanding the Family and Family Settings, Family Systems Theory, Family responsibilities, Modern Day Family Trends and Challenges, Roles of Family in Societal, National and Global Development, God's Mandate for Families, The Christian Family Responsibility and Role Sharing in the Family, Parenting: Issues and Practices, Handling Family Finance, Careers and Modern Day Families.

TMC 522: Total Man Concept: Sport X (0 unit)

Jogging: This helps in many ways, our focus here on the benefit of jogging is for physical fitness that reduces risk of Osteoporosis. Osteoporosis is the condition when the bones become increasingly porous and brittle. It can result to bone fractures and deformities.

Game (Basketball & Handball): This centers on the mastery of basic skills, game situation as well as rules and regulation governing the various sports that will be attempted.

Focuses are also being on appreciation of various sports and the spirit of sportsmanship that is 'win or loss' taking it in good fate.

1.4 Compliance with Admission Requirements

The admission policy of Covenant University is consistent with the Department, which is “To admit young, single, disciplined and vision-driven candidates, who will be ready to accept full responsibility for the revolution being entrusted to them”. The Chemical Engineering programme follow the University general criteria for student admission. An applicant for admission into the Chemical Engineering programme of Covenant University must have graduated from an accredited secondary school. In addition, the applicant must satisfy the University Matriculation Examination (UME) and Senior School Certificate Examination/General Certificate Examination (SSCE/GCE) Ordinary “O” Level requirements for the programme.

Candidates applying to Covenant University are required to sit for the UME examination of the Joint Admissions and Matriculation Board (JAMB) and attain the prescribed cut-off marks. In addition to the above, the University conducts aptitude and character screening exercises for all candidates seeking admission into the University.

The minimum entry requirements for admission into Chemical Engineering programme in Covenant University are credit level passes in 5 subjects at the SSCE/GCE ‘O’ Level/NECO/NABTEB or its equivalent obtained at not more than two sittings. The subjects passed must include English Language, Mathematics, Physics, Chemistry and either credit pass in Further Mathematics, Biology, or Technical Drawing.

1.5 Academic Regulations

All the Students of Covenant University are given a student handbook each at resumption into the University. The handbook contains Programme Educational Objectives (PEOs), Programme Outcomes (POs), entry requirements, rules and regulations governing the conduct of examinations, grading system, penalties for examination malpractice, requirements for withdrawal, repeat, probation, graduation and all that the student needs to know about his or her academic programme. Copies are available in the department.

1.6 Standard of Tests and Examinations

The Department gives great care and attention to issues regarding all its examinations. There is an internal and external vetting process in place to ensure that the examinations are of the highest standard. The Department also runs a peer-review system which ensures that every course coordinator works in tandem with co-examiners to provide for quality control.

The Examination processes include Continuous assessment (assignments, quiz and class test) and Examination. Every course is examined at three levels, namely: tests, mid-semester examination and semester examination. They attract respectively a maximum of 15%, 15% and 70%, the total marks of each student’s cumulated at the end of the semester.

i. Tests/Mid-Semester Examination

A lecturer is expected to give impromptu tests to the students registered for and attending the course he/she is teaching. Such tests are designed to find out whether the students are keeping pace in assimilation with the teaching of the course. The test could be in any number and should run throughout the period of the course. While it tests the student’s understanding of the course, they also convey information to the lecturer on the adequacy of his delivery and his teaching method.

This examination is a university-wide examination and the time is announced. It takes place the same period throughout the university. Usually the time-table is the same as the lectures time-table. The total mark for this is 30 percent. The answerscripts are returned to the students after grading. This is to help the students appraise their performance and make corrections where necessary.

ii. **Semester Examination**

This examination is university-arranged and the time is pre-announced, it follows a separate time-table. It is the major examination and it attracts 70 percent out of a total score of 100 percent. Other aspects of these examinations such as setting the questions, conduct, evaluation schemes, moderation schemes (internal and external) and the issuance of results are discussed below.

iii. **Setting Examinations:**

Each lecturer sets the examination for the course he/she teaches and such questions are vetted by the Head of Department, who has the responsibility of moderating the questions with the cooperation of the lecturer.

For final year examinations, the set questions are sent to the University appointed external examiner to further vet, write and submit a report to the Vice-Chancellor regarding his finding(s). The Department is then obliged to accept the modifications to the questions. These apply only to semester examinations and not test or mid – semester examination. Also, the external examiner only vets questions for final year students.

iv. **Conduct of the Examinations**

All semester examinations are conducted by the University, including the selection and distribution of invigilators and examination venues under the supervision of a University appointed Chairman of Examination Committee whose members are selected by the University. Examination Monitoring teams (both at central and college levels) are engaged during semester examination period to ensure examination rules and sanctities are kept.

v. **Evaluation Schemes**

After a lecturer has graded the scripts, he submits the scripts to the Head of Department. The HOD then ensures that the scripts are vetted by himself or any other colleague of his in the Department who must be senior to the examiner of the course. This applies to all courses at all levels including final year. The examiner ensures that the marking scheme and model answers are forwarded to the HOD as soon as the question papers are submitted.

Once the grading process is completed, the Departmental Board of Examiners meet with the Head of Department as Chairman. The board will discuss the results, ensuring that probity, integrity and rule of competence have been observed in grading the scripts. Consensus is the rule and where this is not possible, the matter is passed on to the College Board of Examiners.

vi. **External Examiners**

The Departments engages external examiners that are professionally and academically qualified persons (someone in the professorial cadre) who can make judgment on the standard of work done with regard to the type and level of manpower to be produced. The Department adequately makes use of the comment of our competent and qualified External Examiners from recognized institutions. This process helps the department meet the national standards laid down for the level of certification.

The external examiner's evaluation is a crucial stage of validation of the Department's results. For all final year courses examined, the external examiner's role begins by vetting the

questions even before the examination takes place. He has the power to modify or cancel any question and order a new one. A capable external examiner (in the rank of professor) is always considered and he generally reports his findings to the Vice- Chancellor. The external examiner has always reported well on our questions. Once the examination has been completed, he is invited to come and assess the performance of the students using the marking schemes. His reports on the rating, ranking and performance of our students have always been above board and of a high standard. Samples of external examiners' reports are in the file.

vii. College Board of Examiners

The College Board of Examiners is the forum in which all examiners in the College as members, meet and ensure that all Departments comply with Senate regulations on University examinations. The result is put in the full glare of the entire College members and deliberated upon. The decision of the College Board must be complied with and where this is not so and this is very rarely the case, issues move to Senate for final determination.

viii. Senate

Results go to Senate in summary form and there the results are electronically presented analytically; even then, discussion of details still occurs and issues that escaped either the Department and/or college are deliberated upon and resolved.

ix. Moderation Scheme (internal and external) for Degree Examinations

We ensure moderation of the degree examinations under the following:

Examinations (Undergraduate)

- a. After setting the questions, the lecturer submits them for moderation and advice by the Head of Department who is the Chief Examiner; subsequently the lecturer modifies, prints and count the questions before sending them in a sealed envelope to the college examination office where they are kept in a secured safe, usually 24 hours before the examination date. The chief invigilator for the examination, who is usually a faculty member in the college, collects the question papers in the sealed envelope to the examination venue to be administered.
- b. For final degree examinations, as soon as the questions have been internally moderated by the Chief Examiner (the HOD), a secure arrangement is made to take them to the External Examiner for vetting, moderation and immediately returned by the emissary, usually the Examinations Officer or the HOD. Necessary arrangements are effected by the course coordinator, printed and sent to the examination office in sealed envelope.

x. Issuance of Results

Results are only issued after the Senate has given approval. In other words, no student is expected to have any knowledge of the examination results until after the Senate meeting which considers such results. The results are published on the notice boards and on their portal.

1.7 Interview with Students

The students would be made available to the visitors or accreditors for interview on request.

1.8 Practical/Project Works

Chemical Engineering students are exposed to the practical applications of the principles of the courses being taught in every semester at different levels in the forms of practical works, workshop practices, final year research projects and group process design projects.

General Engineering Laboratories & Workshops are offered by all 200L engineering students in Covenant University. In every semester, the first two weeks are used for safety education and awareness, equipment familiarizations, Electrical & electronics and Mechanical components identification, introduction to engineering tools etc. At least, ten experiments are conducted per semester which translates to one experiment per week. Due to the large population of 200 Level engineering students, students are divided in groups for proper management and effective teaching and instruction (based on the capacity of each of the laboratory).

Some of the experiments being conducted in 200 Level are listed below:

GEC214: Applied Mechanics

- Forces, Moment Couples, Laws of Mechanics.
- Coplanar forces and their resultants.
- Distributed line loads and their resultants.
- Application of vectors to resolution of forces.
- Application of Newton's laws of motion.
- Rigid body translation, rotation about fixed axis and the velocity and acceleration of general plane motion.
- Relative motion of two particles.
- Instantaneous centre of rotation.
- Kinetics of particles, kinetic energy; principles of work and energy impulse and momentum analysis.

GEC216: General Engineering Laboratory

- Introduction to Engineering Laboratory Safety
- Introduction to Electronics
- Familiarization with Engineering Lab Experiment
- Components and Circuit
- Basic Soldering Guide
- Network Cable Crimping
- Current and Voltage
- Resistance and Ohm's Law
- Capacitors Measurements
- Capacitance Connected In Series and Parallel
- Resistor in Series in AC Circuit.

GEC218: Workshop Technology

Introduction to engineering workshop practice covering:

- Mechanical, Electrical, Information Engineering, Civil, Chemical, and Petroleum Engineering.

- Machine Operation Practice.
- Use of Hand Tools
- Safety Measures.

The Chemical Engineering practical works taken by 300 and 400 Level students are carried out in groups of between six and eight students per group every week. Laboratory manuals are usually prepared by the Department and made available to students prior to the commencement of practical work. Each practical period lasts for three hours. Experimental data generated during practical are collated by each group and signed by the Faculty/Technologist in-charge of the experiment. Copies of the signed experimental data must be attached to well written and spiral bound laboratory reports submitted to the coordinator (Faculty) in-charge of the experiment for grading. These laboratory reports are available to visitors and accreditors.

The titles of the experiments for each of the practical courses taken at 300 and 400 Levels (in Chemical Engineering department) are listed below:

300 Level Alpha Semester

- (i) Saponification Value of Oil
- (ii) Iodine Value of Oil
- (iii) Acid Value of Oil
- (iv) Reaction Kinetics I
- (v) Heat of Solution
- (vi) Distribution Coefficient
- (vii) Adsorption Equilibrium
- (viii) Osborne Reynolds Apparatus
- (ix) Hydrostatic Bench
- (x) Centre of Pressure
- (xi) Flow meter Demonstration Rig I
- (xii) Cooling Tower I
- (xiii) Distillation Rig I

300 Level Omega Semester

- (i) Sedimentation
- (ii) Drying of Solids
- (iii) Screen Analysis
- (iv) Air Flow Rig
- (v) Cooling Tower II
- (vi) Centrifugal Pump Characteristics
- (vii) Isothermal Batch Reactor
- (viii) Flow meters and Pipe Fittings
- (ix) Investigation of the Hydraulic Ram
- (x) Stirred Tank Reactor in Series
- (xi) Reaction Kinetics II (pseudo α – order reaction)
- (xii) Distillation Rig II

400 Level Alpha

- (i) Distillation Rig II
- (ii) Rising Film Evaporator
- (iii) CSTR
- (iv) Liquid-Liquid Extraction (Lab Scale)
- (v) Spray Drying
- (vi) Liquid- Liquid Extraction (Pilot Plant)
- (vii) Modular Pump Test Set
- (viii) Impact of Jets
- (ix) Investigation of Elementary Advanced Weir

- (x) Stirred Tank Reactor
- (xi) Reaction Kinetics III
- (xii) Cooling Tower III

400 Level students spend Omega semester in industries on a compulsory 6 months Students Industrial Work Experience Scheme (SIWES), to acquire relevant practical experience of the Chemical Engineering principles taught in the class. The students' performance is evaluated by both the Industry based supervisors and Institution based supervisors that pay visit to the students. In addition, each student is further evaluated at the end of the programme, by submitting a dully completed filled logbook, a written report on the experienced gained and making a power point presentation (organised by a team of examiners in the Department) to defend the experience gained.

Final year students undertake research projects spanning from Alpha to Omega semester of each academic year. They are usually assigned to project supervisors (lecturers) who in turn assign research topics to them. The students research on the given topics and defend same using power point at the end of Omega semester under the assessment of the departmental panel of examiners headed by an external examiner. Detailed reports are then submitted to the department for further corrections and grading thus: 30% oral presentation, 30% report presentation and 40% supervisor's mark. These are subject to the external supervisor's final evaluation and approval.

The students' yearly projects have clearly defined aim and objectives and apply acceptable methodology in its execution geared toward problem solving and relevant to the profession/environment. The project works, SIWES reports and logbooks are also available to visitors (or accreditors) for assessment.

1.9 External Examination System

The Department adequately makes use of the comment of our competent and qualified External Examiners from recognized institutions. This process helps the department meet the national standards laid down for the level of certification. The external examiners employed are professionally and academically qualified persons (most times in the professorial cadre) who can make judgment on the standard of work done with regard to the type and level of manpower to be produced.

External examiners are therefore used in the final year of the degree programme to assess final year courses and projects and to certify the overall performance of the graduating students as well as the quality of facilities and teaching.

1.10 Engineering Drawing Practice

These are College-wide Engineering drawing courses anchored by the Department of Mechanical Engineering. Our students participate in these courses in 100 and 200 levels.

Students have individual drawing boards for learning the use of paper and pencil to learn and appreciate the basic engineering drawing before using digital drawing process that aids engineering draughtsmanship. There are standards drawing rooms in Mechanical Engineering department for this important task.

1.11 Adequacy of Lectures

Schedules of courses taught and lecturers are indicated in the University Lecture Time-Table before the commencement of every semester. Students have adequate period of lectures and Tutorial hours. Lecture notes or course ware and course compacts (indicating the specific POs to address) are uploaded to E-learning module platform from where students access them

at all times. A comprehensive Covenant University Lecture Time Table is always available and a sample of Chemical Engineering Course Allocation (2021/2022 Alpha semester) is shown in the Table 1.3.

Table 1.3: Chemical Engineering Alpha Semester Course Allocation for Academic Session

S/N	Course Code	Course Title	Unit (C/E)	Lecturer (s)/Examiner(s)	Course Coordinator	Faculty to Upload
200 Level						
1.	CHE 211	Introduction to Chemical Engineering	1 (C)	Engr. Dr. A. O. Ayeni	Engr. Dr. A. O. Ayeni	Engr. Dr. A. O. Ayeni
300 Level						
2.	CHE310/331	Chemical Engineering Process Analysis I	3 (C)	Engr. O. G. Abatan (Mrs) Engr. Dr. D. E. Babatunde	Engr. (Mrs) O. G. Abatan	Engr. (Mrs) O. G. Abatan
3.	CHE312/332	Chemical Engineering Laboratory I	1 (C)	All Faculty	Engr. A.T. Ogunbiyi	Engr. A.T. Ogunbiyi
4.	CHE313/333	Transport Phenomena I	4 (C)	Engr. O. A. Adeeyo Engr. Dr Odunlami Engr. O. Fagbiele (Mrs)	Engr. O. A. Adeeyo	Engr. O. A. Adeeyo
5	CHE315	Chemical Reaction Kinetics	3 (C)	Engr. Dr. E. E. Alagbe Engr. O. Fagbiele Engr. Dr. O. Agboola	Engr. Dr. E. E. Alagbe	Engr. O. Fagbiele (Mrs)
6.	CHE317/334	Process Modelling and Simulation	3 (C)	Engr. Prof. V. E. Efevbokhan Engr. Dr. D. E. Babatunde Engr. Dr. O Oladokun	Engr. Prof. V. E. Efevbokhan	Engr. Dr. D. E. Babatunde
7.	CHE319/335	Separation Processes 1	4 (C)	Engr. Dr. A.A. Ayoola Engr. Dr. F. B. Elehinafe Engr. Dr. O. R. Obanla	Engr. Dr. F. B. Elehinafe	Engr. Dr. O. R. Obanla
8.	CHE336	Process Instrumentation	2 (C)	Engr. Dr. O. A. Oladokun Engr. Dr. D. E. Babatunde	Engr. Dr. O. A. Oladokun	Dr. D. E. Babatunde
400 Level						
9.	CHE410/418	Chemical Engineering Process Analysis III	3 (C)	Engr. Prof. V. E. Efevbokhan Dr. S.E. Sanni	Engr. Prof. V. E. Efevbokhan	Engr. Dr. S.E. Sanni
10.	CHE411/432	Unit Operations II	3 (C)	Engr. Dr. M.E. Ojewumi	Engr. Dr. M. E Ojewumi	Engr. A. T. Ogunbiyi

		Separation Processes III		Engr. A. T. Ogunbiyi	(Mrs.)	
11.	CHE412 /437	Chemical Engineering Laboratory III	2 (C)	All Faculty	Engr. Dr. D.E. Babatunde (Ms)	Engr. Dr. D.E. Babatunde
12.	CHE413/433	Chemical Engineering Transport Phenomena II	3 (C)	Engr. Dr. O. A. Odunlami Engr. Dr. T. E. Oladimeji Engr. O. A. Adeeyo	Engr. Dr. O. A. Odunlami (Mrs)	Engr. O. A. Adeeyo
13.	CHE414/434	Principles of Plant Design I	2 (C)	Engr. Dr. O. Oladokun Engr. Dr. (Mrs) T. E. Oladimeji	Engr. Dr. O. Oladokun	Dr. (Mrs) T. E. Oladimeji
14.	CHE415/435	Chemical Engineering Thermodynamics II	2 (C)	Engr. Dr. A. A. Ayoola Engr. Dr. F. B. Elehinafe	Engr. Dr. A. A. Ayoola	Dr. F. B. Elehinafe
15.	CHE 416/436	Chemical Reaction Engineering II	3 (C)	Engr. Dr. E.E. Alagbe Engr. Dr. M.E. Ojewumi Engr A. T. Ogunbiyi	Engr. Dr. E. E. Alagbe (Mrs)	Engr A. T. Ogunbiyi
16	CHE 417	Polymer Process Engineering	3 (C)	Engr. Dr. O. Agboola Engr. Dr. O. M. Obanla	Engr. Dr. O. M. Obanla (Mrs.)	Dr. (Mrs.) O. M. Obanla
17.	CHE431	Corrosion of metals and alloys	3 (C)	Engr. Dr. O.A. Odunlami Engr. Dr. S. E. Sanni	Engr. Dr. (Mrs.) O. A. Odunlami (Mrs.)	Dr. S. E. Sanni
500 Level						
18.	CHE 511/531	Biochemical Engineering	3 (C)	Engr. Dr. A. O. Ayeni Engr. Dr. M.E. Ojewumi	Engr. Dr. O. A. Ayeni	Engr Dr. (Mrs.) M.E. Ojewumi
19.	CHE 512/532	Process Dynamics and Control	3 (C)	Engr. Dr. O. Agboola Engr. Dr. E.E. Alagbe	Engr. Dr. O. Agboola	Engr Dr. E.E. Alagbe
20.	CHE 513/533	Chemical Engineering Process Design I	3 (C)	Engr. Dr. A. A. Ayoola Engr. Dr. O. A. Odunlami Engr. Dr. F. B. Elehinafe Engr. Dr. O. Oladokun (All Faculty)	Engr. Dr. O. Oladokun	Engr Dr. O. A. Odunlami
21.	CHE 516	Chemical Reaction Engineering III	3 (C)	Engr. Prof. Omoleye Engr. Dr. S. E. Sanni	Engr. Prof. J. A. Omoleye	Engr. Dr. S. E. Sanni

22.	CHE 519/539	Research Project I		All Faculty	Engr. Dr. F. B. Elehinafe	Engr. Dr. F. B. Elehinafe
Electives						
23.	CHE 517	Industrial Hazard and Environmental Pollution	3 (E)	Engr. Dr. (Mrs) T. E. Oladimeji Engr. Mrs O. Fagbiele	Engr. Dr. T. E. Oladimeji (Mrs.)	Dr. (Mrs) T. E. Oladimeji
24.	CHE 518	Introduction to Polymer Engineering and Processing	3 (E)	Engr. Dr. O. Agboola Engr. (Dr.) O. M. Obanla	Engr. Dr. O. Agboola (Mrs.)	Engr. (Dr.) O. M. Obanla
25.	CHE 510/530	Pulp and Paper Technology	3 (E)	Engr. O. G. Abatan (Mrs)	Engr. O.G. Abatan (Mrs.)	Engr. (Mrs). O.G. Abatan

2 PHYSICAL FACILITIES

Facilities such as classrooms, offices, laboratories, and associated equipment provided are adequate to support attainment of the Programme Outcomes (POs) or Student Learning Outcomes (SLOs) and provide an atmosphere conducive for learning. Modern tools, equipment, computational facilities, and laboratories appropriate for the programme are available, accessible, and systematically maintained and upgraded to enable students to attain the student outcomes and to support programme needs. Students are provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories available for the programme. The library services and the computing and information infrastructure are adequate to support the scholarly and professional activities of the students and faculty.

The existing facilities are very adequate in terms of quality and quantity. The quantity of facilities is being improved as the department expands with time. There is an installed 512/512 Kbps bandwidth Dedicated VSAT for uninterrupted internet access. Every staff can access the internet from his/her office. The internet is also distributed to lecture rooms and laboratory via LAN/Wireless LAN for students and staff with free access.

The University provides modern health facilities and qualified medical personnel at the health center. Faculty members, staffs and students have unhindered 24hours access to medical services anytime all through the week.

Drawing studios are also available at the departments of Mechanical Engineering and Architecture, for students' use

2.1 Minimum Laboratory and Workshops Required per Programme

All laboratories and workshops are adequately equipped. The Chemical Engineering programme has the minimum required number of laboratories and workshops as articulated in the COREN Benchmark Minimum Academic Standards (BMAS). All practical and laboratory equipment are clearly articulated. The laboratories and workshops are equipped with the state-of-the-art equipment to accomplish the program objectives in an atmosphere conducive to learning.

2.1.1 Laboratories & Workshops

Engineering Workshops are housed in Mechanical, Civil and Electrical Engineering Departments where 200 and 300 level students carry out their workshop practices. It is also available for other levels of students who need to carry out fabrications during their final year research projects. It is adequate in size, well equipped with suitable machinery, tools and equipment, safe, well maintained and suitably laid out.

2.1.2 Equipment/Instruments

The laboratory equipment and instruments available in the five laboratories (within the department) are modern day equipment that meet the BMAS specifications. The equipment and instruments are listed in **Tables 2.1 – 2.5**.

Table 2.1: List of Equipment in Chemical Analysis Laboratory (LAB 1)

S/N	Equipment	Quantity
1	Multimeter with Probe (hand held)	1
2	Turbidity Meter	1
3	Vision Scientific Hot Air Oven	3
4	Muffle Furnace	1
5	Edwards Vacuum Pump	1
6	Heating Mantle 1000ml	1
7	Heating Mantle 500ml	1
8	Heating Mantle 250ml	2
9	Digital Refractometer ABBE	1
10	Platform Mixer	1
11	Water Bath	1
12	Deionizer	1
13	Ductless FumeHood	1
14	Deep Freezer	1
14	Refrigerator	1
15	Hot Plate Magnetic Stirrer, Stuart	4
16	Weighing Balance	1

Table 2.2: List of Equipment in Environmental Engineering Laboratory (LAB 2)

S/N	Equipment	Quantity
1	Vision oven	2
2	Water Bath	3
3	Kinematic Viscosity Tester	1
4	Weighing Balance	2
5	Digital Heating Mantle (Six holes)	1
6	Orbital Incubator	1
7	Stationary Incubator	1
8	Microprocessor Turbidity Meter HI 93703C	1
9	Handheld Refractometer PALM ABBE 203X	1
10	Conductivity Meter (hand held) HI 991301 PH/EC/TDD meter	1
11	Colony Counter	1
12	CO Test kit PGM – 1860 (FC/CO 0 – 500ppm	1
13	YSI Multi parameter Kits 14H100132	1
14	PH Meter Jen way 3505	1
15	YSI 550A Oxygen Kit IIL100949	1
16	Cleveland open cup Flash point tester	1
17	Fume cupboard	1
18	Hot Plate Magnetic Stirrer, Staurt	3
19	Deep Freezer	1
20	Refrigerator	1

Table 2.3: List of Equipment in Chemical Reaction Laboratory (LAB 3)

S/N	Equipment	Maker	Quantity
1	Continuous Stirred Tank Reactor	ARMFIELD/ UK	1
2	Stirred Tank Reactor In Series With Service Unit	ARMFIELD/ UK	1
3	Batch Reactor With Reactor Service Unit	ARMFIELD/ UK	1
4	Electric Control Console	ARMFIELD/ UK	2
5	Basic Process Module	ARMFIELD/ UK	1
6	Industrial PID Controller (Pct20h)	ARMFIELD/ UK	2
7	Deep Freezers	THERMOCOOL	2
8	Bench Spray Dryer	ARMFIELD/ UK	1
9	Bench Top Cooling Tower	ARMFIELD/ UK	1
10	Rotary Evaporator	STUART	1
11	Weighing Balance	OHAUS	2
12	Weighing Balance	Camry	1
13	Water Distiller	STUART	1
14	Vacuum Pump	JEVAC	1
15	Refrigerator	THERMOCOOL	1
16	Electronic Digital Oven	HEIER	1
17	Oven	VISION SCIENTIFIC	1
18	Hot Plate Magnetic Stirrer	STUART UC152	3
19	Furnace Carbolite 1700 °C	CARBOLITE	1

Table 2.4: List of Equipment in Post Graduate Research Laboratory (LAB 4)

S/No	Name of Equipment	Quantity
1	Shaking Water Bath	1
2	pH Meter	1
3	Centrifuge	1
4	Oxygen Bomb Calorimeter	1
5	UV-Spectrophotometer	1
6	Hot Plate Magnetic Stirrer, Stuart	1
7	Deep Freezer	1
8	Abbe Refractometer	1
9	Ductless Fume Hood	1

Table 2.5: List of Equipment in Unit Operations/Transport Phenomena Lab.

S/No.	Description of Equipment	OEM	Quantity
1	Liquid- Liquid Extraction Unit	ARMFIELD/ UK	1
2	Distillation Column (Monitoring Interface Uop3cc)	ARMFIELD/ UK	1
3	Continuous Distillation Column	ARMFIELD/ UK	1
4	Hydrostatics Bench	CUSSENS/ UK	1
5	Electric Steam Boiler	ARMFIELD/ UK	1
6	Rising Film Evaporator	ARMFIELD/ UK	1
7	Tall Spray Dryer	ARMFIELD/ UK	1
8	Chiller For Spray Dryer	ARMFIELD/ UK	1
9	Air Flow Rig	ARMFIELD/ UK	1
10	Flow Meters Demonstration Rig	ARMFIELD/ UK	1
11	Hydraulic Bench	ARMFIELD/ UK	1
12	Differential Manometer	CUSSENS/ UK	1
13	Bernoulli's & Manometer Board	CUSSENS/ UK	1
14	Water Flow Measuring Apparatus	CUSSENS/ UK	1
15	Modular Pump Test Bench	CUSSENS/ UK	1
16	Pump Characteristics	ARMFIELD/ UK	1
17	F1-10 Hydraulics Bench	ARMFIELD/ UK	1
18	Orifice Rig	ARMFIELD/ UK	1
19	Heat Exchanger (Shell & Tube) 'A'	ARMFIELD/ UK	1
20	Heat Exchanger (Tubular) 'B'	ARMFIELD/ UK	1
21	Heat Exchanger (Plate)	ARMFIELD/ UK	1
22	11 Bar Air Compressor		1
23	Hydrostatic Pressure Apparatus	ARMFIELD	1

2.2 Laboratory Documents/Documentation

The laboratory documents in the department include the laboratory manuals, equipment manuals and maintenance manuals. Copies of these documents are available in the department.

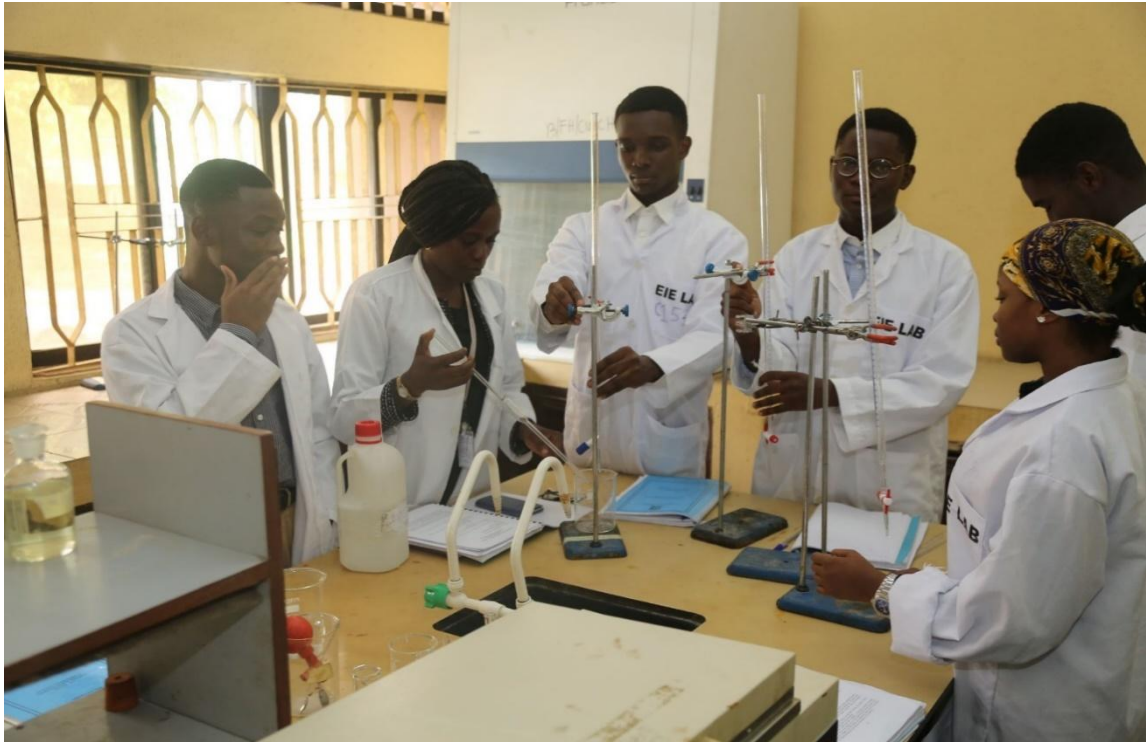
Some of the pictures taken in the laboratories and workshops during the laboratory practical periods and capstone project periods are shown below.



Students Performing Experimental Work in the Laboratory



Students Performing Experimental Work in the Laboratory



Students Performing Experimental Work in the Laboratory



Colour Chart Formation after Paint Production by Students (Capstone Project)



Wood Cutting Operation in Engineering Workshop



Capstone Project in Engineering Workshop

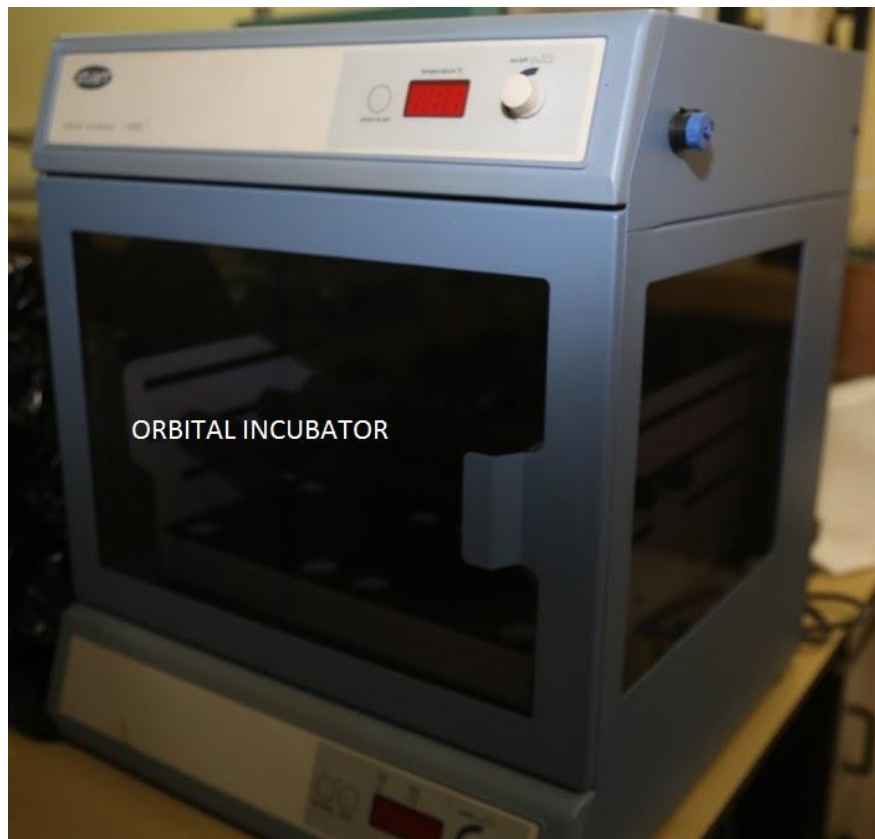


Paint Production by Students in Chemical Engineering (Capstone Project)

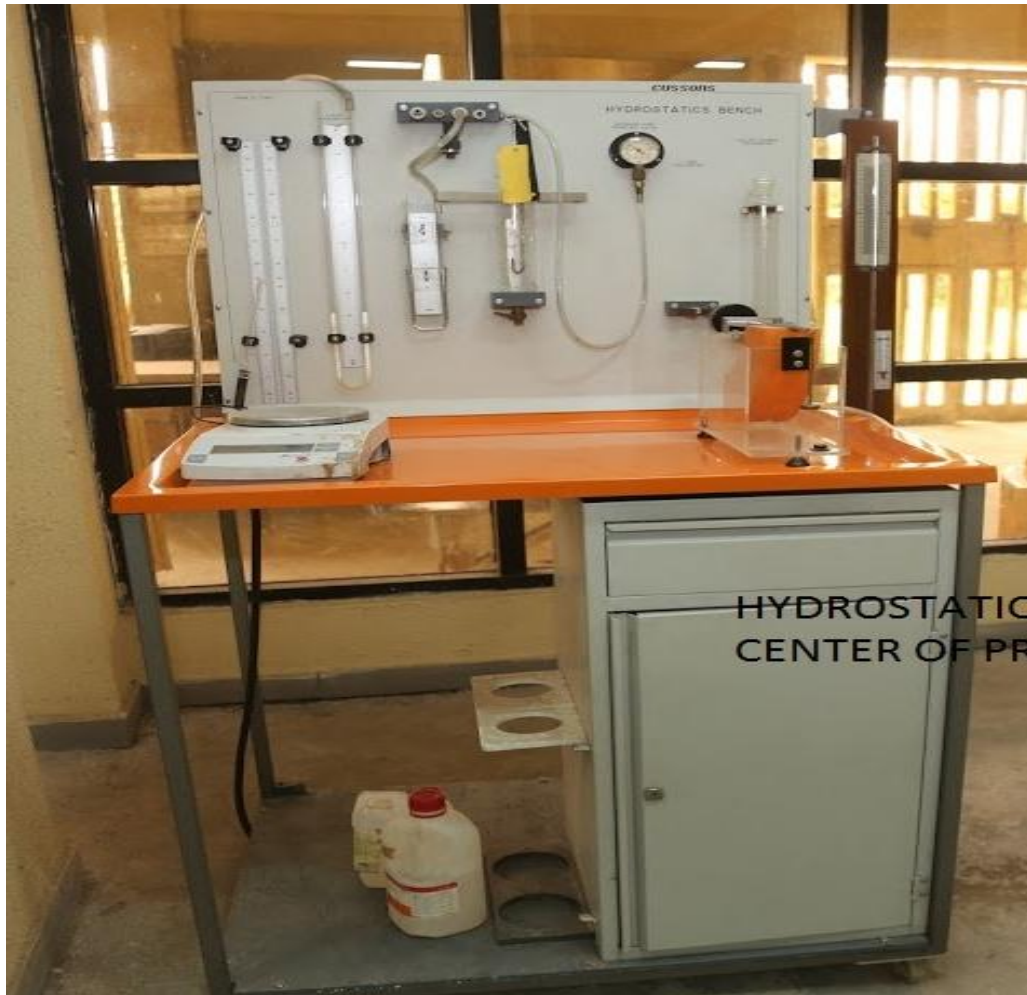


Welding Operation in Engineering Workshop

Some of the equipment in Chemical Engineering laboratories are shown below







HYDOSTATIC BENCH WITH
CENTER OF PRESSURE





FLOW METER
DEMONSTRATION RIG



DISTILLATION COLUMN CONSOLE





DIGITAL OXYGEN BOMB CALORIMETER



CONTINUOUS STIRRED
TANK REACTOR

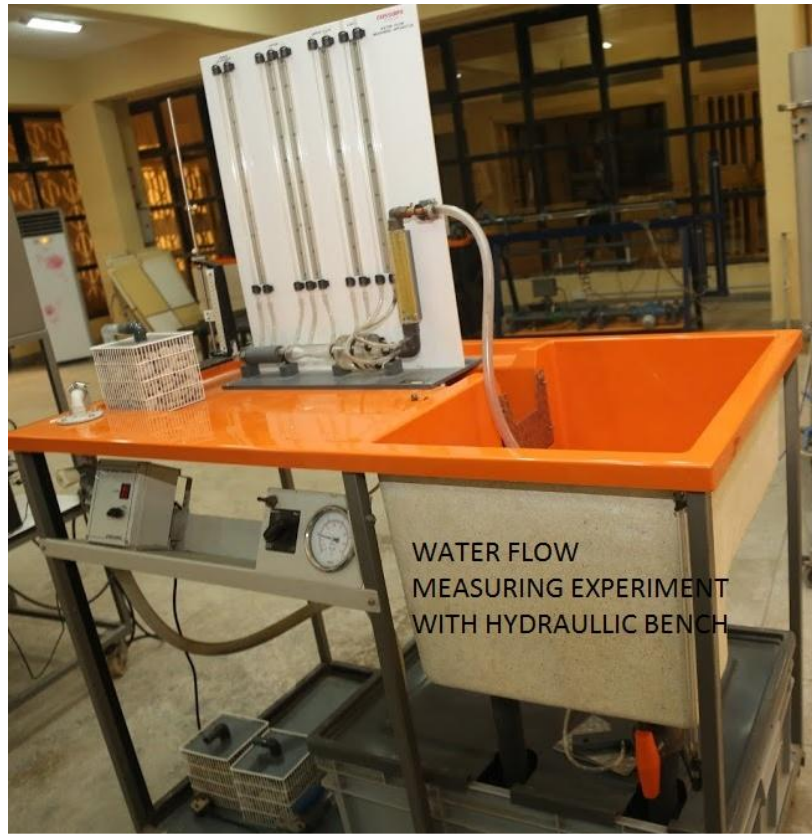


LABORATORY STEAM BOILER

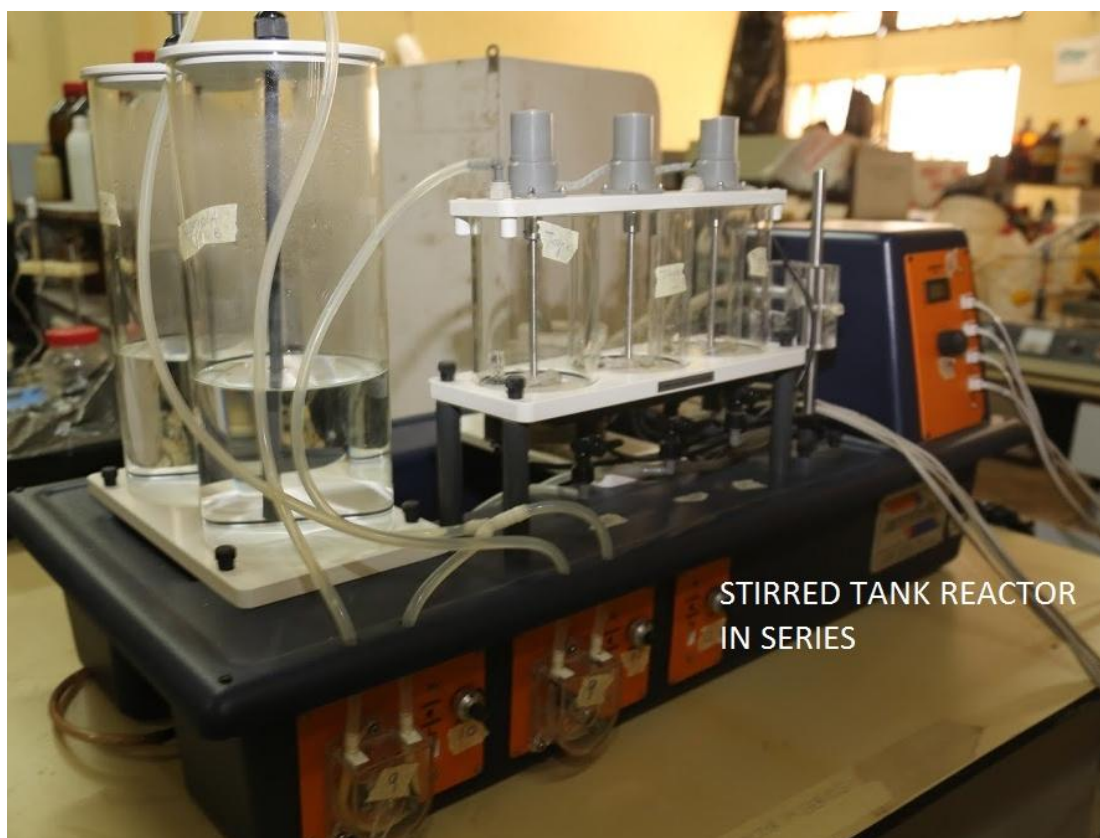








WATER FLOW MEASURING EXPERIMENT WITH HYDRAULIC BENCH





RISING FILM EVAPORATOR



OSBORNE REYNOLDS APPARATUS WITH HYDRAULIC BENCH

2.3 Classrooms and Lecture Theatres

All the classrooms and lecture theatres (for lectures delivery) are very conducive for productive teaching and learning. Table 2.6 gives the details of the classrooms, lecture theatres and other facilities available for students used.

Table 2.6: Classrooms and Lecture Theatres

Type of Facility	No. Available	Average area of room/studio etc. in m sq.	No. of students each room can accommodate	No of rooms jointly used with other Departments	Expansion Program me (if any)	Total Facility that will be available to Department when expansion work is completed		
					Additional facility	Year Started	Year of Completion	
Lecture Room	6	96	80	11	-	2022	2023	10
Lecture Theatre	2	-	3000	2	1	2022	2023	2
Assembly/ Exams Hall	1	-	3000	1	1			2
Laboratories / Workshops	9	-		4	-			-
Studios	2			2	-			-
library	2			2	-			-
Office	2			2	-			-
Accommodation	21			-	-			
Others								

2.4 Office Accommodation

Every staff has conducive office accommodation furnished with basic items of furniture. They are well ventilated. The minimum office size is about 4.5m X 3.5m (15.75m²). And each is occupied by one academic staff. Each office is furnished with a writing table, computer table, swivel chair, an air conditioner, a ceiling fan, telephone handset and visitors chairs (Table 2.7).

Table 2.7: Office Accommodation

S/N	Name	Size of Office	Furniture	No in Room	Comment
1	Prof. V.E Efeobokhan. (H.O.D'S Office)	32m ²	Table- 2 Office chair-1 Visitors chair-3 Conference chair - 12 Refrigerator – 1 BookShelf-4 Cabinet-1 P.C-1 Printer-1 UPS – 1 Fridge – 1 Air conditioner -2 Fan -4 Internet facility	1	Adequate
2.	Admin Officer (H.O.D.)	20m ²	Tables - 2, Chair-2, PC - 2, Printer1, File Cabinets-2, Bookshelf-1 Air conditioner -1 Fan -2 Visitor's chair-6 Internet facility	2	Adequate
3.	Prof. J.A. Omoleye	14 m ²	Table- 1 Office chair-1 Visitors chair-2 BookShelf-2 Fridge – 1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
4	Prof. V.E Efeovbokhan	11.76 m ²	Table- 1 Office chair-1 Visitors chair-2 BookShelf-2 Fridge – 1 Air conditioner -1 Fan -1 Internet facility	1	Adequate

5	Dr. A.O Ayeni	11.76m ²	Table- 1 Office chair-1 Visitors chair-4 BookShelf-1 Fridge – 1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
6	Dr. Oluranti Agboola	16 m ²	Table- 2 Office chair-0 Visitors chair-4 BookShelf-2 Refrigerator – 1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
7	Dr. Ayoola A. Ayodeji	16 m ²	Table- 1 Office chair-1 Visitors chair-3 Bookshelf-1 Air Conditioner -1 Fan -1 Fridge – 1 Cabinet – 2 Air conditioner -1 Fan -1 Internet facility	1	Adequate
8	Dr. M.E. Ojewunmi	14 m ²	Table- 1 Office chair-1 Visitors chair-3 Bookshelf-2 Fridge – 1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
9	Dr. O.A. Odunlami	11.76m ²	Table- 1 Office chair-1 Visitors chair-3 Bookshelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate

10	Dr. O. Olagoke	25.87m ²	Table- 1 Office chair-1 Visitors chair-2 BookShelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
11	Dr. S.E Sanni	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 BookShelf-1 Air conditioner - 1 Fan -1 Internet facility	1	Adequate
12	Dr. T.E. Oladimeji	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-1 Air conditioner -1 Fan – 1 Internet facility	1	Adequate
13	Dr. O.R. Obanla	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-2 Air conditioner Fan – 1 Internet facility	1	Adequate
14.	Dr. D.E. Babatunde	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-1 Air conditioner Fan – 1 Internet facility	1	Adequate
15	Engr. O.A Adeeyo	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate

16	Engr. A.T. Ogunbiyi	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
17	Engr. A Akinyemi	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
18	Engr. O. G. Abatan	11.76 m ²	Table- 1 Office chair-1 Visitors chair-2 BookShelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
19	Engr. O.J. Omodara	9.76m ²	Table- 1 Office chair-1 Visitors chair-4 Bookshelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
20	Engr. Adegbite	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 BookShelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
21	Mr B.A. Oni	11.76m ²	Table - 2 Office chair - 1 Visitors chair - 3 Bookshelf – 1 Air conditioner -1 Fan -1 Internet facility	1	Adequate

22	Dr. Edith Alagbe	11.76m ²	Table- 2 Office chair-1 Visitors chair-2 BookShelf-1 Air conditioner -1 Fan -1 Internet facility	1	Adequate
23	Mrs A.V Olawepo	11.76m ²	Table – 1 Office chair - 1 Visitors chair – 3 Air conditioner -1 Fan -1 Bookshelf – 1 Internet facility	1	Adequate
24	Mr. O.J Omodara	11.76m ²	Table- 1 Office chair-1 Visitors chair-2 Bookshelf-1 Internet facility	1	Adequate

2.5 Safety, Sanitation and Environment

Our institution has a clean environment and buildings are safe and comply with Federal, State and Local Government Laws relating to safety, fire hazards, etc. All buildings have functional fire-extinguishers, fire buckets with sand, and water source/reservoir and all staff and students have some knowledge on how to operate all fire equipment.

There are Campus Keepers that are saddled with the responsibility of keeping offices, classrooms, laboratories, workshops and the entire campus environment clean at all time.

2.6 Drawing Office & Equipment

Two drawing studios and offices are available at the departments of Mechanical Engineering and Architecture.

2.7 Teaching Aids

The department boasts of modern Teaching facilities and they include

- i. Projector & Screen
- ii. White board
- iii. Interactive board
- iv. PA System
- v. Smart Boards
- vi. E-Moodle platform

2.8 Virtual Laboratories, Simulation Systems and Models

Students accessed computer systems with software such as Matlab and Excel software for the teaching and examination of computer packages. Also, staffs and students have their own laptops installed with these and other software such as AutoCAD, Minitab, HYSYS etc for

simulation and modeling of systems. Media Centre at the Library is also equipped with a number of laptops, printers and photocopiers for final year students.

3 STAFFING

3.1 Teaching (Academic) Staff

Table 3.1: Academic Staff Teaching Chemical Engineering students, Courses Taught and Their Qualifications

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
1.	Engr. Prof. Vincent E. Efeovbokhan	Professor/ CUASS14/ 06-11-2006	F/T	Ph.D, 2013 M.Eng, 1994 B. Sc. Tech, 1986, COREN, MNSE, MNSChE	- till date LII, LI, SL Professor	GEC220 CHE317/C HE334 CHE410/C HE418 CHE522/C HE544 CHE519 CHE529	See course allocation	1. HOD, Chemical Engineering (2015-2018, 2021 - date) 2.National University Commission (NUC), Nigeria, Accreditation Panel Member to several universities 3.External Examiner for M.Eng dissertations, OAU, & UniUyo 4. External Examiner for the Undergraduate programmes at Edo University, Uzairue & University of Lagos, Lagos
2	Engr. Prof. James A. Omoleye	Professor/ CUASS14/ May 2007	F/T	Ph.D, 2007, M.Sc, 1979, BSc, 1979	1981 - Date LII, LI, SL,	CHE346 CHE520 CHE416/5 16		1.Dean Students Affair 2008-2010 2. Director Center for Reseach - 2010 -2013

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
					Professor Total Publication: (1) Articles 71 (2) Patents 7	CHE519 CHE529		3. HOD Chemical Engineering - 2014 - 2015 4. National University Commission (NUC) Accreditation Panel Member 5. External Examiner (BSc, PhD): - University of Lagos - Akwa Ibom State University 6. Professorial Assessment: - University of Ilorin - University of Abuja - Lagos State University
3	Engr. Dr. Augustine O. Ayeni		F/T	B. Sc., M.Sc., Ph.D	2005-till date AL, LI, LI, SL, A/P Total publication: 100	GEC221, CHE211, CHE221, CHE321, CHE324, CHE416, CHE521, CHE511/	See course allocation	1. HoD, Chemical Engineering, 2018-2021 2. External Examiner for M.Eng and PhD Theses, Wit University, South Africa, University of Johannesburg, South Africa, Cape Peninsula

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
					Scientific papers	CHE531		University, South Africa
5	Engr Dr. Oluranti Agboola	Associate Professor/ CUASS13/02 04-01-2017	F/T	D.Tech., 2015 M.Tech., 2011 B.Eng., 2004 COREN, MNSE	2011-2016 (Part-time lecturer) 2017- till date SL, Associate Professor Total Publications- 129	CHE15 CHE326/ CHE346 CHE512/C HE532 CHE516 CHE417 CHE521 CHE525	See course allocation	1. Post graduate coordinator, Chemical Engineering (2018-2021) 2. Industrial board coordinator (2021-2023) 3. External Examiner for MSc dissertations, University of the Witwatersrand Johannesburg, South Africa, 2020 & 2021 4. External Examiner for MSc dissertations, University of Johannesburg, Johannesburg, South Africa, 2022
6	Engr. Dr. Odunlami A. Olayemi	Senior Lecturer/ CUASS12/ 01-08-2016	F/T	Ph.D, 2015 MSc., 2011 BSc., 2001 NSE, 2013 COREN, 2010	2016-2018 LI 2018-till date SL	CHE211, CHE321 CHE341 CHE313 CHE333	See course allocation	1. Chairman Hooding and college week committee, college of Engineering (2021-till date)

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
						CHE413 CHE433 CHE431C HE517CH E520CHE 528 PET520		2.School of post graduate studies coordinator, Chemical Engineering Department (2021-2023) 3. College Examiner and Assessor for Ph.D students, Covenant University (2020-2023) 4. Assessor for Ph.D students, Covenant University (2022)
7	Engr. Dr. Modupe E. Ojewumi	Senior Lecturer CUASS12/ 10-04-2010	F/T	B.Tech.2001, M.Sc.,2007 , Ph.D. 2016	2010-2023	CHE 211 GEC 221 CHE 320 CHE 326 CHE 411 CHE 432 CHE 412 CHE 511 CHE 519 CHE 529	See course allocation	Departmental Time table officer 2010 – 2015 Academic level adviser – till date Departmental Examination Officer 2010 - 2017 College Examination office / Time table committee member College of Engineering, Covenant University 2011 – 2017 Supervisor undergraduate projects

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
								2011 – Till date Departmental Welfare Committee Chair 2011 – 2016 SIWES Supervisor 2012 – 2018 Post UTME Panel Member [CUSAS] 2014 -2016 College welfare committee member 2017 – 2019 PhD. Thesis Examiner 2020 – Till date
8.	Engr. Dr. Samuel E. Sanni	Senior Lecturer, CUASS12/XX, 2013	F/T	B.Tech., 2003 M.Sc., 2009 Ph.D 2018 COREN MNSE MNSCHE MIPMD IAM	2013 - present AL; 2013-2015 LII; 2015-2018 LI; 2018-2020 SL; 2020-present Total Publications: 130	GEC 220 CHE211 CHE312 CHE315 CHE326 CHE346 CHE412 CHE410/ CHE418 CHE416 CHE431 CHE 516 CHE528	Senior Lecturer (FT)	Deputy Director, Research/Research Coordinator, Covenant University Center for Research, Innovation and Discovery, College Examiner, PhD. Thesis, Internal Assessor, Ph.D Thesis, SPS Examiner/Representative Ph.D Thesis, Member CU Research Policy Review Committee, Covenant University

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
								Research Committee
9	Engr. Dr. Olagoke Oladokun	Senior Lecturer, CUASS12/XX, 2017	F/T	B.Tech., 2000 M.Sc, 2003, Ph.D, 2017 COREN, IChemE MAHE	2004-Teaching Till date 2017-2019 -Research Post-Doctorate, UTM 2019-2020 -Teaching & Learning Post-Doctorate, UTM	GEC220 CHE312 CHE317/C HE334 CHE410 CHE414/C HE424 CHE524/C HE536 CHE513 CHE523 CHE519 CHE529	Senior Lecturer (FT)	1. Malaysia-Thailand Joint Authority (MTJA) Team on Removal of CO2 from Natural Gas using Fibre Membrane Adsorbent. 2. Member, Institute of future Energy, Universiti Teknologi Malaysia (UTM)
10	Engr. Dr. Edith E. Alagbe		F/T	B. Eng., M.Sc., Ph.D			Senior Lecturer (FT)	1. Academic adviser (2018 - Date) 2. COREN Examiner 3. College Welfare Chairman: 2020 – 2022
11	Engr. Dr. T. E.	Senior Lecturer	F/T	Ph.D, 2019	Senior	CHE341	See	-Departmental Exam

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
	Oladimeji	CUASS12/01		M.Sc, 2013 B.Tech, 2008, COREN, MNSE, MNSChE	Lecturer-2021- Till date Lecturer I - 2019-2021 Lecturer II- 2015-2019 Assistant Lecturer - 2013-2015 Total Publications- 37	CHE342 CHE412 CHE434 CHE517 CHE527 CHE524 CHE519 CHE549	course allocation	Officer- 2022- till date -Examiner for Ph.D students, Covenant University (2022) -Departmental Welfare Officer_ 2021- till date -Level Adviser- 2015-till date -Departmental Chaplain - 2015-1017
12	Engr. Dr. Francis B. Elehinafe	Lecturer I/ CUASS10A-04/ 21 - 04 - 2017	F/T	Ph.D, 2016 M.Sc, 2012 B. Sc., 2005, COREN, MNSE, MNSChE Total Number of Publication: 67	2012 - 2016: Part-time Lecturer 2017- till date LII, LI	CHE312 CHE 322 CHE 412 CHE315 CHE/345 /CHE319 CHE415/ CHE435	See course allocation	Departmental Exam Officer 2017- 2022 Deputy College Exam Officer 2020 - till date Departmental SIWES/SWEP

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
						CHE526 CHE519 CHE529 CHE513/ CHE 533 CHE517/ CHE534 CHE523/ CHE 543 CHE 542		Coordinator 2020- till date Level Adviser- 2017-2022 Quality Assurance and Academic Standard Officer 2021 til date Departmental Safety Officer 2023 - till date
13	Engr. Dr. Oyinlola R. Obanla	Lecturer I/ CUASS10A-04/ 2014	F/T	B.Tech, 2008 M.Sc, 2010 Ph.D, 2020	AL 2014 L1 2018 L1 2022	CHE317/ CHE334 CHE325/C HE345 CHE415/C HE435 CHE519 CHE529	See course allocation	Academic Adviser, (2015-2019, 2021 till date) Time table officer Examination board committee
14	Engr. Dr. Damilola E. Babatunde	Lecturer I/ CUASS10A-02/ 24-04-2015	F/T	B.Tech, 2009 M.Sc, 2013 Ph.D, 2021 COREN MNSE	Teaching and Administration - (2009-	CHE310/C HE331 CHE312 CHE317/C HE334	See course allocation	1. Staff Adviser, The Nigerian Society of Chemical Engineers (NSChE), Covenant University Students'

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
				AIChE IAENG IAENG Society of Chemical Engineering	2015) Industrial Production and Management - (2013-2015) Lecturer II - (2015-2021) Lecturer I - (2021 till date) Total Publications- 49	CHE322 CHE325/CHE345 CHE412 CHE415/CHE435 CHE522/CHE544 CHE519 CHE529		Chapter (2022 till date) 2. Secretary & Member, Departmental Quality Assurance and Academic Standard Committee (2021 till date) 3. Academic Adviser, (2015-2019, 2021 till date) 4. Departmental Examination Board Committee (2015 till date) 5. External Examiner for PhD thesis, University of South Africa, South Africa (2022). 6. Member, Registration Committee, ICEBE Conference 2021 Covenant University (2021). 7. Departmental SIWES Coordinator

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
								(2017/2018). 8. Time-Table Officer/Deputy Departmental Examination Officer (2016 - 2018) 9. Member, Publicity Committee for an international seminar on “Carbon capture, utilization and storage: a means to mitigating the effect of climate change” (2016).
15	Engr. Dr. Elochukwu S. Agudosi	Lecturer I/ CUASS10A/12-12-2022	F/T	B. Eng/2008, PDM/2014, M.Eng/2017, Ph.D/2020	2023 - date/L1, 2020 - 2022/Research Fellow 2019/Research Intern	GEC221 CHE527	See course allocation	Member - Departmental QAASC team
16	Engr. Dr. Ezinne Igbokwe	Lecturer I/ CUASS10A/20-	F/T	B. Sc, 2004, M.Sc/2006,	2023 - date/L1	CHE325/3345	Lecturer I (FT)	

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
		03-2023		Ph.D/2020 COREN	2017 - 2020/Research Fellow 2010- 2017/Research and Development	CHE525 CHE824		
17	Engr. Dr. Anthony I. Okoji	Lecturer I/CUASS10A/2 3-03-2023	F/T	B. Tech, 2000, M.Sc, 2004, Ph.D, 2022 COREN, MNSE	2023 - date/LI 2019 - 2022 Research/ Teaching	GEC 221 CHE 524	Lecturer I (FT)	,
18	Engr. Ajibola T. Ogunbiyi	Lecturer II/ CUASS08/06/ 01/05/2015	F/T	B. Sc., M.Sc.	2015 - date LII	CHE312 CHE322 CHE412 CHE519 CHE529	Lecturer II (FT)	1. Level Students Adviser - 2021/2022 – Date. 2. Member, Publicity Committee and Online Advert Coordinator, ICEBE Conference 2021 Covenant University, 2021/2021. 3. Departmental

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
								Examination Officer, - 2017/2018.
19	Engr. Olubunmi G. Abatan	Lecturer II/ CUASS08/08 3/3/2014	F/T	B.Eng., M.Eng.		CHE326 CHE346 CHE310 CHE320, CHE510, CHE521, CHE542, CHE312, CHE322, CHE 412	Lecturer II (FT)	
20	Engr Akinnike F. Akinyemi	Assistant Lecturer / CUASS07/02 17/11/2021	F/T	B. Tech M.Tech. COREN	2021-till date Total Publications- 3	CHE417 CHE510 CHE340 CHE527 CHE433 GEC221	See course allocation	Level Adviser- 2022 -till date
21	Ayo Adesina	Assistant Lecturer /	F/T	B. Sc. M.Sc.	2023-till date	GEC221 GEC220	Assistant Lecturer	

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL-TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
		CUASS07/02 17/11/2021			Total Publications- 4	CHE342	(FT)	

Teaching Staff: Cognate Faculty and Other Engineering Faculty

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FULL - TIME (F/T)	Qualification, dates obtained and specialisation, membership of professional association	Post Qualification Work/Teaching experience	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

22	Engr. Prof. Olayinka O. Ohunakin	Professor/ CUASS14 13-June.-2007	F/T	PhD Mech (2014) M.Sc Mech (2002) BSc. Mechanical (1998) MNSE COREN 104 Publications	2007- till date L11 L1 SL Professo r	GEC320	See Course Allocat ion Table	Chair, International Conference on Engineering for a Sustainable World 2021 Chairman: Covenant University International Office & Linkages: 2021/2022 session. Chairman: Covenant University International Office & Linkages: 2019/2020 session. Chairman: Covenant University Quality and Academic Standards Committee: 2018/2019 session.
23.	Engr. Prof. R.T. Loto	Professor/ CUASS14/ 28-01-2013	F/T	Ph.D Metallurgical and Materials Engineering (2014) M.Sc Metallurgical and Materials Engineering (2007) B.Tech Mechanical Engineering (2002) COREN, MNSE, SAIMM and CORRISA 266 Publications	2013- till date L11 L1 SL PR	GCE 213 GEC 223	See Course Allocat ion Table	Co-Chair, International Conference on Engineering for a Sustainable World 2021 · Cluster Leader, Corrosion and Materials Research Cluster · Departmental Seminar coordinator (2017) · Exam Officer, Department of Mechanical Engineering (2016) · Tutorials Coordinator, Department of Mechanical Engineering (2016)

24.	Engr. Dr. Kennedy Okokpujie	Senior Lecturer/ CUASS10/07-01-2016	F/T	Ph.D ICE 2020 ,M.Sc. EEE 2015 ,B.Eng Electrical Engineering(2002) COREN, MNSE 88 publications	2016-till date LII LI	GEC215 GEC225	2 1	B. Eng. Project Supervision, M. Eng. Supervision, Research, Reading and Watching Football
25.	Engr. Dr. Charles. Onuh	Senior Lecturer Lecturer/CUASS 12	F/T	Ph.D. Pet. Eng., M.Sc. Pet. Eng., B.Sc. Pet. Eng., MNSE, COREN	SL LI LII	GEC210	3	Post Graduate College Examiner
26	Engr. Dr. Isaac Akinwumi	Senior Lecturer /CUASS1/06-01-2009	F/T	Ph.D Civil Eng. 2017 M.Eng. Civil Eng. 2012 ,B.Eng Civil Eng. (2006) COREN, MNSE	2009 - till date RF AL LII LI SL	GEC223	2 3	B. Eng. Project Supervision, M. Eng. Supervision, Research
27	Engr. Dr. Paul Awoyera	Senior Lecturer Lecturer/CUASS 12	F/T	Ph.D. Civil Eng., M.Eng. Civil Eng., B.Eng. Civil Eng., COREN, MNSE	LII LI SL	GEC224	3	Post Graduate College Examiner
28	Engr. Dr. Olugbenga A. Omotosho	Senior Lecturer/ CUASS12 20-Feb-2007	F/T	Ph.D Mechanical (2016) M.Eng Mechanical (2010) B.Eng Mechanical (1996) MNSE COREN	2007- till date GA AL L11 L1 SL	GEC214 , GEC218 ,	See Course Allocat ion Table	B.Eng Project Supervision, M.Eng dissertation supervision, Ph.D supervision, Research, Reading, Travelling, Table tennis

				62 Publications				
29	Engr. Dr. Philip. O. Babalola	Senior Lecturer/ CUASS12 03-June.-2008	F/T	PhD Mechanical (2015) M.Sc (Mechanical - 1999) B.Eng (Mechanical-1995) MNSE COREN 105 Publications	2008- till date L11 L1 SL	GEC222 GEC214	See Course Allocation Table	B.Eng. Project Supervision, M.Eng. Supervision, Ph.D Supervision, Research, Reading and Singing
30	Engr. Dr. Kilanko O.	Senior Lecturer/ CUASS12/ 03-10-2005	F/T	Ph.D. (2015), M.Sc. (2003), B.Sc. (2000) Mechanical Engineering, COREN, MNSE	AL L11 L1 SL	GEC117 GEC212 GEC222	See Course Allocation Table	B. Eng. Project Supervision, M.Eng Project Supervision, Research, Reading and Music
31.	Engr. Dr. Richard Leramo	Lecturer I 02-Feb-2005	F/T	PhD Mech (2017) MSc. Mech (2000) B.Eng. Mech. (1995) MNSE COREN 46 Publications	2005- Date	GEC212 GEC222	See Course Allocation Table	B. Eng. Project Supervision, M. Eng. Supervision Research, Playing chess, counselling and business

32	Dr. Mfon Udo	Lecturer I CUASS10 01-02-2016	F/T	B.Tech (Mechanical Engineering) 1989) M.Sc (Mechanical Engineering), 1997 Ph.D (Metallurgical and Material Engineering), 2012	2016 till date Lecturer I	GEC320 , GEC223 , GEC214 ,	See Course Allocation Table	Reading and evangelism
33	Engr. Dr. Oluwasegun Falodun	Lecturer I/ CUASS10 03-Mar.-2022	F/T	PhD Metallurgical and Materials Engineering (2019) M.Eng Metallurgical and Materials Engineering (2015) B.Eng Metallurgical and Materials Engineering (2010) MNSE COREN 10 Publications	2021- till date L1	GEC213 , GEC223 ,	See Course Allocation Table	B. Eng. Project Supervision, Level Adviser, Research, Reading, Watching Football and Playing musical instrument
34.	Dr. Elizabeth Amuta	Lecturer I CUASS10 10-11-2016	F/T	Ph.D EIE, M.Eng. EIE. ,B.Eng EIE., COREN, MNSE	LII	GEC211 GEC228	2 2	Research and Reading
35.	Engr. John O. Oluwafemi	Lecturer II CUASS8	F/T	M.Eng., B.Eng. Civil Engineering, COREN, MNSE	LII	GEC217 EDS512 GEC517	2 2 3	B.Eng. M.Eng. Examination Conduct, Monitoring and Invigilation

List and qualification of Non-Engineering Faculty (Adjunct)								
S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FUL L- TIM E (F/T)	Qualification, dates obtained and specialisation, membership of professional association and number of publications	Post Qualification Work/Teaching experience and date, post held and the organisation	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular and extracurricular activities
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
36	Dr. Abimbola A. Adegbuyi	L2	F/T		AL LII	EDS311 EDS411 EDS511 EDS311	See Table 7.9	Research, Reading and Watching Football
37	Dr. Ebikaboere Ovia	Lecturer I/CUASS10/13-06-2007	F/T	Ph.D Philosophy 2006 ,M.Phil. Philosophy 1991 ,B.A Philosophy (1985) 12 publications	2016-till date LII LI	GST211 GST311 GST221		Research, Reading and Watching Football
38	Dr. Samuel T. Owoeye	Senior Lecturer /CUASS12/13-10-2002	F/T	Ph.D French 2013 ,M.Sc. French 2009 ,B.A French(1996) 20 publications	2002-till date A/L LII LI SL	TMC211 TMC311 TMC221 TMC321		Research, Reading and Watching Football

List and qualification of Non-Engineering Faculty (Adjunct)

S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FUL L- TIM E (F/T)	Qualification, dates obtained and specialisation, membership of professional association and number of publications	Post Qualification Work/Teaching experience and date, post held and the organisation	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular and extracurricular activities
39	Dr.Michael Agarana	Senior Lecturer /CUASS12/13-10-2012	F/T	Ph.D Mathematics (2012) ,M.Sc. Mathematics (1999) ,B.Sc Mathematics (1991)	2012-till date LII LI SL	MAT111, MAT112		Research, Reading
40	Dr Maxwell Omeje	Senior Lecturer /CUASS12/01-05-2015	F/T	Ph.D Geophysics (2014) ,M.Sc. Geophysics (2010) ,B.Sc Industrial Physics (2002)	2015-till date LI SL	PHY111 PHY112 PHY121 PHY122		Research, Reading and Watching Football

List and qualification of Non-Engineering Faculty (Adjunct)								
S/N	Name of Staff	Rank/Designation Salary Scale, date of first appointment	FUL L- TIM E (F/T)	Qualification, dates obtained and specialisation, membership of professional association and number of publications	Post Qualification Work/Teaching experience and date, post held and the organisation	Course/Subjects Taught	Teaching Load/Lecture Hours/Week	Other responsibilities/interest in curricular and extracurricular activities
41	Dr. Tolulope Siyanbola	Senior Lecturer /CUASS12/01-05-2015	F/T	Ph.D Chemistry (2014) M.Tech. Industrial Chemistry (2006) B.Sc Chemistry (2001)	2007-till date A/L LII LI SL	CHM123		Research, Reading and Watching Football

3.2 Non-Teaching Staff

Table 3.2: Non-Teaching Staff

S/N	NAME OF STAFF	Rank/Designation Date of First Appointment	Qualifications, Dates Obtained Membership of Professional Association	Duties Performed
1	Engr. O. J. Omodara	Technologist I	B. Eng. Chemical Engineering, COREN(R45495) 2018. (MNSE 45593). 2018,	Overall head of Department Laboratories. My duties include but not limited to; 1.Providing technical leadership in a medium-to-large size academic department. 2.Planning and organizing periodic maintenance, servicing and calibration of teaching and research equipment and instruments. 3.Equipment installation & amp; commissioning. 4.overseeing the management of laboratories by taking proper account of Laboratory Staff, Equipment, wares, Chemicals and reagents, 5.Maintenance of proper inventory for technical materials, instruments, equipment, consumables used for teaching and research programmes. 6.preparing standard solutions, laboratory manuals and safety tips, 7.budgeting for laboratory equipment and consumables, vetting and validating of new equipment.
2	Mrs V. Olawepo	Technologist II	B.Tech. Chemical Engineering (COREN in-view).	Overseeing the undergraduate practical works. Coordinating SWEP programme.
3	Engr. O. A. Adegbite	Technologist II	B.Tech. Chemical Engineering, Masters in Process Engineering	Departmental Procurement officer, Handling of practical sessions, Teaching and training students during SWEP, In charge of Chemical Store in the

			(MPE), NISP, COREN (R.47,709), MNSE (48914)	department, In charge of preparing standard solutions for research purposes and practical purpose, Budget preparatory team member, Calibration of equipment. Vetting and quality control team
4	Mr. Oni Aisosa	Technologist II	B.Sc., M.Sc. Chemical Engineering (COREN in-view).	Laboratory technologist, chemical engineering dept. Handling of practical sessions, Teaching and training students during SWEP. In charge of preparing standard solutions for research purposes and practical purpose.
5	Engr. E. O. Bolujo	Technologist II	B. Eng. Chemical Engineering (2005), M.Eng. Petroleum Engineering (2017). COREN(R46238) 2018.	1.Planning and organizing periodic maintenance, servicing and calibration of teaching and research equipment and instruments. 2.Equipment installation & amp; commissioning. 3Providing technical leadership in the Reservoir laboratory. 4.Overseeing the management of laboratories by taking proper account of Laboratory glass wares, Chemicals and reagents, 5.Maintenance of proper inventory for technical materials, instruments, equipment, consumables used for teaching and research programmes. 6.Preparing laboratory manuals and safety tips, 7.Budgeting for laboratory equipment and consumables, vetting and validating of new equipment. 8. Handle and maintain the sage software for the department.
6	Mrs. Solomon Nsidibeobong Moses	Technologist III	HND. Chemistry	1.Planning and organizing periodic maintenance, servicing and calibration of teaching and research equipment and instruments.

				2.Equipment installation & amp; commissioning. 3Providing technical leadership in the Reservoir laboratory.
7	Miss Gift Madu	Supporting Laboratory Assistant 1, Sep. 2014	OND	Support the Technologist in the Lab during practical sessions and help in coordinating activities during SWEP
8	Miss Bridget Okoro	Supporting Laboratory Assistant 1	SSCE	Support the Technologist in the Lab during practical sessions and help in coordinating activities during SWEP
9	Miss Kehinde Ojesanmi	Supporting Laboratory Assistant 1	SSCE	Support the Technologist in the Lab during practical sessions and help in coordinating activities during SWEP

3.3 Administrative Support Staff

Table 3.3: Administrative support staff

S/ N	Name of Staff	Rank/Designation Salary Scale and Date of First Appointment	Qualification and Dates Obtained	Post Qualification Work Experience
1	Mrs. Mary Kehinde Faleye	Admin. Officer I/CUSS08/11/March, 2014	BA English, 2011	-Hall officer(Student Affairs) Covenant University -PA to the Dean, CoE, Covenant University -Admin officer, Centre for Information Technology, Covenant University -Quality and Academic Standard officer, Covenant University -Certificate & Verification officer, Covenant University -Departmental officer, Chemical Engineering Department, Covenant University

3.4 Students/Staff Ratio and Staff Mix

A good students/staff ratio is regularly maintained in the department to ensure effective dissemination of knowledge and result-oriented mentoring of students. It is important to mention that 21 out of the 25 teaching staff (84%) have completed their PhD programme and that 24 out of the 25 teaching staff (96%) are COREN registered. Tables 3.1 and 3.4-3.5 reveal the simple approach to the computation of the **students/staff ratio of 8 obtained**.

3.4.1 Total number of students

Considering the curriculum of chemical engineering programme, basic pure and applied sciences are being taught in 100 level, while General Engineering courses as well as Chemical Engineering courses are taken by chemical engineering students from 200 level. That is, the teaching of chemical engineering (as a course) starts from 200 level (up to 500 level). Hence, the students involved in the learning of chemical engineering and its practices are 200 – 500 level students and their total number is given in Table 3.4.

Table 3.4: Number of 100 – 500 Level students

Level	No. of Students
100	75
200	61
300	86
400	71
500	53
Total	346

3.2 Staff-Mix Computation

The staff mix of the teaching staff for the programme is as shown in Table 3.3.

Table 3.3: Staff-Mix of the Teaching staff

Staff – Mix	Professor	Senior Lecturer	Lecturer I, Lecturer II, Assistant Lecturers	Total/ Score
Core Engineering Staff	7	13	15	35
Percentage (%)	20	37	43	100

Hence,

$$\begin{aligned}\text{Students-Staff ratio} &= \text{Number of students (200 to 500 Level): Number of teaching staff} \\ &= 271:35 \\ &= 8:1\end{aligned}$$

3.5 Staff Development Programme

Table 3.5: Staff Development Programme

S/N	Name of Staff	Status	Type of Staff Development
1	Engr. Prof. Vincent E Efeovbokhan	Professor	<p>1. Africa OCIIP Expo 2020</p> <p>2. Participated in International Conference on Leadership Strategy, Management Development & Business Intelligence LSMDBI, July 2019</p> <p>3. Leadership and management Skills Course by African Women in Agricultural Research & Development (AWARD), September, 2018</p> <p>4. Proposal and Grant Writing Skills Course by African Women in Agricultural Research & Development (AWARD), September, 2018</p> <p>(5) Facilitator, College Wide Workshop on Non-Scoring International Engineering Alliance (IEA) Accreditation, 2018</p> <p>(6) Invitation to Covenant Health Research and Ethics Committee (CHREC) Training, 2018</p> <p>7. The Art of Selling yourself by Center for Life Long Learning, Covenant University, February, 2018</p> <p>(8) Technology and Innovation Expo 2018 by Federal Ministry of Science and Technology</p> <p>(9) COREN - “Outcome Based Engineering Workshop and Review of Benchmark Minimum Academic Standard (BMAS) and Accreditation Scoring Criteria for Undergraduate Engineering Programmes in Nigerian Universities” (4-6 April, 2017)</p> <p>(10) Microsoft office Specialist Training for College of Engineering, Faculty and Staff – Part time, October 10 – December 2, 2016</p> <p>(11) Full sponsorship to COREN Assembly 2013, 2014 and 2016.</p> <p>(12) PhD, July 2013, from Covenant University, Ota.</p> <p>(13) Full sponsorship to NSCh.E Uyo, 2012</p> <p>(14) Full sponsorship to Engineering Education, Unilag, 2015</p> <p>(15) Full sponsorship to International Conference on African Development Issues (ICADI), Covenant University.</p>

2	Engr. Prof. James A. Omoleye	Professor	(1) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019). (2) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020).
3	Engr. Dr. Augustine O. Ayeni	Associate Professor	(1) PhD, July 2013, from Covenant University, Ota. (2) Postdoctoral Training October 2015 to October 2016. (3) Full sponsorship to NSCh.E Uyo, 2012 (4) Full sponsorship to International Conference on African Development Issues (ICADI), Covenant University, 2014, 2015 & 2016. (5) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).
4	Engr. Dr. Ayodeji A. Ayoola	Associate Professor	(1) PhD, June 2015, from Covenant University, Ota. (2) Full sponsorship to COREN Assembly 2019 (3) Full sponsorship to International Conference on African Development Issues (ICADI), Covenant University (2015–2016). (4) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019). (5) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020). (6) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020). (7) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).
5	Engr. Dr. Oluranti Agboola	Associate Professor	(1) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019). (2) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020). (3) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).

			<p>(4) Full sponsorship to International International Conference on Nanoelectronics, Nanophotonics, Nanomaterials, Nanobioscience and Nanotechnology, Indian, 23rd to 24th April, 2020</p> <p>(5) Full sponsorship to International International Conference and Exposition on Mechanical, Materials and Manufacturing Technology, 9th to 10th October 2020</p> <p>(6) Full sponsorship to the International Conference on Advanced Materials Behaviour and Characterization, 20th – 22nd April 2020.</p> <p>(7) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).</p>
6	Engr. Dr Modupe E. Ojewunmi	Senior Lecturer	<p>(1) PhD, June 2016, from Covenant University, Ota.</p> <p>(2) Full sponsorship to International Conference on African Development Issues (ICADI), Covenant University, 2014, 2015 & 2016.</p> <p>(3) Full sponsorship to APWEN Conference, 2018</p> <p>(4) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019).</p> <p>(5) Full sponsorship to the International Conference on Science and Sustainable Development (2017–2020).</p> <p>(6) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).</p>
7	Engr. Dr. Olayemi A. Odunlami	Senior Lecturer	<p>(1) Full sponsorship to APWEN Conference, 2021</p> <p>(2) Full sponsorship for COUSERA training, 2020</p> <p>(3) Full sponsorship to International Conference on Energy and Sustainable</p>

			<p>Environment (2019–2020).</p> <p>(4) Conference Registration fees sponsorship for the World Congress on Engineering and Computer Science (WCECS 2019) San Francisco, USA 22-24 October 2019.</p> <p>(5) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).</p>
8	Engr. Opeyemi A. Adeeyo	Lecturer I	<p>(1) Ph.D (in view), Covenant University, Ota.</p> <p>(2) Full sponsorship to COREN Assembly 2014.</p> <p>(3) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019).</p> <p>(4) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020).</p>
9	Engr. Dr. Samuel E. Sanni	Senior Lecturer	<p>(1) Ph.D, Covenant University, Ota.</p> <p>(2) Full sponsorship to Oil Trading & logistics (OTL) Conference, Lekki Lagos, 2015</p> <p>(3) Full sponsorship to International Conference on African Development Issues (ICADI), Covenant University, 2014, 2015 & 2016.</p> <p>(4) Full sponsorship to Advanced Digital Acquisition Programme for Tertiary Institution, Covenant University, October 2016.</p> <p>(5) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019).</p> <p>(6) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020).</p> <p>(7) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).</p> <p>(8) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).</p>
10	Engr. Dr. Edith E. Alagbe	Senior Lecturer	<p>(1) Full sponsorship to International Conference on Energy and Sustainable Environment (2019–2020).</p> <p>(2) Full sponsorship to International Conference on Science and Sustainable Development (2019–2020).</p>

			<p>(3) Full sponsorship to International Conference on Engineering for a Sustainable World (2019–2020).</p> <p>(4) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).</p> <p>Other organized staff development programs include:</p> <ul style="list-style-type: none"> i. Leadership Development Masterclass at Covenant University. April, 2021 ii. West African Petroleum Standards Training. Abidjan, Cote D'Ivoire. November 18 – 22, 2019 iii. Elsevier-Covenant University Workshop on 'Avoiding predatory journal. 3rd March, 2021. iv. Elsevier - Covenant University Workshop on 'How to increase visibility of my work'. 17th March, 2021. v. Elsevier – Covenant University Workshop on 'Identifying trending research topics'. <p>2021 National Budget Roundtable & Panel Discussion on the theme, 'National Budgeting, security issues and sustainable development in Nigeria'. 22nd February, 2021</p>
11	Engr. Dr. Temitayo .E. Oladimeji	Senior Lecturer	<p>(1) Ph.D , 2019, Covenant University, Ota.</p> <p>(2) International Conference on African Development Issues (ICADI), Covenant University, 2014, 2015 & 2016.</p> <p>(3) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019).</p> <p>(4) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020).</p> <p>(5) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).</p> <p>(6) Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).</p>
12	Engr. Dr. Olufunmilayo O. Joseph	Senior	<p>(1) PhD, July 2016, from Covenant University, Ota.</p> <p>(2) Full sponsorship to International Conference on Engineering for a Sustainable</p>

		Lecturer	World (ICESW 2017–2020). (3) Full sponsorship to COREN Assembly 2021.
13	Engr. Dr. Oyinlola R. Obanla	Lecturer I	(1) Ph.D, 2020, Covenant University, Ota. (2) Full Sponsorship to International Conference on African Development Issues (ICADI), Covenant University, 2014, 2015 & 2016. (3) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019). (4) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020). (5) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).
14	Engr. Olubunmi G. Abatan	Lecturer II	(1) Ph.D (in view), Covenant University, Ota. (2) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019). (3) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020). (4) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).
15	Engr. Dr. Damilola E. Babatunde	Lecturer I	1. PhD, May 2021, from Covenant University, Ota. 2. Full sponsorship for 2020 7th International Conference on Power and Energy Systems Engineering (CPESE 2020), September 2020, Fukuoka, Japan 3. Full sponsorship to 4th International Conference on Science and Sustainable Development (ICSSD 2020), Covenant University, Ota, Ogun State. 4. Sponsorship for Coursera Master Class: The Art and Science of Teaching Online, Coursera, August 2020 5. Sponsorship for Certificate in Introduction to Indoor Air Quality, the Hong Kong University of Science and Technology, July 2020 6. Full sponsorship to 2nd International Conference on Engineering for a Sustainable World (ICESW 2018), Covenant University, Ota, Ogun State.

			7. Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC)/Covenant University (2017)
16	Engr. Ajibola T. Ogunbiyi	Lecturer II	<p>(1) Full sponsorship to the International Conference on Energy and Sustainable Environment (2018).</p> <p>(2) Full sponsorship to the Chemical Engineering Curriculum Review Workshop organized by the Nigerian Society of Chemical Engineers (NSChE) at Julius Berger Hall, University of Lagos, Akoka, Lagos on 21st June, 2018.</p> <p>(3) Full sponsorship to the International Seminar on Process Safety organized by Nigerian Society of Chemical Engineers (NSChE) in conjunction with the Department of Petroleum Resources at Victoria Island, Lagos. October, 2017.</p> <p>(4) Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC)/Covenant University (2017).</p> <p>(5) MATLAB Training by Solid Professor organized by Covenant University's College of Engineering (2016).</p> <p>(6) Online and Content Marketing IT Training by Livity Africa at Covenant University (2016).</p> <p>Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC)/Covenant University (2017)</p>
17	Engr. Dr Philip O. Babalola	Senior Lecturer	<p>(1) PhD, July 2015, from Covenant University, Ota.</p> <p>(2) Full sponsorship to COREN Assembly 2009.</p> <p>(3) Full sponsorship to International Conference on Engineering and Sustainable World (2017–2020).</p>

			(4) Full sponsorship to International Conference on Energy and Biochemical Engineering (2021).
18	Engr. Dr. Olagoke A. Oladokun	Senior Lecturer	<ol style="list-style-type: none"> 1. Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC)/Covenant University (2021) 2. Full sponsorship to International Conference on Energy and Biochemical Engineering (ICEBE 2021).
19	Engr. Julius O. Omodara	Senior Lab. Technologist	<ol style="list-style-type: none"> (1) International Conference on African Development Issues (ICADI), Covenant University, 2014, 2015 & 2016. (2) Full sponsorship to International Conference on Energy and Sustainable Environment (2017–2019). (3) Full sponsorship to International Conference on Science and Sustainable Development (2017–2020). (4) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).
20	Engr. Dr. Udo, Mfon O.	Lecturer I	<ol style="list-style-type: none"> (1) Full sponsorship to 2nd International Conference on Engineering for Sustainable World, Covenant University, Ota, 2018 (2) Full sponsorship to 3rd International Conference on Engineering for Sustainable World, Covenant University, Ota, 2019 (3) Full sponsorship to International Conference on Energy and Biochemical Engineering, Covenant University, Ota, 2021
21	Dr. Damilola Abraham	Lecturer I	<ol style="list-style-type: none"> (1) PhD, June 2021, from Covenant University, Ota. (2) Full sponsorship to International Conference on Science and Sustainable Development, Covenant University (2020).
22	Engr. O. Fagbiele	Assistant	(1) Full sponsorship to International Conference on Engineering for a Sustainable

		Lecturer	World (2019). (2) M.Eng., 2017-2019. Covenant University, Ota Ogun State.
23	Engr. O. Abatan	Lecturer II	PhD Scholarship (Ongoing), Covenant University, Ota. Full sponsorship to International Conference on Sustainable Engineering and Materials Development (ICSEMD), 2021 Full sponsorship to International Conference on Sustainable World infrastructural development (2020). Full sponsorship to Oasis ODL Course Development and Facilitation Training 2020 Full sponsorship to Advance Digital Appreciation Programme for tertiary Institutions (Statistical Packages for social sciences) 2020 Full sponsorship to 2021 Women in Management and Leadership Conference (WIMLEAD)
24	Engr. Dr. F. Elehinafe	Lecturer I	(1) International/Virtual Coursera Conference 2021: Building a More Just World Together, 19 th – 21 st , 2021. (2) The 1 st International Conference on Recent Trends in Applied Research, hosted by Research Acad HUB with channels and human resources in India, Mexico, Nigeria, and Cameroon (Zoom Platform), 18 th – 20 th , September, 2020 (3) 2 nd International Conference on Sustainable Infrastructural Development (ICSID), Covenant University, Ota, Ogun State, July 27 th 28 th , 2020 (4) United Nations at 75 International/Virtual Conference, Covenant University, Ota, Ogun State, October 22 nd – 24 th , 2020. (5) International Conference On Science and Sustainable Development, Covenant University, Ota, Ogun State, August 3 rd – 5 th , 2020 (6) 3 rd International Conference on Engineering for a Sustainable World, Covenant University, Ota, Ogun State, July, 2019. (7) 2 nd International Conference on Engineering for a Sustainable World, Covenant University, Ota, Ogun State, 9-13 th July, 2018.
25	Engr. Dr. Ayokunle A.	Senior	(1) Master's degree, July 2007, Covenant University, Ota

	Awelewa	Lecturer	(2) Ph.D, April 2016, Covenant University, Ota (2) Conference sponsorship (3) Full sponsorship of publication payment
26	Engr. Dr. Samson O. Ongbali	Lecturer I	(1) Full sponsorship to International Conference on Engineering for a Sustainable World, (2018 –2020). (2) Full sponsorship to International Conference on Sustainable Infrastructural Development , (2020)
27	Engr. Dr. Fajobi Muyiwa Adedapo	Lecturer 1	(1) Ph. D, May 2021, from Covenant University, Ota. (2) Full sponsorship to International Conference on Engineering for a Sustainable World (2017–2020).

4.LIBRARY

4.1 University Library

Large volumes of books, journals & other Resource Materials are available at the **University Library** for the teaching and learning of Chemical Engineering programme. Library Facilities at the **University Library** building and in the department are both adequate and of good quality. There is access to books and journals that can be done remotely via the University web page. Internet Facilities are also located and accessible by both students and staff at the library complex.

4.2 E-Library

The Resources In Centre For Learning Resources (CLR) Online Databases

- **EBSCO:** <http://search.epnet.com>
 - Academic Source Complete
 - Art and Architecture Complete
 - Business Source Complete
 - Communication and Mass Media Complete
 - Computers and Applied Sciences Complete
 - GeoRef
 - GeoRef in Process
 - GreenFile
 - Library, Information Science and Technology Abstracts with Full Text
 - Political Science Complete
 - Regional Business News
 - Religion and Philosophy Collection
 - Science and Technology Collection
 - SocINDEX with Full Text
 - Environment Complete
- **JSTOR:** www.jstor.org
- **AGORA:** <http://www.aginternetnetwork.org>
- **NUC VIRTUAL LIBRARY:** www.nigerianvirtuallibrary.com
- HINARI:** <http://www.who.int/hinari>
- **OARE:** <http://www.oaresciences.org>
- **MIT OPEN COURSEWARE:** <http://ocw.mit.edu/>
- **Science Direct:** <http://www.sciencedirect.com>
- **SAGE:** <http://online.sagepub.com/>
- **E-Library:** covenant.bravecontent.com
- **Scopus:** <http://www.scopus.com/>

➤ **Web of Science Master Journal List:** ip-science.thomsonreuters.com/mjl/

Research Africa Funding Opportunities: www.research-africa.net

OTHER VIRTUAL LIBRARY COMPONENT

WebPAC: <http://clr.covenantuniversity.edu.ng/>

Website: <http://clrmain.covenantuniversity.edu.ng/>

Repository: <http://eprints.covenantuniversity.edu.ng>

<http://dspace.covenantuniversity.edu.ng>

Online Referencing Services

Blog Site: <http://www.covenantuniversitylibrary.blogspot.com>

Email: clr@covenantuniversity.edu.ng

Facebook: Covenant University Library

Twitter Name: CULibrary

4.3 Faculty/Departmental Library

Faculty/Departmental library is also housed at the Chemical Engineering building where current books and serials can be accessed by students and staff of the department.

5. OVERALL MANAGEMENT OF PROGRAMME

The general administration of the department revolves around the Head of Department (HOD) who is the Chair as well as Chief Examiner of the Department. The department operates a committee system of administration.

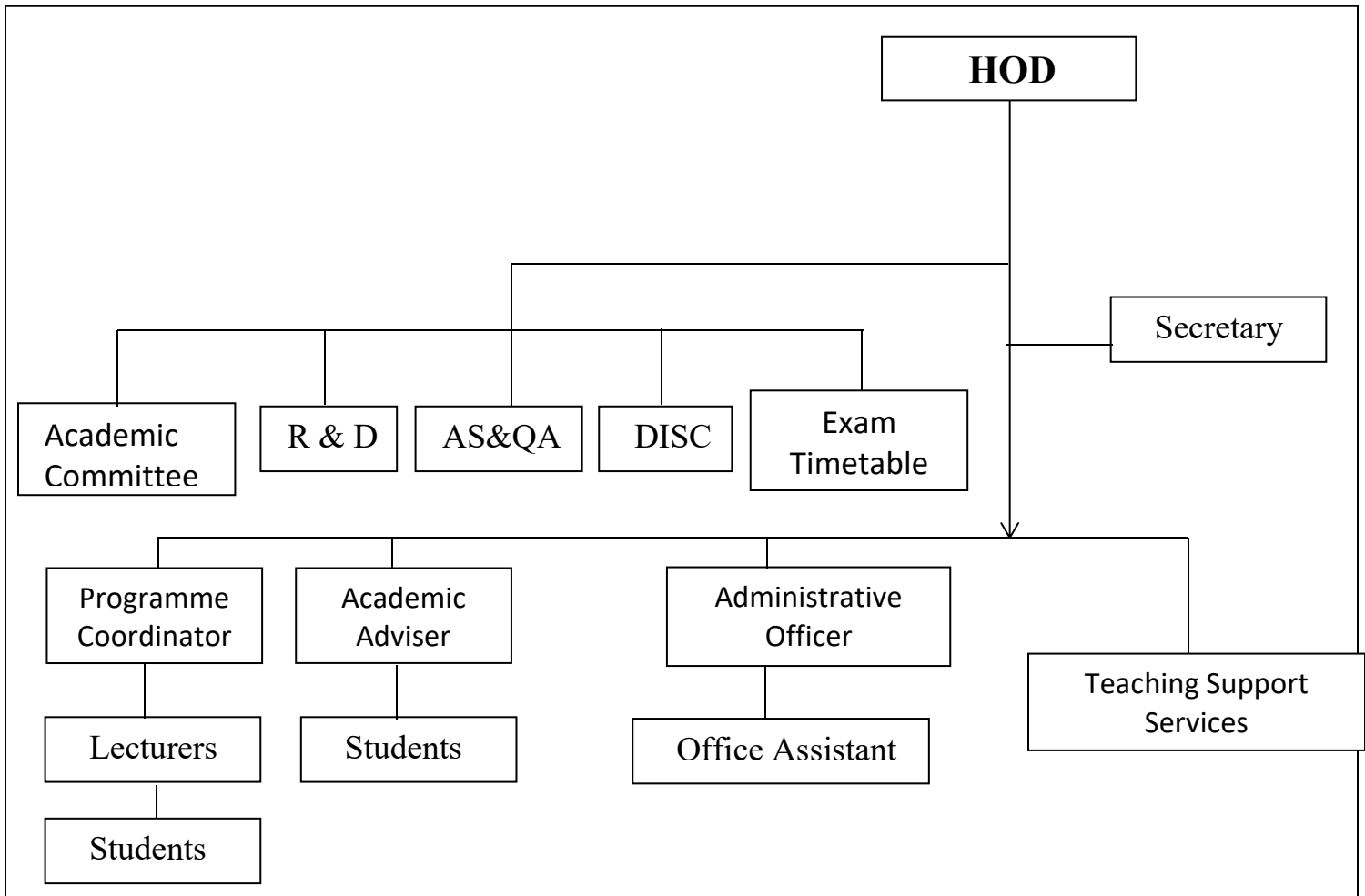


Figure 5.1: Organizational Chart of the Department

Keys

HOD	-	Head of Depart
R & D	-	Research and Development
AS&QA	-	Academic Services and Quality Assurance
DISC	-	Disciplinary Committee

5.1 Staff Involvement in the decision making process and general administration

i. Decision-making process is through regular Departmental and Committee meetings. The HOD is the chairman at departmental meetings and in such meetings, major academic and non-academic decisions are democratically taken. At such meetings, ad hoc committees can be constituted to carry out certain activities and submit their findings to the Department for final deliberations and decisions.

ii. The HOD appoints at a Departmental meeting Level Advisers, Course Co-ordinators, and Examination Officers from among his staff to head these sub-units, within the Department. During Departmental meetings, most issues deliberated upon are decided based on general consensus or democratic ethos in line with practices that the chair considers to be in conformity with the university quality assurance and academic standards.

iii. It is also the HOD who assigns (allocates) courses to individual lecturers with inputs from other lecturers at Departmental meetings, usually based on their areas of specialization as informed by their CVs submitted to the Department. Course allocation system is based on shared interest and or collective efforts- that is, more than one person can team up to teach a course with one of them (most likely the senior) as coordinator. The HOD also allocates students to staff for supervision of their Final year Projects.

5.2 Policy and Practice on Staff Development

The University has a robust staff development programme in place. Any academic staff employed in the University who has no Ph.D at the point of appointment is expected to commence immediately a postgraduate programme in-house, fully sponsored by the University, except there is a strong evidence that such staff is making satisfactory progress in postgraduate programme elsewhere. Furthermore, each faculty of the University is entitled each year to conference sponsorship as long as such conferences are in any of the channels recognized by the University (Scopus, CPCI).

5.3 Staff Promotion

The Staff promotion process is in line with the University policy that rewards quality scholarship.

5.4 Student's Welfare

(a) Handling of academic grievance

There are two level advisers for each level of our programmes. Students having grievances or/and suggestions can discuss either with their level advisers, the staff concerned, or/and the HOD. Every student has unrestricted access to all the staff and particularly the level advisers in the Department, to the HOD, and to the Dean. In fact, at the University level, there is a scheme tagged *in-loco parentis*, where faculty and staff act as the parents of students. Through this scheme, faculty and staff are able to interact with students as parents on all issues such as academic, social and welfare.

(b) Student academic advising

Academic advising is done at different levels for all students in the University. At the departmental level, the level advisers are primarily responsible for interacting with the students at a specified level and to ascertain that all issues bothering on academic matters are addressed promptly. Such typical issues include registration, continuous assessment and health challenges amongst others.

STAFF PUBLICATION AND CURRICULUM VITAE



EFEOVBOKHAN Vincent Enontiemonria

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	2013
M. Eng	Chemical Engineering	University of Benin	1994
BSc. Tech	Chemical & Petrochemical Technology	Federal University of Technology, Owerri	1986

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Professor	HoD, Chemical Engineering	2021-Date	FT
Covenant University	Professor	Director, SIWES	2018-2021	FT
Covenant University	Snr. Lecturer	HoD, Chemical Engineering	2015-2018	FT
Covenant University	Lecturer II	Member, Covenant University Tutorial Committee	2015	FT
Covenant University	Lecturer II	Member, covenant University Purchasing Committee (CUPC)	2011-2013	FT
Covenant University	Lecturer II	Chairman, Chemical Eng'g Laboratory Committee	2007	FT
Covenant University	Lecturer II	Member, CST Purchasing Committee	2007	FT
Igbinedion University	Lecturer I	Ag. HOD, Chemical Engineering	2003-2006	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Capital Oil, Plc	Non-Executive Director	Represent shareholders' interest.	2018-date	PT
Nigerian-German Chemicals	Manager, R&D	Product Research & Development	1995-2001	PT
Nigerian-German Chemicals	Manager, Quality Assurance & Control	Quality checks on raw materials & Finished Products	1995-2001	FT

University of Benin	Snr. Lab. Technologist	Teach, prepare, conduct, and grade lab practicals for 300-, 400, & 700-L students	1989-1995	FT
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Certifications or Current Membership in Professional Organizations:

1. Corporate Member, Nigerian Society of Chemical Engineers (NSCh.E)
2. Corporate Member, Nigerian Society of Engineers (MNSE), Membership ID: (14124)
3. Registered Engineer, Council for the Regulation of Engineering in Nigeria (COREN), R. 13,433.

Honours and Awards

1. AWARD (hosted by World Agroforestry Centre) – Certificate of Completion in Leadership & Management Skills Course, Covenant University, Nigeria (Sept. 3 -5, 2018)
2. AWARD (hosted by World Agroforestry Centre) – Certificate of Completion in research Proposal Writing Skills Course, Covenant University, Nigeria (Sept. 6 -8, 2018)
3. COREN - “Outcome Based Engineering Workshop and Review of Benchmark Minimum Academic Standard (BMAS) and Accreditation Scoring Criteria for Undergraduate Engineering Programmes in Nigerian Universities” (4-6 April, 2017)
4. Boiler Operation and maintenance by Industrial Training Fund (ITF) March 18-22, 1996
5. International Organization for Standards ISO 9000 Training Course by Standard Organization of Nigeria (SON) December 1 – 5
6. Lecturer of the Year (Male) Award by NSChE CU Chapter 2018/2019 Session

Service Activities

1. Appointed as an Assessor by Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria, to assess a candidate's publications for appointment as a Reader in the Department of Chemical Engineering, 2021.
2. Appointed External Examiner for Chemical Engineering Programme for three academic sessions, by Edo University, Iyamho 2019/2020 – 2021/2022
3. Appointed an Assessor by Edo University, Iyamho to assess a candidate's publications for appointment as an Associate Professorship in the Department of Chemical Engineering, 2020
4. Appointed as a Reviewer by the National Research Foundation (NRF), South Africa for rating A Researcher’s research outputs, 2020
5. Appointed External Examiner to examine Master dissertation/thesis at Obafemi Awolowo University (OAU), Ile-Ife, Osun State Nigeria 2019
6. Appointed Accreditation Panel Member by the National University Commission (NUC), Nigeria, to the:
 - i. Chemical Engineering Programme (Undergraduate), Delta State University, Abraka, April 18-20, 2021
 - ii. Chemical Engineering Programme (Undergraduate), Federal University, Otuoke, Bayelsa State April 21-23, 2021
 - iii. Department of Chemical Engineering, First Technical University, Ibadan as the Team Lead for a Resource Verification exercise Dec. 6-8, 2020

- iv. Chemical Engineering Programme (Undergraduate), Enugu State University of Technology Oct. 31-Nov. 2, 2019
- v. Chemical Engineering Programme (Undergraduate), Federal University Technology, Owerri, Nov. 3-5, 2019
7. Participant in the Review of NUC Instruments for ODL Accreditation Feb. 23-28, 2019
8. Participant in the Review of NUC Postgraduate Accreditation Instruments Jan.15-22, 2019
9. Examiner for eight PhD students in Covenant University, Ota 2017 – date

Selected Publications and Presentations for the period

1. Sowunmi, A. O., Efevbokhan, V. E., Orodu, O. D., Oni, B. A., (2022). Polyelectrolyte–nanocomposite for enhanced oil recovery: influence of nanoparticle on rheology, oil recovery and formation damage, **Journal of Petroleum Exploration and Production Technology**, 2022, 12(2), pp. 493–506.
2. Akinleye Sowunmi, Vincent E. Efevbokhan, Oyinkepreye D. Orodu, Oluwasanmi Olabode, and Alma Oputa, (2022). Comparative Study of Biopolymer Flooding: A Core Flooding and Numerical Reservoir Simulator Validation Analysis
3. Akinleye Sowunmi, Oyinkepreye Orodu, **Vincent Efevbokhan**, Solomon Ogundare (2020). Comparative dataset on the characterization of natural polymers and nanocomposites for enhanced oil recovery
4. Rasheed Babalola, Augustine O. Ayeni, Peter S. Joshua , Ayodeji A. Ayoola, Ukeme O. Isaac, Umo Aniediong, **Vincent E. Efevbokhan**, James A. Omoleye (2020). Synthesis of thermal insulator using chicken feather fibre in starch-clay nanocomposites; *Heliyon* 6 (2020) e05384
5. **Vincent E. Efevbokhan**, Augustine O. Ayeni, Osuvwe P. Eduvie, James A. Omoleye, Oladotun Bolade, Ajibola T. Ogunbiyi and Victoria N. Anyakora (2020). Classification and characterization of bio-oil obtained from catalytic and non-catalytic pyrolysis of desludging sewage sample *AIMS Energy* 8(6), 1088–1107
6. Alagbe Edith Egbimhanlu, Okocha Dumebi Sophia, Ayegbo Stephen Korede, Oyeniyi Esther Adenike, Alagbe Olusegun Adegboyega, Daniel Ebakota Omonigho, **Efevbokhan Vincent E** (2020), Contamination Assessment of Underground Water Around a Cemetery: Case study of Ayobo cemetery in Lagos, Nigeria, (136), 1283-1288
7. **Efevbokhan V.E**, Alagbe E.E, Ogundowo O, Abatan O.G, Oni B. A. (2020). A Study of the Effect of Epoxidation Temperature on the Production of Biolubricant Base Stocks from Two Grades Castor Oil, *IJSTR* 9(4), 2745-2749 (**Scopus Indexed**)
8. **Vincent E. Efevbokhan**, Damilola Akinneye, Augustine O. Ayeni, James A. Omoleye, Oladotun Bolade, Babalola A. Oni (2020). Experimental dataset investigating the effect of temperature in the presence or absence of catalysts on the pyrolysis of plantain and yam peels for bio-oil production, *Data in Brief* 31 (2020) 105804 (**Scopus Indexed**)
9. Damilola V. Abraham, Oyinkepreye D. Orodu, **Vincent E. Efevbokhan**, Oluwasanmi Olabode Temiloluwa Ojo (2020). The Influence of Surfactant Concentration and Surfactant Type on the Interfacial Tension of Heavy Crude Oil/Brine/Surfactant System, *Pet Coal*; 62(2) 292-298. (**Scopus Indexed**)

10. Temitayo E. Oladimeji, Kehinde M. Oguntuashe, Moses E. Emetere, **Vincent E. Efeovbokhan**, Olayemi A. Odunlami, Oyinlola R. Obanla (2020), Industrial- and automotive-used lubricating oils recycling cum acidic sludge treatment, Int J Adv Manuf Technol, DOI 10.1007/s00170-019-04751-6 (**Scopus Indexed**)

Recent Professional Development Activities

1. AWARD (hosted by World Agroforestry Centre) – Certificate of Completion in Leadership & Management Skills Course, Covenant University, Nigeria
(Sept. 3 -5, 2018)
2. AWARD (hosted by World Agroforestry Centre) – Certificate of Completion in research Proposal Writing Skills Course, Covenant University, Nigeria
(Sept. 6 -8, 2018)
3. COREN - “Outcome Based Engineering Workshop and Review of Benchmark Minimum Academic Standard (BMAS) and Accreditation Scoring Criteria for Undergraduate Engineering Programmes in Nigerian Universities”
(4-6 April, 2017)
4. International Conference on leadership strategy, Management Development & Business Intelligence (LSMDBI 2019) 30-31 July, 2019
5. The Art of Selling Yourself-Center for Life Long Learning, Covenant University 17 Feb., 2018



OMOLEYE James Abiodun

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	University of Lagos	1987
MSc	Chemical Engineering	Washington	1979
BSc	Chemical Engineering	Washington University, US	1979

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Professor	Dean, Head of Research Center, HoD, Head Research Cluster	2008-Date	FT
University of Ilorin	Senior Lecturer	HoD	1995-2007	FT
University of Port Harcourt	Senior Lecturer	HoD	1981-1995	FT

Certifications or Current Membership in Professional Organizations

1. Member, Nigerian Association of Inventors
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN),

Honours and Awards

1. NURESDEF 2005, First Position (University of Ilorin)
2. Award as one of the best three projects to represent Nigeria in AU/WIPO Exhibition Addis Ababa
3. NURESDEF 2011, 2nd best project, Engineering. (Covenant University)
4. Best Engineering Graduating Students' projects Supervision, 2018, 2019 Sessions

Service Activities

1. Chairman, University Equipment Committee, 2019-Date
2. Head of Department, Chemical Engineering, Covenant University, Ota, 2013/2014
3. Chairman, College of Engineering CDET Committee Member, Covenant University Centre for Entrepreneurial Development, 2014-2018
4. Director Covenant University Centre For Research – 2011-2013
5. Dean, Students' Affairs – 2009-2011
6. Chairman, Product Development Research Cluster. 2016 - Date

Selected Publications and Presentations from the Past Five Years

1. Babatunde, D., Anozie, A., **Omoleye, J A**, Etal, An Air – Fuel ratio parametric assessment on efficiency and cost of a power plant steam boiler. PIOS 2021
2. Babatunde, D., Anozie, A., **Omoleye, J A**. Etal, Modeling the power output from a steam power plant in Nigeria, Science Direct, 2020
3. **Omoleye, J A**. Oyekunle, D., A novel method for the Synthesis of Chitosan from Snail Shell, Nigeria Patent, 2019.
4. **Omoleye, J A**. A novel method for the preparation of powdered Akamu, Nigeria Patent. 2017
5. **Omoleye, J A**., Igbamerun, O., Development of a violation self-reporting speed limiter, Nigeria Patent, 2018
6. Damilola Babatunde, Ambrose Anozie, James Abiodun Omoleye, (2020), Artificial Neural Network and its Applications in the Energy Sector – An Overview, International Journal of Energy Economics and Policy
7. Damilola Babatunde, Ambrose Anozie, James Abiodun Omoleye, (2020). Prediction of global warming potential and penalties of a natural gas-fired plant, CPESE Conference Proceedings by Energy Reports (ISSN: 2352-4847),
8. Damilola E. Babatunde, Ambrose N. Anozie, James A. Omoleye, Oluwaseun Oyebodec, Olubayo M. Babatundee, Augustine O. Ayeni, (2020), Modelling the power output from a steam power plant in Nigeria, ScienceDirect Energy Reports 6 (2020) 822–828 www.elsevier.com/locate/egyr, Japan.
9. Damilola Babatunde, Ambrose Anozie, James Omoleye, Olubayo Babatunde,(2021), An Air-Fuel Ratio Parametric Assessment on Efficiency and Cost of a Power Plant Steam Boiler, Process Integration and Optimization for Sustainability Springer Nature Singapore Pte Ltd. part of Springer Nature 2021.
10. Damilola Elizabeth Babatunde, Ambrose Anozie, James Omoleye, (2021), Performance evaluation of a major thermal power plant in Nigeria, IOP Conf. Ser.: Earth Environ. Sci. 655 01205.

Recent Professional Development Activities

Design and Construction of a pilot Plant for Pyrolysis of Waste plastics to Fuel
(Externally sponsored Project)



AYENI Augustine Omoniyi

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	2013
MSc	Chemical Engineering	University of Lagos	2001
BSc	Chemical Engineering	Obafemi Awolowo University, Ile-Ife	1997

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Associate Professor	Chairperson, College Equipment Committee	2020-Date	FT
Covenant University	Senior Lecturer	HoD, Chemical Engineering	2018-2020	FT
Covenant University	Lecturer 1	College of Engineering, Publication committee member	2015-2017	FT
Covenant University	Lecturer 11	Departmental Examination Officer	2007-2015	
Covenant University	Assistant Lecturer	Academic level Adviser	2005-2007	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
ACS Omega Journal	Reviewer	Reviewing of technical articles	2020-Date	PT
General Marine & Oil Services Ltd., Apapa	Cargo Surveyor	Inspection of petroleum products to meet quality, environmental and marketable requirements.	2002-2004	FT
Remedial Systems Overseas, Ltd., Ekpan, Warri	Environmental Officer	Monitor and implement incident reporting systems Prepared a feasibility study and report on waste recovery, re-use, recycling for Delta State	1999-2000	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), 18136
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R26, 927
3. South African Institute of Chemical Engineers

Honours and Awards

1. Guest Speaker, 1st International Produced Water Management Conference and Exhibition. Lagos Continental Hotel, Lagos. 5-7 November, 2019.
2. Poster Award, O. Ejekwu, A.O. Ayeni, M.O. Daramola, on the topic “Biomass Resources” entitled Development and evaluation of an environmentally benign non-derivatizing pretreatment solvent for fractionation of corn cob, 27th European Biomass Conference and Exhibition, Lisbon, Portugal, May 2019.

Service Activities

1. Chairman, College of Engineering Equipment Committee, 2020-Date
2. Head of Department, Chemical Engineering, Covenant University, Ota, 2018-2020
3. Committee Member, Covenant University Centre for Entrepreneurial Development, 2014-2018
4. Committee Member, College of Engineering Budget Committee, 2018-2020
5. Committee Member, College of Engineering Publication Committee 2017-2018

Selected Publications and Presentations from the Past Five Years

1. **Ayeni, A.O.**, Agboola O., Daramola, M.O., Grabner, B., Oni, B.A. Babatunde, D.E., Ewudere, J. Kinetic study for the activation and deactivation of adsorbed cellulase during enzymatic conversion of alkaline peroxide oxidation pretreated corn cob to sugar. Korean Journal of Chemical Engineering 2021; 38(1):81-89.
2. **Ayeni, A.O.**, Daramola, M.O., Agboola, O., Ayoola, A.A., Babalola, R., Oni, B.A., Omodara, J.O., Dick, D.T. A comparative evaluation of fermentable sugars production from oxidative, alkaline, alkaline peroxide oxidation, dilute acid, and molten hydrate salt pretreatments of corn cob biomass. AIMS Energy; 2020:9(1):15–28
3. **Ayeni, A.O.**, Daramola, M.O., Taiwo O., Olanrewaju, O.I., Oyekunle, D.T., Sekoai, P.T., Elehinfafe, F.B. Production of Citric Acid from the Fermentation of Pineapple Waste by *Aspergillus niger*. Open Chemical Engineering Journal July, 2019.
4. **Ayeni, A.O.**, Daramola, M.O., Sekoai, P.T., Adeeyo, O., Garba, M.J., Awosusi, A.A. Statistical modelling and optimization of alkaline peroxide oxidation pretreatment process on rice husk cellulosic biomass to enhance enzymatic convertibility and fermentation to ethanol. Cellulose 2018; 25:2487-2504.
5. **Ayeni, A.O.** and Daramola. M.O. Lignocellulosic biomass waste beneficiation: Evaluation of oxidative and non-oxidative pretreatment methodologies of South African corn cob. Journal of Environmental Chemical Engineering 2017; 5: 1771-1779.

Recent Professional Development Activities

1. College of Engineering Industrial grant/proposal writing training, Covenant University, Ota, Nigeria, 18 December, 2019.
2. Covenant University Centre for Research and Innovation Development seminar on Innovation and Entrepreneurial Culture, 17 December, 2019.

3. One-day leadership workshop for Heads of Department and Units at Covenant University, Ota, Nigeria, 13 December, 2019.
4. 7th Cross-Faculty Postgraduate Supervision – Supervisor Workshop, Supervision and Professional identity- Wits University, Johannesburg, South Africa, 23rd February, 2016.
5. Science communication workshop on creating website/blog (knowledge of twitter, info-graphics, sound-cloud, You tube, 10-11 February 2016, Wits University, Johannesburg, South Africa.
6. Training courses on Transmission Electron Micrograph (TEM), FEI Scanning Electron Micrograph (SEM), workshop on Powder X-Ray Diffraction, 5-day training on academic writing skills, Postgraduate Supervision Workshop, October, 2015- January, 2016 at Wits University, Johannesburg, South Africa.



AYOOLA Ayodeji Ayodele

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	2015
MSc	Chemical Engineering	University of Lagos	2003
B. Tech	Chemical Engineering	Ladoke Akintola University of Technology	1998

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Associate Professor	<ul style="list-style-type: none"> - Chairperson, Departmental Accreditation Committee - Chairperson, College Quality Assurance and Academic Standard Committee 	2021 – date	FT
Covenant University	Senior Lecturer	Departmental PG Coordinator, Chemical Engineering	2016 – 2020	FT
Covenant University	Lecturer I	Examination Officer	2014 – 2016	FT
Covenant University	Lecturer II	Level Adviser	2007 – 2014	FT
Covenant University	Assistant Lecturer	Level Adviser	2005 – 2007	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
South African Journal of Chemical Engineering	Reviewer	Reviewing of technical articles	2020 – date	PT
Covenant University	LOC member, Int. Conf. on Energy and Biochemical Engineering	Protocol and Logistics.	2021 – date	FT
Covenant	Departmental	Upload of staff	2014 – 2017	FT

University	Webometric Master	information on school website		
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Certifications or Current Membership in Professional Organizations

1. Nigerian Society of Engineers, NSE (Corporate Member, 18132)
2. Council for the Regulation of Engineering in Nigeria, COREN (R31816)
3. International Association of Engineers, IAENG (Member, 215143)
4. IAENG Society of Chemical Engineering (Member, 215143)

Honours and Awards

The Most Outstanding PhD Candidate (Overall Best), Covenant University, 2015

Best Teacher Award, Chemical Engineering Department, Covenant University 2018

3rd Position, Best Teacher Award, College of Engineering, Covenant University, 2018

Best Researcher Award, Chemical Engineering Department, Covenant University, 2018

Award of Recognition, Deputy College Examination Officer Covenant University, 2012

Service Activities

Chairman, Departmental Accreditation Committee, 2020 till date

Member, College Accreditation Committee, 2020 till date

Chair, College Quality Assurance and Academic Standard Committee, 2019 till date

Member, Central Examination Monitoring Team, 2019 till date

Member, College Preparatory Team for COREN Accreditation, Oct., 2016

Selected Publications and Presentations from the Past Five Years

1. **A.A. Ayoola**, N. Auta-Joshua, B.M. Durodola, O.J. Omodara, E.A. Oyeniyi (2021). Combating A36 mild steel corrosion in 1M H₂SO₄ medium using watermelon seed oil inhibitor. *AIMS Materials Science*, Vol. 8, Issue 1, pg. 130 - 143
2. **A.A. Ayoola**, O.R. Obanla, O.G. Abatan, O.S.I. Fayomi, I.G. Akande, O. Agboola, O.A. Ayeni, D. Oyekunle, V.A. Olawepo, O.O. Ayo-Aderele (2020). Corrosion Inhibitive Behaviour of the Natural Honey in Acidic Medium of A315 Mild and 304 Austenitic Stainless Steels. *Analytical and Bioanalytical Electrochemistry*, Vol. 12, No 1, pg. 21 - 35
3. **A.A. Ayoola**, O.S.I. Fayomi, O.A. Adeeyo, J.O. Omodara, O. Adegbite (2019). Impact assessment of biodiesel production using CaO catalyst obtained from two different sources, *Cogent Engineering*, 6:1, 1615198.
4. **A.A. Ayoola**, F.K. Hymore, C.A. Omonhinmin, O.C. Olawole, O.S.I. Fayomi, D. Babatunde, O. Fagbiele (2019). Analysis of Waste Groundnut Oil Biodiesel Production Using Response Surface Methodology and Artificial Neural Network, *Chemical Data Collections*, Volume 22, Article No.100238.
5. **A.A. Ayoola**, O.S.I. Fayomi, I.G. Akande, O.A. Ayeni, O. Agboola, O.R. Obanla, O.G. Abatan, C.J. Chukwuka (2020). Inhibitive Corrosion Performance of the

Eco-Friendly Aloe Vera in Acidic Media of Mild and Stainless Steels, *Journal of Bio and Tribo Corrosion*, 6(67), <https://doi.org/10.1007/y40735-020-00361-y>

Recent Professional Development Activities

28TH Engineering Assembly, Council for the Regulation of Engineering in Nigeria (COREN), August 19 – 21, 2019, International Conference Centre, Abuja.

International Conference on Sustainable Infrastructure Development (ICSID, 2019 & 2020), Covenant University, Ota, Ogun State, Nigeria

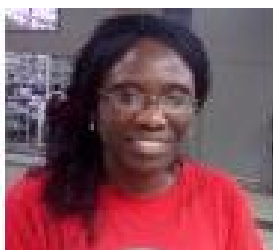
International Conference on Energy and Sustainable Environment (ICESE), June 18 – 20, 2019, Covenant University, Ota, Ogun State, Nigeria

International Conference on Science and Sustainable Development (ICSSD, 2019 & 2020), Covenant University, Ota, Ogun State, Nigeria.

African Women in Agricultural Research and Development (AWARD) Proposal and Grant Writing Skills Course September 5 – 7, 2018, Covenant University, Ota, Nigeria.

DigitalPro Master-Class Workshop (#DMW2018), June 25 – 29, 2018, Covenant University, Ota, Nigeria.

International Conference on Engineering for a Sustainable World, ICESW 2017 – 2020), Covenant University, Ota, Nigeria.



AGBOOLA Oluranti

Education

Degree	Discipline	Institution	Year
D-Tech	Chemical Engineering	Tshwane University of Technology, South Africa	2015
M-Tech	Chemical Engineering	Tshwane University of Technology, South Africa	2011
B. Eng	Chemical Engineering		2004

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Associate Professor	Member, Industrial Board Committee	Feb 2021-Date	FT
Covenant University	Senior Lecturer	Departmental Postgraduate Coordinator	2018-2020	FT
Tshwane University of Technology		Member, Exam Committee at the Department of Chemical Engineering,	2014/2015	PT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Mine Water and the Environment	Reviewer	Reviewing of technical articles	2017	PT
Environmental Chemistry Letters	Reviewer	<u>Reviewing of technical articles</u>	2017-2020	PT
Korean Journal of Chemical Engineering	Reviewer	Reviewing of technical articles	2017 till date	PT
Journal of Bio and Tribo-Corrosion	Reviewer	Reviewing of technical articles	2019 Till date	PT
Journal of Cleaner Production	Reviewer	Reviewing of technical articles	2019 till date	PT
International Journal of Chemical Engineering (Hindawi)	Lead guest Editor	Securing articles from authors, inviting reviewers to review them and also reviewing them. Working with authors to make necessary revisions, and arranging	2020-2021	PT

		for review.		
International Journal of Chemical Engineering (Hindawi)	Guest Editor	Securing articles from authors, inviting reviewers to review them and also reviewing them. Working with authors to make necessary revisions, and arranging for review		

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), **45589**
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), **R45018**

Service Activities

1. Member, Industrial Board Coordinator, 2020-Date
2. Post Graduate Coordinator, Chemical Engineering, Covenant University, Ota, 2018-2020
3. Committee Member, College Equipment Committee, 2018-2019

Selected Publications and Presentations from the Past Five Years

1. **Oluranti Agboola**, Ojo Sunday Isaac Fayomi, Ayoola Ayodeji, Augustine Omoniyi Ayeni, Edith E. Alagbe, Samuel E. Sanni, Emmanuel E. Okoro, Lucey Moropeng, Rotimi Sadiku, Kehinde Williams Kupolati, Babalola Aisosa Oni. A Review on Polymer Nanocomposites and Their Effective Applications in Membranes and Adsorbents for Water Treatment and Gas Separation. *Membranes*. (2021), 11: 139.
2. **Oluranti Agboola**, Patricia Popoola, Rotimi Sadiku, Samuel Eshorame Sanni, Sunday Ojo Fayomi, and Olawale Samuel Fatoba.. Chapter 1 in the book entitled “Environmental Nanotechnology: Volume 3”. Chapter 1 is Nanotechnology in Wastewater and the Capacity of Nanotechnology for Sustainability. Publisher: [Springer](#) (2020).
3. **Oluranti Agboola**, Rotimi Sadiku, Patricia Popoola, Samuel Eshorame Sanni, Peter Adeniyi Alaba, Daniel Temitayo Oyekunle, Victoria Oluwaseun Fasiku, and Mukuna Patrick Mubiayi. Chapter 8 in the book entitled “In: Membranes for Environmental Applications, Environmental Chemistry for Sustainable World 42”. Chapter 8 is Role and characterization of nano-based membranes for environmental applications. [Springer](#) (2020).
4. **Oluranti Agboola**, Femi Johnson, Samuel E. Sanni, Ojo Sunday Isaac Fayomi, Emmanuel Adedayo Omonidgbeyin, Bose Esther Adegboye, Godwin I. Akandee, Patricia Popoola, Rotimi Sadiku, Munyadziwa Mercy Ramakokovhu. Thermodynamic, Adsorption Isotherms and Electrochemical Investigations of Nickel Electroplating on Mild Steel in Electrolyte Containing Deoxyribonucleic Acid from *Citrus aurantium* as Additive. *Surface Engineering and Applied Electrochemistry* (2020): 56(6) 684–696.

5. **Oluranti Agboola**, Samuel E. Sanni, Sunday O. Fayomi, Patricia Popoola, Rotimi Sadiku, Adesola Adegbola, Victoria Oluwaseun Fasiku. Prospects of DNA macromolecule for corrosion inhibitor applications: A mini review. *Journal of Bio- and Tribo-Corrosion*, 6:7 (2020)
6. **Oluranti Agboola**, Damilola E. Babatunde, Ojo Sunday Isaac Fayomi, Emmanuel Rotimi Sadiku, Patricia Popoola, Lucey Moropeng, Abdulrazaq Yahaya, Onose Angela Mamudu. A review on the impact of mining operation: Monitoring, assessment and management. *Results in Engineering* 8: (2020) 100181
7. **Agboola O**, Sadiku ER, Popoola O, Fayomi OSI, Ayeni AO, Dick DT, Adegbola AT, Moropeng L, Ramakhokhovhu. Surface roughness of ternary blends: Polypropylene/Chitosan/Sisal fiber membranes. *International Conference and Exposition on Mechanical, Materials and Manufacturing Technology*, 9th to 10th October 2020. *Materials Today: Proceedings* (2020)
8. **Oluranti Agboola**, Toluwani Adedoyin, Samuel E. Sanni, Sunday O. Fayomi, Emmanuel Adedayo Omonidgbihin, Bose Esther Adegboye, Ayodeji Ayoola, Oladele Omodara, Augustine Omoniyin Ayeni, Patricia Popoola, Rotimi Sadiku, Peter Adeniyi Alaba evaluation of DNA from *manihot esculenta* leaf (cassava leaf) as corrosion inhibitor on mild steel in acidic environment. *Analytical and Bioanalytical Electrochemistry*. (2019) 11(10): 1304-1328
9. **Oluranti Agboola**, Faith Achile, Sunday Ojo Fayomi, Samuel E. Sanni, Olubunmi Abatan, Emmanuel R. Sadiku, Patricia Popoola, Mukuna Patrick Mubiayi, Esther Titilayo Akinlabi, Mamookho Elizabeth Makhatha, Toluwani Adedoyin, Isaac Ekere: adsorptive performance mechanism of the dna of calf thymus gland (CTG_{DNA}) on 3cr12 stainless steel as corrosion inhibitor in acidic medium. *Journal of Bio- and Tribo-Corrosion*. (2019) 5:52.
10. **Oluranti Agboola**: the role of membrane technology in acid mine water treatment: A review. *Korean Journal of Chemical Engineering*. (2019) 63:1389-1400
11. **Oluranti Agboola**, Benjamin Okoli, Samuel E. Sanni, Peter Adeniyi Alaba, Patricia Popoola, Emmanuel R. Sadiku, Patrick M. Mubiayi, Esther Titilayo Akinlabi, Mamookho Elizabeth Makhatha. Synthesis of activated carbon from olive seeds: investigating the yield, energy efficiency, and dye removal capacity. *SN Applied Sciences*. (2019) 1:85
12. **Oluranti Agboola**, Touhami Mokrani, Emmanuel Rotimi Sadiku, Andrei Kolesnikov, Olubiyi Isola Olukunle, Johannes Phillippus Maree. Characterization of two nanofiltration membranes for the separation of ions from acid mine water. *Mine Water and the Environment*. (2017) 36:401-408.

Recent Professional Development Activities

1. College of Engineering Industrial grant/proposal writing training, Covenant University, Ota, Nigeria, 18 December, 2019.



Samson Oyaka ONGBALI

Education

Degree	Discipline	Institution	Year
PhD	Industrial Engineering	University of Benin	2016
M. Sc.	Engineering Management	University of Benin	2005
B. Eng.	Mechanical Engineering	University of Ilorin	1995

Academic Experience

Institution	Rank	Title	Dates Held	FT/PT
Covenant University	Lecturer I	Member, College seminar committee	2020 - Date	FT
Covenant University	Lecturer II	Departmental Time Table Officer	2018 - 2018	FT

Non-academic Experience

Organization	Title	Duties	Dates	FT/PT
Goshen Base Nig. Ltd.	Managing Director	Oversees the general operations	2010 – 2017	FT
Central Bank of Nigeria (CBN)	Facilities Management Engineer	Maintenance management	1996 – 1997	FT

Certifications/Current Membership in Professional Organizations

- Corporate Member, Nigerian Society of Engineers (M.N.S.E), 44673
- Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R41129
- Fellow Member, Institute of Management Consultants – Nigeria (FIMC)

Honors and Awards

- College of Engineering excellence award - Time Table Officer (2018/2019 & 2021)

Service Activities

- Welfare Committee Member, LOC 2018 International Conference on Engineering for a Sustainable World (2018)
- Member, College of Engineering seminar committee (2021 - Date)
- **Selected Publications and Presentations from the Past Five Years**

- **Ongbali S.O.**, Afolalu S.A., Oyedepo S.A., Aworinde A.K., M.A. Fajobi. (2021). A study on the factors causing bottleneck problems in the manufacturing industry using principal component analysis. *Heliyon* 7 e07020 (**Scopus Indexed**)
- **Ongbali Samson O.** and Afolalu Sunday A. (2018) Bottleneck Problem Detection in Production System Using Fourier Transform Analytics. *International Journal of Mechanical Engineering and Technology (IJMET)*. 9 (12), (**Scopus Indexed**)
- **Ongbali Samson O.**, Afolalu Sunday A., and Salawu Enesi Y. (2019). Bottleneck Problems Arising in Inter-industry Production Setting and Vertical Integration: A Review. *International Journal of Mechanical Engineering and Technology (IJMET)*. 10 (5), 2019 (**Scopus Indexed**)
- **Ongbali Samson O.**, Afolalu Sunday A., and Philip Babalola. (2019). Supply Chain Management and the Accompanying Problems in Production Environment: A Review. *International Journal of Mechanical Engineering and Technology (IJMET)*. 10 (5), (**Scopus Indexed**)
- **Ongbali S. O**, Igboanugo A. C, Afolalu S. A, Udo M. O. Okokpuije I. P (2018) Model Selection Process in Time Series Analysis of Production System with Random Output. *International Conference on Engineering for a Sustainable World, Covenant University, Ota, Ogun State, Nigeria*

Recent Professional Development Activities

- Management Consultants Certification Seminar organized by “The Institute of Management Consultants – Nigeria” held at Ikeja Airport hotel, Lagos, June 2020

Productivity Certification Workshop organized by “Center for Public Service Productivity and Development” held at Pumpkin Leaf Restaurant – Sheraton Lagos Hotel, December 2021.



OJEWUMI Modupe Elizabeth

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	2016
MSc	Chemical Engineering	University of Lagos, Akoka	2007
BSc	Chemical Engineering	LAUTECH, Ogbomosho	2001

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Senior Lecturer	-Examination officer -Time table officer -College seminar committee	2010 – Till Date	FT

Certifications or Current Membership in Professional Organizations

1. The Nigerian Society of Engineers {Reg. No : 25942} - Corporate Member
2. The Council for the Regulation of Engineering in Nigeria {Reg. No : R. 22,474}
3. American Institute of Chemical Engineers {AIChE} {Reg. No 9900108563}

Honours and Awards

1. Covenant University award of Recognition as Time table Officer for the Department of Chemical Engineering, 2014/015 Academic session.
2. Supervisor of the 2nd position project in CODET competition, 2018 Abuja.

Selected Publications and Presentations from the Past Five Years

1. **Modupe Elizabeth Ojewumi**, Kayode Gbolahan Oyeyemi, Moses Eterigho Emetere, Joshua Olusegun Okeniyi (2018). Data on the rheological behavior of cassava starch paste using different models. Data in Brief. 19(2018), 2163-2177.
2. **Modupe Elizabeth Ojewumi**, Ejemen Valentina Anenih, Olugbenga Samson Taiwo, Bosede Temitope Adekeye, Olugbenga Olufemi Awolu, Emmanuel Omotayo Ojewumi (2018). A Bioremediation Study of Raw and Treated Crude Petroleum Oil Polluted Soil with *Aspergillus niger* and *Pseudomonas aeruginosa*. Journal of Ecological Engineering. 19(2), 226–235.
3. **Modupe Elizabeth Ojewumi**, Joshua Olusegun Okeniyi, Elizabeth Toyin Okeniyi, Jacob Olumuyiwa Ikotun, Valentina Anenih Ejemen, Esther Titilayo Akinlabi (2018). Bioremediation: Data on Biologically-Mediated Remediation of Crude Oil (Escravos Light) Polluted Soil using *Aspergillus niger*. Chemical Data Collections, 17 – 18: 196 – 204.

4. **Modupe Elizabeth Ojewumi**, Barbra Ijeoma Obielue, Moses Eterigho Emetere, Olugbenga Olufemi Awolu, Emmanuel Omotayo Ojewumi (2018). Alkaline Pre-Treatment and Enzymatic Hydrolysis of Waste Papers to Fermentable Sugar. *Journal of Ecological Engineering*. 19(1): 211–217.
5. **Modupe Elizabeth Ojewumi**, James A. Omoleye and Adesola A. Ajayi (2017). Optimization of Fermentation Conditions for the Production of Protein Composition in *Parkia biglobosa* Seeds using Response Surface Methodology. *International Journal of Applied Engineering Research*. 12(22): 12852-12859.
6. **Modupe Elizabeth Ojewumi**, Moses Eterigho Emetere, Damilola Elizabeth Babatunde and Joshua Olusegun Okeniyi (2017). In Situ Bioremediation of Crude Petroleum Oil Polluted Soil Using Mathematical Experimentation. *International Journal of Chemical Engineering*, 5184760, 11
7. M.E. Emetere, I.S. Aro, S. Jack-Quincy, O.D. Okonkwo, **M.E. Ojewumi**, O.J. Omodara, E.N. Jasper and A.O. Adeyemi (2017). Investigating the cyclic breaking of butyl-, methyl- and ethyl-biodiesel from waste vegetable oil using ultraviolet-visible spectrophotometry. *Cogent Engineering* 4: 1321084. .

Recent Professional Development Activities

1. Certificate in Leadership Development, African Development Center Covenant University, Ota. 2016
2. Training on the use of MATLAB, 2017. College of Engineering Covenant University, Ota, Ogun State.
3. TECHWOMEN Mentors from Silicon Valley, U.S.A. Professional Development workshop, 2018.
4. 10th AWARD Training on Grant writing. Covenant University, 2018.



ODUNLAMI Olayemi Abosede

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Obafemi Awolowo University Ile-Ife	2015
MSc	Chemical Engineering	Obafemi Awolowo University Ile-Ife	2011
BSc	Chemical Engineering	Obafemi Awolowo University Ile-Ife	2001

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Senior Lecturer	Deputy College Examination Officer	2017-2019	FT
Covenant University	Senior Lecturer	Post graduate Representative	2021-Date	FT
Covenant University	Senior Lecturer	College Examiner for Post Graduate Students	2020-Date	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Open Engineering Journal	Reviewer	Reviewing of articles	2019-Date	PT
Association of Professional Women Engineers in Nigeria, Ota Chapter	Vice Chairman	Mentoring the female students from primary school and tailoring them towards becoming fulfilled and successful engineers in future.		FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), 24439
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R25, 472
3. Member International Association of Engineers (IAENG), 242155

Honours and Awards

1. Cogent Engineering- Best Civil & Environmental Engineering Paper in 2019 G.B. Abimbola, B.S. Fakinle, O.A. Odunlami on the topic "Investigation and Quantification of Carbon Footprint in Lagos Megacity". Awarded in 2020.

Service Activities

1. College of Engineering representative of SIWES Committee, 2017-2019
2. Committee Member, Covenant University Centre for Entrepreneurial Development, 2017-2020
3. Committee Member, College of Engineering Examination Committee, 2017-2020
4. Post graduate Representative of Department of Chemical Engineering 2021-Date

Selected Publications and Presentations from the Past Five Years

Odunlami O.A., Chinyelugo J.N., Elehinafe F.B., & Ayoola A.A. Assessment of Carbon Monoxide and Hydrogen Sulfide Emissions from Different Brands of Window Air-Conditioners. Key Engineering Materials (2021).

Odunlami O.A., Abatan O.G., Busari A.A., Alao G.T., Elehinafe F.B. & Emekekwe C.O. Assessment of hydrogen sulfide emission levels on the floors of some selected bakeries in southwestern Nigeria. IOP Conference Series Materials Science and Engineering (2021).

Odunlami O.A., Abatan O.G., Busari A.A., Alao G.T., Loto R.T. & Olomukoro O.T. Electrochemical control of high carbon steel corrosion using rosemary oil in citric acid medium. IOP Conference Series Materials Science and Engineering (2021).

Odunlami O.A., Loto R.T., Fajobi M.A., Olomukoro O. T, Godwin I.G., Oke M.A. & Oladimeji T.E. Data on the corrosion Inhibition Property of Rosemary on High Carbon Steel in dilute sulphuric acid, citric acid and sodium chloride solution. Chemical Data Collections (2021).

Odunlami O.A., Elehinafe F.B., & Okorie C.G. (2018) Assessment of In-Tricycle Exposure to Carbon Monoxide Emission on Roads in Nigerian Urban Centres. International Journal for Mechanical Engineering and technology (IJMET) (2018).

Odunlami O.A., Elehinafe F.B., & Okorie C.G. (2018) Assessment of In-Tricycle Exposure to Carbon Monoxide Emission on Roads in Nigerian Urban Centres. International Journal for Mechanical Engineering and technology (IJMET) (2018).

Recent Professional Development Activities

The World Congress on Engineering and Computer Science (WCECS 2019)

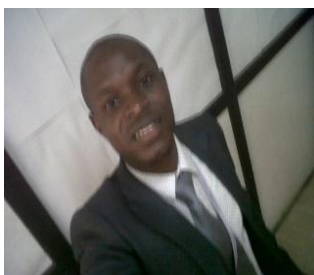
San Francisco, USA, 22-24 October, 2019

Covenant University- OCIIP Nigeria, (CU-OCIIP) Expo 2020 Webinar on Post COVID-19 Creativity and Innovation- The Pathway to Sustainable Development.

23rd -25th June, 2020

Introduction to Indoor Air Quality: An online non-credit authorized by the Hong Kong University of Science and Technology and offered through Coursera

Safety in the Utility Industry: An online non-credit authorized by the Hong Kong University of Science and Technology and offered through Coursera



SANNI Samuel Eshorame

Education

Degree	Discipline	Institution	Year
Ph.D	Chemical Engineering	Covenant University	2018
M.Sc	Chemical Engineering	Ahmadu Bello University	2009
B.Tech.	Chemical Engineering	Ladoke Akintola University of Technology	2003

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Senior Lecturer	Dr./Staff Adviser NSChE CU-Chapter	2020-Date	FT
Covenant University	Lecturer 1	Chair, College of Engineering Seminar Committee & Acting Chair, CODET Committee	2018-2020 2017	FT
Covenant University	Lecturer 2	Staff Advisor 200-400 L	2015-2017	FT
Covenant University	Assistant Lecturer	Staff Advisor 500 L	2014-2015	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
i. Kaduna Refining & Petrochemical Company, Nigeria	IT student, Kaduna Refining and Petrochemical Company	Refining of short residue from crude oil to produce lube oil Roles/skills acquired: <ul style="list-style-type: none"> - Support Plant operator - Short residue refining for lube oils (light, heavy, medium machine oils) - The use of Process Information Diagrams (PIDs) - Propane deasphalting, dewaxing and solvent extraction 	2002	PT
II. Weam & Company, Port Harcourt, Nigeria	HYSYS Trainee,	- HYSYS appreciation/installation	2007	PT

		HYSYS Engineering Training Programme	<ul style="list-style-type: none"> - Launching HYSYS - Entering the simulation environment & performing simulations - Choosing an appropriate fluid package 		
iii.	Engineering Development Training Programme (sponsored by NNPC/PTDF), KRPC, Nigeria	PTDF/NNPC Attache', Engineering Training Development	Refining of Naphtha to produce Reformate/gasoline Roles/skills acquired: <ul style="list-style-type: none"> - Support Plant operator - Naphta Refining for fuels (gasoline, diesel, LPG, kerosene etc.) - Equipment (Heaters, exchangers, pumps, compressors & boilers) - commissioning/start up 	2011	PT

Certifications or Current Membership in Professional Organizations

Certifications:

- Fellow, Institute of Management and Policy Development, 2019
- ADAPTI Certificate for Proficiency in the use of Microsoft Office, Ministry of Education, Nigeria, 2016
- Council for the Regulation of Engineering (COREN) Nigeria Certificate, 2015
- Nigerian Society of Engineers (NSE) Certificate, Nigeria, 2014
- Nigerian Society of Chemical Engineers (NSChe) Certificate, Nigeria, 2014
- Health, Safety and Environment Certificate (HSE), Nigerian National Petroleum Corporation, 2011
- Engineering Training and Development Programme Certificate (ETDP) Nigerian National Petroleum Corporation, 2011
- Aspen HYSYS Certificate for Oil & Gas Process Simulation, Weam & Company, Nigeria, 2007

Professional membership of organizations:

- International Association of Advanced Materials (IAAM), Membership no: 791712343930, August 14, 2018 to date
- Fellow, Institute of Policy Management Development (FIPMD), Reg no: 1107, June 2018 to date
- Member, Council for the Regulation of Engineering in Nigeria (COREN), R.30877, April 2015 to date
- Member, Nigerian Society of Engineers (MNSE), Reg. no: 33613 April 2014 to date
- Member, Nigerian Society of Chemical Engineers (MNSChe) Reg. no: M1654, April 2014 to date

Honours and Awards

- Nigerian Institute of Information Technology (NIIT) 2007
Prize: Scholarship Award to study JAVA, 2007

- Cash Prize: N 137,000
- ii. Petroleum Technology Development Fund/ 2007
Prize: Nigerian National Petroleum Corporation (PTDF/NNPC)
Scholarship for training & HYSYS Certification
 - iii. PTDF/NNPC Scholarship 2011
Prize: Scholarship to undergo Engineering Training and
Development Programme (ETDP)
 - iv. 4th Position at the Intercontinental Research Competition 2015
of the Oil Trading and Logistics Conference, October 27-29, 2015.
 - v. Award of Fellowship, Institute of Policy Management Development 2018
(IPMD) June 2018 to date
 - vi. Africa International Achievers Award 2018
 - vii. Covenant University Chancellor's Exceptional Researcher Award 2019
 - viii. Grant Award (worth 6 million naira), for the construction of a 2020
pilot plant for the production of fuels from plastics, awarded by Nigerian
Content and Development Monitoring Board (NCDMB)
 - ix. Best Researcher Award, Department of Chemical Engineering presented
2020 by College of Engineering, Covenant University, Nigeria
 - x. NCDMB-Grant Winner Recognition Award in the College of Engineering
2020

Service Activities

1. Lead Guest Editor (2020-2021): Special Issue "Innovative Carbon Capture Technologies for Sustainable Engineering and Environment", Journal: International Journal of Chemical Engineering, Impact Factor: 1.88, publisher: Hindawi; papers published = 2 for now.
2. Co-Organizer, International Conference on Energy and Sustainable Environment, Covenant University, 2019.
3. Journal Editor:
 - Editorial board member of the "Open Chemical Engineering Journal, a Scopus indexed Journal"; publisher – Bentham Science, September 7, 2018 to date
 - Editorial board member of "Advanced Energy Conversion Materials", Publisher: Universal Wise Publisher (seeking indexation in Scopus)
4. Journal Reviewer:
 - Journal of Natural Gas Science and Engineering; Published by Elsevier (Indexed in Scopus & Web of Science)
 - Sustainable Production and Consumption; Published by Elsevier (Indexed in Scopus & Web of Science)
 - International Journal of Energy Research; Published by Wiley ((Indexed in Scopus & Web of Science) and 14 other journals.
5. Examiner/coordinator
Covenant University Scholastic Aptitude Screening (CUSAS) Panelist, 2015/2016 academic and 2017/2018 Academic sessions

Selected Publications and Presentations from the Past Five Years

1. **Samuel Eshorame Sanni**, Peter Adeniyi Alaba, Emeka Okoro, Moses Emetere, Babalola Oni, Oluranti Agboola, Amanda Onyinye Ndubuisi. (2021). Strategic Examination of the Classical Catalysis of Formic Acid Decomposition for Intermittent Hydrogen Production, Storage and Supply: A Review. *Sustainable Energy Technologies and Assessments*, 45 (2021): 101078. <https://doi.org/10.1016/j.seta.2021.101078>.
2. **Eshorame Samuel Sanni**, Emmanuel Rotimi Sadiku, Emeka Emmanuel Okoro. (2021). Novel Systems and Membrane Technologies for Carbon Capture. *International Journal of Chemical Engineering*, 2021: 1-23. Doi: <https://doi.org/10.1155/2021/6642906>.
3. **Samuel Eshorame Sanni**, Frederick-Simon Ovie, Oluseyi Ajayi, Oluranti Agboola, Sam Sunday Adefila, Patricia Popoola, Rotimi Sadiku. (2020) Effect of Controlled pH and Concentrations of Copper Sulphate and Silver Nitrate during Nanoparticle Synthesis towards Modifying Compressor Oil Yield Stress and Lubricity for Improved Refrigeration. *Heat and Mass Transfer*, 56: 931-961. <https://doi.org/10.1007/s00231-019-02746-3>.
4. **Samuel Eshorame Sanni**, Oluranti Agboola, Omololu Fagbiele, Esther Yusuf and Moses Emetere. (2020). Optimization of Natural Gas Treatment for the Removal of CO₂ and H₂S in a Novel Alkaline-DEA Hybrid Scrubber, *Egyptian Journal of Petroleum*, 29: 83-94. Doi: <https://doi.org/10.1016/j.ejpe.2019.11.003>
5. **Samuel Eshorame Sanni**, Sam Sunday Adefila, Ambrose Nwora Anozie. (2019). Prediction of Sand Kinematic Pressure and Fluid-Particle Interaction Coefficient as Means of Preventing Sand-Induced Corrosion in Crude Oil Pipelines, *Ain Shams Engineering Journal*, 10 (2019): 55-62. <https://doi.org/10.1016/j.asej.2018.02.007>.
6. **Samuel E. Sanni**, Sunday I. O. Fayomi, Moses E. Emetere, and Theophillus I. Tenebe. (2019). Corrosion Inhibition of Mild Steel in Aqueous HCl Using Bitter Leaf and Fenugreek Seed Oils, *Protection of Metals and Physical Chemistry of Surfaces*, 55 (2): 389-399. Doi: 10.1134/S2070205119020254.
7. **Samuel Sanni**, Ayomipo Ewetade., Moses emetere., Oluranti Agboola., Emmanuel Okoro., Shade Olorunshola., Taiwo Olugbenga. (2018). Enhancing the Inhibition Potential of Sodium Tungstate for Mitigating the Corrosive Effect of Acidithiobascillus Thiooxidans on X-52 Carbon Steel, *Materials Today Communications*, 19(2019): 238-251.

Recent Professional Development Activities

- (i) Master Class on Leadership Development (Workshop), Covenant University, 2021.
- (ii) International Conference on Engineering for a Sustainable World (ICESW), Covenant University, July, 2020.
- (iii) International Conference on Sustainable Infrastructural Development (ICSID), Covenant University, July, 2020.
- (iv) International Conference on Energy and Sustainable Environment, Covenant University, July, 2020.
- (v) COREN 26th Engineering Assembly: Entrepreneurship and Manufacturing in Nigeria, Aug. 2017.
- (vi) Petroleum Summit and Exhibition, International Conference Centre, Abuja, Nigeria, Feb. 2018.



BABALOLA Philip Olufemi

Education

Degree	Discipline	Institution	Year
PhD	Mechanical Engineering	Covenant University	2015
MSc	Mechanical Engineering	University of Ibadan	1999
BEng	Mechanical Engineering	University of Ilorin	1995

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Senior Lecturer	Lecturer	2018-Date	FT
Covenant University	Lecturer I	Lecturer	2015-2018	FT
Covenant University	Lecturer II	Lecturer	2008-2015	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E)
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R8890

Honours and Awards

1. Best overall graduating student, Immanuel College High School, Ibadan, 1988
2. Book award presented by College of Science & Technology, Covenant University, Ota 'in recognition of your performance as the outstanding Level Adviser in Mechanical Engineering Department in 2008/2009 academic session'
3. Book award presented by College of Science & Technology, Covenant University, Ota 'in recognition of your performance as the outstanding Level Adviser in Mechanical Engineering Department in 2011/2012 academic session'
4. Book award presented by College of Science & Technology, Covenant University, Ota 'in recognition of your performance as the outstanding Departmental Examination Officer in Mechanical Engineering Department in 2011/2012 academic session'
5. Plaque award presented by Department of Mechanical Engineering, Covenant University in recognition of performance as Chair, Publicity Committee, 4th International Conference on Engineering for a Sustainable World.

Service Activities

1. LOC, HIGHER EDUCATION PARTNERSHIP IN SUB – SAHARAN AFRICA (HEPSSA), 2018
2. LOC, International Conference on Engineering for a Sustainable World (ICESW), 2017 till date
3. Session Chair, International Conference on Energy and Sustainable Environment (ICESE)

4. Session Chair, International Conference on Engineering for a Sustainable World
5. Reviewer, The Journal of The Minerals, Metals & Materials Society (TMS), Scopus
6. Reviewer, African Journal of Science, Technology, Innovation and Development Scopus
7. Reviewer, Journal of Materials Science Scopus
8. Reviewer, Journal of Petroleum Technology and Alternative Fuels Scopus
9. Reviewer, UMUDIKE JOURNAL OF ENGINEERING AND TECHNOLOGY (UJET)
10. Reviewer, Advanced Engineering Forum Scopus
11. Reviewer, Covenant Journal of Engineering and Technology
12. Reviewer, International Conference on Engineering for a Sustainable World, Scopus
13. Reviewer, International Conference on Sustainable Infrastructural Development (ICSID), Scopus
14. Reviewer, International Conference on Energy and Sustainable Environment (ICESE), Scopus
15. Editorial Board, International Conference on Engineering for a Sustainable World, Scopus
16. Editorial Board, International Conference on Advances in Material Science, Indexed in Scopus
17. Member, Industry Coordinator of College of Engineering

Selected Publications and Presentations from the Past Five Years

1. Moses Oriyomi1, Philip Babalola, 2020. Comparison of Mosquitoes Response to Different Diodes Wavelengths, International Journal of Science and Research (IJSR), Volume 9 Issue 7, July 2020
2. Babalola P.O., Bolu C.A, Inegbenebor A.O., Oyedepo S.O. and Kilanko O., 2019. Application of solar photovoltaic system to power air blower and mixing mechanism in a tilting furnace. World Review of Science, Technology and Sust. Development, Volume 15, No. 2, pp. 160-169
3. Philip O. Babalola, Anthony O. Inegbenebor, Christian A. Bolu, Shella I. John, 2019. Comparison of the mechanical characteristics of aluminium SiC composites cast in sand and metal moulds, International Journal of Mechanical Engineering and Technology (IJMET) Volume 10, Issue 02, February 2019, pp. 1671–1681, Article ID: IJMET_10_02_172 ISSN Print: 0976-6340 and ISSN Online: 0976-6359
4. Loto RT, Babalola P., 2019. Electrochemical analysis of SiC composite additions at 7.5% weight content on the corrosion resistance of monolithic aluminium alloy in sulphate–chloride solution. J Mater Res Technol. <https://doi.org/10.1016/j.jmrt.2019.03.001>
5. Loto R.T. & Babalola P., 2018. Analysis of SiC grain size variation and NaCl concentration on the corrosion susceptibility of AA1070 aluminium matrix composites. Cogent Engineering, 5: 1473002 <https://doi.org/10.1080/23311916.2018.1473002>

6. Loto R.T & Babalola P., 2018, Effect of alumina nano-particle size and weight content on the corrosion resistance of AA1070 aluminum in chloride/sulphate solution, Results in Physics, Elsevier, 10, 731–737
7. Babalola P.O., Bolu C.A., Inegbenebor A., 2017. Artificial Neural Network Prediction of Aluminium Metal Matrix Composite with Silicon Carbide Particles Developed Using Stir Casting Method, International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol:15 No:06.
8. Babalola P.O., Bolu C.A, Inegbenebor A.O., Kilanko O., Oyedepo S.O. and Odunfa K.M., 2017. Producing AA1170 Based Silicon Carbide Particulate Composite through Stir Casting Method, Asian Journal of Materials Chemistry, 3(2), pp 1-5, DOI: <https://doi.org/10.14233/ajmc.2017.AJMC-P49>
9. Loto R.T. & Babalola P., 2017. Corrosion polarization behavior and microstructural analysis of AA1070 aluminium silicon carbide matrix composites in acid chloride concentrations. Cogent Engineering, 4: <https://doi.org/10.1080/23311916.2017.1422229>
10. Oyedepo S.O., Babalola P.O., 2017. ‘Renewable Energy Technologies in Nigeria: Challenges and Opportunities for Sustainable Development’ in Renewable Energy Systems-Renewable Energy: Research, Development and Policies, Edited by Sandip A. Kale, Nova Science Publishers, Inc., New York, pp. 225-257.

Recent Professional Development Activities

2019 International Conference on Energy and Sustainable Development (ICESE 2019), May 18-20, Ota, Nigeria

4th International Conference on Science and Sustainable Development (ICSSD 2020), Covenant University, Ota, Ogun State.

International Conference on Energy and Biochemical Engineering (ICEBE 2021), Covenant University, Ota, Ogun State.

International Conference on Sustainable Engineering and Materials Development (ICSMD 2021), September 22-24, 2021, Ontario, Canada.



OLADOKUN Abimbola Olagoke

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Universiti Teknologi Universiti	2017
MSc	Chemical Engineering	University of Lagos	2001
BSc		Ladoke Akintola University of Technology	1999

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Senior Lecturer	Faculty	2020-Date	FT
Universiti Teknologi Malaysia	Post-Doctorate	Faculty	2018-2020	FT
University of Maiduguri	Senior Lecturer	Faculty	2004-2018	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Chemical Engineering Communication	Reviewer	Reviewing of technical articles	2019-Date	PT
Journal of Analytical and Applied Pyrolysis	Reviewer	Reviewing of technical articles	2018-Date	PT
Jurnal Teknologi	Reviewer	Reviewing of technical articles	2016-Date	PT

Certifications or Current Membership in Professional Organizations

1. Institute of Chemical Engineer (ICHEME)
2. Associate Member, The Malaysian Association of Hydrogen Energy (MAHE) 13012864
3. Approved Registered Member, Council for the Regulation of Engineering in Nigeria (COREN)

Honours and Awards

1. Best Presenter, 5th Conference on Emerging Energy and Process Technology (CONCEPT-2016), Port Dickson, Malaysia. 2016.

2. Best Presenter, 4th Conference on Emerging Energy and Process Technology (CONCEPT-2015), Port Dickson, Malaysia. 2015.

Service Activities

1. Committee Member, College of Engineering Publication Committee 2020-Present

Selected Publications and Presentations from the Past Five Years

1. Oladokun, O., Ahmad, A., Abdullah, T. A. T., Nyakuma, B. B., Kamaroddin, M. F. A., & Nor, S. H. M. (2017). Biohydrogen production from *Imperata cylindrica* bio-oil using non-stoichiometric and thermodynamic model. *International Journal of Hydrogen Energy*, 42(14), 9011-9023. [Scopus-indexed]
2. Oladokun, O., Ahmad, A., Abdullah, T. A. T., Nyakuma, B. B., & Wong, S. L. (2016). Model Free Kinetics Analysis of *Imperata Cylindrica* (Lalang). *Jurnal Teknologi*, 78(8-3). [ESCI-indexed]
3. Oladokun, O., Ahmad, A., Abdullah, T. A. T., Nyakuma, B. B., Kamaroddin, M. F. A., Ahmed, M., & Alkali, H. (2016). Sensitivity analysis of Biohydrogen Production from *Imperata cylindrica* Using Stoichiometric Equilibrium Model. *Jurnal Teknologi*, 78(8-3). [ESCI-indexed]
4. Oladokun, O., Ahmad, A., Abdullah, T. A. T., Nyakuma, B. B., Bello, A. A.-H., & Al-Shatri, A. H. (2016). Multicomponent devolatilization kinetics and thermal conversion of *Imperata cylindrica*. *Applied Thermal Engineering*, 105, 931-940. [Scopus-indexed]
5. Oladokun, O., Ahmad, A., Kamaroddin, M. F. A., Abdullah, T. A. T., & Nyakuma, B. B. (2015). A Quasi Steady State Model for Flash Pyrolysis of Biomass in a Transported Bed Reactor. *Jurnal Teknologi*, 75(6). [ESCI-indexed]
6. Oladokun, O., Ahmad, A., Abdullah, T. T., Nyakuma, B. B., Al-Shatri, A., & Bello, A. (2015). Modelling multicomponent devolatilization kinetics of *Imperata cylindrica*. *Chemical Engineering Transactions*, 45, 919-924. [Scopus-indexed]

Recent Professional Development Activities

Elsevier- Covenant University Workshop Series - March 2021, Covenant University, Ota, Nigeria, 3 March, 2021.



ALAGBE Edith Egbimhanlu

Education

Degree	Discipline	Institution	Year
PhD	Chemical & Polymer Engineering	Lagos State University	2017
MSc	Chemical Engineering	University of Lagos	2007
BSc	Chemical Engineering	University of Benin	1997

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer 1	Chairperson, College of Engineering Welfare Committee	2018 - Date	FT
Federal Institute of Industrial Research, Oshodi	SRO		2013 - 2018	FT
Lagos State Polytechnic	Lecturer		2011 - 2013	PT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
AVI Services Ltd, Ikeja	Technical Service Manager	Kept records of vehicle parts and maintenance schedule. Initiate transportation deals with companies, for Staff bus.	2008 - 2010	PT
Advanced Industrial & Engineering Polymer Research (AIEPR)	Reviewer		2020 – Date	PT
Oil Seeds and fats, crops and lipids	Reviewer		2020 – Date	PT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (MNSE), 38273
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R24,482
3. Corporate Member, Nigerian Society of Chemical Engineers, NSChE, 1502
4. Licentiate Member, Nigerian Institute of Food Science and Technology, NIFST

Honours and Awards

1. Presidential Merit Award from the Nigerian Society of Chemical Engineers, NSChE. November 2019

2. Best paper in Innovative solutions in Engineering by the Academy of Engineering. June 2018.
3. Technical Chair, 2nd Conference on Advances in Biochemistry and Molecular Biology (CABMB), 22-24th March, 2016

Service Activities

1. Chairman, College of Engineering Welfare Committee, 2019-Date
2. Chair, Departmental Editorial Board, 2019 – Date.
3. Committee Member, Local Organizing Committee, 1st International Conference on Energy and Biochemical Engineering, ICEBE. 2021 - Date
4. Committee Member, College of Engineering Awards Committee, 2019-2020
5. External Examiner, Chemical Engineering and Technology Department, Lagos State Polytechnic, Ikorodu. Lagos State.

Selected Publications and Presentations from the Past Five Years

Alagbe EE, Daniel EO, Oyeniyi EA. Data set on the effect of different pretreatment on the proximate analysis, microbial and sensory evaluation of dried banana during storage. Data in Brief, 2021; 31:105678.

Alagbe EE, Amlabu YS, Daniel EO, Ojewumi ME. Effect of varying drying temperature on the soluble sugar and nutritional content of banana. Open Chemical Engineering Journal, 2020, 14: 11-16.

Alagbe EE, Okocha DS, Daniel EO, Efevbokhan VE. Contamination assessment of underground water around a cemetery: Case study of Ayobo cemetery in Lagos, Nigeria. International Journal of Engineering Research and Technology. 2020; 13(6): 1283-1288.

Alagbe EE, Bassey ES, Daniel EO, Ojewumi ME. Physical, chemical and mechanical properties of corn sheath as pulp and paper raw material. Journal of Physics: Conference Series. 2019; 1378(3): 032083

Efevbokhan VE, Egwari L, **Alagbe EE**, Adeyemi JT, Taiwo OS. Production of bioethanol from hybrid cassava pulp and peel using microbial and acid hydrolysis. Bioresources. 2019; 14(2): 2596-2609.

Recent Professional Development Activities

1. Elsevier-Covenant University Workshop on ‘Avoiding predatory journal. 3rd March, 2021.
2. Elsevier - Covenant University Workshop on ‘How to increase visibility of my work’. 17th March, 2021.
3. Elsevier – Covenant University Workshop on ‘Identifying trending research topics’.
4. 2021 National Budget Roundtable & Panel Discussion on the theme, ‘National Budgeting, security issues and sustainable development in Nigeria’. 22nd February, 2021.
5. Leadership development masterclass. 8th April, 2021



JOSEPH Olufunmilayo Oluwabukola

	Discipline	Institution	Year
PhD	Mechanical Engineering	Covenant University	2016
M.Eng	Metallurgical & Materials Engineering	Federal University of Technology, Akure	2010
B.Eng	Metallurgical & Materials Engineering	Federal University of Technology, Akure	2004

Academic Experience

Institution	Rank	Title	Dates Held	FT/PT
Covenant University	Senior Lecturer	Lecturer/Level Adviser	2018 – Date	FT
Covenant University	Lecturer I	Lecturer/Level Adviser	2016 – Date	FT
Covenant University	Lecturer II	Lecturer/Level Adviser	2012- 2016	FT
Covenant University	Assistant Lecturer	Lecturer	2011 – 2012	FT
320 Technical Training Group, NAF Base, Kaduna	Lecturer		2005 - 2007	FT

Non-academic Experience

Organization	Title	Duties	Dates	FT/PT
Materials Journal (MDPI)	Peer Reviewer	Review of technical article	2017 - 2021	PT
Cogent Engineering	Peer Reviewer	Review of technical article	2017	PT

Certifications or Current Membership in Professional Organizations

- Corporate Member, Nigerian Society of Engineers (M.N.S.E), 24630
- Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R23,619

Honors and Awards

- 2013 CSIR-TWAS Sandwich Postgraduate Fellowship Award undertaken at CSIR-National Metallurgical Laboratory, Jamshedpur, India. [Grant number: FR 3240275047]

Service Activities

- Departmental Postgraduate Coordinator (2021)
- Level Adviser, Mechanical Engineering, Covenant University (2012 to 2016)

- Member, International Conference on Clean Energy and Contemporary Engineering Management (ICCEM 2012) Publicity Committee
- Member, 2015/2016 CUSAS Panel
- Member, College of Engineering Publications Committee [2016/2017 Session]
- Secretary and Member, Corrosion and Materials Science and Engineering Cluster [2014 till date]

Selected Publications and Presentations from the Past Five Years

1. **O.O. Joseph**, O.S.I. Fayomi, A.O. Inegbenebor and A.A. Ayoola (2021): “Potential of composite incorporation on the mechanical behavior of multilayer coatings,” *Portugaliae Electrochimica Acta*, vol. 39, pp159-165.
2. **O.O. Joseph**, J.A. Ajayi (2020): “Data on chloride-related electrochemical deterioration of micro-alloyed steel in E20 simulated fuel ethanol blend,” *Chemical Data Collections*, vol. 27, pp. 100384.
3. **O.O. Joseph**, K.O. Babaremu (2019): “Agricultural Waste as a Reinforcement Particulate for Aluminium Metal Matrix Composite-A Review,” *Fibers*, vol. 7, pp.33.
4. **O.O. Joseph**, C.A. Loto, O.O. Joseph, J. Dirisu (2019): “Comparative Assessment of the Degradation Behaviour of API 5L X65 and Micro-Alloyed Steels in E20 Simulated Fuel Ethanol Environment,” *Energy Procedia*, vol. 157, pp. 1320-1327.
5. O.S.I. Fayomi, **O.O. Joseph**, I.G. Akande, C.K. Ohiri, K.O. Enechi, N.E. Udoye (2019): “Effect of CCBP doping on the multifunctional Al-0.5 Mg – 15CCBP superalloy using liquid metallurgy process for advanced application,” *Journal of Alloys and Compounds*, vol. 783, pp. 245-255. <https://doi.org/10.1016/j.jallcom.2018.12.312>
6. **O.O. Joseph**, K.O. Babaremu, J.A. Adeniyi, “A Study on the Corrosion Inhibition Effect of Hexamethylene Tetramine on Welded API 5L X70 Steel in E10 Fuel Ethanol Environment,” *The 3rd International Conference on Engineering for Sustainable World (ICESW 2019)*, IOP Conf. Series: Materials Science and Engineering
7. K.O. Babaremu, **O.O. Joseph**, “Experimental Study of Corncob and Cow horn AA6063 Reinforced Composite for Improved Electrical Conductivity,” *The 3rd International Conference on Engineering for Sustainable World (ICESW 2019)*, IOP Conf. Series: Materials Science and Engineering
8. **O.O. Joseph**, J.A. Ajayi, O.P. Abioye, S.O. Oyedepo. “A Positive Dive into the Global Fuel Ethanol Industry: Opportunities for Nigeria,” *Eko-3M-Conf-2019*. Nigerian Institution of Metallurgical and Materials Engineers 2019 Annual National Conference and Exhibitions held at the Lagos Chamber of Commerce and Industry Conference and Exhibition Centre, Alausa, Ikeja, Lagos, Nigeria: June 26 – 28, 2019.
9. **O.O. Joseph**, C.A. Loto, S. Sivaprasad, J.A. Ajayi, S. Tarafder (2018): “Comparative Assessment of the Fracture Behaviour of Micro-alloyed and API-5L X65 Steels in E20 Simulated Fuel Ethanol Environments,” *Engineering Fracture Mechanics*, vol. 189, pp1-12.

Recent Professional Development Activities

- Workshop on Outcome-Based Education (OBE) For Engineering Accreditation, College of Engineering, Covenant University, Ota, Ogun State, Nigeria: September 19-20, 2019.
- Eko-3M-Conf-2019. Nigerian Institution of Metallurgical and Materials Engineers 2019 Annual National Conference and Exhibitions held at the Lagos Chamber of Commerce

and Industry Conference and Exhibition Centre, Alausa, Ikeja, Lagos, Nigeria: June 26 – 28, 2019.

- International Conference of Engineering for a Sustainable World (ICESW 2019) held at the Centre for Entrepreneurial Studies, Covenant University, Canaanland, Ota, Nigeria: July 3 – 5, 2019.
- Career and Professional Women Conference (CPWC), May 15-16, 2018. Covenant University, Canaanland, Ota, Nigeria.



OLADIMEJI Temitayo Elizabeth

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	2019
MSc	Chemical Engineering	Obafemi Awolowo University	2013
BTech	Chemical Engineering	Ladoke Akintola University	2008

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer I	Level Adviser	2020-Date	FT
Covenant University	Lecturer II	Departmental chaplain College welfare committee	2015-2019	FT
Covenant University	Assistant Lecturer		2013-2015	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Chemical Data Collections Journal	Reviewer	Reviewing of articles	2020-Date	PT

Certifications or Current Membership in Professional Organizations

1. Registered Member, Nigerian Society of Engineers (M.N.S.E),
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R30, 739

Service Activities

Departmental Chaplain, 2018-2019

Committee Member, College of Engineering Welfare Committee, 2018-2020

Selected Publications and Presentations from the Past Five Years

Temitayo E. Oladimeji, Babatunde O. Odunoye, Francis. B. Elehinafe, Oyinlola, R. Obanla, Olayemi, A. Odunlami. Production of activated carbon from sawdust and its efficiency in the treatment of sewage water. **Heliyon** 7 (2021) e05960

Oladimeji, T.E., Oguntuashe, K.M., Emetere, M.E. *et al.* Industrial- and automotive-used lubricating oils recycling cum acidic sludge treatment. *Int J Adv Manuf Technol* 106, 4157–4167 (2020).

Temitayo E. Oladimeji, Jacob A. Sonibare, James A. Omoleye, Abiola A. Adegbola, Hilary I. Okagbue Data on the treatment of used lubricating oil from two different sources using solvent extraction and adsorption. **Data in Brief** (2018) 19; 2240–2252

Temitayo E. Oladimeji, Jacob A. Sonibare, James A. Omoleye, A Review on Treatment Methods of Used Lubricating Oil **International Journal of Civil Engineering and Technology (IJCIET)**, 2018 9(9); 506-514

Vincent E. Efeovbokhan¹, Joseph D. Udonne, **Temitayo E. Oladimeji**, Chinoso Nwokorobia, Paul A.L. Anawe. Formulation, Compounding and Assessment Of De-Emulsifiers For The De-Emulsification Of Nigerian Crude Oil Emulsion. **Pet Coal** (2017); 59(3)

Recent Professional Development Activities

AWARD Mentoring Orientation Workshop, Covenant University, Ota, Nigeria, 6-7 September, 2018

Coursera Master Class: The Art and Science of Teaching Online. 8-24 August, 2020

Coursera Indoor Air Quality 2-17 July



Name:

Dr. Yunusa C. ONUH

Rank:

Senior Lecturer

Qualifications:

B.Sc., Metallurgical Engineering, Zaria

M.Sc., Petroleum Engineering, Abuja

Ph. D Petroleum Engineering, Covenant University

Onuh Charles Yunusa is a Petroleum Engineer with over 30 publications (authored & co-authored) in solving Oil & Gas drilling, production and environmental challenges. His publications include Society of Petroleum Engineers papers and journal articles, and reviews articles for publication in journals. Onuh holds a bachelor's degree in Metallurgical Engineering and master's and doctorate degree in Petroleum Engineering. He is currently a member of the Petroleum Reservoir and Production Technology research cluster at Covenant University, Nigeria. His areas of core competence are drilling engineering and fluid, well engineering and petroleum production economics. He had undertaken production optimization and wellbore analysis as a research intern with Halliburton and his current research interest includes “Enhanced Lost Circulation Materials for Drilling Mud Operation”, “Modelling Wellbore Performance for Niger Delta Reservoirs Using Vertical Lift Models”, and “Application of Data Analytics for Drilling Optimization”. Onuh is an SPE member and a registered engineer (R.Eng. R31,496, COREN) in Nigeria.



ELEHINAFE Francis Boluwaji

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Obafemi Awolowo University	2016
MSc	Chemical Engineering	Obafemi Awolowo University	2012
BSc	Chemical Engineering	Obafemi Awolowo University	2005

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer I	Member, College SIWES Committee	2021-Date	FT
Covenant University	Lecturer I	Member, College Examination & Timetable Committee	2020-Date	FT
Covenant University	Lecturer II	Member, College Examination & Timetable Committee	2017-2020	FT
Obafemi Awolowo University	Research Assistant	Supervisor, Research Experiments	2008-2016	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Elsevier; Taylor and Francis; Scientific. Net; Inderscience etc.	Reviewer	Reviewing of technical articles	2017-Date	PT
Hexon Environmental Consultants and Engineers	Environmental Engineer	Conduction of EIA, EA; Waste Management and Land Reclamation	2012-2013	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), 45590
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R45,192
3. Corporate Member, Nigeria Society of Chemical Engineers (NSChE)
4. Graduate Member, Nigerian Institute of Management Chartered (NIM), M99182

Honours and Awards

Examination officer, Award of Recognitions, College of Engineering Hooding Event, 2018/2019 Session, July, 2019.

Service Activities

Chief Examination Officer, Chemical Engineering, Covenant University, Ota,

2018 – Date

Deputy Examination Officer, College of Engineering, Covenant University, Ota, 2019 – Date

Member, College of Engineering Extension Committee, 2017 - 2018

Committee Member, SIWES, Covenant University, Ota, 2020 - Date

Committee Member, SWEP, Covenant University, Ota, 2020 - Date

Secretary, International Conference on Energy and Biochemical Engineering, 2020 -Date

Selected Publications and Presentations from the Past Five Years

(i) **Elehinafe, F.B.**, Okedere, O.B., Sonibare, J.A., Mamudu, A.O. (2021). Identification of the woody biomasses in Southwest, Nigeria as potential energy feedstocks in thermal power plants for air pollution control. *Cogent Engineering*, 2021, 8(1), 1868146. DOI:10.1080/23311916.2020.1868146.

(ii) Francis B. Elehinafe, Timileyin C. Komolafe, Oshiokheme C. Bature, Oni A. Babalola. (2021). Waste Polyethylene Terephthalate Packaging Materials in Developing Countries – Sources, Adverse Effects, and Management. *Ecological Engineering & Environmental Technology*, 2(1), 135–142. <https://doi.org/10.12912/27197050/132222>.

(iii) Oyetunji B. Okedere, Francis B. Elehinafe, Seun Oyelami, Augustine O. Ayeni. (2021) Drivers of anthropogenic air emissions in Nigeria - A review. *Heliyon* 7 (2021) e06398. <https://doi.org/10.1016/j.heliyon.2021.e06398>.

(iv) Oladimeji, T.E., Odunoye, B.O., Elehinafe, F.B., Obanla, O.R., Odunlami, O.A. (2021). Production of activated carbon from sawdust and its efficiency in the treatment of sewage Water. *Heliyon*, 7(1), e05960. DOI:10.1016/j.heliyon.2021.e05960

(v) Mamudu, A., Emetere, M., Okocha, D., Elehinafe, F., Okoro, E. (2020). Parametric investigation of indigenous Nigeria mineral clay (Kaolin and Bentonite) as a filler in the Fluid Catalytic Cracking Unit (FCCU) of a petroleum refinery. *Alexandria Engineering Journal*, 2020, 59(6), pp. 5207–5217.

(vi) Elehinafe, F.B., Mamudu, A.O., Okedere, O.B., Ibitioye, A. (2020). Risk assessment of chromium and cadmium emissions from the consumption of premium motor spirit (PMS) and automotive gas oil (AGO) in Nigeria. *Heliyon*, 2020, 6(11), e05301.

(vii) Elehinafe, F.B., Anjorin, S.D., Odunlami, O.A., Ayeni, A.O., Okedere, O.B. (2020). Modelling of sweet gas flaring and the resultant gaseous emissions with their emission Factors. *Cogent Engineering*, 7(1), 1815931. DOI: 10.1080/23311916.2020.1815931

Recent Professional Development Activities

International/Virtual Coursera Conference 2021: Building a More Just World Together, 19th – 21st, 2021.

The 1st International Conference on Recent Trends in Applied Research, hosted by Research Acad HUB with channels and human resources in India, Mexico, Nigeria, and Cameroon (Zoom Platform), 18th – 20th, September, 2020

2nd International Conference on Sustainable Infrastructural Development (ICSID), Covenant University, Ota, Ogun State, July 27th 28th, 2020

United Nations at 75 International/Virtual Conference, Covenant University, Ota, Ogun State, October 22nd – 24th, 2020.

International Conference On Science and Sustainable Development, Covenant University, Ota, Ogun State, August 3rd – 5th, 2020

3rd International Conference on Engineering for a Sustainable World, Covenant University, Ota, Ogun State, July, 2019.

2nd International Conference on Engineering for a Sustainable World, Covenant University, Ota, Ogun State, 9-13th July, 2018.

The OAUTek Conference 2017, 24th – 27th, September, 2017. Obafemi Awolowo University, Ile-Ife, Osun State. www.oautekconf.org/

2nd International Conference on Engineering and Technology Research, Ladoke Akintola University of Technology, Ogbomoso, 26-28th March, 2013. lautech.edu.ng/fetconference

3rd International Conference on Engineering and Technology Research, Ladoke Akintola University of Technology, Ogbomoso, 5-7th July, 2014. lautech.edu.ng/fetconference



UDO Mfon Okon

Education

Degree	Discipline	Institution	Year
PhD	Metallurgical and Material Engineering	University of Lagos	2012
MSc	Mechanical Engineering	University of Lagos	1997
BSc	Mechanical Engineering	Rivers State University of Science and Technology, Port Harcourt	1989

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer I	Lecturer	2016-Date	FT
Federal College of Fisheries and Marine Technology, V.I., Lagos	Senior Lecturer	Lecturer	1998 - 2016	FT
Lagos State Polytechnic, Ikorodu, Lagos	Assistant Lecturer	Lecturer	1997 - 1998	PT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Federal Ministry of Works and Housing	Mechanical Engineer II	Maintenance and Installation of Air conditioning and Plumbing facilities	1993 -1998	FT
Bertola Machine Tools, Lagos	Service Engineer	Repair, Servicing, and Installation of Machines and tools	1991 - 1993	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), 09986
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R11, 567

Service Activities

Level Advisor

Secretary, International Conference for Engineering for Sustainable World, 2016

Chairman, Fundraising Committee, International Conference of Engineering for Sustainable World

Selected Publications and Presentations from the Past Five Years

1. **Mfon O. Udo**, David E. Esezobor, Friday I. Apeh, Adeniran S. Afolalu (2018). Factors Affecting Ballability of Mixture of Iron Ore Concentrates and Iron Oxide Bearing Wastes in Metallurgical Processes, *Journal of Ecological Engineering* 19(3); 235-242
2. Roland Tolulope and **Mfon Udo** (2019) Effect of SiC Particle Additions on the Corrosion Resistance, Thermodynamic Stability and Surface Morphology of Ng-Al Alloy in Sulphate and Chloride Media, *Mater. Res. Express* 6 0865g5.
3. Israel Dunmade, Sunday Oyedepo, Ojo Fayomi and **Mfon Udo** (2019). Government Policies and Engineer's Roles in Facilitating Nigeria's Transition to Circular Economy. *Journal of Physics, Conference Series* 1378022097.
4. Sylvia Echezona Kelechi-Asumba, Okorie Austine Uche, Imhade P. Okokpujie, **Mfon Udo** (2019). Experimental Analysis of Engineering Properties of some Selected African Timber Species for Sustainable Building Development. *International Journal of Civil Engineering and Technology* 10(3) 189-202
5. Sunday Olayinka Oyedepo, Israel Dunmade, Adekeye Tunde, Ahme A. Attabo, Olukunle C. Olawole, Philip Babalola, **Mfon Udo**, Oluwaseun Kilanko, Joseph Adewumi Oyebanji, Oluwafemi Leramo (2019). Bioenergy technology Development in Nigeria – Pathway to Sustainable Energy Development, *International Journal of Environmental and Sustainable Development*, 18(2): 175
6. Sunday Olayinka Oyedepo, Precious I. Airhiken, Damola S. Adelekan, Idehai Olayemi Ohijeagbon, Kelvin Efemwenkiekie, Joseph Dirisu, **Mfon Udo** (2019). Experimental Investigation of Waste Vegetable Oil-Diesel Fuel Blends Effects on Performance of Compression-Ignition Engine, *Procedia Manufacturing* 35 pp 1039-1046.
7. Adeniran Sunday Afolalu, Ezekiel H. Asonamiinasom, Samsn Ongbali. Abiodun Abioye, **Mfon Udo**, Salawu Enesi (2018). Dataset on Experimental Investigation of Optimum Carburizing Temperature and Holding Time of Bi-nano Additives Treatment of AISI 5130, *Data in Brief* 19: 2279-2283.
8. Sunday A. Afolalu, Abiodun A. Abioye, **Mfon O. Udo**, Olajide R. Adetunji, Omolayo M. Ikumapayi (2018). Data Showing the Effects of Temperature and Time Variances on Nano-additives Treatment of Mild Steel During Machining, *Data in Brief* 19: 2382-3409
9. OP Abioye, AA Abioye, SA Afolalu, **M Udo** (2018). Numerical investigation of stress and strain distribution in equal channel angular extrusion of AL 6063 alloy, *International Journal of Civil Engineering and Technology* 9 (11), 522-531
10. SA Afolalu, S Oladipupo, SO Ongbali, AA Abioye, A Abdulkareem, MO Udo (2021). Queueing Theory an Index Factor for Production Inventory Control in Automotive Industry—A Review, *Trends in Manufacturing and Engineering Management*, 853-860 Articles 1–20
11. Onawumi, A.S.; Okolie, S.T.A., **Udo, M.O.**; Raheem, W.A.; Ajayeoba, A.O. (2017). Noise Level Investigation and Control of Household Electric Power Generators, *Industrial Engineering Letters*: 7(2), 63-69

Recent Professional Development Activities

1st International Conference on Engineering for a Sustainable World (ICESW 2017), Covenant University, Ota, Ogun State.

2nd International Conference on Engineering for a Sustainable World (ICESW 2018), Covenant University, Ota, Ogun State.

International Conference ON Energy and Biochemical Engineering (ICEBE, 2021), 1st
International Conference on Engineering for a Sustainable World (ICESW 2017),
Covenant University, Ota, Ogun State.



OKE, Michael Abidemi

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Obafemi Awolowo University Ile-Ife. Osun State.	2019
MSc	Chemical Engineering	Obafemi Awolowo University, Ile-Ife. Osun State.	2015
BSc	Chemical Engineering	Ladoke Akintola University of Technology, Ogbomoso.	2009

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer I	Faculty	2022-Date	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Walailak Journal of Science and Technology	Reviewer	Reviewing of technical articles	2020-Date	PT
Trends in Petroleum Engineering	Reviewer	Reviewing of technical articles	2020-Date	PT
Current Trends in Engineering Science	Reviewer	Reviewing of technical articles	2022-Date	PT
Journal of Energy, Environment and Chemical Engineering	Editor	Editing of Technical articles	2022-Date	PT

Certifications or Current Membership in Professional Organizations

Approved Registered Member, Council for the Regulation of Engineering in Nigeria (COREN)

Service Activities

Academic Level Adviser, Petroleum students 100L 2022 - date

Selected Publications and Presentations from the Past Five Years

- (a) **Oke M.A.**, Oluwaseun A.O., Oluwafunmiso A. I., Ademola J.S. Gaseous Emission from the Combustion of Dual Purpose Kerosene (DPK) from the Kaduna Refinery and Petroleum Company in Nigeria. Trends Petro. Eng. 2021;1(1):1-4. 000502.
- (b) **Oke Michael Abidemi**, Osunnusi Oluwaseun Adedayo, Sonibare Ademola Jacob, Akeredolu Funsho Alaba. Estimation of Emission Factor from the Combustion of AGO, PMS and DPK from the Kaduna Refinery and Petroleum Company in Nigeria. International Journal for Technological Research in Engineering. 2021;8(4):25-29. ISSN: 2347-4718.
- (c) Oluwaseun Osunnusi Adedayo, **Michael Abidemi Oke**, Jacob Ademola Sonibare. Gaseous Emission from the Combustion of AGO from KRPC in Nigeria. Petroleum and Coal. (2020);62(1):617-622. ISSN: 1337-7072.
- (d) Anthony Onakpohor, Bamidele Sunday Fakinle, Jacob Ademola Sonibare, **Michael Abidemi Oke**, Funso Alaba Akeredolu. Characterization of Gaseous Emission from Artisanal Refinery in Niger-Delta, Nigeria. Heliyon. 2020;6(11):1-9. Doi: 10.1016/j.heliyon.2020.e05608.
- (e) Odewale S.A., Sonibare J.A., Ayofe O.A. and **Oke M.A.** Experimental Investigation of Electrical Resistivity of Cement dust. Journal of Engineering Research and Reports.2020;15(1):44-51. Doi: 10.9734/JERR/2020/V15I117138.
- (f) Sonibare Jacob Ademola, **Oke Michael Abidemi**, Onakpohor and Akeredolu Funsho Alaba. Ultimate and Elemental Analysis of Some Common Charcoal in Southwestern Nigeria. Modern Chemistry. 2021;9(1):13-24. Doi: 10.11648/j.mc.20210901.13.
- (g) **Oke M. A.**, Sonibare J. A., Onakpohor A. and Akeredolu F. A. Characterization of Gaseous Emissions from the Combustion of Some Common Charcoal in Southwestern Nigeria. Journal of Research in Environmental and Earth sciences. 2021;9 (5):01-10. ISSN (Online): 2348-2532.
- (h) Osunnusi O. A., **Oke M. A.**, Odekanle E. L., Sonibare J. A., Ige O. A., Oyewale B. O., Odewale S. A. Gaseous Emission from the Combustion of Premium Motor Spirit (PMS) from the Kaduna Refinery and Petroleum Company (KRPC) in Nigeria. J Korean Soc Environ Eng. 2021;43(5):319-324.

Recent Professional Development Activities

Sustainability of Energy Generation in Nigeria: Engineer's perspectives 12th March, 2020 at Ladoke Akintola University of Technology, Ogbomoso
 Certificate in Advanced Digital Appreciation Programme for Tertiary Institutions Statistical Package (SPSS), Covenant University, Ota 2022



ADEEYO Opeyemi Adewale

Education

Degree	Discipline	Institution	Year
MSc	Chemical Engineering	University of Lagos	2004
BSc	Chemical Engineering	Ladoke Akintola University of Technology	2001

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer 1	Lecturer	2017	FT
Covenant University	Lecturer 2	Lecturer	2008	FT
Covenant University	Assistant Lecturer	Lecturer	2005	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Sulphuric Acid Plant, Drury Industries Ltd, Agbara	Process Engineer	Monitor, control and manage the production process of sulphuric acid in the plant.	2005	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (MNSE, 18129)
2. Registered Member, Council for the Regulation of Engineering in Nigeria (R. 20,916)
3. Corporate Member, Nigerian Society of Chemical Engineers, (MNSChE, M1112)

Service Activities

Student Industrial Work Experience (SIWES) Supervisor	2007-2017
Member, Chemical Engineering Laboratory Committee	2007-2013
Member, Covenant University Scholarship Aptitude Test Interview Panel:	2010-2012
Level Adviser 100-L to 500-L	2006-2018

Selected Publications and Presentations from the Past Five Years

1. Ayoola A.A, Fayomi, O.S.I **Adeeyo, O.A.** Omodara, J.OAdegbite (2019) O. Impact Assessment of Biodiesel Production using CaO catalyst obtained from two different sources, Cogent Engineering, 00;1615198.
2. Modupe Elizabeth Ojewumi, **Opeyemi Adewale Adeeyo**, Oluwaseun Mary Akingbade, Damilola Elizabeth Babatunde, Ayodeji Ayodele Ayoola, Olugbenga Olufemi Awolu, Emmanuel Omotayo Ojewumi, Oladele Julius Omodara. Evaluation Of Glucose Syrup Produced from Cassava Hydrolyzed with Malted Grains (Rice, Sorghum and Maize. International Journal of Pharmaceutical Sciences and Research, 2018;9:1000-1010.
3. Ayoola Ayodeji, Babalola Rasheed, Odunlami Olayemi, **Adeeyo Opeyemi**, Ajibola Abosede, Nnachortam Kingsley. Assessment of the Potential Emissions from Biodiesel

Produced from Groundnut and Soybean Oils. International Journal of Research in Engineering and Technology, 2018;7:57-62.

4. Augustine Omoniyi Ayeni, Michael Olawale Daramola, Patrick T. Sekoai, **Opeyemi Adeeyo**, Musa Joel Garba, Ayotunde A. Awosusi. Statistical modelling and optimization of alkaline peroxide oxidation pretreatment process on rice husk cellulosic biomass to enhance enzymatic convertibility and fermentation to ethanol. Cellulose 2018;25:2487-2504.
5. Augustine O. Ayeni, David O. Odede, Ayodeji Ayoola, **Opeyemi Adeeyo**, Ajibola Ogunbiyi. Evaluation of Blends of Agricultural Solid Biomass Waste for Solid Fuel Production. Covenant Journal of Engineering Technology 2018;1:74-83.

Recent Professional Development Activities

Certificate in Advanced Digital Appreciation Programme for Tertiary Institutions Statistical Package (SPSS), Covenant University, Ota 2019

24TH COREN Engineering Assembly, Abuja, 2015
Nigerian Society of Chemical Engineers (NSChE) 42nd Annual General Meeting, Conference & Exhibition, Abuja, 2012



OBANLA, Oyinlola Mopelola

Education

Degree	Discipline	Institution	Year
Ph.D	Chemical Engineering	Covenant University, Nigeria	2020
M.Sc	Chemical & Polymer Engineering	Lagos State University, Epe, Campus	2012
B.Sc	Chemical & Polymer Engineering	Lagos State University, Epe Campus	2008

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer I	Deputy Departmental Examination Officer	2021-Date	FT
Covenant University	Lecturer II	Deputy Departmental Examination Officer	2026-2021	FT
Covenant University	Assistant Lecturer	Assistant Time table Officer	2014-2016	FT
Lagos State Model College of Education	Lecturer	Time Table Officer	2012-2014	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
American Journal of Applied Science	Reviewer	Reviewing of submitted manuscript	2019-Date	PT
Goldnestbuds Nigeria Limited	Quality control Officer	<u>Inspection of finished products to meet standard and marketable requirements.</u>	2012-2014	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E); 33,608
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN); R32, 244
3. Corporate Member, Polymer Institute of Nigeria (PIN); 1378
4. Corporate Member, Nigerian Society of Chemical Engineers (MNSChE); 1688

Honours and Awards

Final Year Level Adviser Award. Chemical Engineering. College of Engineering Hooding Event. 2018/2019 Session.

Service Activities

1. Committee Member, Covenant University Road Safety Corps. 2019-Date
2. Committee Member, International Conference on Energy and Biochemical Engineering (ICEBE 2021). Conference Planning Committee, 2020-Date
3. Departmental welfare Officer, Covenant University, 2014-2017

Selected Publications and Presentations from the Past Five Years

Oladimeji, T.E., Odunoye, B.O., Elehinafe, F.B., **Obanla, O.R.**, Odunlami, O.A.. Production of activated carbon from sawdust and its efficiency in the treatment of sewage water. *Heliyon*, 2021, 7(1), e05960

Temitayo E. Oladimeji, Kehinde M. Oguntuase, Moses E. Emetere, Vincent E. Efeovbokhan, Olayemi A. Odunlami, **Oyinlola R. Obanla**. Industrial- and automotive-used lubricating oils recycling cum acidic sludge treatment. *The International Journal of Advanced Manufacturing Technology*. January 2020.

doi:10.1007/s00170-019-04751-61742-6596.

Emetere, M.E., Ayara, W.A., **Obanla, O.R.** Design and construction of fruit solar drier for rural settlements. *Journal of Computational and Applied Research in Mechanical Engineering*, 2020, 9(2), pp. 323–330

Ayoola, A.A., Fayomi, O.S.I., Akande, I.G., Ayeni, O.A., Agboola, O., **Obanla, O.R.**, Abatan, O.G. Chukwuka, C.J. Inhibitive Corrosion Performance of the Eco-Friendly Aloe Vera in Acidic Media of Mild and Stainless Steels. *Journal of Bio- and Tribo-Corrosion*. Volume 6, Issue 3, 2020.

Oni, B.A., Ayeni, A.O., Agboola, O., Oguntade, T., **Obanla, O.R.** Comparing microplastics contaminants in (dry and raining) seasons for Ox- Bow Lake in Yenagoa, Nigeria. *Ecotoxicology and Environmental Safety*, 2020, 198, 110656

Recent Professional Development Activities

1. The role of Chemistry in Natural Rubber Development for sustainable industrial Growth (26th July, 2018). 11th Chemtech Annual Conference Iyanomo, Benin City, Edo State.
2. Python Programming Language Training (September 12 – 15, 2017), CSIS Centre. Diamond Bank. Covenant University, Ota, Nigeria.



Engr. Dr. E.S. AGUDOSI

Education

<i>Degree</i>	<i>Discipline</i>	<i>Institution</i>	<i>Year</i>
PhD	Chemical Engineering	Universiti Teknologi Malaysia	2020
MEng	Chemical Engineering	Universiti Putra Malaysia	2017
PDM	Business Administration	Ahmadu Bello University Zaria	2014
BEng	Chemical Engineering	Federal University of Technology, Owerri	2007

Academic Experience

<i>Institution</i>	<i>Post held</i>	<i>Date</i>	<i>FT/PT</i>
Covenant University, Ota	Lecturer I	2023 - present	
Universiti Teknologi Malaysia	Research Fellow	2020-2022	FT
Universiti Teknologi Malaysia	Teaching & Research Assistant	2017-2020	FT
Catalan Institute of Nanoscience and Nanotechnology (ICN2), Barcelona Spain	Research Intern	2019-2019	FT

Non-Academic/Industry Experience

<i>Organization</i>	<i>Title</i>	<i>Duties</i>	<i>Date</i>	<i>FT/PT</i>
Dextron Engineering (Nig.) Limited	Administrator-cum-Site Supervisor	<ul style="list-style-type: none"> - Planned, organised, and conducted the affairs of the company at Kaduna branch office including logistics. - Oversaw and analysed financial operations, approved purchases and expenditures, and facilitated training programs. - Recommended changes to working conditions, obtained work permits, and scheduling subcontracting. - Scheduled workers, created budgets, and paid close attention to details to avoid errors and safety lapses. - Multitasked to effectively juggle competing demands. - Motivated team members and communicated effectively to provide clear instructions to team members. - Supervised geotechnical investigation for tower foundation classification (determination of soil bearing capacity). - Supervised tower foundation construction (excavation, setting of tower stubs, and casting of pad and chimney). - Provided courses of action in the event of any exigencies 	2010-2015	FT

Certifications/Current Membership in Professional Organizations:

1. Corporate Member, Nigerian Society of Chemical Engineers (MNSChE)
2. Corporate Member, Nigerian Society of Engineers (MNSE), **NSE (Reg. no.: 37936); 25 May 2016**
3. Registered Engineer, Council for the Regulation of Engineering in Nigeria (COREN), **(Reg. no.: 35709); 16 December 2016**

AWARDS/HONOURS/GRANTS:

- PhD Merit Thesis Award, Malaysia-Japan International Institute of Technology (MJIT), Universiti Teknologi Malaysia (UTM), January 2021
- Certificate of Excellence for PhD Thesis, MJIT UTM, January 2021
- UTM International Doctoral Fellowship (IDF), UTM, August 2017 - October 2020
- MJIT International Doctoral Incentive - Full Tuition Waiver, MJIT UTM, September 2017 - October 2020
- Erasmus+ International Credit Mobility Grant - Action KA 107, Fellowship was undertaken at Catalan Institute of Nanoscience and Nanotechnology (ICN2), Campus UAB - Universitat Autònoma de Barcelona Spain, Funded by the European Commission, May - July 2019

RESEARCH INTERESTS

- Nanomaterials Synthesis (organic and inorganic) - graphene, CNTs, MXenes, TMDs & Characterisation
- Energy Storage Devices (Supercapacitors, LIBs, and Supercapatteries)
- Machine Learning for Advanced Energy Materials
- Water & Wastewater Treatment

SELECTED PUBLICATIONS

1. Omar, N., Abdullah, E. C., Numan, A., Mubarak, N. M., Khalid, M., Aid, S. R., & Agudosi, E. S. (2022). Facile synthesis of a binary composite from watermelon rind using response surface methodology for supercapacitor electrode material. *Journal of Energy Storage*, 49, 104147, doi:10.1016/j.est.2022.104147, **ISI-indexed, IF: 8.907, Q1**
2. Agudosi, E. S., Abdullah, E. C., Numan, A., Khalid, M., Mubarak, N. M., Benages-Vilau, R., Gómez-Romero, P., Aid, S. R., & Omar, N. (2021). Optimisation of NiO electrodeposition on 3D graphene electrode for electrochemical energy storage using response surface methodology. *Journal of Electroanalytical Chemistry*, 882, 114992, doi:10.1016/j.jelechem.2021.114992, **ISI-indexed, IF: 4.598, Q1**
3. Agudosi, E. S., Abdullah, E. C., Numan, A., Khalid, M., Mubarak, N. M., Aid, S. R., & Omar, N. (2021). Optimising the fabrication of 3D binder-free graphene electrode for electrochemical energy storage application. *Surface and Coatings Technology*, 413, 127080, doi:10.1016/j.surfcoat.2021.127080, **ISI-indexed, IF: 4.158, Q1**
4. Agudosi, E. S., Abdullah, E. C., Numan, A., Mubarak, N. M., Khalid, M., & Omar, N. (2020). A Review of the graphene synthesis routes and its applications in electrochemical energy storage. *Critical Reviews in Solid State and Materials Sciences*, 45(5), 339-377. doi:10.1080/10408436.2019.1632793, **ISI-indexed, IF: 11.178, Q1**
5. Agudosi, E. S., Abdullah, E. C., Numan, A., Mubarak, N. M., Aid, S. R., Benages-Vilau, R., Gómez-Romero, P., Khalid, M., & Omar, N. (2020). Fabrication of 3D binder-free graphene NiO electrode for highly stable supercapattery. *Scientific Reports*, 10(1), 11214. doi:10.1038/s41598-020-68067-2, **ISI-indexed, IF: 4.011, Q1**
6. Omar N., Abdullah, E. C., Petrus A.A., Khalid, M., Mubarak, N. M., Agudosi, E. S., Numan, A., & Aid, S. R. (2021). Single-route synthesis of binary metal oxide loaded coconut shell and watermelon rind biochar: Characterizations and cyclic voltammetry analysis. *Biomass Conversion and Biorefinery*, doi:10.1007/s13399-021-01367-3 (In Press), **ISI-indexed, IF: 4.987, Q1**
7. Agudosi, E. S., Abdullah, E. C., Mubarak, N. M., Khalid, M., Pudza, M. Y., Agudosi, N. P., & Abutu, E. D. (2018). Pilot study of in-line continuous flocculation water treatment plant. *Journal of Environmental Chemical Engineering*, 6(6), 7185-7191, doi:10.1016/j.jece.2018.11.001, **ISI-indexed, IF: 5.909, Q1**
8. Agudosi, E. S., Salleh, M. A. M., Abdullah, E. C., Mubarak, N. M., Khalid, M., & Azni, A. A. (2018). Characterization of crystallized struvite on wastewater treatment equipment: Prospects for crystal

- fertilizer production. *Desalination and Water Treatment*, 113, 205-212, doi:10.5004/dwt.2018.22281, **ISI-indexed, IF: 1.603**
9. Agudosi E.S., Salleh, M. A. M., & Faudzi, H. I. (2017). Phosphorus and nitrogen recovery from animal wastewater through struvite process for agricultural development. *Applied Journal of Environmental Engineering Science* 3 (3), 3-3, 231-245, **Google Scholar/SIS-indexed**

BOOK CHAPTER

10. Agudosi, E. S., Abdullah, E. C., Mubarak, N. M., & Khalid, M. (2020). Carbon-based Nanomaterials for Energy Storage and Sensing Applications. In P.K. Zarzycki (Ed.) *Pure and Functionalised Carbon-Based Nanomaterials: Analytical, Biomedical, Civil, and Environmental Engineering Applications*, 147-174. doi:10.1201/9781351032308-7, **Scopus-indexed (CRC Press)**



OKOJI Anthony Ikechukwu

Education

<i>Degree</i>	<i>Discipline</i>	<i>Institution</i>	<i>Year</i>
<i>PhD</i>	<i>Chemical Engineering</i>	<i>Covenant University</i>	<i>2022</i>
<i>MSc</i>	<i>Industrial & Production Engineering</i>	<i>University of Ibadan</i>	<i>2004</i>
<i>BSc</i>	<i>Chemical Engineering</i>	<i>Ladoke Akintola University of Technology</i>	<i>2000</i>

Academic Experience

<i>Institution</i>	<i>Rank</i>	<i>Title/Position</i>	<i>Date Held</i>	<i>FT/PT</i>
<i>Covenant University</i>	<i>Lecturer I</i>	<i>Lecturer</i>	<i>2023 till date</i>	<i>FT</i>
<i>Landmark University</i>	<i>Lecturer II</i>	<i>Lecturer</i>	<i>2019-2022</i>	<i>FT</i>
<i>Nnamdi Azikwe University, Awka</i>	<i>Assist Lecturer</i>	<i>Lecturer</i>	<i>2005-2006</i>	<i>FT</i>

Non-Academic Experience

<i>Organization</i>	<i>Title</i>	<i>Duties</i>	<i>Date</i>	<i>FT/PT</i>
<i>FOLATON Integrated services</i>	<i>Operations Manager</i>	<i>Coordinate all the activities in the Production, Process and Quality department; monitor and conduct tests when operating conditions are guaranteed stable and achieve minimal operator influence on process parameters. Investigate quality-related problems and report to the Optimization Manager of the outcome of such investigations. Conduct production process with quality studies and audits in autonomy, which are required for plant performance</i>	<i>2015 - 2019</i>	<i>FT</i>
<i>Lafarge Cement, WAPCO</i>	<i>Process Manager</i>	<i>1. Conduct production process studies, technical surveys and audits that are necessary as requested by the plant management with possible assistance from the Technical Centre where necessary. 2. Recommend improvement on existing methods, systems and work instructions 3. Coordinate all the activities in the Process department; monitor and</i>	<i>2006 - 2015</i>	<i>FT</i>

		<p><i>conduct tests when operating conditions are guaranteed stable and achieve minimal operator influence on process parameters</i></p> <p><i>4. Assign jobs and controls the performances of Process team</i></p>		
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Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (MNSE),
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R15908

Selected Publications and Presentations from the Past Five Years

1. **Okoji, A. I.**, Anozie, A. N., & Omoleye, J. A. (2021). Evaluation of optimization techniques for predicting exergy efficiency of the cement raw meal production process. *Cogent Engineering*, 8(1), 1930493.
2. **Okoji, A. I.**, Anozie, A. N., & Omoleye, J. A. (2022). Evaluating the thermodynamic efficiency of the cement grate clinker cooler process using artificial neural networks and ANFIS. *Ain Shams Engineering Journal*, 13(5), 101704.
3. **Okoji, A. I.**, Anozie, A. N., Omoleye, J. A., Taiwo, A. E., & Osulale, F. N. (2022). Energetic assessment of a precalcining rotary kiln in a cement plant using process simulator and neural networks. *Alexandria Engineering Journal*, 61(7), 5097-5109.
4. Okoji, C. N., **Okoji, A. I.**, Ibrahim, M. S., & Obinna, O. (2022). Comparative analysis of Adaptive neuro-fuzzy inference system (ANFIS) and RSRM models to predict DBP (trihalomethanes) levels in the water treatment plant. *Arabian Journal of Chemistry*, 103794.
5. Taiwo, A. E., **Okoji, A. I.**, Eloka-Eboka, A. C., & Musonge, P. (2022). The role of artificial neural networks in bioproduct development: a case of modeling and optimization studies. In *Current Trends and Advances in Computer-Aided Intelligent Environmental Data Engineering* (pp. 417-431). Academic Press.
6. Taiwo, A. E., Tom-James, A., Falowo, O. A., **Okoji, A. I.**, Adeyi, O., Olalere, A. O., & Eloka-Eboka, A. (2022). Techno-economic analysis of Cellulase Production by *Trichoderma reesei* in Submerged Fermentation Processes using a Process Simulator. *South African Journal of Chemical Engineering*.
7. **Okoji, A. I.**, Anozie, A. N., Omoleye, J. A., & Osulale, F. N. (2021, April). Thermodynamics and Parametric Study of the Grate Clinker Cooler Using the Process Model. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1107, No. 1, p. 012189). IOP Publishing.
8. **Okoji, A. I.**, Anozie, A. N., Omoleye, J. A., Taiwo, A. E., & Babatunde, D. (2023). Evaluation of Adaptive neuro-fuzzy inference system-Genetic algorithm in the prediction and optimization of NOx emission in cement pre calcining kiln. *Environmental Science and Pollution Research*. (pp. 1-11) <https://doi.org/10.1007/s11356-023-26282-0>.

Recent Professional Development Activities

1. 2nd International Conference on Engineering for a Sustainable World (ICESW 2018), Covenant University, Ota, Ogun State.



IGBOKWE, Ezinne Igbokwe

Education

<i>Degree</i>	<i>Discipline</i>	<i>Institution</i>	<i>Year</i>
<i>PhD</i>	<i>Chemical Engineering</i>	<i>University of the Witwatersrand</i>	<i>2020</i>
<i>MSc</i>	<i>Chemical Engineering and Biotechnology</i>	<i>Mendeleyev University of Chemical Technology</i>	<i>2006</i>
<i>BSc</i>	<i>Chemical Engineering and Biotechnology</i>	<i>Mendeleyev University of Chemical Technology</i>	<i>2004</i>

Academic Experience

<i>Institution</i>	<i>Rank</i>	<i>Title/Position</i>	<i>Date Held</i>	<i>FT/PT</i>
<i>Covenant University</i>	<i>Lecturer I</i>	<i>Faculty</i>	<i>2023- Date</i>	<i>FT</i>
<i>University of the Witwatersrand</i>	<i>Tutor</i>	<i>PhD Student</i>	<i>2017- 2020</i>	<i>PT</i>
<i>Engineering Materials Development Institute</i>	<i>Senior Research Officer</i>	<i>Research Engineer</i>	<i>2010- 2017</i>	<i>FT</i>

Certifications or Current Membership in Professional Organizations

1. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN)

Honours and Awards

1. University of the Witwatersrand Post-Graduate Merit Award: 2017 – 2019
2. Russian Government and Nigerian Bureau of External Affairs Scholarship: 1999-2006
3. Federal Government Scholarship for the gifted and talented Children: 1992-1998
4. Awarded 3rd prize 9th Wits Cross-Faculty Post Graduate Symposium University of the Witwatersrand, Johannesburg, South Africa – Oct 2018

Service Activities

1. Committee Member, College of Engineering Publication Committee 2020-Date

Selected Publications and Presentations from the Past Five Years

1. Igbokwe, E., Daramola, M., & Iyuke, S. (2019). Production of CNT Yarns from Methane Gas for Use As Filaments in Incandescent Bulbs: Effect of Hydrogen Co-Feeding on the Properties of As-Spun CNT Yarns. In 2019 AIChE Annual Meeting. AIChE.
2. Igbokwe, E. C., Daramola, M. O., & Iyuke, S. E. (2019). Production of carbon nanotube yarns via floating catalyst chemical vapor deposition: Effect of synthesis temperature on electrical conductivity. Results in Physics, 15, 1–7.

3. Mahagani, N., Igbokwe, E., Aberefa, O., Bodiba, V., Daramola, M. O., & Iyuke, S. E. (2019). Production of CNT Yarns from Methane Gas for Use as Filaments in Incandescent Bulbs: Thermodynamic Properties of As-spun CNT Yarns. In *Journal of physics: Conference Series* 1378, (2), 1–11.
4. Bodiba, V., Igbokwe, E., Mahangani, N., Aberefa, O., Daramola, M. O., & Iyuke, S. E. (2018). Production of CNT yarns for use as filaments in incandescent bulb: effect of carbon source and state of catalyst on the production of CNT. *IOP Conference Series: Materials Science and Engineering*, 413(1), 1–7.

CONFERENCES

5. Oral Presentation: “Production of CNT yarns from methane gas for use as filaments in incandescent bulbs: Thermodynamic properties of as-spun CNT yarns” 3rd International Conference on Engineering for a Sustainable World (ICESW) Centre for Entrepreneurial Studies, Covenant University Canaan Land, Ota, Nigeria – July 2019
6. Flash Talk Presentation: 9th Wits Cross-Faculty Post Graduate Symposium University of the Witwatersrand, Johannesburg, South Africa – Oct 2018 (Awarded 3rd prize in Faculty of Engineering and Built Environment)
7. Oral presentation: “Production of CNT yarns for use as filaments in incandescent bulb: effect of carbon source and state of catalyst on production of CNT” 2nd International Conference on Engineering for Sustainable World (ICESW) Centre for Entrepreneurial Studies, Covenant University Canaan Land, Ota, Nigeria – July 2018
8. Poster presentation: “Synthesis and Evaluation of bi-functional Nickel/Chitosan Nanocomposite Adsorbent for Post-combustion Capture and Utilization of CO₂” 5th Biennial Carbon Capture and Storage (CCS) Conference Umhlanga, KwaZulu Natal, South Africa – Oct 2017
9. Poster Presentation: Synthesis and Evaluation of a Bifunctional Nickel/Chitosan Based Composite for Capture and Utilization CO₂ from Flue Gas, Coal Research Colloquium, University of the Witwatersrand, Johannesburg, South Africa – June 2017



BABATUNDE Damilola Elizabeth

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	2021
MSc	Chemical Engineering	University of Lagos	2013
BSc	Chemical Engineering	Ladoke Akintola University of Technology	2009

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Lecturer I	Lecturer	2021	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
International Journal of Energy Sector Management	Reviewer	Review of technical article	2019	PT
Process Engineer	Process Engineer	Meeting production targets. Assurance and compliance with best practices like SOP	2012-2015	FT

Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), 35,499
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R32, 582
3. Associate Member, Institute of Strategic Management, Nigeria, ISMN/02/2011/A11504

Honours and Awards

2011/2012 Oyo State Postgraduate Scholarship

Service Activities

Member, Laboratory Committee, 2015 till Date

Level Advisor, 2015-2019

Member, Publicity Committee for an International Seminar entitled: "Carbon capture, utilization and storage: a means to mitigating the effect of climate change", 2016

Time – Table Officer, Chemical Engineering, Covenant University, Ota, 2016-2018

SIWES Departmental Coordinator, 2017-2018

Selected Publications and Presentations from the Past Five Years

Damilola Babatunde, Ambrose Anozie, James Omoleye, Olubayo Babatunde (2021) An air-fuel ratio parametric assessment on efficiency and cost of a power plant steam boiler. *Process Integration and Optimization for Sustainability*. DOI: 10.1007/s41660-021-00162-x.

Damilola Elizabeth Babatunde, Ambrose N. Anozie, James A Omoleye (2020) Artificial neural network and its applications in the energy sector – an overview. *International Journal of Energy Economics and Policy*, 10(2).

Damilola E Babatunde, Iheanacho H Denwigwe, Olubayo M Babatunde, Saheed L Gbadamosi, Ifeoluwa P Babalola, Oluranti Agboola (2019) Environmental and societal impact of nanotechnology. *IEEE Access*.

D.E. Babatunde, G.O. Otusemade, V.E. Efeovbokhan, M.E. Ojewumi, O.P. Bolade, T.F. Owwoeye. (2019). Chemical composition of steam and solvent essential oil extracts from *Azadirachta indica* leaves. *Chemical Data Collections*.

D.E. Babatunde, O.M. Babatunde, T.O. Akinbulire, P.O. Oluseyi (2018) Hybrid energy systems model with the inclusion of energy efficiency measures- A rural application perspective. *International Journal of Energy Economics and Policy*.

Recent Professional Development Activities

2020 7th International Conference on Power and Energy Systems Engineering (CPSE 2020), September 2020, Fukuoka, Japan

4th International Conference on Science and Sustainable Development (ICSSD 2020), Covenant University, Ota, Ogun State.

2nd International Conference on Engineering for a Sustainable World (ICESW 2018), Covenant University, Ota, Ogun State.

Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPT) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC), 2017

Carbon Capture, Utilization and Storage: A means to Mitigating the Effect of Climate Change, International Seminar (2016), Covenant University, Ota

Mandatory Continuing Professional Education Courses (2015), organized by the Nigerian Society of Engineers, Akobo, Ibadan, Oyo State



OGUNBIYI Ajibola Temitope

Education

Degree	Discipline	Institution	Year
Technical Diploma	Drilling and Completion Engineering	Institut Français du Pétrole (IFP) Training, Pau Centre, France.	2012
MSc	Process Systems Engineering	Cranfield University, UK.	2013
BSc	Chemical Engineering	University of Lagos, Nigeria.	2007

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
University of Science and Technology of China	Doctoral researcher	Research	2018-Date	FT
Covenant University	Lecturer II	Teaching, Research, and Community Development	2015-Date	FT
Oxford-Del College & The Concord School, Ibadan	Science Tutor	Coaching Science students in core science subjects.	April. – Dec., 2014	PT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Makunu Oil & Allied Products Limited, Ketu, Lagos.	Sales/Business Development Engineer	1. Marketing of lubricants, Petroleum products and 2. Consultancy services in the area of Drilling and well services	2015	FT
Nigerian Petroleum Development Company Limited, Benin City, Edo State.	Trainee Drilling Engineer	1. Assisted in well design and planning 2. Rigsite supervision of drilling, completion and workover operations.	2002-2004	FT
Zenith Bank Plc,	Executive	Banking Operations	2009-2011	FT

Benue State.	Assistant			
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Certifications or Current Membership in Professional Organizations

1. Corporate Member, Nigerian Society of Engineers (M.N.S.E), M1866
2. Registered Member, Council for the Regulation of Engineering in Nigeria (COREN), R40975
3. Member, Institution of Chemical Engineers (ICChemE), 2012.

Honours and Awards

1. Chinese Government Scholarship (CGS) Award for Doctorate Degree at University of Science and Technology of China (USTC). Sept 2018 – July 2022
2. Co-coordinator of a Chemical Engineering Process Design Project at Covenant University that won the Nigerian Society of Chemical Engineers (NSChE) Award. 2017
3. Petroleum Technology Development Fund's (PTDF's) 'Drilling and Completion Engineering' Scholarship Training at IFP, France. 2012
4. Petroleum Technology Development Fund's (PTDF) Overseas Masters Scholarship Awards. 2011
5. Elf Petroleum Nigeria Limited (EPNL) University Undergraduates Scholarship Award Winner. 2004 – 2007

Service Activities

1. Member, ICEBE 2021 Publicity Committee, Covenant University, 2021/2021.
2. Departmental Examination Officer, Chemical Engineering Department, Covenant University, 2017/2018.
3. Member, College of Engineering Examination Committee, Covenant University, 2016/2017.
4. Member, College of Engineering College Week and Hooding Committee, 2016/2017 Session.
5. Level Students Adviser, Chemical Engineering Department, Covenant university, 2015/2016 – 2017/2018 Session.
6. Member, Publicity Committee for a Seminar on "Carbon Capture Utilization and Storage: A Means to Mitigating the Effect of Climate Change", 2016.
7. Member, Chemical Engineering Departmental Curriculum Review Committee, 2016 to date.
8. Member, Covenant University's Health, Safety and Environment (HSE) Committee, 2016 to date.

Selected Publications and Presentations from the Past Five Years

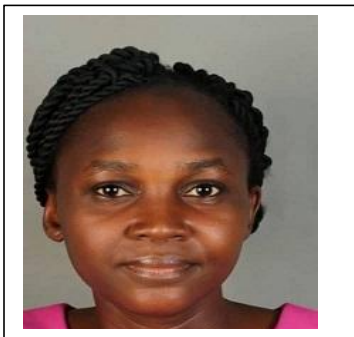
1. Tao Yang, Wenzhi Li, Ajibola T. Ogunbiyi, and Shengxin An, Efficient catalytic conversion of corn stover to furfural and 5-hydromethylfurfural using glucosamine hydrochloride derived carbon solid acid in γ -valerolactone, Industrial Crop and Products, 161 (2021) 113173, DOI: <https://doi.org/10.1016/j.indcrop.2020.113173>; Impact Factor: 4.244
2. Guo, G., Li, W., Dou, X., Ogunbiyi, A.T., Ahmed, T., Zhang, B., Wu, M., Hydroconversion of Kraft lignin for biofuels production using bifunctional rhenium-molybdenum supported zeolitic imidazolate framework nanocatalyst, Bioresource

Technology (2021), doi: <https://doi.org/10.1016/j.biortech.2020.124443>; Impact Factor: 7.539

3. Ajibola Temitope Ogunbiyi, Wenzhi Li, Baikai Zhang, 6 - Chemo-catalytic conversion of lignin, Editor(s): Thallada Bhaskar, Ashok Pandey, Biomass, Biofuels, Biochemicals, Elsevier, 2021, Pages 109-128, ISBN 9780128202944, <https://doi.org/10.1016/B978-0-12-820294-4.00003-X>.
4. Cunshuo Li, Wenzhi Li, Kun Chen, Ajibola T. Ogunbiyi, Zean Zhou, Qiuyan Duan, Fengyang Xue, Highly active Pd catalysts supported on surface-modified cobalt-nickel mixed oxides for low temperature oxidation of lean methane, Fuel, 279 (2020) 118372, DOI: <https://doi.org/10.1016/j.fuel.2020.118372>; Impact Factor: 5.578
5. Ajibola T Ogunbiyi, Adegboyega B Ehinmowo, Samuel E Sanni and Hoi Yeung. (2018), "Passive Slug Attenuation Device: Potential and Operability", IOP Conference Series: Materials Science and Engineering, 413 012005. Available at: <http://iopscience.iop.org/issue/1757-899X/413/1>

Recent Professional Development Activities

6. Publons Academy's Practical Peer Review course, an online course supervised by a qualified supervisor, completed a peer review course work corresponding to 15 hours. Jan. – Mar. 2021.
7. ACS Reviewer Lab™, an online course that taught the principles of high quality peer-review including reviewer ethics, instruction for reviewers, and tools and components for writing a constructive review; Organized by American Chemical Society (ACS), with a final assessment and a certificate, June 2020
8. A crash course in Organic Chemistry by Prof. Hou-min Chang, an Emeritus Professor in Wood Chemistry, North Carolina State University, held at University of science & Technology of China, Hefei, China, Sept. 3-7, 2019.
9. Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC). 2017



AKINYEMI Akinnike Felicia

Education

Degree	Discipline	Institution	Year
PhD	Chemical Engineering	Covenant University	In view
MSc	Chemical Engineering	Ladoke Akintola University Ogbomoso.	2018
BSc	Chemical Engineering	Ladoke Akintola University Ogbomoso.	2012

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Assistant Lecturer	Lecturer	2022-Date	FT
Scholars Universal Secondary School	Mathematics Teacher	Subject Teacher	2018-2021	FT

Non-Academic Experience

Organization	Title	Duties	Date	FT/PT
Bentos Pharmaceutical Limited	SIWES Intern	Quality Control Analyst	2011	PT

Certifications or Current Membership in Professional Organizations

Certification:

1. Registered Applicant, Council for the Regulation of Engineering in Nigeria.
2. Certificate of Occupation Safety and Health, OSHAcademy USA 2014.
3. Certificate of Onshore Offshore Health, Safety & Environment, JPTS Int'l 2014.

Service Activities

Level Adviser (400 Level) Chemical Engineering, Covenant University, Ota, 2022 till date.

Selected Publications and Presentations from the Past Five Years

1. O. O. Ogunleye, A. O. Arinkoola, S. O. Alagbe, O. O. Agbede, A. E. Omodele, A. F. Morakinyo & Y. A. Osho (2020) Synthesis of green corrosion inhibitor for mild steel

- in acidic environment, Indian Chemical Engineer, 62:1, 52-66, DOI: [10.1080/00194506.2019.1625815](https://doi.org/10.1080/00194506.2019.1625815)
2. O.O. Ogunleye, A.O. Arinkoola, O.A. Eletta, O.O. Agbede, Y.A. Osho, **A.F. Morakinyo**, J.O. Hamed Green corrosion inhibition and adsorption characteristics of Luffa cylindrica leaf extract on mild steel in hydrochloric acid environment, Heliyon, Volume 6, Issue 1, 2020, e03205.
 3. O.A, Eletta, O.O. Ogunleye, **A.F. Morakinyo**. Adsorption of congo red dye onto coconut shell based NaOH activated carbon: kinetics, thermodynamics and optimisation studies. Umudike Journal of Engineering and Technology 2017; 3(1): 105-116.

Recent Professional Development Activities

1. Statistical Packages for Social Sciences (SPSS) Training under the Advanced Digital Appreciation Programme for Tertiary Institutions (ADAPTI) by Digital Bridge Institute (DBI) sponsored by Nigerian Communications Commission (NCC), 2022.



Mr Ayo ADESINA

Education

<i>Degree</i>	<i>Discipline</i>	<i>Institution</i>	<i>Year</i>
<i>MSc</i>	<i>Chemical Engineering</i>	<i>University of Lagos</i>	<i>2021</i>
<i>BSc</i>	<i>Chemical Engineering</i>	<i>Obafemi Awolowo University, Ile-Ife</i>	<i>2014</i>

Academic Experience

<i>Institution</i>	<i>Rank</i>	<i>Title/Position</i>	<i>Date Held</i>	<i>FT/PT</i>
<i>Covenant University</i>	<i>Assistant Lecturer</i>	<i>Lecturer</i>	<i>2023- Date</i>	<i>FT</i>
<i>Glorious Hope Academy</i>	<i>Chemistry/ math Teacher</i>	<i>Further Subject Teacher</i>	<i>2018- 2021</i>	<i>FT</i>
<i>Obafemi Awolowo University</i>	<i>Graduate Asst</i>	<i>Asst</i>	<i>2014- 2015</i>	<i>FT</i>

Non-Academic Experience

<i>Organization</i>	<i>Title</i>	<i>Duties</i>	<i>Date</i>	<i>FT/PT</i>
<i>Crown Flour MILL</i>	<i>SIWES Intern</i>	<i>Quality Control Analyst</i>	<i>2013</i>	<i>PT</i>

RESEARCH INTERESTS

- Biomass Conversion, Bio-fuels, and Sustainable System
- Catalyst/Material Preparation and Characterization
- Transformation of Waste into Bio-products
- Liquid Phase Adsorption Analysis of Wastewater Treatment
- Simulation and Modeling of Bio-processing System/Industrial process

Selected Publications and Presentations from the Past Five Year

1. Niyi B. Ishola, Omowumi. Adeyemi, **Ayo J. Adesina**, Victoria O Odude, Oluwaseyi O. Oyetunde, Adebisi A. Okeleye, Ayowumi O. Soji-Adekunle, EriolaBetiku. *Adaptive Neuro-fuzzy Inference System-genetic Algorithm vs. Response Surface Methodology: A Case of Ferric Sulphate-catalyzed Esterification of Palm Kernel Oil*. Ishola et al 2017, Process Safety and Environmental Protection 111 (2017) 211 – 220.
2. Victoria O.Odude, **Ayo J. Adesina**, Oluwaseyi O. Oyetunde, Omowumi O. Adeyemi, Niyi B. Ishola, Anietie Okon Etim, Eriola Betiku. *Application of Agricultural Waste-based Catalyst to Trans-esterification of Esterified Palm Kernel Oil into Biodiesel: A Case of Banana Fruit Peel vs. Cocoa Pod Husk*. Odude et al 2017, Waste and Biomass Valorization.
3. **A.J Adesina**, O.O Adeyemi, O.O Oyetunde, N.B Ishola, A.O Etim, E. Betiku. (2017). *Potential Application of Cocoa Pod Husks as a Green Catalyst for Biodiesel Synthesis via Trans-esterification*. Proceedings of Obafemi Awolowo University Faculty of Technology Conference, January 2017.
4. Olafadehan O.A and **Adesina A.J**. *Dynamic Studies of Binary Adsorption System in Fixed Beds*. 2023 Adsorption Publications, Springer Journal
5. Olafadehan O.A, Ehigimeto B, **Adesina A.J**. *ANN Optimisation of Adsorption of Naphthalene on Composite Nanoparticles of Chitosan-CTAB-Sodium Bentonite Clay*. 2023. PPEJ-RA-23-406



OLAWEPO Abiodun Victoria

Education

Degree	Discipline	Institution	Year
BTech	Chemical Engineering	Ladoke Akintola University of Technology	2005

Academic Experience

Institution	Rank	Title/Position	Date Held	FT/PT
Covenant University	Technologist III	Technologist	2016-Date	FT

Selected Publications and Presentations from the Past Five Years

- **Olawepo AV**, Ogunkunle FT, Oni BA (2019) Waste Recycling; a Link to Environmental Safety and Healthy Living in Nigeria. J Waste Manag Disposal www.scholarena.com Volume 2, Issue 1, ISSN: 2641-8827.
- B. A Oni*, O. Fagbiele, O. Agboola, **V. A. Olawepo** (2019) Emission Properties and Performance Characteristics of Jatropha Curcas L. and Spirulina Platensis Microalgae oil-based biodiesel in diesel Machines. J. Phys.: Conf. Ser. 1378 032063
- Ayodeji Ayodele Ayoola, Oyinlola Rukayat Obanla, Oluwabunmi Grace Abatan, Ojo Sunday Isaac Fayomi, Itopa Godwin Akande, Oluranti Agboola, Omoniyi Augustine Ayeni, Daniel Oyekunle, **Victoria Abiodun Olawepo** and Oyinkansade Oluwasayo Ayo-Aderele (2020) Corrosion Inhibitive Behaviour of the Natural Honey in Acidic Medium of A315 Mild and 304 Austenitic Stainless Steels. Anal. Bioanal. Electrochem Vol. 12, No. 1.
- A.A. Ayoola, O.S.I. Fayomi, I.G. Akande, O.A. Adeeyo, O.R. Obanla, O.G. Abatan, D.E. Babatunde, **V.A. Olawepo**, O.O. Fagbiele, V.D. Olomo. (2019) Production of Adhesive from Cassava Starch. J. Phys.: Conf. Ser. 1378 032079.
- A.A. Ayoola, F.K. Hymore, C.A. Omonhinmin, P.O. Babalola, O.S.I. Fayomi, O.C. Olawole, A.V. Olawepo, A. Babalola. (2020). Response surface methodology and artificial neural network analysis of crude palm kernel oil biodiesel production, *Chemical Data Collections*, Volume 28, 100478

- Babalola Aisosa Oni, Samuel Eshorame Sanni, Michael Daramola, Abiodun Victoria Olawepo (2021) Effects of oxy-acetylation on performance, combustion and emission characteristics of Botryococcus braunii microalgae biodiesel-fuelled CI engines, Fuel, Science Direct, www.elsevier.com/locate/fuel, Fuel 296 (2021) 120675

Recent Professional Development Activities

2021 seminar by Elsevier: How to Increase Visibility of my work.

2020 course on Coursera: Foundations of Healthcare Systems Engineering.

2020 course on Coursera: Chemicals and Health.

2020 course on Coursera: Nanotechnology: A maker's Course.

2020 course on Coursera: Teaching in University Science Laboratories (Developing Best Practice).

2017 training by Digital Bridge Institute: Advance Digital Appreciation Program for tertiary Institution.