



FACULTY OF NATURAL AND APPLIED SCIENCES

PROFESSOR I. A. OKUNLOLA
B.Sc., M.Sc., Ph.D.
Dean

BRIEF ON THE FACULTY

The Faculty of Natural and Applied Sciences operated first as a College of Natural Sciences at the commencement of the University's academic activities from the 2005/2006 session. The collegiate system was transformed to a Faculty during the 2016/17 session by Senate approval along with other Colleges. It was named: The Faculty of Natural Sciences comprising three departments, namely; the Departments of Biological, Chemical & Geological, and Physical Sciences. In 2018 when new applied science programmes were contemplated for introduction upon application to the National Universities Commission (NUC), Senate approved the change of name to: The Faculty of Natural and Applied Sciences with four departments, viz: Biological, Chemical & Geological, Computer and Physical Sciences. The Faculty produced its first set of graduates in the 2008/2009 session.

NUMBER/NAMES OF DEPARTMENTS/PROGRAMMES

Undergraduate Programmes:

S/No.	Name of Departments	Name of Programmes
1.	Department of Biological Sciences	1. B.Sc. Biochemistry 2. B.Sc. Biology 3. B.Sc. Microbiology
2.	Department of Chemical & Geological Sciences	1. B.Sc. Industrial Chemistry 2. B.Sc. Geology & Mineral Sciences 3. B.Sc. Petroleum Chemistry
3.	Department of Computer Sciences	1. B.Sc. Computer Science 2. B.Sc. Cyber Security 3. B.Sc. Information Systems 4. B.Sc. Software Engineering
4.	Department of Physical Sciences	1. B.Sc. Industrial Mathematics 2. B.Sc. Mathematics 3. B.Sc. Physics 4. B.Sc. Physics with Electronics 5. B.Sc. Statistics

Postgraduate Programmes

After producing B.Sc. graduands for more than seven years, research and postgraduate programmes in several disciplines were added to the Faculty's programmes. The processing began in the 2017/2018 session through 2018/2019 session. The M.Sc. Programmes approved by Senate after passing through the hurdles of the Postgraduate Board and the PGAC include those in Biochemistry, Geology & Mineral Sciences, Computer Science and Statistics. Others are Ph.D. programme in Geology as well as a number of Postgraduate Diploma (PGD) programmes in Statistics and Computer Science.

STAFFLIST

S/No.	Names	Qualifications	Designation/Position Held
1.	Okunlola, Ipoola Ajani	B.Sc., M.Sc., Ph.D.	Dean
2.	A. D. Jamihu	B.A, PGDE, M.A.	Faculty Officer
3.	Funmi R. Obalola	WASC, Certificate in Secretarial Studies, Computer Certificate	Dean's Secretary
4.	M. O. Jimoh	WASC	Clerical Officer

STUDENT MATTERS

a. Students' Population by Academic Programmes and Levels of Study

S/N o.	Department	Course	100 L	200 L	300 L	400 L	Total
1.	Biological Sciences	Biochemistry	6	11	15	28	60
2.	Biological Sciences	Biology	5	3	-	-	8
3.	Biological Sciences	Microbiology	13	23	26	62	124
4.	Chemical & Geological Sciences	Industrial Chemistry	4	5	3	8	20
5.	Chemical & Geological Sciences	Geology and Mineral Sciences	22	14	11	30	77
6.	Chemical & Geological Sciences	Petroleum Chemistry	17	31	7	5	60
7.	Physical Science	Industrial Mathematics	2	-	-	-	2
8.	Physical Science	Statistics	1	3	1	7	12
9.	Physical Science	Physics	-	-	-	4	4
10.	Physical Science	Physics with Electronics	13	13	6	-	32
11.	Physical Science	Mathematics	-	-	-	4	4
12.	Computer Science	Computer Science	36	36	37	64	173
13.	Computer Science	Cyber Security	33	26	5	1	65
14.	Computer Science	Information Science	15	23	14	8	60
15.	Computer Science	Software Engineering	53	33	20	1	107
			220	221	145	222	808

b. Students' Activities

All the students are bonafide members of National Association of Science Students'. The students' association carries out its activities with the permission of the Dean, Faculty of Natural and Applied Sciences. The following activities took place in the session under review:

1. Orientation
2. Tutorial Classes
3. Football Competition (Dean's Cup)
4. National Association of Science Students' (NASS) Week

STAFF MATTERS

b. Confirmation of Staff Appointments and Promotions

During 2020/2021 session, one staff appointment was confirmed, one staff was promoted from Lecturer I to Senior Lecturer, three (3) staff were promoted from Lecturer II to Lecturer I, while a staff was promoted from Associate Professor to Professor.

c. Staff Conference/Workshop/Seminar Presentations/Attendance

Several academic and non-academic staff got sponsorship for conferences and workshop trainings.

d. Staff Welfare

The Faculty welfare committee attended to the welfare needs of the staff in line with the Committee Guidelines.

Challenges and Way forward

There is dire need for infrastructural improvement in terms of:

- i. Office space, lecture rooms etc.
- ii. Purpose-built laboratories
- iii. Analytical equipment
- iv. Maintenance of adequate ventilation in Central and Biological Sciences Laboratories (Biochemistry and Microbiology) that require Air Conditioners (ACs) and refrigerators for specimen preservation.
- v. Need to increase funding at Faculty and departments to cater for examination materials, refreshment, etc.





DEPARTMENT OF BIOLOGICAL SCIENCE

DR QUADRI OLAIDE NURUDEEN

B.Sc. (Ilorin), PGDE (NOUN), M.Sc., Ph.D. (Ilorin)
Ag. Head of Department

BRIEF ON THE DEPARTMENT

The Department of Biological Sciences started and matriculated its first set of undergraduate students in January, 2009. At that time, the Department offered two degree programmes; B.Sc. Biochemistry and B. Sc. Microbiology. There are currently three academic programmes in the Department, namely: B.Sc. Biochemistry, B. Sc. Microbiology and B.Sc. Biology. Each degree programme has its distinct academic curriculum components, specifically designed to enable graduate students acquire more scientific knowledge to carry out cutting edge research, develop new technologies, solve practical problems, and make informed decisions – both individually and collectively. Over the years, the Department has graduated many students and our graduates are employed in many reputable organisations, research institutes, and tertiary institutions, while some are pursuing postgraduate studies in other universities within and outside the country. Furthermore, the Department of Biological Sciences has produced First Class graduates that are lecturing in different universities across the country.

STAFFLIST

Academic Staff List (Biochemistry Programme)

SN	Name	Qualifications	Discipline	Rank	Status
1.	Q.O. Nurudeen	B.Sc. (Ilorin), PGDE (NOUN), M.Sc., Ph.D. (Ilorin)	Biochemistry	Senior Lecturer/ Ag. Head of Department	Full-time
2.	M. A. Akanji	B.Sc. (Ibadan), M.Sc., Ph.D. (Ife)	Biochemistry	Professor	Part-time

3.	M. T. Yakubu	B. Sc., M. Sc., Ph.D. (Ilorin)	Biochemistry	Professor	Part-time
4.	Oluwayemisi B. Ibitoye	B. Sc., M. Sc. Ph.D. (Ilorin)	Biochemistry	Senior Lecturer	Full-time
5.	Azeemat T. Abdulazeez	B.Sc. (Ilorin), M.Sc. (Sokoto), Ph.D. (Ilorin)	Biochemistry	Lecturer 1	Full-time
6.	Muinat O. Lambe	B. Sc., M. Sc. Ph.D. (Ilorin)	Biochemistry	Lecturer 1	Full-time
7.	A. Balogun	B.Sc. (Ilorin), M.Sc. (Kano),	Biochemistry	Lecturer 1	Full-time

Academic Staff List (Biology Programme)

SN	Name	Qualifications	Discipline	Rank	Status
1.	A. Ayinla	B.Sc., M.Sc., Ph.D. (Ilorin)	Plant Biology	Lecturer 1	Full time
2.	A.O. Koiki	B.Sc., M.Sc.(Ilorin)	Plant Biology	Assistant Lecturer	Part-time
3.	W. O. Opadokun	B. Sc., M.Sc. (Ilorin)	Plant Biology	Assistant Lecturer	Part-time
4.	S. O. Bakare	B. Sc. (Minna), M.Sc. (Ibadan)	Zoology	Assistant Lecturer	Part-time

Academic Staff List (Microbiology Programme)

SN	Name	Qualifications	Discipline	Rank	Status
1.	Bolanle K. Saliu	B. Sc., M. Sc. Ph.D. (Ilorin)	Microbiology	Senior Lecturer	Part-time
2.	Mansurat B. Falana	B.Sc., PGDE (Sokoto), M.Sc., Ph.D. (Abeokuta)	Microbiology	Lecturer 1	Full-time
3.	A. B.Agbaje	B. Sc., M. Sc. Ph.D. (Ilorin)	Microbiology	Lecturer 1	Full-time
4.	Aishat O. Mohammed	B. Sc., M. Sc. (Ilorin)	Microbiology	Lecturer 1	Full-time
5.	S.A. Bello	B.Sc. (Ilorin), M.Sc. (Ibadan)	Microbiology	Lecturer 1	Full-time

Non-Teaching Staff

SN	Name	Qualifications	Rank
1.	Lateefat A. Jimoh	HND	Confidential Secretary 1
2.	Asmau J. Abdulazeez	WASSCE	Assistant Chief Clerical Officer

Technical Staff

SN	Name	Qualifications	Rank
1	Kudirat O. Jimoh-Hamza	HND (SLT); B.Sc. (Ed.) Biology, M.Sc. Microbiology	Assistant Chief Technologist
2.	Khadijat T. Mohammed	B.Sc. Microbiology	Senior Technologist

PROGRAMME STRUCTURE OF THE DEPARTMENT

S/N	Department	Undergraduate Programmes	Postgraduate Programme
1.	Biological Science	B. Sc. Biochemistry	M. Sc. Biochemistry
		B. Sc. Biology	Nil
		B. Sc. Microbiology	Nil

NUMBERS/NAMES OF UNITS: Three

- i. Biochemistry Unit
- ii. Biology Unit
- iii. Microbiology Unit

ACTIVITIES IN THE DEPARTMENT

No	Programmes	Activites
1	Undergraduate Programmes	Conducted lectures, examinations, undergraduates Seminar, SIWES presentation, Research project presentation, orientation for freshers and get-together for final year students.
2	Postgraduate Programmes	Conducted lectures, examinations, postgraduates seminars, research proposal presentation
3	Other Programmes	Summer and Sandwich Programmes
4	Other Activities	Association Day and ASDAC Weekly Lecture



5	New Programmes in the Department	B.Sc. Biology
6	Accreditation	NUC accreditation exercise for B.Sc. Biochemistry and B.Sc. Microbiology. Both programmes earned full accreditation status.

STUDENT MATTERS

a. Students' Population by Programmes, Levels and Sex

Academic Programme	100L		200L		300L		400L		Total	
	Sex		Sex		Sex		Sex		Sex	
	M	F	M	F	M	F	M	F	M	F
B.Sc. Biochemistry	0	6	1	10	7	8	10	18	18	42
B.Sc. Biology	1	4	0	3	0	0	0	0	1	7
B.Sc. Microbiology	2	11	4	19	6	20	14	48	26	98
Department of Biological Sciences	3	21	5	32	13	28	24	66	45	147

b. Students' Learning Performance

S/N	Class of Degree	Programme	100 LEVEL		200 LEVEL		300 LEVEL		400 LEVEL		Graduate Output	Total
			M	F	M	F	M	F	M	F		
1	First Class	Biochemistry	-	1	-	-	-	-	-	2	3	
		Biology	-	-	-	-	-	-	-	-	-	
		Microbiology	-	-	-	-	1	1	-	4	6	9
2	Second Class Upper	Biochemistry	-	2	1	2	1	2	1	4	13	
		Biology	-	1	-	-	-	-	-	-	1	
		Microbiology	-	4	-	2	1	6	1	8	22	36
3	Second Class Lower	Biochemistry	-	2	-	8	-	5	5	7	27	
		Biology	-	1	-	1	-	-	-	-	2	
		Microbiology	2	1	1	9	2	7	4	16	42	71

4	Third Class	Biochemistry	-	1	-	-	5	-	1	2	9	
		Biology	1	2	-	2	-	-	-	-	5	
		Microbiology	-	6	2	7	1	5	2	8	31	45
5	Pass	Biochemistry	-	-	-	-	-	-	-	-	-	
		Biology	-	-	-	-	-	-	-	-	-	
		Microbiology	-	-	-	-	1	1	-	-	2	2
6	Non-Graduating	Biochemistry	-	-	-	-	-	-	3	3	6	
		Biology	-	-	-	-	-	-	-	-	-	
		Microbiology	-	-	-	-	-	-	7	12	19	25
7	Probation	Biochemistry	-	-	-	-	-	-	-	-	-	
		Biology	-	-	-	-	-	-	-	-	-	
		Microbiology	-	-	1	1	-	-	-	-	2	2
8	Withdrawal	Biochemistry	-	-	-	-	-	-	-	-	-	
		Biology	-	-	-	-	-	-	-	-	-	
		Microbiology	-	-	-	-	1	1	-	-	2	2
Total			3	21	5	32	13	28	24	66	192	192

STAFF MATTERS

a. Confirmation of Staff Appointments and Promotions

SN	Staff Name	Last Rank	Current Rank
1	Mrs Kudirat O. Jimoh-Hamza	Principal Technologist	Assistant Chief Technologist

b. Staff's Conference/Workshop Attendance

SN	Staff Name	Conference/Workshop Attended	Venue/Date
1	Dr Muinat O. Lambe	Annual scientific conference and General Meeting of the Society for Experimental Biology (NISEB) of Nigeria	University of Ilorin, Ilorin (8th-11th August, 2021)
2	Dr A. Ayinla	28th Annual Conference of the Botanical Society of Nigeria	Federal University of Kashere 12th-16th September, 2021

3.	Dr Azeemah T. Abdulazeez	College of Natural and Applied Sciences, Summit University, Offa Maiden Conference	17th -19th August, 2021 at Summit University, Offa
4.	Dr Mansurat B. Falana	43rd Scientific National Conference and Annual General Meeting of Nigeria Society for Microbiology (NSM)	University of Port Harcourt, Choba, Port Harcourt, Nigeria. 6th- 10th, 2021
5.	Aishat O. Mohammed	43rd Scientific National Conference and Annual General Meeting of Nigeria Society for Microbiology (NSM)	University of Port Harcourt, Choba, Port Harcourt, Nigeria. 6th- 10th, 2021
6.	Dr Oluwayemisi B.Ibitoye	1 st CONAS Conference of the Summit University, Offa.	17th -19th August, 2021 at Summit University, Offa
7.	Dr Q. O. Nurudeen	38th Annual Conference of the Nigerian Society for Biochemistry and Molecular Biology	Usmanu Danfodiyo University, Sokoto (6th-10th June, 2021)

STAFF RESEARCH AND PUBLICATIONS, ACADEMIC AWARDS, PRIZES AND ACHIEVEMENTS

a. Staff Completed Research in the Session

S/No.	Department	Completed Research
1	Biological Sciences	Dr Oluwayemisi B. Ibitoye completed a research on protective effects of honeyin 3-monochloropropane-1,2-diol toxicity; studies on oxidative stress and cellular biomarkers
		Aishat O. Mohammed completed a research on Antibacterial effect and phytochemical constituents of the aqueous and ethanolic extracts of <i>Annonamuricata</i> (Linn.) leaf against <i>Staphylococcus aureus</i>
		Abdulazeez Balogun completed a research on Investigating the free radicalscavenging and reducing power properties of selected Protein Tyrosine Phosphatase Inhibitors

b. Staff Publications in the Year

S/ N	Department/ Programme	Publications
1.	Biological Sciences/ Biochemistry	NaAllah, A. Ayipo, Y. O, Komolafe, D. I. Solihu, S., Bamidele, B., Alabi, M. A., Balogun, A., Abdulazeez, A.T., Mordi, M. N. (2021). Phytochemical screening and in silico pharmacological profiling of ethanolic extract of <i>Aframomummelegueta</i> for prostate carcinoma. <i>Journal of Applied Pharmaceutical Science</i> , 11(7),132–145. Ibitoye, O.B., Ajiboye, T. O., Abdulazeez, A. T. , Oyegoke, R.A., Muritala, H.F., and Abubakar, F.A. (2021). Antidiabetic Principle in <i>Cucumissativus</i> L In: <i>Cucumber Economic Values and It s Cultivation and Breeding</i> Ed: Haiping Wang, IntechOpen. DOI: 10.5772/intechopen.96393. Available from: https://www.intechopen.com/chapters/76001

Nurudeen, Q. O., Salahudeen, T.O., Salimon, S.S., Ayinla, A., and Falana, M.B. (2021). Safety Evaluation of the Aqueous Extract of *Lecaniodiscuscupanioides* Roots in Male Wistar Rats. *The Nexus (Science Edition)*.1(1), 12-20. (Official Journal of Al-Hikmah University, Ilorin, Nigeria).

Folami, S.O., **Nurudeen, Q. O.**, Falana, M. B., Ajiboye, T.O., and Bamaïyi, A.J. (2020). Involvement of Oxidative Stress in Bactericidal Activity of Vanillic acid Against *Staphylococcus aureus*. *Annals of Clinical and Experimental Medicine*. 1(1), 67 – 72. (Official Journal of the Association of Specialist Medical Doctors in Academics, Sokoto State Chapter, Sokoto, Nigeria). [Available on the internet <https://doi.org/10.47838/acem.26011977.11162020.asmeda.11.0>]

Nurudeen, Q.O. and Yakubu, M.T. (2020).Aqueous Extract of *PhyllanthusamarusSchum&Thonn* Leaves Attenuated the Alterations in Fluoxetine-induced Anti-estrogenic Activity in Female Rats. *Tropical Journal of Natural Product Research* . 4(7): 310 – 314. (Official Journal of the Faculty of Pharmacy, University of Benin, Benin, Nigeria). [Available on the internet <https://doi.org/10.26538/tjnpr/v4i7.10>]

Abubakar, I.B., Ukwuani-Kwaja, A.N., Folami, S. O., Malami, I., Muhammad, A., Ahmed, S.J., Nurudeen, Q.O. and Falana, M.B. (2020).An Inventory of Medicinal Plants Used for the Treatment of Cancer in Kwara and Lagos State, Nigeria. *European Journal of Integrative Medicine* .34: 1 -10. (Article 1D: 101062). Published by Elsevier, Ireland [Available on the internet <https://doi.org/10.1016/j.eujim.2020.101062>].

Falana, M. B. , and **Nurudeen, Q. O.** (2020). Analysis of Secondary Metabolites and In Vitro Evaluation of Extracts of *Carica papaya* and *Azadirachtaindica* Leaves on Selected Human Pathogens. *Notulae Scientia Biologicae* . 12(1), 57 – 73. (Official Journal of the Horticulture and Forestry Society from Transylvania). [Available on the internet <https://doi.org/10.15835/nsb12110541>].

Falana, M. B., and **Nurudeen, Q. O.** (2020). Evaluation of Phytochemical Constituents and *In Vitro* Antimicrobial Activities of Leaves Extracts of *Calotropisprocera* Against Certain Human Pathogens. *Notulae Scientia Biologicae*. 12(2): 208 – 221. (Official Journal of the Horticulture and Forestry Society from Transylvania). [Available on the internet <https://doi.org/10.15835/nsb12210699>].

Nurudeen, Q.O.,Salimon, S.S., Falana, M. B., Oweh, O.T. and Abubakar, I.B. (2020).Antioxidant activity and toxicological implications of the aqueous extract of *Phyllanthusamarus (Euphorbiaceae)* leaves in female Wistar rats. *Pacific Journal of Medical Sciences*. 21(1): 29 – 40. (Official Journal of the School of Medicine and Health Sciences, University of Papua New Guinea, Papua New Guinea).

		<p>[Available on the internet https://www.pacjmedsci.com/QO.%20Nurudeen%20et%20al%20Pac%20J%20Med%20Sci%20Vol%2021%20No%201%20Sept%202020%20pp%2029-40.pdf]</p> <p>Nurudeen, Q. O., and Falana, M. B. (2021). Identification and Quantification of Secondary Metabolites and the Antimicrobial Efficacy of Leaves Extracts of Some Medicinal Plants. <i>Zanco Journal of Pure and Applied Sciences</i>. 33(1): 91 – 106. (Official Journal of Salahaddin University-Erbil, Iraq). [Available on the internet in https://doi.org/10.21271/ZJPAS.33.1.10].</p>
Biological Sciences/ Biology		<p>Kareem, I., Faseyi A.F., Kareem, S.A., Lawal, O.I., Adekola, O.F., Olaniyan, J.O., Yusuf, S.Y., Lawal, M.T., Baba, H.S., Abdulkareem, K.A., Olayinka, B.U., Ayinla, A., Ahmed, O., Kuranga, H.A., Oyelade, Y.H., Lawal, Q.O., Musa, A.I. (2021). Effects of Salinity Stress on NPK Partitioning, Growth, Yield and Proximate Composition Of okra (<i>Abelmoschus esculentus</i>) <i>Annals of West University of Timișoara, ser. Biology</i>, 24 (1), 93-106.</p> <p>Kareem, I., Ismail, M.R., Puteh, A.B., Kareem, S.A., Lawal, O.I., Adekola, O.F., Faseyi A.F., Olaniyan, J.O., Yusuf, S.Y., Lawal, M.T., Abdulkareem, K.A., Olayinka, B.U., Ayinla, A., Ahmed, O., Baba, H.S., Kuranga, H.A., Lawal, Q.O., Musa, A.I., Oyelade, Y.H. (2021). Influence Of Seed Priming On Yield, Morphological And Physiological Characteristics Of Water-Deficit Stressed Lowland Rice <i>Annals of West University of Timișoara, ser. Biology</i>, 24(1), 73-92.</p> <p>Olayinka, B.U., Abdulkareem, K.A., Abdulkareem, A.S. Ayinla, A., Jacobs, O.E. and Etejere, E.O. (2021) Foliar application of proline enhances stress tolerance in Water-stressed <i>Arachis hypogaea</i> L. <i>Jewel Journal of Scientific Research</i>, 5 (14), 1-7.</p> <p>Olayinka, B.U., Abdulkareem, K.A., Murtadha, R.B., Abdulkareem, A.S., Ayinla, A., Sagaya, A. Muhammed R.T. and Etejere E.O. (2021). Determination of chlorophyll content, carbonic anhydrase activity, bio-productivity and composition of groundnut under five zinc oxide applications <i>Sri Lankan Journal of Biology</i>; 6(1)1-7.</p>
Biological Sciences/ Microbiology		<p>Agbaje, A. B., Oyeyiola, G. P., and Sule, I. O. (2020). Production of L-asparaginase by <i>Alcaligenes faecalis</i> subspecies <i>phenolicus</i> Isolated from the Rhizosphere of <i>Zeamays</i> L. <i>Archive of Science and Technology</i>, 1 (2), 143-156</p> <p>Bello, S. A., Ayofe, T. A., Yakub, M. F., Jamiu, A. T. (2020). Comparative analysis of the antimicrobial potential of stem and fruit extracts of <i>Calotropis procera</i>. <i>Pharmacognosy Research</i>. 12(4), 368. DOI: 10.4103/pr_58_20.</p> <p>Falana, M. B., and Nurudeen, Q. O. (2020). Analysis of Secondary Metabolites and <i>In Vitro</i> Evaluation of Extracts of <i>Carica papaya</i> and <i>Azadirachta indica</i> Leaves on Selected Human Pathogens. <i>Notulae Scientia Biologicae</i>. 12(1), 57 – 73. (Official Journal of the Horticulture and Forestry Society from Transylvania). [Available on the internet https://doi.org/10.15835/nsb12110541].</p>



		<p>Falana, M. B. and Nurudeen, Q. O. (2020). Evaluation of Phytochemical Constituents and in Vitro Antimicrobial Activities of Leaves Extracts of <i>Calotropisprocera</i> Against Certain Human Pathogens. <i>Notulae Scientia Biologicae</i>. 12(2), 208 – 221. (Official Journal of the Horticulture and Forestry Society from Transylvania). [Available on the internet https://doi.org/10.15835/nsb12210699].</p> <p>Nurudeen, Q.O., Salimon, S.S., Falana, M. B., Oweh, O.T. and Abubakar, I.B. (2020). Antioxidant activity and toxicological implications of the aqueous extract of <i>Phyllanthusamarus</i> (Euphorbiaceae) leaves in female Wistar rats. <i>Pacific Journal of Medical Sciences</i>. 21(1), 29 – 40. (Official Journal of the School of Medicine and Health Sciences, University of Papua New Guinea, Papua New Guinea). [Available on the internet https://www.pacjmedsci.com/QO.%20Nurudeen%20et%20al%20Pac%20J%20Med%20Sci%20Vol%2021%20No%201%20Sept%202020%20pp%2029-40.pdf].</p> <p>Nurudeen, Q. O. and Falana, M. B. (2021). Identification and Quantification of Secondary Metabolites and the Antimicrobial Efficacy of Leaves Extracts of Some Medicinal Plants. <i>Zanco Journal of Pure and Applied Sciences</i>. 33(1), 91 – 106. (Official Journal of Salahaddin University-Erbil, Iraq). [DOI: https://zancojournals.su.edu.krd/index.php/JPAS].</p>
		<p>Falana, M. B., and Nurudeen, Q. O. (2021). The Pharmacological screening and <i>In vitro</i> antimicrobial activities of <i>Euphorbia lateroflora</i> on selected pathogens. <i>Iraqi Journal of Science</i>. 62 (11). XXXX – XXXX Accepted 17 October 2021. (Official Journal of College of Science, University of Baghdad, Iraq) (SCOPUS INDEXED).</p> <p>Nurudeen, Q.O., Salahudeen, T.O., Salimon, S.S., Ayinla, A., and Falana, M.B. (2021) Safety Evaluation of the Aqueous Extract of <i>Lecaniodiscuscapanioides</i> Roots in Male Wistar Rats. <i>The Nexus (Science Edition)</i>. 1(1), 12-20. (Official Journal of Al-Hikmah University, Ilorin, Nigeria).</p> <p>Folami, S.O., Nurudeen, Q.O., Falana, M.B., Ajiboye, T.O., and Bamaiyi, A.J. (2020). Involvement of Oxidative Stress in Bactericidal Activity of Vanillic Acid against <i>Staphylococcus aureus</i>. <i>Annals of Clinical and Experimental Medicine</i>. 1(1): 67 – 72. (Official Journal of the Association of Specialist Medical Doctors in Academics, Sokoto State Chapter, Sokoto, Nigeria). [Available on the internet https://doi.org/10.47838/acem.26011977.11162020.asmeda.11.0].</p> <p>Abubakar, I.B., Ukwuani -Kwaja, A.N., Olayiwola, F.S., Malami, I., Muhammad, A., Ahmed, S.J., Nurudeen, Q.O., and Falana, M.B. (2020). An Inventory of Medicinal Plants Used for the Treatment of Cancer in Kwara and Lagos State, Nigeria. <i>European Journal of Integrative Medicine</i>. 34, 1-10. (Article ID: 101062). Published by Elsevier, Ireland [Available on the internet https://doi.org/10.1016/j.eujim.2020.101062].</p>



CHALLENGES AND WAY FORWARD

Poor response of students to academic and mentoring services. Low enrolment of students for the programmes in the Department.

The major challenge encountered during the session is the work load due to the small number of staff for the programmes. The outcome was a successful accreditation of the programmes.

Photo Gallery:



Cross section of Microbiology Laboratory



Cross section of Biochemistry Laboratory





DEPARTMENT OF CHEMICAL AND GEOLOGICAL SCIENCES

Dr HARUNA, Kehinde Abdulrasaq

B.Sc. (Ilorin), M.Sc. (Ilorin), PGDE (HUI), Ph.D. (Malete)

Ag. Head of Department

BRIEF ON THE DEPARTMENT

The Department started in the year 2008 with the commencement of Industrial Chemistry Programme. The establishment of the Geology and Mineral Sciences Programme in the year 2009 followed this, and recently the Petroleum Chemistry Programme was added in 2018. These programmes in the Department have been carefully designed and structured to reflect new developments at local and global levels, to enable the students to be practitioners capable of shaping a better and safer world. The Department is made up of competent, reliable and selfless scholars of national and international repute who have worked assiduously in their careers to help shape the students' future as they begin their new life.

ACADEMIC STAFF LIST

Name	Qualifications	Area of Specialisation	Rank
A. K. Haruna	B.Sc. (2008); M.Sc.(2013); PGDE.(2018); Ph.D. (2021)	Petroleum Geology/ Sedimentology	Lecturer I/Ag. Head of Department
I. A. Okunlola	B.Sc.(1975), M.Sc. (1977), Ph..D (1980)	Hydrogeology/Engineering Geology	Professor
N. A. Eleburuike	B.Sc. (2006) M.Sc. (2010) Ph.D. (2018)	Heterogeneous Catalysis/Inorganic/Industrial Chemistry	Lecturer I
R. O. Jimoh	B.Sc. (1984) M.Sc.(2011);Ph.D. (2018) MNMGS	Mineral Exploration/Geochemistry	Lecturer I
R. T. Musa	B.Sc. (2004) M.Sc. (2009)	Environmental /Industrial Chemistry	Lecturer I
F. A. M'civer	B.Sc. (1996) M.Sc. (2011)	Analytical /Environmental Chemistry	Lecturer I

O. O. Alu	B.Sc. (2006), M.Sc.(2010)	Applied Geophysics	Lecturer I
S. O. Ayinla	B.Sc.(2003), M.Sc.(2009), PGDE(2017)	Analytical Inorganic Chemistry	Lecturer II
B. Garba	B.Sc. (2002) M.Sc. (2013)	Organic Chemistry	Lecturer II
A. T. Amigun	B.Tech. (2010) M.Tech. (2015)	Analytical/Industrial/ Environmental Chemistry	Lecturer II

NON-ACADEMICS STAFF LIST

Laboratory Staff

NAME	RANK/DESIGNATION	QUALIFICATIONS	
Mr Oladimeji, A. F.	Laboratory Technologist II	B.Sc.(1918)	
Mrs Akinsola, N.A.	Laboratory Technologist II	HND Science Laboratory Technology (2012)	

Administrative Staff

NAME	RANK/DESIGNATION	QUALIFICATIONS AND DATES OBTAINED	
Mrs Bawa, H. H.	Computer Operator	O'Level, Diploma (Data Processing)	
Mrs Abdulazzez, A. J.	Clerical Officer	O'Level	

PROGRAMME STRUCTURE OF THE DEPARTMENT

S/ N	Department	Undergraduate Programmes	Postgraduate Programme	Other Programmes
1.	Chemical and Geological Sciences	B. Sc. Geology and Mineral Science	M.Sc. Geology, M.Phil/Ph.D.Geology	
		B. Sc. Industrial Chemistry		Top-Up, Sandwich
		B.Sc. Petroleum Chemistry		



NUMBERS/NAMES OF UNITS

There are three units in the department

S/No.	Name of Programme
1	Industrial Chemistry
2	Geology and Mineral Science
3	Petroleum Chemistry

ACTIVITIES IN THE DEPARTMENT

S/No.	Programmes	Activities
1	Undergraduate Programmes	Lectures and examinations conducted. Geological field exercises were organised for students. So also seminars and projects. NUC Accreditation of Industrial Chemistry and Petroleum Chemistry.
2	Postgraduate programmes	Lectures and examinations conducted. Geological field exercises were organised for students. So also seminars and projects.
3	Other Programmes	Top-Up and Summer
4	Other Activities	Inauguration of students' associations such as, Nigerian Mining and Geosciences Society (NMGS), Nigerian Association of Petroleum Explorationists (NAPE) and American Association of Petroleum Geologists (AAPG)

STUDENT MATTERS

Students' Population by Programmes, Levels and Sex

Academic Programme	100L		200L		300L		400L		Total	
	Sex		Sex		Sex		Sex		Sex	
	M	F	M	F	M	F	M	F	M	F
Geology	17	5	09	05	10	01	22	8	58	19
Industrial Chemistry	03	01	03	02	01	02	07	01	14	06
Petroleum Chemistry	09	08	20	11	02	05	02	03	33	27



b. Students' Learning Performance

S/No.	Class of Degree	100 Level		200 Level		300 Level		400 Level		Graduate Output		Total	
		M	F	M	F	M	F	M	F	M	F	M	F
1	First Class												
2	Second Class Upper	08	4	10	09	0	0	1	05			33	20
3	Second Class Lower	15	7	08	5	0	0	1	04			44	19
4	Third Class	5	3	12	4	0	0	0	02			23	12
5	Pass												
6	Non-Graduating							0	01			02	01
7	Probation	1		02								01	02
8	Withdrawal												

c. Students' Welfare

All students in the Department are involved in various forms of professional associations, students' chapters such as the Nigerian Mining and Geosciences Society (NMGS), Nigerian Association of Petroleum Explorationists (NAPE) and American Association of Petroleum Geologists (AAPG). Through these associations, the students engage in different welfare activities.

STAFF MATTERS

a. Staff's Conference/Workshop Attendance

S/No.	Staff Name	Conference/Workshop Attended	Venue/Date
1	Alu, O.O	Winning International Research Grant	17 th August/Ilorin
2	Alu, O.O	Practical Approach to Strategies in Winning International Grant	7 th October/Ilorin
3	Alu, O.O	Pedagogy	11 – 12 November/Ilorin
4	Ayinla, Sheriff Olakunle	JUPEB CONFERENCE MARKING EXERCISE	Jupeb-Office, Lagos/ 25 th –29 th Oct., 2021.
5	Ayinla, Sheriff Olakunle	International Weekly Webinar Series on Instrumental Techniques in Chemistry	Department of Chemistry, N.S.S. College, Manjeri, Kerela (Affiliated to the University of Calicut). 18 th July – 15 th August, 2020.

6	Ayinla, Sheriff Olakunle	53 rd Annual Conference of Science Association of Nigeria, Sokoto, 2019	Usmanu Dan Fodiyo University, Sokoto. 14 th - 18 th July, 2019.
7	Ayinla, Sheriff Olakunle	Workshop on Global Chemists Code of Ethics	Department of Chemistry, University of Ilorin, Ilorin; 15 th Dec., 2017.
8	Ayinla, Sheriff Olakunle	Capacity Building Workshop for Chemistry Lecturers	National Mathematical Centre, Abuja; 15 th - 21 st Nov., 2015.

b. Staff Conference/Workshop/Seminar Presentations/Attendance

Department of Chemical and Geological Sciences			
S/N	Staff Name	Conference/Workshop Attended	Venue /Date
1.	Dr K. A. Haruna	Nigerian Association of Petroleum Explorationist (NAPE)	EKO Hotels and Suite

DEGREES AWARDED BY THE DEPARTMENT

S/N	Degree
1	B.Sc Geology
2	B.Sc Industrial Chemistry
3	B.Sc Petroleum Chemistry

STAFF RESEARCH AND PUBLICATIONS, ACADEMIC AWARDS, PRIZES AND ACHIEVEMENTS

a. Staff Completed Research in the Session

S/N	Department	Completed Research
.		<p>Eleburuike, N. A., Amigun, A. T., Ayinla, S. O., M'civer, F. A., Oyewumi - Musa, R. T., & Garba, B. (2021). <i>Fundamentals of Physical Chemistry</i>. Ilorin: Published by Unilorin Press. unilorinpress@gmail.com.</p> <p>Eleburuike, N. A., Amigun, A. T., Ayinla, S. O., M'civer, F. A., Oyewumi - Musa, R. T. & Garba, B. (2021). <i>Essentials of Inorganic Chemistry</i>. Ilorin: Published by Unilorin Press. unilorinpress@gmail.com.</p> <p>Rajee, A. O., Babamale. H. F., Aliyu, A. A., Lawal, A., Ayinla, S. O., Osunniran, W. A., Aliyu, A. A. and Musa, I.(2020). Synthesis, Structural Elucidation and Antimicrobial Activity of Metal (II) Polypyridyl Complexes of 2-Amino-4-(Methylthio) Butanoic Acid. <i>Fountain Journal of Natural and Applied Sciences</i>. Vol 9, No 1, 19-26.</p> <p>Rajee. A.O., Aliyu. A.A., Babamale. H.F., Lawal. A., Ayinla. S.O., Osunniran, W.A., & Obaleye. J.A (2020). Preparation, characterization and antibacterial activity of Mn(II), Cu(II) and Zn(II) complexes of methionine and 2,2-bipyridine co-ligands. <i>Journal of the Kenya Chemical Society</i>, Vol 13 No 1, pp: 16-21.</p>

	<p>Amigun Azeedah T. , Basheeru Adebayo K., Amigun Bamidele O., and Ayinla Sheriff O. (2021) Physico-Chemical Properties and Heavy Metals Assessment of Wastewater Discharged from Selected Cosmetic Industries in Nigeria. <i>Caliphate Journal of Science & Technology</i> (CaJoST) (1), 51-61.</p> <p>Saheed Mustapha., Tijani Jimoh., Muhammed Ndamitso., Saka Ambali Abdulkareem., Shuaib Damola Taye., Abdul Kabir Mohammed and Azeedah Taiwo Amigun (2021). The Occurrence of <i>N</i>-nitrosodimethylamine (NDMA) in Swimming Pools: An Overview <i>Environmental Health Insights</i> Volume 15: 1–12</p> <p>Mustapha, S., Tijani, J. O., Ndamitso, M. M., Abdulkareem, A. S., Shuaib, D. T., Amigun, A. T. , & Abubakar, H. L. (2021). Facile synthesis and characterization of TiO₂ nanoparticles: X-ray peak profile analysis using Williamson–Hall and Debye–Scherrer methods. <i>International Nano Letters</i>, 1-21.</p>
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CHALLENGES AND WAY FORWARD

The Department has challenges of running its practical classes for 100, 200, 300 and 400 Levels Chemistry, Industrial Chemistry, Petroleum Chemistry and Geology courses due to the fact that there were no supply of reagents, apparatus erstwhile there were some valuable laboratory equipment lacking for our regular undergraduate and top-up programmes during the session. The University Management should please come to our aid and ensure adequate supply of resources needed for our students to succeed.





DEPARTMENT OF COMPUTER SCIENCE

Dr. Abdulrauf U. Tosho
B.Sc., MSc., Ph.D.
Ag. Head of Department

BRIEF ON THE DEPARTMENT

The undergraduate degree programme in Computer Science commenced during the 2005/2006 academic session while other three programmes such as Cyber Security, Information Systems and Software Engineering commenced in 2018/2019 session. The Department started with a student population of 15 and academic staff strength of 7. Since then, both students and staff have grown in population. The Department now has a staff strength made up of 2 Professors, 4 Senior Lecturers, 1 Lecturer I, 4 Lecturer II, and 1 Assistant Lecturer, Adjunct lecturers, inclusive. There are also five technologists and two non-academic staff with one Secretary and one Office Assistant while other posts as listed above are academic staff with one or more administrative post(s.. admitted every year.

The new three (3) programmes have been having progressive admission of students. Software Engineering is due for accreditation during the 2021/2022 academic session while the other programmes have earned full accreditation status.

This departmental annual report provides basic information on areas ranging from academic staff, administrative staff, programmes within the Department, laboratories, equipment to student matters and statistics; staff conferences attended, research and publications. Thanks.

Staff List

S/No.	NAME	QUALIFICATIONS	RANK/DESIGNATION
1	Tosho, Abdulrauf Uthman	B.Sc., MSc., Ph.D.	Senior Lecturer /Ag Head of Department
2	Alimi, Maruf Olasunkanmi	B.Sc., MSc., Ph.D.	Ass. Professor
3	Saheed, Yakubu Kayode	B.Sc., MSc., Ph.D.	LI /Leave of Absence

4	Mustapaha, Isah Olawale	B.Sc., MSc., Ph.D.	LI/PG Coordinator, Project Coordinator & 100 Level Adviser
5	Salau-Ibrahim, Taofeekat	B.Sc., MSc.	LI/Departmental Secretary
6	Akanni, Abdulsabur Oluseye	B.Sc., MSc.	LII/Dept. Exam Officer
7	Gbolagade, Marufat Damola	B.Sc., MSc.	LII/200 Level Adviser & SIWES Coordinator
8	Oyelakin, A. Maruf	B.Sc., MSc., Ph.D	LII/100 Level Adviser

Programmes of the Department

The Department ran four (4) programmes in the year under review namely; B.Sc. Degree Programmes in Computer Science, Cyber Security, Information Systems and Software Engineering. The Department has already commenced postgraduate programmes in the following areas;

Undergraduate Programmes

1. B.Sc. Computer Science
2. B.Sc. Cyber Security
3. B.Sc. Information Systems
4. B.Sc. Software Engineering

Postgraduate Programmes

1. M.Sc. Computer Science
2. PGD Computer Science
3. Ph.D. Computer Science

Staff Welfare

a. Confirmation of Staff Appointments and Promotions

During the 2020/2021 session, one staff (Dr Mrs T. Salau-Ibrahim) was upgraded from Lecturer II to the rank of Lecturer I.

b. Staff's Conference/Workshop Attendance

During the session under review all staff enjoyed either conference or workshop sponsorship. The details are as follows:



SN	Staff Name	Conference/Workshop Attended	Venue/Date
1	Dr Alimi O. M.	14 th International Multidisciplinary Honours Conference & Doctoral Consortium in International Science, Technology, Education, Arts, Management and Social Sciences (iSTEAMS) Research.	Al-Hikmah University Auditorium, 11 th – 13 th December, 2018.
2	Dr Alimi O. M.	International Conference on <i>Blended Learning: Integrating Technology into Instruction</i> , by Association for Innovative Technology Integration in Education (AITIE). (As Lead Paper Presenter).	Ebitimi Banigo Hall, University of Port-Harcourt, Rivers State, Nigeria. 9 th – 12 th , July, 2018.
3	Dr Alimi O. M.	2018 Information Technology (IT) Assembly on “ <i>Professionalism in Information technology; Past, Present and Future</i> ”, by Computer Professional Registration Council of Nigeria.	Abuja International Conference Centre, Area 11, Abuja. 20 th – 21 st , June 2018.
4	Dr Tosho A. U.	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium, 20 th – 21 st , February, 2018.
5	Dr Saheed Y. K.	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium. 20 th – 21 st , February, 2018.
6	Mr I. O. Mustapaha	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium, 20 th – 21 st , February, 2018.
7	Mr A O Akanni	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium, 20 th – 21 st , February, 2018.



8	Mrs M. D. Gbolagade	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium, 20 th – 21 st , February, 2018.
9	Mrs T. T. Salau-Ibrahim	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium, 20 th – 21 st , February, 2018.
10	Dr O. M. Alimi	Workshop on <i>Student Assessment and Grading System</i> , organised by Faculty of Education, Al-Hikmah University, Ilorin.	Al-Hikmah University Auditorium, 20 th – 21 st , February, 2018.
11	Dr O. M. Alimi	Symposium on <i>Policy and Practice in Open and Distance Learning</i> , organised by National University Commission (NUC)/University of	Idris Abdulkadir Auditorium, NUC, Maitama Abuja. 7 th November, 2017.
12	Dr Saheed Y. K.	Workshop on <i>Cyber Security Conference For Higher Institutions</i> . Organised by Netplus Limited and Supported by Kaspersky Lab and Microsoft. Theme: Be Prepared: Emerging Cyber Security Threats, Risks and Vulnerabilities on Campus Networks.	26 th September, 2018.

Student Matters

Since the inception of the University, the Department is one of the departments with the highest population of students' enrolment each session. The details for 2020/2021 academic session are as shown in the table below:

a. Students' Population by Total, Academic Programmes and Levels

S/No	Programme	100 Level	200 Level	300 Level	400 Level	Total
1	Computer Science	36	36	37	64	173
2	Cyber Security	33	26	5	1	65
3	Information Science	15	23	14	8	60
4	Software Engineering	53	33	20	1	107
	TOTAL	137	118	76	74	405

a. Students' Welfare

Level Advisers are always in contact with the students, helping them on academic issues, while accommodation/hostel is handled by student affairs. Security is always in place with personnel at alert at all times.

b. Student Activities

National Association of Computer Science Students (NACOSS) and National Association of Science Students (NASS), Al-Hikmah chapters are being monitored and coordinated by Staff Advisers and HOD. Student regular meetings on semester basis, excursions and student week are not left out.

Staff Research and Publications, Academic Awards, Prizes and Achievements

Dr Abdulrauf U. Tosho

Tosho, A. (2020) Identifying Elements for Applying Learning Instructional in Game Base Design. *Journal of Digital Innovations & Contemporary Research in Science, Engineering & Technology*. Vol. 8, No.2, pp. 155-166 DOI: dx.doi.org/10.22624/AIMS/DIGITAL/V8N2P10

Abdulrauf T. (2020). Towards Unified Criteria for Usability Measurements in the Interface Evaluation based on Instructional Design. *Journal of Advances in Mathematical & Computational Sciences*. Vol. 8, No3, pp 117-126. DOI:crossref.org/06members/50go-live.html

Aliyu, N. I., Dogo, A. M., Ajibade, F. O., & **Abdulrauf, T.** (2020). Analysis of Cyber Bullying on Facebook Using Text Mining. *Journal of Applied Artificial Intelligence*, Taylor & Francis 1(1), 1-12.

Moruff, O. A., Maruf, A. O., & **Abdulrauf T.** (2020). Performance Analysis of Selected Machine Learning Algorithms for the Classification of Phishing URLs. *Journal of Computer Science and Control Systems*, Universitatea din Oradea. 13(2), 16- 19.

Abdulrauf T. & Mutalib A. A. (2020). Adoption of Multimedia Instructional Material for Community Development in Africa: An Inclusive Educational System in *African Perspectives on Reshaping Rural Development* IGIGlobal, (pp.249-260).

Dr. Alimi O. Maruf

Alimi O. Maruf (2020). Puerperal Psychosis Detection using Cleanroom-based Software Engineering Model in the book titled *Theory and Practice of Mathematics and Computer Science*, Chapter 11; Published by Book Publisher International. Print ISBN 978-93-90206-63-6., pp.120-127. DOI:10.9734/bpi/tpmcs/v2.

Oyelakin Akinyemi Moruff, **Alimi Olanakanmi Maruf** and Abdulrauf Tosho (2020). Performance Analysis of Selected Machine Learning Algorithms for the Classification of Phishing URLs. Published by *Journal of Computer Science and Control Systems*, Universitatea din Oradea, Romania. Vol. 13, No.2, pp 16-19.

Alimi Olanakanmi Maruf and Mukhtar Ibrahim Hussaini (2021). Text-To-Speech Input Normalization Algorithm for Medical Prescription. Accepted for publication by *International Journal of Computing, Intelligence and Security Research (IJCISR)*. Nigerian Defence Academy (NDA).



Oyelakin A. M., **Alimi O. M.**, Mustapha I. O. Ajiboye I. K. (2021). Analysis of Single and Ensemble Machine Learning Classifiers for Phishing Attacks Detection Published by *International Journal of Software Engineering & Computer Systems (IJSECS)*, Universiti Malaysia Pahang. Vol. 7, No.2, pp 44-49.

Dr Oyelakin A. M.

Oyelakin A. M., Alimi M. O., Mustapha I.O. & Ajiboye I. K. (2021). Analysis of Single and Ensemble Machine Learning Classifiers for Phishing Attacks Detection, *International Journal of Software Engineering and Computer Systems*, 7(2).

Oyelakin A. M., Muhammad-Thani S., Salau-Ibrahim T. T. & Rilwan D. M. (2021). Performance Analysis of Selected Machine Learning Algorithms for the Detection of Cervical Cancer Based on Behavioral Risk Dataset, *International Journal of Information Security, Privacy and Digital Forensics (IJIS); A Journal of Nigeria Computer Society (1)*, 1-15.

Oyelakin A.M. & Jimoh R.G. (2021), A Survey of Feature Extraction and Feature Selection Techniques Used in Machine Learning-Based Botnet Detection Schemes, *VAWKUM Transactions on Computer Sciences*, 9(1), available at <https://vfast.org/journals/index.php/VTCS/article/view/604/658>

Oyelakin A. M., Agboola R.O., Abdullah F. & Yusuf S.A. (2021). Students' Perception Towards the Design of Custom Computer Aided Instruction Solution for Teaching and Learning of Undergraduate Physics, *Amity Journal of Computational Sciences*, Amity University, India, (1/2)

Oyelakin A. Moruff (2021). A Random Forest Classifier for the Classification of Breast Cancer, *Daffodil International University (DIUJST) Journal of Science and Technology*, 16(2), 1-5

Rilwan Dauda Magaji, **Oyelakin A. Moruff** & Usman Mohammed Abubakar (2021). Design and Implementation of a Custom, Web-Based Cooperative Loan Application Management System (A Case Study of ASCHIRT Cooperative), *Equity Journal of Science and Technology*, A TETFund-funded Journal of Kebbi State University, Aliero, Kebbi State

Oyelakin A. Moruff, Alimi O. Maruf, & Abdulrauf Tosho (2020). Performance Analysis of Selected Machine Learning Algorithms for the Classification of Phishing URLs, *Journal of Computer Science and Control Systems*, Oredia University, Romania, 2020, 13(2):16-19

Oyelakin A. M. Salau-Ibrahim T. T., Ogidan B. S., Azeed R. D., & Ajiboye I. K. (2020). Using Machine Learning Techniques for Predicting Covid-19 Cases-An Overview of Evolving Datasets and their Promising Features, *Anale, Seria Informatică. Vol. XVIII fasc. 2 – 2020*

Mabayoje Medinat A.

Mabayoje M. A., Akinrotimi A. O., Alufa A.O., Balogun A. O., Ameen A. O., Mojeed H. A. (2021): Design of a Decision Support System for Cassava Farming in Nigeria. *Ilorin Journal of Computer Science and Information Technology (ILJCSIT)*. 4(1); 1–15. Published by Department of Computer Science, University of Ilorin, Ilorin. Available online at: <https://iljcsit.com.ng/index.php/ILJCSIT/article/view/47/25>

Dagogo-George, T. E., Mojeed, H. A., Balogun, A. O., **Mabayoje, M. A.** and Salihu, S. A. (2020):



Tree-based homogeneous ensemble model with feature selection for diabetic retinopathy prediction. *Jurnal Teknologi dan Sistem Komputer*, 8(4), 297-303. Published by Departemen Teknik Sistem Komputer, Fakultas Teknik, Universitas Diponegoro. Available online at <https://jtsiskom.undip.ac.id> or DOI: [10.14710/jtsiskom.2020.13669](https://doi.org/10.14710/jtsiskom.2020.13669)

Adewole, K. S., Akintola, A. G., Jimoh, R.G., **Mabayoje**, M. A., Jimoh, M. K., Usman-Hamza, F. E., Balogun, A. O., Sangaiah, A. K., and Ameen, A. O. (2020) Cloud-based IoMT framework for cardiovascular disease prediction and diagnosis in personalized E-health care. In: Sangaiah, A. K. and Mukhopadhyay, S. C. (eds) *Intelligent IoT Systems in Personalized Health Care*, pp. 105-145, Elsevier. The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, United Kingdom. ISBN: 978-0-12-821187-8. Available: <https://www.elsevier.com/books/intelligent-iot-systems-in-personalized-health-care/sangaiah/978-0-12-821187-8>.

Mojeed, H.A., Sanoh, U., Salihu, S. A., Balogun, A. O., Bajeh, A. O., Akintola A.G., **Mabayoje M. A.** & Usman-Hamzah F. E. (2020). An Approach for Journal Summarization Using Clustering Based Micro-Summary Generation. In: Silhavy R. et al. (eds.): *Software Engineering Perspectives in Intelligent Systems* part of *Advances in Intelligent Systems and Computing Book Series (AISC)*, Springer, Cham. vol. 1295, pp. 685–699. ISBN:978-3-030-63318-9 Available: DOI: https://doi.org/10.1007/978-3-030-63319-6_64

Adewole, K. S., Balogun, A. O., Raheem, M. O., Jimoh, M. K., Jimoh, R. G., **Mabayoje, M. A.**, Usman-Hamza, F. E., Akintola, A. G., Asaju-Gbolagade, A. W. (2021): Hybrid Feature Selection Framework for Sentiment Analysis on Large Corpora. *Jordanian Journal of Computers and Information Technology (JJCIT)*. Vol. 7. No 2, 130-151. ISSN: 2415-1076. Published by: Princess Sumaya University for Technology (PSUT), Khalil Saket Street, Al-Jubaiha, Amman 11941, Jordan. Available: <https://doi.org/10.5455/jjcit.71-1609858713>

Balogun, A. O., Adewole, K. S., Raheem, M. O., Akande, N. O., Usman-Hamza, F. E., **Mabayoje, M. A.**, Akintola, A. G., Asaju-Gbolagade, A. W., Jimoh, M. K., Jimoh, R. G., Adeyemo, V. E. (2021): Improving the phishing website detection using empirical analysis of Function Tree and its variants. *Heliyon*. Vol. 7. No 7, e07437. Published by: Elsevier, Available: <https://doi.org/10.1016/j.heliyon.2021.e07437>

Balogun A. O., Akande N. O., Usman-Hamza F. E., Adeyemo V. E., **Mabayoje M. A.**, & Ameen A.O. (2021). Rotation Forest-Based Logistic Model Tree for Website Phishing Detection. *In O. Gervasi et al. (eds). Computational Science and its Applications*. (ICCSA 2021) pp 154 – 169, Vol. 12957. ISBN:978-3-030-87013-3. Springer Nature Switzerland AG 2021. Available: https://doi.org/10.1007/978-3-030-87013-3_12

Ameen, A.O., Mojeed, H. A., Bolarinwa, A.T., Balogun A.O., **Mabayoje M.A.**, Usman-Hamzah F.E., Abdulraheem, M. (2021). Application of Shuffled Frog-Leaping Algorithm for Optimal Software Project Scheduling and Staffing. In: Saeed F., Mohammed F., Al-Nahari A. (eds) *Innovative Systems for Intelligent Health Informatics (IRICT 2020)*, pp. 293-303. *Lecture Notes on Data Engineering and Communications Technologies Series (LNDECT)*, vol. 72. ISBN: 978-3-030-70712-5. Springer, Cham. Available: DOI: https://doi.org/10.1007/978-3-030-70713-2_28

Mr Msutapaha, I. O.

Isah O. Mustapha, Stephen Olabiyisi, Rasheed G. Jimoh, Maruf O. Alimi (2018). Performance Evaluation of Implementation Languages on Cognitive Complexity of Dijkstra Algorithm.



Published by Annals. Computer Science Series Anale. Seria Informatica, Journal of Computer Science, Tibiscus University, Romania Vol. XVI. No.1. pp. 49-54. <http://www.anale-informatica.tibiscus.ro/>

Alimi O. Maruf, Usman-Hamza F. E., **Mustapha I. O.** and Ogidan B. S. (2018). Derivation of Reliability Estimation Model for Metrically Reliable Software Product Development. Published by *Pacific Journal of Science and Technology*, Akamai University, USA. Vol. 19 No.1 Pp 182-188 http://www.akamaiuniversity.us/PJST19_1_182.pdf

Adewole K. S., Jimoh R. G., **Mustapha Isah O.**, Isiaka R.M., and Ajiboye, A. R.(2017). "A Framework of Tip Spam Detection in Location Based Social Network". *Information Technology System and Security Professional*, Volume 1, April, 2017.

Mustapha, I. O., Mustapha, M.I. & Adewole, K.S. (2018): Educational Data Mining (EDM) for Predicting Students' Performance Using K-Nearest Neighbour Technique". Vol 14, pp. 229-238

Mrs T. T. Salau-Ibrahim

Abdulsalam S.O., Hambali M. A., **Salau-Ibrahim T. T.** (2017) "Knowledge Discovery from Educational Database using Apriori Algorithm". *Georgian Electronic Scientific Journal: Computer Science and Telecommunications*. Vol. 51 No. 1. Pp. 41-51.

Alimi O.M, Isiaka A., & **Salau-Ibrahim T.T.** (2017) "Development of Biometrics Controlled e-Voting System: Means of Blissful and Successful Voting System in any Society". *Computing, Information Systems, Development Informatics & Allied Research Journal*. Vol. 8, No. 2, pp. 19-26. Available at www.cisdijournal.net

Mrs Gbolagade M. D.

Gbolagade M. D., Jimoh R. G., Gbolagade K. A., & Mejabi O. V., (2017). Design of Hybridized Wireless Sensor Network using K-Means Clustering and Genetic Algorithm. *Circulation in Computer Science*, Vol.2

Gbolagade M. D., Saheed Y. K., & Hamza-Usman F. E., (2017). Prediction of Student's Academic Performance in Mathematics using J48, Reptree and Simple CART Algorithms. Science Association of Nigeria Conference.

Mr Akanni A. O.

Saheed Yakub Kayode, **Abdulsabur Oluseye Akanni**, Maruf O Alimi, F.E. Hamza- Usman (2018). Influence of Discretization in Classification of Breast Cancer Disease. *University of Pitești Scientific Bulletin: Electronics and Computer Science*, Vol.18, Issue 2, pp. 13-20. http://bulletin.feccupit.ro/archive/pdf/2018_2_3.pdf

Saheed Y. K., Oladele T.O., **Akanni A. O.**, and Ibrahim W. M., (2018). Student Performance Prediction Based on Data mining Classification Techniques. *Nigeria Journal of Technology*. Vol. 37, No. 4, 2018, pp. 1087 – 1091. <http://dx.doi.org/10.4314/njt.v37i4.31>



Staff Ongoing Research in the Session

Dr Alimi Olasunkanmi Maruf

- i. Development of RFID Controlled System to Track Criminals in Public Places
- ii. Arduino-Based Student Online and Offline Attendance System Capital Projects, Infrastructures and Environment

The University has put in place another Computer Based Test (CBT) Centre that will occupy over five hundred computers and available for CBT examinations and lectures.

Challenges and Way Forward

The Department has capable hands but needs more staff in order to do away with Associate/Part-time lecturers. Population of our students is also our strength as we have the highest in the Faculty and the University in general. We need professorial cadre staff, and better still more staff in general. There is the need for dedicated Computer Laboratories for our students instead of managing with ICT Centre. There is also the need for Departmental Library where specific books and other computer accessories for research can be kept for both staff and students.





DEPARTMENT OF PHYSICAL SCIENCES

Dr Folashade M. Jimoh

B.Sc. (Ilorin), M.Sc. (Ibadan), Ph.D. (Ilorin)
Ag. Head of Department

BRIEF ON THE DEPARTMENT

The Head of Department is assisted by unit heads and Level Advisers. There is a Departmental Secretary and a Clerical Officer to assist in the day-to-day running of the secretariat. There is also an Examination Officer, a SIWES Coordinator and a Project Coordinator.

The Department of Physical Sciences was one of the core departments with which the university took off during the 2005/2006 academic session. It started with the Computer Science programme with a student population of 15 and an academic staff strength of 7, both the students and staff population have since grown steadily. New programmes like Statistics, Mathematics and Physics were introduced. In the 2017/2018 academic session, the NUC approved the introduction of two more courses, namely Industrial Mathematics and Physics with Electronics. The Department had earlier proposed the two new programmes due to their nature as applied sciences to meet the needs and actualisation of the Millennium Development Goals. It is also hoped that the programmes will attract more students to the Department.

Academic Staff List

S/No.	Name	Qualifications	Area of Specialisation	Designation/Position Held
1	F. M. Jimoh	B.Sc., M.Sc., Ph.D.	Complex Analysis	Lecturer I/Ag. Head of Department
2	I. A. Adimula*	B.Sc., M.Sc., Ph.D.	Space Physics	Professor
3	K. J. Oyewumi*	B.Sc., M.Sc., Ph.D.	Theoretical Physics	Professor
4	W. B Yahya*	NCE, ND, HND, B.Sc., M.BA, Ph.D.	Data mining, Micro-Array statistics and Biostatistics	Professor
5	K. O. Babalola*	B.Sc., M.Sc., Ph.D.	Complex Analysis	Reader
6	S. O. Abdulkareem*	B.Sc., M.Sc., Ph.D.	Control Techniques and Optimization	Senior Lecturer

7	K. Jimoh	B.Sc., M.Sc., Ph.D.	Econometrics	Senior Lecturer
8	A. B. Ibraheem*	B.Sc., M.Sc., Ph.D.	Experimental Design	Senior Lecturer
9	F. A. J. Bello*	B.Sc., M.Sc., Ph.D.	Fluid Mechanics/Modelling	Lecturer I
10	R. B. Afolayan*	B.Sc., M.Sc., Ph.D.	?????	Lecturer I
11	A. A. Ishaq	B.Sc., M.Sc., Ph.D.	Optimisation	Lecturer I
12	S. B. Jaiyeola	B.Sc., M.Sc., Ph.D.	Space Dynamics	Lecturer I
13	L. O. Mustapha	B.Sc., M.Sc.	Condensed Matter Physics	Lecturer I
14	S. A. Ibrahim	HND, B.Sc., M.Sc.	Experimental Design	Lecturer II
15	R. O. Agboola	B. Sc., M.Sc.	Geophysics	Lecturer II
16	S. O. Jabaru	HND, B.Sc., M.Sc.	Econometrics	Lecturer II
17	A. A. Oni	B.Sc., M.Sc.	Radiation & Heat Physics	Lecturer II
18	W. F. Akanbi	B.Sc., M.Sc.	Atmospheric Physics	Assistant lecturer
19	A. A. Adekoya	B.Sc., M.Sc.	Solid State Physics	Assistant lecturer

* Part time Lecturer.

Technical Staff

Name of Staff	Rank/Designation	Qualification and Dates Obtained	Remarks
Mr A. O. Ilesanmi	Technologist II	HND 2004 WAEC	Principal Technologist

Programme Structure of the Department

S/N	Department	Undergraduate Programmes	Postgraduate Programme	Other Programmes
1.	Physical Sciences	B. Sc. Mathematics	Postgraduate Diploma in Statistics	Topup Programme, Sandwich programme
		B. Sc. Industrial Mathematics	M. Sc. Statistics	
		B. Sc. Physics with Electronics	M. Phil/Ph.D. Statistics	
		B. Sc. Statistics		

Activities in the Department

No	Programmes	Activites
1	Undergraduate Programmes	Conducted lectures, examinations, undergraduates' seminar, NUC Accreditation of the Physics with Electronics programme was conducted and the programme was granted full accreditation.
2	Postgraduate Programmes	Conducted lectures, examinations, and postgraduates' seminar.
3	Sub-Degree Programmes	Nil
4	Other Programmes	Conducted lectures and examinations for Top-Up, Summer and Sandwich programmes.
5	Other Activities	
6	Conference/Workshop/Seminars and Public Lectures hosted by Faculty/Centre/ Department/Unit	Nil

Student Matters

a. Students' Population by Programmes, Level and Sex

Academic Programme	100L		200L		300L		400L		Total	
	Sex		Sex		Sex		Sex		Sex	
	M	F	M	F	M	F	M	F	M	F
MATHEMATICS							4		4	
INDUSTRIAL MATHEMATICS	2								2	
PHYSICS							4		4	
PHYSICS WITH ELECTRONICS	9	4	11	2	5	1			25	7
STATISTICS		1	2	1	1		6	1	9	3

b. Students' Learning Performance

S/N	Class of Degree	100 Level		200 Level		300 Level		400 Level	
		M	F	M	F	M	F	M	F
1	First Class	1							1
2	Second Class Upper	4	5	2	1			1	



3	Second Class Lower	5		6	1	3	1	9	
4	Third Class	1		2	1	2		2	
5	Pass								
6	Non-Graduating							2	
7	Probation			3		1			
8	Withdrawal								
	Total	11	5	13	3	6	1	14	1

a. Students' Welfare

The students are guided by Level Adviser assigned to each level who put them through and assist in solving any problem that may arise in the course of their academic pursuit.

Staff Matters

Confirmation of Staff Appointments and Promotions

a. Staff Confirmed

SN	Staff Name	Date of Confirmation
1	Dr A. A. Ishaq	1st October 2021

b. Staff for Promotion

SN	Staff Name	Last Rank	Current Rank
1	Dr F. M. Imoh	Lecturer I	Senior Lecturer

c. Staff's Conference/Workshop Attendance

SN	Staff Name	Conference/Workshop Attended	Venue/Date
1	F. M. Jimoh	2021 Annual Workshop for JUPEB Tutors	Akure. 24th-25th 2021 March 2021

d. Staff Welfare

S/N	Name of Staff	Research Topic	Type of Grant (Ph.D. grant at Al-Hikmah University)
1	Mr. L. O. Mustapha	Abinitio Study of Defect Complexes in Gallium Nitride: Vacancy, Mn Dopant, and Oxygen/Hydrogen Impurities	150,000
2	S. O. Jabaru	Geoaddivitive Regression Modelling with High Dimensional Data	250,000



Staff Conference/Workshop/Seminar Presentations/Attendance

During the session under review all staff enjoyed either conference or workshop.

a. Staff Research and Publications, Academic Awards, Prizes and Achievements Staff Completed Research in the Session

S/No.	Department	Completed Research
		S. B. Akanni, K. Y. Kareem, A. O. Grace, M. O. Alabi, S. O. Jabaru , M. T. Muhammed, E. Samuel, O. I. Adeniyi, M. Peter, O. J. Oyerinde (2021): Vector Autoregressive Modelling of Crop Production Index-Permanent Cropland Relationship in Nigeria. <i>Annals. Computer Science Series</i> , 19(1), https://analeinformatica.tibiscus.ro/?page=11_numarcurent&lang=en Online ISSN: 2065-7471 & Print ISSN: 1583-7165; 92 – 97.
		S. O. Jabaru and K. Jimoh (2020): Effect of Selected Macroeconomic Variables on the Nigeria Economy. <i>International Journal of Advanced Research (IJAR)</i> http://doi.org/10.21474/IJAR01/11608 ; 1236-1242, ISSN: 2320-5407.
		Kayode, A. A., Akande, N. O., Jabaru, S. O. , and Oladele, T. O. (2020): An Empirical Investigation of the Prevalence of Osteoarthritis in South West Nigeria: A Population-Based Study. <i>International Journal of Online Engineering (iJOE)</i> [Indexed in SCOPUS] https://doi.org/10.3991/ijoe.v16i01.11554 ; 100-114.
		Oyelakin A. M., Agboola R. O. , Yusuf S. A., Abdullahi F. (2020): A Study of the Comparative Analysis of Manet Routing Protocols in Nomadic Community Scenario. <i>Amity Journal of Computational Sciences AJCS</i> . ISSN: 2456-6616(online); Volume: 4, Issue:1.
		Alu, O. O., Bappah, A. A., Amir, A. W., Ojulari, B. A., Agboola, R. O. (2020): Estimation of Reserves and Rock Suitability for Construction Using Basic Geologic Mapping and Geotechnical Methods: A Case Study of an Abandoned Quarry Site at Buari, Southwestern Nigeria. <i>NSUK Journal of Science & Technology (NJST)</i> , Vol. 7, No. 2, 2020. pp. 94-100.
		Oyelakin, A. M. Agboola R. O. , Abdullahi F., Yusuf S. A., (2021). Student's Perception towards the Design of Custom Computer Aided Instruction Solution for Teaching and Learning of Undergraduate Physics. <i>Amity Journal of Computational Sciences AJCS</i> . Vol. 4 (2) & Vol.5 (1) pp. 13 -25



		Ishaq, A. A., Ayinde, M. A., and Jimoh, F. M. (2021). Some Nonlinear Conjugate Gradient Methods using Weak Wolfe Line Search for large-scale Optimization functions. 612-617 <i>Federal University Wukari Trends in Science</i> .
		Jimoh, F. M., and Mohammed, U. F., (2021). New Results on a Certain Class of Analytic Functions. <i>Transactions of Nigerian Association of Mathematical Physics</i> . 14, 15-20, Published by the Nigerian Association of Mathematical Physics.
		Omosowon, J. B., A kinyele, A. Y., and Jimoh, F. M., (2021). Dual Properties of W -order Reversing Partial Contraction Mapping in Semigroup of Linear Operators. <i>Asian Journal of Mathematics and Applications</i> . http://www.scienceasia.asia/index.php/ama/article/download/566/245
		Rabiu, M., Adeniji, S. M., and Jimoh, F. M., (2020). Numerical Solution and Stability Analysis of A Childhood -Disease Model with Vaccination and Relapse. <i>Applied Mathematics E-Notes</i> . 499-515. Available online at http://www.math.nsysu.edu.tw/~amen/2020/AMEN-191012.pdf
		Yahya W. B., Ezeweke C. P., Olaniran. R. O., Adeniyi J. A., Jimoh, K., Afolayan, R. B., and Garba, M. K., (2021). Bayesian Non Inferiority Test between Two Independent Binomial Proportions. <i>Journal of Modern Applied Statistical Methods</i> , Wayne State University, USA https://digital commons.wayne.edu/jmasn/

Challenges and Way Forward

The Department has always been confronted with the challenge of low number of students on a yearly basis. The 2020/2021 academic session was not different as the Department had only 54 students registered across the five programmes offered for the session. Although this number is an improvement on the total number of 39 registered students for the previous year, the number is still small as majority of the students were Physics with Electronics students. Mathematics and Statistics programmes are still facing the challenge of low enrolment.

Another major challenge which is a direct consequence of the first challenge is the issue of poor funding of the Department which is based on the number of students registered. Physical Sciences however is a servicing department that caters for the needs of Physics, Mathematics and Statistics courses of the Faculty of Natural & Applied Sciences, Faculty of Public Health, Faculty of Agriculture and Faculty of Education. This often takes its toll on the available fund which is paid by few students but used to cater for a large number of students as well as the departmental needs. There is a need for Management to review revenue allocation to departments to reflect the actual departmental needs and not the number of registered students.



The Department of Physical Sciences has been operating without a Secretary nor an Office Assistant for the past three academic sessions. This has led to additional strain on the Acting Head of Department. This development has been reported to the Management with no positive response. A request for at least a youth corps member to help in the office has also not yielded a positive response.

