Vice Chancellor's

REPORT

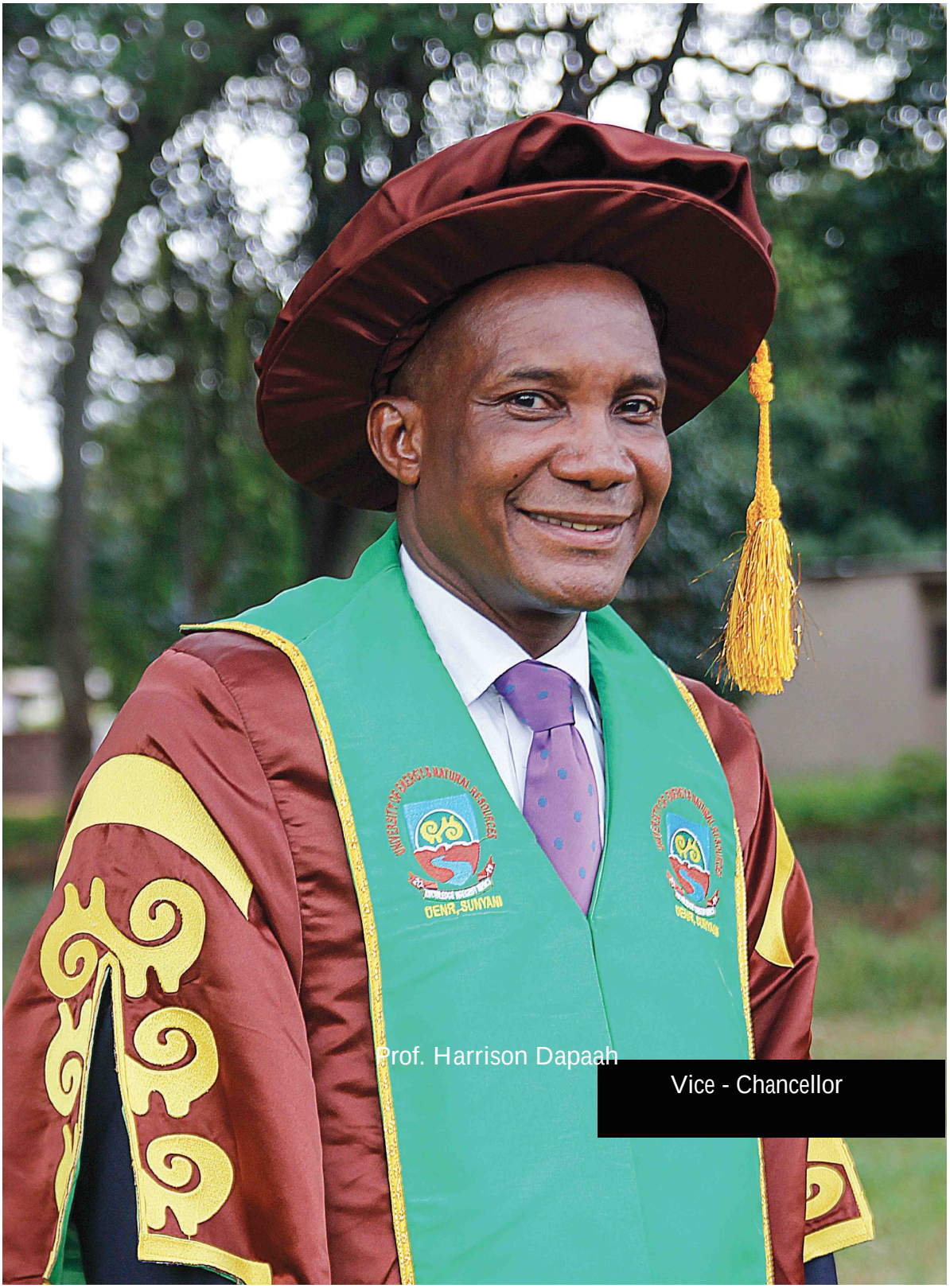
to the 3rd Congregation

August

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Prof. Harrison Dapaah

Vice - Chancellor

FOREWORD

This report covers the general activities of the University over the 2017/2018 academic year. The report provides information on all major constituents of the University particularly from the Office of the Vice Chancellor and the Central Administration, Schools and Academic Departments, Library, and other related areas within the University.

The University, during the year under review, recorded major progress in academic activities and increased its enrolment to 3,613 over the period under consideration. Within the period, the University also received accreditation for new programmes which will be mounted in the 2018/2018 academic year.

In addition, the School of Graduate Studies also made significant progress during the past year and increased its intake to over 246 students pursuing various programmes leading to the award of master's and doctoral degrees in Environmental Engineering, Renewable Energy Management, Social Forestry and Environmental Governance, Crop Sciences, Computer Science, Mathematics and Envirnmental Planning and Sustainability.

In line with our vision of becoming a centre of academic excellence, the University, during the year under consideration, continued its research activities across its academic departments and other units, leading to significant research output and publications in national and international peer-reviewed journals.

Within the period, the University received a $1.2 Million DANIDA research grant to undertake studies on the resilience of the Bosomtwi lake in the wake of climate change in Ghana. The university is collaborating with other institutions such as University of Ghana, Arhaus University, among others.

The University also organized the 2nd Science Festival under the lead sponsorship of the Bui Power Authority. During the period under review, the University also supported some staff to attend conferences to share knowledge with the scientific community as well as pursue terminal degrees.

All these activities over the period, demonstrated the determination of the University to become a centre of excellence within a short period of its existence. In spite of challenges such as inadequate funding, physical and human resources, the University also made modest gains in infrastructure for smooth academic, research and administrative activities. Some of these projects include the GNPC sponsored Applications Laboratory and the Bank of Ghana sponsored Auditorium Complex.

In the coming academic year, the University would religiously continue to pursue its mandate of teaching, research and extension services to support the development agenda of the country.

BENEFACTORS OF THE UNIVERSITY

The University will like to acknowledge the benevolence of a number of companies, corporate organisations and philanthropic individuals whose generosity aided the University over the period.

The Bui Power Authority supported the University to organize its 2nd Science Festival which was attended by over 1000 participants to witness research activities, especially innovations and other research breakthroughs. The University also benefited from GNPC through the financing of the Applications Laboratory.

The provision of schorlarship by the GNPC Foundation and Barclays Bank to both undergraduate and postgraduate students of of the University is alo acknowledged. The University is also grateful to a philanthropist, Mr Patrick Agyeman, a Canadian based Ghanaian for donating books worth $ 10,000 to the university library.

The Board of Directors of the Bank of Ghana also approved an amount of Seven Million Ghana Cedis (GH₵7,000,000.00) in support of the construction of a 2,000 capacity Auditorium at the Sunyani Campus.

The University is also indebted to the Government of Ghana for the funding of infrastructural projects through the GETFund. Other benefactors include Osagyefo Oseadeayo Nana Agyeman Badu II, Dormaahene, the Ministry of Energy, the Brong Ahafo Regional Co-ordinating Council, the French Embassy among others.



3RD CONGREGATION REPORT

The University of Energy and Natural Resources was established by an Act of Parliament (Act 830) in 2011 and was inaugurated on 17th November 2012 with two Schools, namely School of Engineering and School of Natural Resources. The University currently operates five Schools and runs 25 academic programs across all the Schools.

The total number of students inclusive of postgraduate and undergraduate students as of June 2018 stood at 3,613 distributed across five Schools in the University, namely School of Natural Resources, School of Engineering, School of Sciences, School of Agriculture and Technology and School of Graduate Studies.

The total number of staff in the employ of the University as of July 2018 stood at 248. Out of the number 116 are in the senior member category whiles 63 represents the senior staff category. The junior staff category is made up of 69 employees.

OFFICE OF THE VICE CHANCELLOR

The Vice Chancellor is the Chief Executive Officer of the University and responsible for the overall planning, direction, organisation and management of the University. As the Chief Academic Officer, the Vice Chancellor provides leadership to all the members of the University. He is accountable to the University Council. The Office of the Vice Chancellor is staffed by the following as indicated in the Table below:

Name	Qualification	Rank/Position
Prof. H.K. Dapaah	PhD (Guelp) MSc (New (Zealand) BSc (UG)	Vice Chancellor
Prof E. O. Frimpong	PhD (Michigan) MPhil, BSc (KNUST)	Pro Vice Chancellor
Prince Awuah	MA BA(UCC)	Jnr. Asst. Registrar
Abigail Yeboah-Kyere	BA (Ghana)	Snr. Admin Assist.
Millicent Daghar	BA (CUCG)	Snr. Admin Assistant

Academic Programmes

The University is currently running 25 accredited programmes. The Table shows a distribution of the number of programmes and future programmes that would be rolled out depending on the country's need, infrastructure and UENR Council's approval.

Table: UENR Schools and the number of accredited programmes.

School	Campus	Number of Programmes	Future Degree Programmes
Energy and Engineering	Sunyani	7	Materials Engineering; Geological Engineering; Petro- Chemical Engineering
Science	Sunyani	6	Nanotechnology; Cyber Security and Computer Forensics; Physics; Biological Sciences, Environmental science, Biochemistry
Natural Resources	Sunyani	4	Wood Products Manufacturing;
Agriculture and Technology	Dormaa	2	Landscape Technology, Plant Sciences, Food Science and Technology; Agricultural Economics, Agricultural Extension
Graduate Studies	Sunyani	4	Graduate programmes in all the key undergraduate programmes

ACTIVITIES

During the period under review, the Vice Chancellor performed a number of activities which included, among others visits and interactions, meetings and conferences, both in and outside the country, all in the pursuit of the interest of the University.

J Visits and Interactions

The Vice Chancellor performed a number of engagements in the course of the academic year, by receiving a number of visiting individuals, groups and institutions. Notable amongst them were:

- The Chief Fire Officer - Mr. Ekow Blankson
- Institution of Engineers
- Ghana Armed Forces Command and Staff College, Accra
- TEWU National Executives
- Copy Ghana
- Brong Ahafo Regional Minister

J Workshops /Conferences /Seminars

In the course of the 2017/2018 academic year, the Vice Chancellor participated in the following workshops, conferences and seminars:

- National Summit on Tertiary Education in Accra. The Summit was under the theme Towards a National Vision and Plan for Tertiary Education.
- Management Development Seminar for Executive Heads and Vice-Chancellors of Public University in Ghana
- The Lean Theory Training Programme at the St Andrews University, Fife, Scotland from 9th to 16th June, 2018.
- VCG Higher Education Conference in Ghana held at ISSER Conference Hall, University of Ghana, Legon Accra.

- The Pro Vice-Chancellor attended the Global Timber Tracking Network (GTTN) Regional Stakeholder Meeting in Africa" from June 27-28, 2018 in Yaoundé,

- The Pro Vice-Chancellor attended the Satellite Technology Innovation (STI) Arena Summit organised by the Earth Observation Research and Innovation Centre (EORIC) of the University on June 21, 2018.

- The Pro Vice-Chancellor during the year under review, attended the final Institutional Strengthening CIRCLE Programme in Nairobi , Kenya from December 11th -13th, 2017. The Workshop focused on the progress within the institutional strengthening programmes and actions implemented by CIRCLE institutions.

- The Vice chancellor chaired the Annual Co-ordinating Directors conference organized in Sunyani.

- National Procurement Workshop for CEOs and Ministers of state

Linkages and Collaborations

For a young and growing University to reach its potential, exposure to the current trends and best practices in teaching, research, partnerships and collaborations becomes an important tool for the achievement of institutional goals. For this reasons, Management initiated a number of linkages with other institutions and organisations

As part of efforts aimed at promoting knowledge in solar technologies, UENR entered into an MoU with the Energy Commission, for the training of Solar PV Installers in the Design, Installation and Maintenance of Off-grid and Grid-tied Solar PV Systems.

The Vice Chancellor also led UENR to sign an MoU with Hohai University, China to co-operate in the field of scientific research, teaching and application of results with a focus but not restricted on energy and natural resources research on the basis of mutual benefit.

During the 2017/2018 academic year, UENR also entered into an MoU with the Global Change Research Institute of the Czech Academy of Sciences, Czech Republic to establish an International Greenhouse Gas and Global Climate Change Research Station.

The University also signed an MoU with the University of Agriculture in Krankow, Poland to co-operate in the field of research and education.

RESEARCH

Research Projects and Related Activities

Research activities at the institutional level continued during the year under consideration. The Univesity received $1.2 million research grant to undertake research in and around Lake Bosomtwi dubbed RELAB.

Building Resilience of Lake Bosumtwi to Climate Change (RELAB)

This project is strongly linked to the resilience to climate change (Theme 4) and consistent with the UN Millennium Development goals on environmental sustainability, eradicating extreme poverty and hunger, Sustainable Development Goals (SDG's) 11-Sustainable cities and communities, 13-climate action, 14-life below water, 15-life on land; DANIDA's 'Right to a Better Life' enshrined in the Denmark Ghana Partnership Policy 2014-2018; Ghana's Shared Growth and Development Agenda II, the Ghana National Climate Change Policy and National Climate Change Adaptation Strategy.

The RELAB Projects has it specific objectives:

1. Elucidate lake physical structure and climate-regulating mechanisms of lake productivity, degree of climate change impacts on the functioning of the lake and fish productivity with historical and instrumental data.
2. Obtain requisite data for development of Lake Ecosystem model and apply the model to assess the risk of persistent meromixis in Lake Bosumtwi under future climate scenarios.

3. Obtain requisite data for development of appropriate watershed model and apply model to quantify hydrology and sediment erosion under future climate scenarios.
4. Investigate fisheries productivity and fisheries management aimed at development of fisheries management plan.
5. Understand the role of fishery decline in livelihood vulnerability and adaptation strategies and resultant watershed changes and feedbacks on lake ecology

The project has a wide range of partners from academia namely Aarhaus University, University of Ghana and Helmholtz Centre for Environmental Research. It also covers sponsorship for Ph.D.

Resource Mobilization & Donations

Financial resource mobilization for infrastructural development was mostly through external donor funding particularly, the GETFund. The Ghana National Petroleum Corporation (GNPC) supported the construction of the Applications Laboratory Phase One. Osagyefo Oseadeayo Agyemang Badu II, Omanhene of the Dormaa Traditional Area also supported the construction of a Syndicate Hall and gave out his hotel for the use by the Dormaa Campus until the GETFund buildings are completed.

Under the Energy Conservation and Climate Change South-South Co-operation Project, the Chinese Government donated 1,000 Solar Home Systems. The Board of Directors of the Bank of Ghana also approved an amount of Seven Million Ghana Cedis (GH₵7,000,000.00) in support of the Construction of a 2,000 capacity Auditorium at Sunyani Campus.

) Staff Development

Since the establishment of the University, Management has made efforts to facilitate staff development through GETFund and other sources. A number of staff were enrolled on PhD programmes through GETFund support whiles

others also enrolled on programmes based on external scholarships and self funding. During the year under review, the University gave approval for 5 members of staff to pursue terminal degrees in various universities in Europe and elsewhere.

Challenges

As a young and growing University, it is worth acknowledging that UENR is confronted with a number of challenges. Major infrastructural challenges that UENR faces include the need for a multipurpose Auditorium and Library for each of the campuses. Lecture hall complex for each of the campuses, laboratories with modern equipment for a world class science and technology university, halls of residence for 3 campuses, offices for staff and PhD students as well as housing for teaching and non-teaching staff.

Transportation, health and agriculture challenges include the need for buses and pick-up vehicles, tractors and accessories and farm machinery, an inter-campus shuttle system for staff and students and well equipped University clinic for all campuses.

Technical and security related challenges also include fibre optic cabling of 3 campuses (ICT infrastructure), consistent high speed internet connectivity, teaching aids and books for teaching, learning and research, walling/fencing of UENR lands to prevent encroachment, police posts, police visibility and night patrols on all campuses.

QUALITY ASSURANCE AND PLANNING UNIT (QAPU)

The Quality Assurance and Planning Unit is directly under the Office of the Vice Chancellor with the Pro Vice Chancellor, excising supervisory role of the Unit. The QAPU plays a major role by ensuring that academic quality is not sacrificed in the pursuit of other goals. The Unit seeks to assure quality in teaching and research and ensure that all actors in the teaching and learning process meet standards. The Unit is staffed by the following:

- Prof. Emmanuel Opuni -Frmpong – Head
- Mr. George Kwadwo Anane – Assistant Registrar
- Mr. Michael Addaney – Snr. Administrative Assistant

In order to ensure that maximum benefits are derived from teaching and learning in the University, the Unit periodically monitors, audits and evaluates teaching staff. During the year under review, the following workshops were organized by QAPU to promote efficiency in teaching and learning:

- Workshop for examination officers and Invigilators
- Academic Orientation for newly recruited teaching staff
- Documentation of Promotion Papers and Content Assessment
- Annual compilation of research outputs of teaching staff
- Student's assessment of lecturers

PROCUREMENT OFFICE

The Procurement Office has the principal mandate to superintend over all procurements in the University in accordance with the Public Procurement Act 663 2003 as amended by Act 914, 2016. One of the key functions is to advise Management on all procurement related activities. The Procurement Office is supervised by the Entity Head who is the Vice Chancellor. The main philosophy of the Procurement Office is to ensure the procurement of goods, works and services in a transparent and efficient manner to ensure value for money and judicious use of national resources.

Units and Staff

The Procurement Office comprises of Goods & Services Procurement, Works Procurement and Expediting and Records Management. The staffs of the Procurement Office are:

Name	Qualification	Rank
John Baptist Siddick	MSc (Salford) BSc (GIMPA) MCIP, HND, PgC(Harriot)	Procurement Officer
Baffour Antoa-Mensah	MBA, BSc, HND	Asst Procurement Officer
Kofi Dwomo	MBA, BSc, HND	Snr. Procurement Asst.

Activities over the Past Year

The Procurement Office coordinated and facilitated the procurement of the ebizframe Software, Library Books and Textbooks, and other logistics to aid teaching, learning, research and administration.

Future Plans

The Procurement Office plans to further streamline the procurement process in the University, to develop operational manual for service procurement and to upgrade existing procurement manual for goods and works.

Future Development

The Office envisages to attend refresher courses in E-Procurement, World Bank and other Development Partners procurement processes and Works and Services Procurement as well as Public-Private Partnership (PPP) initiatives.

Conferences/Workshops/Seminars

Some members of staff of the Procurement Office attended the following Conferences/Workshops/Seminars.

1. 8th Annual Forum on the Theme: Act 914: Transitioning into a vibrant Public Procurement System in Ghana organized by the Public Procurement Authority in October 2016 at Accra
2. Achieving Value for Money through Public Procurement organized by Public Service Procurement and Supply Chain Class in October 2016 at Accra

3. Modern Trends in University Administration and Management, organized by Ghana Association of University Administrators (GAUA) in March 2017 at Kumasi
4. Auditing the Supply Chain, organized by KPMG in May 2017 at Accra
5. Special Training Session on Public Procurement Act, 2003(Act 663) as amended & Public Financial Management Reforms for Ministers and Heads of Agencies organized by the Ministry of Education in May/June 2017 at Accra



Ben Appiah Kubi, Ag. Registrar

REGISTRAR'S OFFICE

The Registrar's Office is the nerve centre of the administrative system of the University. The Registrar's Offices is superintendent by the Registrar, who is the University's Chief Operating Officer (COO) and Secretary to the Council of the University.

The Registrar's Office is responsible, under the Vice-Chancellor, for the day-to -day administration and management of the University. To achieve this, the Registrar works in concert with and collaborates with other Offices of the University's Central Administration.

The Registrar's Office is currently made up of five (5) main Divisions and five Sub-Divisions. The Registrar is supported by a cadre of Administrators and Professionals made up of Senior Assistant Registrars and Assistant Registrars who handle the various Divisions of the Office and service Committees and Boards of the University

Summary of Senior Members in the Registrar's Offices

Name	Unit	Rank/Position	Qualification
Ben Appiah-Kubi	Office of the Registrar	Ag. Registrar	MBA (Leicester) B.Ed (UCC) PgD (CIPR-UK) MCIPR
Hayford Asare	Gen. Admin	Snr. Assist. Registrar	MA, B.Ed, (Cape Coast)
Mary Yebo-Okra	SMSL	Assistant Registrar	MA, BA (KNUST)
Alfred Appiah	Human Resources Affairs	Snr. Assist. Registrar	MBA, BA (KNUST)
Prince Awuah	VC's Office	Jnr. Assist. Registrar	MA, B.Ed (UCC)
George Anane	Academic	Snr. Assist Registrar	MSc (KNUST) BSc (Cape Coast)
Mrs Linda Mensah	Legal Unit	Assistant Registrar	LLB (KNUST) BL LLM (Stratclyde)
David Twumasi Ankrah	Graduate School	Jnr. Assistant Registrar	CEMBA, BA (KNUST)

In the course of the year, six additional senior members were appointed into various grades or positions to augment the staff strength in the Registrar's office. Additionally, two others were also promoted from within to the senior member category and assigned various schedules in the Registrar's Office.

The Registrar is also assisted by various grades ofAdministrative Assistants and other staff whoperform senior administrative and managerial rolesin Academic Departments and Administrative Unitson behalf of the Registrar.

During the period under review, the Registrar'sOffice continued to carry out its mandate as thepivot for administrative work in the University byfacilitating University business and ensuringeffective functioning of the various committees aswell as providing essential services to both lecturersand students alike. Again, Offices under the direction of the Registrar performed some of thefollowing functions or role in line with the statutoryprovisions of the Act establishing the University:

- Delivering of accurate, prompt, courteous andconsistent service to all students and constituents of the University, consistent with its educationalmission.
- Providing efficient leadership role in the accurateand efficient management of data in all functionalareas of management.
- Provision of admission services for students
- Serving as the official custodian of University records, interprets and appliesacademic policies.
- Initiation of policies, rules and regulations forapproval and adoption.

During the period, the Registrar's Office worked assiduously in the staffing process through the provision of recruitment, placement and development. The Offices also worked to improve upon the visibility of the University by providing marketing and in-house public relations services aswell as legal advisory services to all constituents of the University.

Services in the Registrar's Offices are provided through open, collaborative, and accurate communication, respect for all, innovative improvements in efficiency and effectiveness, and an active commitment to an environment of collegiality and professionalism. In the process of discharging its duties, the Office of the Registrar subscribe to the highest ethical principles of maintaining accuracy, integrity, and security of all academic record, and ensure full compliance with all University regulations.



Albert Banan Abdulai, Dir. of Finance

FINANCE DIRECTORATE

Introduction

The Finance Directorate is responsible for preparing the University's annual budget estimates, keeping of all financial records of the University, production of periodic budgetary control reports, and preparation of annual statutory financial accounts.

The Directorate is also responsible for keeping of records of donor funded projects, students'' financial records, fixed asset records and management of stores and the production of reports on these.

The Directorate also provides services to support the academic mandate of the University such as provision of financial reports and financial sustainability reports for accreditation of academic programmes.

The Directorate fulfills these responsibilities through the Treasury & Hostel Financial Management Section, Payroll & Management Accounting Section and the Financial Accounting Section.

Departments and Staff

Name	Rank/Position	Qualification
Albert Banan Abdulai	Director	FCCA, MPhil, B.Com
Paul Nana-Nketia	Senior Accountant	ACCA, MBA, BSc
A. Opoku-Mensah	Accountant	ICA (Gh), BSc (KNUST)
Stephen. Y Ntiamoah	Accountant of Work	ICA (Gh), MBA, HND
Bosea	Asstant Accountant Senior Estate Assistant	ICA (Gh)) BSc

The Directorate has 10 Senior Staff and one Junior Staff.

Activities over the Past Year

The Directorate successfully implemented the ebizframe ERP software in the following five modules: Finance, Materials Management, Human Capital Management, Forecasting, Budgeting & Planning and Fixed Assets

Future Plans

The Directorate plans to acquire software to handle Student Financial Records in the near future. The Directorate also plans to put in place its own financial regulations and risk-management framework to govern the financial operations of the University.

Conferences/Workshops/Seminars

During the 2017/18 Academic Year, staff of the Directorate attended the following Conferences/Workshops/Seminars.

1. 8th Annual Forum on the Theme: Act 914: Transitioning into a vibrant Public Procurement System in Ghana organized by the Public Procurement Authority in October 2016 at Accra
2. IFRS Updates organized by ICA (Ghana) in October, 2016 at Kumasi
3. Training Session on the Public Financial Management Act 2016 (Act 921) organized by the National Council for Tertiary Education in April 2017 at Accra
4. NCTE Senior Academic Leadership Training Board/Council Conference in July 2017 at Accra
5. Modern Trends in University Administration and Management, organized by Ghana Association of University Administrators (GAUA) in 2017 at Kumasi
6. Auditing the Supply Chain, organized by KPMG in May 2017 at Accra
7. Seminar for Taxpayers (on Revenue Administrative Act – Act 915; VAT Act 870/948; TRIPS Implementation; Returns Submission; Rights and Obligations of Tax Payers) organized by the Ghana Revenue Authority in June 2017 at Sunyani



WORKS AND PHYSICAL DEVELOPMENT

The Works and Physical Development Directorate of the University is responsible for the designing, supervision and the development of the infrastructural requirements of the University.

The Directorate conceptualizes projects in line with the needs of the University and implements such projects based on the approval by Management and the University Council. An acting Director is currently exercising oversight responsibility over the management of the Directorate. He is assisted by other built environment professionals. The Directorate is also home to the Estate Division that is charged with the management of the facilities of the University. Below is a summary of staff in the Directorate.

Name	Rank/Position	Qualification
Cephas A. Yeboah	Ag. Director	MSc, BSc, (KNUST)
John Awotwi	Structural Engineer	BSc.(KNUST)
Mathew Arhin	Quantity Surveyor	MSc, BSc(KNUST)
Kwaku Safroadu	Architect/Clerks of Work	MSc, BSc(KNUST)
Maxwell Ofori	Senior Estate Assistant	MSc (UCC) BSc (KNUST)
F. A. Djan	Senior Estate Assistant	BA (KNUST)
Elisha Lasim Finde	Senior Estate Assistant	BSc (UDS)

NUGS Project

The National Union of Ghana Students (NUGS) in the course of the year, revive its plans to construct a new 4 Storey Hostel, 4 Storey Staff Apartment and Commercial Centre at UENR. The estimated cost of the project is GHS35, 000,000.00.

The Governing Council approved the project and it is anticipated that the project will take off soon. A Memorandum of Understanding between NUGS and UENR will be signed at a later date during the 2018/2019 academic year.

ACTIVITIES FOR THE YEAR

During the period under review, the Directorate worked with the Department of Urban Roads to survey proposed new roads earmarked for construction to improve accessibility on the Sunyani Campus.

Within the same period, the Directoracte served as Consultants to the Kenyasi Campus Project under construction. The Directorate similarly, supervised work on the existing GETFund Hostel, Food Court & Business Centre the Bank of Ghana sponsored Auditorium Complex

In the course of the year, two Detached Quarters along the Hostel Link was refurbished and converted into offices to house the Sports Department

The Directorate also supervised the conversion of the old Drivers Quaters to a Basic School for the University Community. Additionally, it is also providing professional services for the construction of a permanent block for the Basic School.

The residences of Messrs Debrah, Clement Kuusoyir and Akoto and old Guest House, in the course of the year, were converted into Staff Offices to house Estate Department, Procurement Office and EORIC.

During the period under review, the Estate Division of the Directorate carried out its mandate by providing administrative and professional work related to managing university land, facilities and property. The Estate division undertook the following activities:

- Facility Management Services such as electrical, carpentry, welding, plumbing, key management, coding, labeling and tagging of University assets, servicing and refill of fire extinguishers, etc.
- General Cleaning of all Lecture Theaters, Auditorium, Laboratories, offices and washrooms, duty post accommodation and general tidiness of campus.
- Renovation works on New Estate Office, Examination Office, Procurement Office, Director of Finance and Director of Works Residential Bungalows.
- University housing services including office allocation, office furnishing, transit quarters, inspection of residence for determination of off campus and determination of terms of tenancy.
- Valuation services on newly built food court and stores at Hostel,
- Assets registration.

PREPARATION FOR 2018 -2020

The Directorate has also planned to execute a number of projects as indicated in the Table below in the next three years. The Projects are expected to be financed from the GETFund and other sources.

Projects	2018	2019	2020	Estimated Cost
Construction of Administratio n Block	2,550,000.00	2,550,000.00	4,700,000.00	12,000,000.00
Construction of 4-Storey Hostel at Dormaa	2,500,000.00	2,500,000.00	2,000,000.00	8,500,000.00
External Works to Hostels and Food Court Building	1,000,000.00	1,000,000.00	0.00	3,000,000.00
Renovation and of Clinic	0.00	0.00	0.00	300,000.00
Construction of Sports Courts	0.00	0.00	0.00	200,000.00
Renovation of URO Office	0.00	0.00	0.00	500,000.00
Renovation of Security Office	0.00	0.00	0.00	300,000.00
Total	6,050,000.00	6,050,000.00	6,700,000.00	25,700,000.00



OFFICE OF THE DEAN OF STUDENTS

The Office of the Dean of Students seeks to provide welfare support for students to enable them attain their goals. This is mainly done through capacity building and advocacy for students. The Office has worked cordially with the leadership of the SRC in minimizing and resolving conflicts to enable the University have a peaceful environment for teaching and learning during the year under consideration.

The Office of the Dean of Students comprises of the Dean, Hostel Manageress and Administrative and Accounting Assistants. Currently, the Office is made up of the following:

Dr Samuel Gyamfi	-	Dean
Ms Abena Ahenkora	-	Hostel Manageress,
Rev. Dr. Ishmael Arthur	-	Head, Counselling Unit
Eva Bakuri	-	Assistant Counsellor
Ms. Cindy Awuah Pokuaa	-	Snr. Administrative Assistant
Ms. Kate Mensah	-	Snr. Administrative Assistant
Manasseh Amoah Osei	-	National Service
Emmanuel Yeboah Manu	-	National Service

Activities

The services provided by the Office include student's guidance and counselling, guidance for SRC leadership, students support service among a host of others.

Orientation for Fresh Students

During the period, the Office participated fully in the orientation of all fresh students" for the University. Such students were exposed to life on campus as contained in their handbook and the workings of the Office.

Seminar on Drug Abuse

In collaboration with the Narcotic Control Board, a seminar on drug abuse was organized for freshmen during their orientation. The seminar was a success and it is our hope that this would become an annual affair.

Students Health Services

During the period under review, health care delivery was enhanced following the secondment of nurses from the Ghana Health Service to the University Clinic. Attendance at the Clinic there went up as a result of the introduction of shift system in the Clinic. With the appointment of a permanent Medical Officer for the University, it is expected that health service delivery in the University in the coming academic year will receive further boost.

Academic Tutors

The Office is working with the Deans of the various Schools to strengthen our academic tutorial system. This would allow students access to academic counselling from lecturers. This would greatly enhance academic performance.

"Anidaso Nsae" (Hope not lost) support

The SRC through the „Anidaso Nsae" support was able to partially assist 69 needy students to pay their fees. They were selected after having attended an interview and ranked according to their needs. The amount that each student got was based on the recommendation of the panel members.

UENR NUGS/ SRC

As part of their programme the Women's Commission of UENR NUGS organized a seminar dubbed "SAY NO TO SEXUAL HARASSMENT". This was to raise awareness and make the university community aware of the rights they had in such situations

Red Cross Society

As part of their social responsibility, the UENR Chapter of the Red Cross and the Rotract club of UENR organized a blood donation exercise to support the blood bank of the regional hospital. The patronage of the exercise was good.

Housing for Students

This continues to be a major concern to the University community as it affects student"s welfare. The standard of service provided by some of the private hostels is poor. The Office has advised some of the hostels to improve the standard of services at their hostels. Generally, most students live in private houses mostly located at Fiapre, Berlin Top and Zinko areas. In these areas, some students are sometimes subjected to attacks and their possessions taken.

Most of these incidences have been reported to the police. As a temporary measure, the police have established a check-point on campus. This has greatly improved security on campus. The Office, in collaboration with the SRC have come out with a flyer to provide the necessary security tips to students. It is hoped that the two Hostels under construction, when completed, would solve the accommodation problem on campus.

SPORTS

Sports constitute a vital component of the training of holistic individuals. The University during the period under review, participated in a number of sporting activities notable among them were the following: In all the university performed creditably.

- GUSA Games in Tamale
- The Sunyani Marathon
- Schools & Colleges Basketball Competition(UPAC)

SRC Projects

The SRC leadership started the construction of summer huts to aid students' relaxation and learning activities. In all there are six summer huts being constructed all around campus.

Peer Counsellors' Training programme

Peer Counsellors' Training programme was organized by the Counsellor during the first semester of the year under review. The theme of the programme was "Becoming a Peer Counsellor in the University." Another programme was organized during the Second Semester under the theme: "Counselling others to make a Good Career Decision." Both sessions were well patronized by members of the Peer Counsellors and other students from various denominations.

Individual Counselling

During the year under consideration, the Counselling Unit witnessed an upsurge in the number of students coming to the Unit for individual counselling on issues related to relationship, planning of studies, and addiction among other issues. Other cases were mostly related to pornography, masturbation, and alcohol. Some of the students came in for counselling on their own, whilst others were brought to the Counselling Unit by their Lecturers. Others, whose issues were related to mental health, were referred to the Regional Hospital Psychiatric Unit for further attention.

SCHOOLS & DEPARTMENTS



SCHOOL OF NATURAL RESOURCES

The School of Natural Resources is one of the foundation schools of the University of Energy and Natural Resources (UENR) which took off during 2012/2013 at the main campus in Sunyani. Its mandate includes training of high level manpower that will harness the country's enormous natural resources as well as the environment. In addition, as with any University academic unit, it undertakes research and extension services. It is currently headed by Dr. Simon Abugri as the Acting Dean with administrative support from staff headed by Mr. Charles Aidoo, Junior Assistant Registrar with assistance from Eric L. Mwintome.

OVERVIEW

The School is made up of the following Departments:

- Ecotourism, Recreation and Hospitality
- Environmental Management
- Entrepreneurship and Business Science
- Fisheries and Water Resources
- Forest Science
- Department of Languages and General Studies

These Departments together offer BSc. Natural Resource Management (with options in Social Forestry, Ecotourism, Land Reclamation and Restoration, Wood Science and Forest Resources Management. In addition, the Department of Ecotourism, Recreation and Hospitality also offers BSc. Hospitality Management while the Department of Environmental Management also offers BSc. Fire and Disaster Management.

There is also the Department of Entrepreneurship and Business Science offering BSc. Resource Enterprise and Entrepreneurship. The Department of Languages and General Studies provides services to the School and the University as a whole.

STUDENT STATISTICS

Year / Level	Male	Female	Total
100	147	70	217
200	217	80	297
300	203	73	276
Total	567	223	790

DEPT. OF ECOTOURISM, RECREATION AND HOSPITALITY

Introduction

The Department of Ecotourism, Recreation and Hospitality is among the four Departments of the School of Natural Resources. The Department seeks to produce graduates capable of working either as employees or as entrepreneurs in the tourism sector that has over the last two decades moved from the sidelines to the centre stage of Ghana"s economic policy.

Graduates from the Department are equipped with strong and vibrant leadership skills to manage ecotourism prospects of the country and manage the hospitality sector of the tourism industry to meet the increasing demand for recreation, tourism, biodiversity conservation and green species. The Department offers and prepares students for a four-year degree, leading to the award of BSc. Natural Resource Management (Ecotourism option and Wildlife and Range Management option) and BSc. Hospitality Management.

Programmes

Currently the Department runs the following programmes:

- BSc. Natural Resources (Ecotourism option and Wildlife and Range Management)
- BSc. Hospitality Management.
- Diploma in Hospitality Management

Preparations are underway to introduce the following programmes:

Activities over the past year

- The Department is currently monitoring the Staw coloured fruit bat (Eiodolon helvum) population and the results are found on www. Eidolon.org website of Afribat, a conservation branch of Bat Conservation International for African birds.

- The Department is also collaborating with the Brong Ahafo Regional Tourism Authority to develop the Duasidan Monkey Sanctuary (near Dormaa Ahenkro) into an ecotourism site.

Teaching Staff and their Qualifications

There are two Senior lecturers, six Lecturers, one Assistant Lecturer and one Technician in the Department. Their names and qualifications are given in the table below.

Name	Designation	Academic Qualification
Dr. Oheneba Akyeampong	Senior Lecturer	PhD (Stockholm); MSc. (Kalmar, Sweden); BA. (Ghana); Dip. Ed.
Dr. Yaw Boakye Agyeman	Lecturer	PhD(Waterloo) MSc(Wageningen);BSc.(KNUST)
Dr. Daniella Delali Sedegah	Lecturer	PhD (UG); MPhil (UG); BSc. (UDS, Tamale)
Mr. Richard Obour	Senior Lecturer/HoD	MPhil (KNUST); BSc. (KNUST).
Mr. James Agyei-Ohemeng	Lecturer	MPhil. (KNUST); BSc. (UCC); PG. Dip. (UCC); Dip. Ed. (UCC)
Mr. Ricky Yao Nutsugbodo	Lecturer	MPhil (UCC); BSc. (UCC)
Miss Olivia Naa Ayorkor Tetteh	Lecturer	MSc. (KNUST); BSc. (KNUST); HND (Accra Poly); Dip. Ed. (UEW)
Miss Mildred Nuoung Deri	Ast. Lecturer	MPhil (UCC); B.Tech (Ho Poly); HND (HCIM, Accra Poly)
Miss Abena Gyamfuaa	Technician	HND (HCIM, Sunyani Poly)

OHENEBA AKYEAMPONG

Research Activities

- Profiling Event Attendees
- Event tourism in Brong Ahafo Region
- Tourism intermediaries in Brong Ahafo Region

Recent Publication(s)

- Akyeampong, O. & Yankholmes, A. (2016). Profiling masquerade festival attendees in Ghana Journal of Events Management, Vol. 20 (2), pp285-294.

- Akyeampong, O. & Nutsugbodo R.Y. (2016) Adoption of ICT by Hotels, in Akyeampong, O. (Ed) Tourism Development in Brong Ahafo: Supply and Demand Dynamics, Sunyani: Xtrym consortium, INC, pp. 89-108

- Akyeampong, O. (2016) Event tourism in Brong Ahafo Region, in Akyeampong, O. (Ed) Tourism Development in Brong Ahafo: Supply and Demand Dynamics, Sunyani: Xtrym consortium, INC, Pp 131-1

Conferences / Workshops / Seminars

- Participant: „Building capacity of fish farmers to adapt to climate change", A one-day workshop organized by the Department of Fisheries and Water Resources, with sponsorship from CIRCLE at UENR Auditorium on 16th March, 2017

- Resource Person: United Nations World Tourism Day Workshop, organized by Ghana Tourism Authority at the University of Energy and Natural Resources, September 27, 2015

Outreach Programmes / Extension Services

- Member, National Accreditation Board Assessment Panel: B.Sc (Business Administration) programme, Hospitality and Tourism Management option, School of Business, Ghana Institute of Public Administration, Achimota, Accra,

- Reviewer: Annals of Tourism Research; Journal of Tourism Management; Journal of Sustainable Development

DANIELLA D. SEDEGAH

Recent Publication(s)

- Daniella, D. S. (2016). Community Participation in Ecotourism in the Brong Ahafo Region in Akyeampong O. A. (Ed.) Tourism Development in Ghana's Brong-Ahafo Region: Demand and Supply Dynamics. Sunyani: Xtrym Publications."
- Daniella, D. S. and Efua Esaaba Mantey (2016) Demand Responsive Approach and Its Significance for Sustainable Management of Water Facilities in the Shai Osudoku District. Ideal Journal of Economics and Management Studies (2016), ISSN: 2067-7721.
- Daniella, D. S. Salami Ayobami Taofik & Ajayi Adesola. (2016) Coping Strategies: A Comparative Analysis of Climate Change and Rural Farming CommunitiesiIn Semi-Arid and Forest Regions In Nigeria. Fifth International Conference on Climate Change Adaptation 2016.

Conferences / Workshops / Seminars

- Participant: 5th Climate Change and Population Conference on Africa (CCPOP-Ghana), 19th-21 July, 2016. University of Ghana. Hosted by the Regional Institute for Population Studies, University of Ghana, Legon

Outreach Programmes / Extension Services

- Reviewer: Water Resources Research, American Geophysical Union.

NUTSUGBODO RICKY YAO

Research Interests / Activities

- Service Quality
- Tourism Transport
- Accommodation

Recent Publication(s)

- **Nutsugbodo, R. Y.**, Amenumey, E. K., &Adjei-Mensah, C. (2018). *Public transport mode preferences of international tourists in Ghana: Implications for transport planning.* Travel Behaviour and Society, 11, 1-8. doi: https://doi.org/10.1016/j.tbs.2017.11.002

- **Nutsugbodo, R. Y.** (2016). Tourist accommodation. In O. A. Akyeampong (Eds.), *Tourism development in Ghana's Brong-Ahafo Region: Demand and supply dynamics* (pp. 73-88), Sunyani, Ghana: Xtrym Consortium.

- Nutsugbodo, R. Y. (2016). Tourist accommodation. In O. A. Akyeampong (Ed.), Tourism development in Ghana''s Brong-Ahafo Region: Demand and supply dynamics (pp. 73-88), Sunyani, Ghana: Xtrym Consortium.

Outreach / Extension Services

- Departmental Examinations Officer
- Departmental Representative, School of Natural Resources Board
- Departmental Representative, University, Academic Board

RICHARD OBOUR

Research Activities / Interests

- Wildlife Development
- Environmental Ecology
- Traditional conservation of wildlife

Recent Publication(s)

- **Obour, R.,** Oppong, S. K. and Abebrese, I. K.(2017). Chemical Composition and Nutritive Value of an Invasive Exotic Species *Broussonetiapapyrifera* in Ghana. *Journal of Natural Sciences Research.7(20): 45-53*

- **Obour, R.,** Ankomah, P. K. and Trent, L. (2017).Ecotourism Potential in Alleviating Rural Poverty: The case of Kakum National Park in Ghana*Athens Journal of Tourism, Vol X, No. Y*
- Obour, R., Asare, R. Ankomah, P. K. and Trent, L. (2016). Poaching and its Potential to Impact Wildlife Tourism: An Assessment of Poaching trends in the Mole National Park in Ghana. *Athens Journal of Tourism, Vol X, No. Y*

Conferences/Workshops/Seminars

- Resource Person: United Nations World Wildlife Day Clebration, organized by the Department of Ecotourism, Recreation and Hospitality in collaboration with Wildlife Society of Ghana at the University of Energy and Natural Resources, March 3, 2017

YAW BOAKYE AGYEMAN

Research Activities / Interests

- Recreational Studies
- Ecotourism management
- Ecotourism and rural livelihood development

Publication

- Eagles, P. F. J. & **Agyeman, Y. B.** (Eds.). (2011). *Ecotourism destination planning guidelines.* Department of Recreation and Leisure Studies, University of Waterloo, Canada.
- Eagles, P. F. J. & Agyeman, Y. B. (2011). Ecotourism destination planning guidelines. Department of Recreation and Leisure Studies, University of Waterloo, Canada.

JAMES AGYEI-OHEMENG

Research interests

- Ghana‟s Wildlife Mystery
- Opportunities in protecting bat colonies
- Charcoal trade

Recent Publication(s)

- **Ohemeng, J. A.,**Nyantakyiwaa, B., G. and Sedegah, D. (2018). *Ecotourism potentials of Bui national Park, Ghana,* International Journal of Interdisciplinary Research and Innovations ISSN 2348-1226 (online) Vol. 6, Issue 2, pp: (114-125).

- **Ohemeng**, **J. A.,**Danquah E, and Adu, Y. B. (2017). Diversity of birds in Mole National Park, Damongo, Ghana. Journal of Natural Science Research, ISSN 2224-3186 (Paper) ISSN 2225-0921 (Online) Vol.7, No.12.

- **Ohemeng, J. A.,** Aba T. M. and Issifu, A. (2017). Water and Sanitation in Rural Communities: The Role of Women in the BrongAhafo Region, Ghana, DOI10.24940/ijird/2017/v6/i8/AUG17094, ISSN 2278-021

OLIVIA NAA AYORKOR TETTEH

Research interests

- Food science and safety

Recent Publications

- Sarkodie, N. A.; Bempong, E. K.; Tetteh, O. N. A.; Saaka, A. C. and Moses, G. K. (2014). Assessing the Level of Hygienic Practices among Street Food Vendors in Sunyani Township. Pakistan Journal of Nutrition; Vol. 13 Issue 10, p610

SAMPSON WIREKO-GYEBI

Recent Publication(s)

- **Wireko-Gyebi, S**., Adu-Frimpong, G. K., &Amepteh, R. S. (2017). Work-related stress: Coping strategies of frontline hotel employees in Ghana. Anatolia: *An International Journal of Tourism and Hospitality Research*,DOI: 10.1080/13032917.2017.1289965

- **Wireko-Gyebi, S**., &Ametepeh, R. S. (2016). Influence of socio-demographic characteristics and occupational attributes on work-related stress among frontline hotel employees in the Kumasi metropolis. *African Journal of Hospitality, Tourism and Leisure, 5*(2), 1-16

DEPARTMENT OF ENTREPRENEURSHIP & BUS. SCIENCES

The Department of Entrepreneurship and Business Sciences is one of the Departments in the School of Natural Resources. It was established in August, 2016. The Department seeks to develop students‟ analytical, technical and entrepreneurial skills to take optimal socio-economic decisions and conduct research. The department offers a four year programme leading to the award of BSc. Resource Enterprise and Entrepreneurship.

The Department has initiated plans to mount the following programmes for the 2018/2019 academic Year:

- Top-up programme for HND and other Diploma Holders
- Certificate in Entrepreneurship

DEPARTMENTAL RESEARCH FOCUS

The Department has initiated team research projects where each member is required to contribute to research in various specialties in the Department. The areas of focus are:

- Entrepreneurship and small enterprise development
- Entrepreneurial Intention among Tertiary students
- Small Business Management
- Revenue Mobilisation of District Assemblies
- Creativity and Innovation

STAFF DEVELOPMENT

One Senior Member is pursuing PhD in Management and Commerce (Entrepreneurship option). The Department, during the period under review, recruited a number of staff to complement teaching in the areas of marketing, economics and entrepreneurship. The new staff are expected to assume duty at the beginning of the 2018/2019 academic year.

TEACHING STAFF

Name	Qualification	Designation	Areas of Specialization
Reginald Djimatey	MBA, BA	Ag. HoD /Lecturer	Entrepreneurial Education/Small Business financing/ Creativity & Entrepreneurship
Daniel Berko	MBA, B.Com	Lecturer	Finance/Small Business Management/ Micro-finance
Paul Hammond	MBA, B.Ed, ICAG	Lecturer	Accounting/Entrepreneurial Finance/Taxation

EGINALD DJIMATEY

Research interests

- Creativity and entreprenuership
- Small business financing
- Entrepreneurial Education

Recent Publication(s)

- Dick-Sagoe,C .and Djimatey R. (2015), The Structure of District Assemblies‟ Finances: The case of Abura-Asebu-Kwamankese District in the Central Region of Ghana

Outreach / Extension Services

- Vice President, UTAG-UENR Branch
- Chairman, Greena FM Board

DANIEL BERKO

Research Activities / Interest

- Small Business Management
- Micro-Finance Enterprises and Sustainable Development
- Organisational Behaviour

Outreach / Extension Services

- Departmental Representative to School / Academic Board

PAUL HAMMOND

Research Activities / Interest

- Entrepreneurial Finance
- Taxation
- Small Business Development

Outreach / Extension Services

- Departmental Examination Officer

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

The Department of Environmental Management (DEM) is under the School of Natural Resources. The mission of DEM is to build competence and promote teaching, research and outreach programmes that address critical issues in the area of land reclamation and restoration practices, fire and disaster management, sustainable management of environment, water and mineral resources.

ACTIVITIES OVER THE PAST YEAR

During the year under review, DEM in collaboration with EORIC and University of Applied Forest Sciences – Germany, engaged in Exchange Visiting Scholar Programme dubbed: Learning From Each Other: Developing Together (Miteinanderforschen, voneinanderlernen: Austausch in Forschung und Lehrezwischen der UENR in Ghana und der HFR in Baden Württemberg).

DEM has also benefited from an Exchange Visiting Scholar Programme aimed at training experts in the area of Carbon Sequestration Monitoring. This institutional collaboration involves the Department, EORIC and Global Change Research Institute (Czech Globe), University of Mendel, Brno (Czech Republic). One of our faculty members, Mr. Thomas Adjei is currently benefiting from this programme.

DEM is collaborating with the Department of Fisheries & Water Resources and EORIC in developing a Postgraduate Programme [PhD/ MPhil/ Professional MSc] in Water, Environment and Sustainability, to be known as The WES Programme. This graduate programme is being developed in consultation with the Ghana Water Company Ltd. and Community Water and Sanitation Agency. DEM is also collaborating with Ghana National Fire Service (Brong Ahafo Regional Headquarters) in developing a Postgraduate Programme in Disaster Management and Emergency Response. A concept paper has been developed and consultations are on-going.

The the following constitute the membersof staff of the Department. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialisation
Dr. Fred Owusu - Ansah	PhD (SUNY-ESF, USA) MPhil (UG) BSc. (UG)	Lecturer	Environmental Mgt and Policy; Water and Wetland Resources Mgt; Risk Perception, Entomology
Mr. Paul K. Nsiah	MSc., BSc (KNUST)	Lecturer	Environmental Resources Mgt; Natural Resource Mgt.
Dr. David Anaafo	PhD (Australia) M.Sc.(Dortmund/ KNUST) B.Sc (KNUST)	Lecturer/HoD	Regional Development; Planning and Management
Dr. Mary Antwi	PhD (KNUST), MSc (Casablanca) BSc (KNUST)	Lecturer	Soil Science; GIS and Land Management; Geodetic Engineering
Mr. Benjamin O. Carlis-Paittoo	MSc (KNUST) MA, MSc (UCC)	Assistant Lecturer	Public Health; Fire Science; Disaster Mgt Forensic Audit
Mr. Thomas Agyei	MSc. (Finland) B.Ed (UEW)	Assistant Lecturer	Environmental Biology; Biological Sciences
Mr. Alex Amerh Agbeshie	M.Phil (KNUST) B.Sc (UDS)	Lecturer	Soil Science; Agronomy; Agriculture Technology

DR. FRED OWUSU ANSAH

Research Activities/Interests

- Mining and agriculture; Municipal solid waste management and climate change; developing and analysing policies in relation to mineral resources, agriculture, environment, water/wetland resources, solid waste, energy and climate change; Risk perception, assessment and communication.

Recent Publication(s)

- Owusu-Ansah, F. and Smardon, R.C. (2015). Mining and Agriculture in Ghana: A Contested Terrain. Int. J. Environmental and Sustainable Development, Vol.14, No. 4, 371-397.
- Derkyi, M., Awuah, E., Obeng-Ofori, D., Derkyi, S. A., and Owusu-Ansah, F. (2014). Climate Change and its Impact in Africa: the Role of Science and Engineering for combat, African Regional Conference Technical Proceedings, OWSD/UENR: Sunyani, Ghana. 942p

Outreach Programmes/ Extension Services

- Technical Editor, Journal of Energy and Natural Resource Management (JENRM), University of Energy and Natural Resources (UENR), Sunyani.

- Member, Editorial and Advisory Board, Current World Environment (An International Research Journal of Environmental Science)

- Reviewer, Sage Open Publications, USA. May, 2014:

DR. DAVID ANAAFO

Research Activities/ Interests

- Sustainable Propertyand Pro-poor Land Policy
- Urban Planning, City Governance and Post Disaster Recovery

Recent Publications

- Anaafo, D., G. A. Akolgo (2018). The role of urban agriculture in climate change mitigation and adaptation in Ghanaian cities. JENRM, Vol. 1, 22-28.
- Anaafo, D (2017). Contested Pastures: State land reform policies, community dynamics and pastoralism in the Nkoranza South Municipality, Ghana. Nature and Faune,31(2), 52-55

- Anaafo, D., & Inkoom, D. K. B. (2015). Land Governance and Decentralised Physical Planning in mid-Sized Cities in Ghana: a Case Study of the Nkoranza South Municipality. Urban Forum (pp. 1-19). Springer Netherlands.

Outreach Programmes / Extension Services

- Chairman, Research and Technical Committee, Department of Environmental Management, August 2016
- Co-opted Member & Abstracts Coordinator, Local Organising Committee, International Conference on Climate Change and Sustainable Development in Africa, Since January, 2017

DR MARY ANTWI

Research Activities / Interests

- GIS and remote sensing technologies / Geospatial analysis
- Integrated soil fertility management
- Land management systems

Publication(s)

- Antwi, M., Duker, A. A., Fosu, M., and Abaidoo, R. C. (2018). Using geographic information systems to assess the distribution of major soil nutrient contents in the Northern Region of Ghana. Journal of Energy and Natural Resource Management, ICCCSDA, 2017. Vol 1, https://doi.org/10.26796/jenrm.v1i1%20SPECIAL.84
- M. Antwi, A. A. Duker, M. Fosu and R. C. Abaidoo. (2017). Simulation of major soil nutrients requirement for maize production using the QUEFTS model in the Northern region of Ghana. Direct Research Journal of Agriculture and Food Science, Vol 5 (3).
- M. Antwi, A. A. Duker, M. Fosu and R. C. Abaidoo. (2016). Geospatial approach to study the spatial distribution of major soil nutrients in the Northern region of Ghana. Cogent Geoscience, 2: 1201906.

Outreach Programmes / Extension Services

- Member, Research and Technical Committee, Department of Environmental Management
- Facilitator, Maiden UENR Science Festival (January, 2017)

MR. ALEX AMERH AGBESHIE

Research Activities / Interests

- Quantifying the effect of Soil Pollution on the functioning of soil, plant and water systems.
- Nutrient cycling on reclaimed lands for long term soil sustainability and environmental protection.
- Nitrogen dynamic of agricultural, forest and reclaimed soils.

Recent Publications

- Agbeshie, A. A., Logah, V. and Opoku, A. (2017). Impact of poultry manure on soil mineral nitrogen variations in a compacted soil. Archives of Agronomy and Soil Science.

Outreach Programmes / Extension Services

- Coordinator: Weekly Seminar Top-Up Students (SNAR).
- Member: Northern Africa Regional Meeting (NARM) 2017

MR. AUSTIN ASARE

Research Activities / Interests

- Land management, surveying and mapping
- Silviculture , Forest Management and Inventory
- Above and Below Ground Carbon Assessment

Recent Publications

- Prempeh, N. O Asamoah, E & Asare, A (2018). Assessing the FloristicDiversity and Conservation Status of Remnant Forest of WildlifeSanctuary, Ghana, usingGeostatistics and GeneticHeat Index. Global Journal of Science, Volume 18 Issue1

MR. JOSEPH ASAKO AZUMYARN

Research Activities / Interests

- Developing a compressive emergency plan for the management of hazardous materials Disasters.
- Fire dynamics and effective fire fighting in two different riparian savannah zones of Ghana; tankwidi and kogyae riparian reserves

MR. THOMAS AGYEI

Research Activities / interests

- Effect of climate change on biodiversity
- Effect of phytotoxic ground-level ozone on emission rate of biogenic volatile organic compounds
- Emissions of nitrous oxide and methane from forest trees

Publication(s)

- Agyei, T. (2013). Methods to identify and detect microbial contaminants in drinking water. In Heinonen-Tanksi, H. (Ed.), safe drinking water in all areas: Publication series of Department of Environmental Science, University of Eastern Finland (100-109). Kuopio: University of Eastern Finland.

Outreach Programmes / Extension Services

- Member, Local Organising Committee on AfriGEOSS Symposium, 13-15 June 2017, UENR/EORIC
- Member, Committee on Sustainable Development for Environmental Management Department

MR. BENJAMIN OSAFO CARLIS - PAITTOO

Research Activities / Interests

- Fire Science
- Disaster Management
- Forensic Audit

Recent Publication(s)

- Carlis-Paittoo B. O.,Mensah Anyan Eric (2018) Manual of Occupational Health and Safety Management Practice:;Potters Publications and Press,
- Carlis-Paittoo Benjamin (2011) Environmental Management in the Oil & Gas Industry – Ghana Offshore Magazine, Issue 4 – August 2011.
- Carlis- Paittoo (2011) Environmental Management in the Oil & Gas Industry – Ghana Offshore Magazine, Issue 4 – August 2011

DEPARTMENT OF FISHERIES AND WATER RESOURCES

Introduction

The Department of Fisheries and Water Resources currently offers a BSc. Natural Resources degree programme specializing in Fisheries and Aquaculture. The emphasis of the programme is on aquaculture; however, other aspects of fisheries courses are well catered for, thereby making our students very versatile in both capture fisheries and aquaculture sectors.

This programme aims at creating the enabling environment for students to acquire in-depth knowledge and skills for fish culture and sustainable management of the fishery resources for the benefit of the country. In addition, it will provide sound scientific and technological basis for fisheries policies and management strategies to be integrated into national goals.

ACTIVITIES OVER THE PAST YEAR

During the 2016/2017 academic year, the Department, in collaboration with the Department of Fisheries and Aquatic Sciences, University of Cape Coast organized a five-day workshop on fisheries management for Marine Fisherman at Sasakawa Centre, University of Cape Coast.

The Department, under the auspices of CIRCLE Programme organized a one-day training workshop on best practices in fish farming in relation to climate change for fish farmers in the Brong-Ahafo Region. Currently the Department, in collaboration with Profag Ltd., an agribusiness entity in Sunyani in the Brong Ahafo Region, is running a Demonstration Farm, which serves as a facility for hands-on practice for undergraduate students in aquaculture.

FUTURE PLANS

The Department has initiated plans for the introduction of a Diploma programme in fisheries and aquaculture and a Top-up BSc degree programme in Natural Resources Management (Fisheries and Aquaculture option) for Diploma holders.

TEACHING STAFF

The following are the Teaching Staff of the Department

Name	Qualification	Designation	Area of Specialisation
Mr. George Intsiful	BSc, MPhil, Dip Ed. (Cape Coast)	Lecturer	Marine Ecology, Fishery Biology, Aquaculture,
Dr. Peter Osam Sanful	B.Sc (KNUST), PhD (KNUST)	Lecturer	Limnology, Fish Ecology, Conservation Ecology
Mr. Amos Asase	MPhil (UG), BSc (UG)	Assistant Lecturer	Capture and culture fisheries management
Asiedu Berchie	PhD (UG)	Senior Lecturer/HoD	

MR. GEORGE INTSIFUL

Research Activities / Interests

Coastal Marine Ecology, Aquaculture, Aquaculture Engineering, Phytoremediation, Freshwater Ecology

Publication

- Intsiful, G., Nunoo, F. K. E., Asiedu, B., and Asase, A. (2017). Introduction to Fisheries. In: Centre for Coastal Management, Training manual on fisheries management. Centre for Coastal Management, Cape Coast. 95 pp.

- Facilitator: Testing of Training manual on fisheries management organized by USAID/Department of Fisheries and Aquatic Sciences UCC at Sasakawa Centre, University of Cape Coast, 12-16th December, 2016.l

DR. BERCHIE ASIEDU

Research Activities / Interests

- Fisheries, aquaculture, fisheries management, fisheries & aquaculture economics, climate change
- Aquaculture development & policy, fisheries socio-economics, fish processing & quality control
- Value chain analysis, fish trade and marketing

Recent Publication(s)

- **Asiedu, B.,**Failler, P. and Beyens, Y. (2018). Ensuring food security: an analysis of the industrial smoking fishery sector of Ghana. *Agriculture & Food Security,* 7:38, 1-11, DOI: 10.1186/s40066-018-0187-z

- Beyens, Y., Failler, P. and **Asiedu, B**. (2018). Institutional challenges and constraints for Ghana in exporting fishery products to the European Union, *Food Reviews International*, 34:3, 265-289, DOI: 10.1080/87559129.2017.1289386.

- Iyiola, A.O., **Asiedu, B.** and Kolawole' A.S. (2018). Assessment of water quality and bacteriological levels in Nile tilapia (*Oreochromisniloticus)* of Aiba Reservoir, Nigeria, West Africa. *TROPICULTURA, 3879*

Conferences / Workshops / Seminars

- 4th International Conference on Fisheries and Aquaculture 2017. Paper presented: "Aquaculture in troubled climate: Farmers'' perception of climate change and their adaptation strategies in Ghana, West Africa". February 20-22, 2017. San Antonio, USA.

- CIRCLE Cohort 2 Post-Fellowship Workshop (AAS, Nairobi-Kenya). 6th-8th Feb., 2017

- USAID-Ghana / UCC / DFAS Fisheries and Coastal Management Capacity Building Support Project: Attended the Lunch of FishCom Ghana. 26th January, 2017, Legon, Ghana.

Outreach Programmes / Extension Services

- Reviewer: West African Journal of Applied Ecology, Current Agriculture Research Journal, Research Journal of Environmental Science.

DR. PETER O. SANFUL

Research Activities / Interests

- Stream and river ecology, Fish ecology in streams
- Aquaculture and water quality, Climate change resilience in aquatic systems
- Zooplankton ecology

Publications

- Sanful P, O,Otu MK, Kling H, Hecky RE. 2017. Occurrence and seasonal dynamics of metalimnetic Deep Chlorophyll Maximum (DCM) in a stratified meromictic tropical lake and its implications for zooplankton community distribution. International Review of Hydrobiology. 102: 135-150

- Sanful P,O,Aikins S & Hecky RE. (2017) Depth distribution of zooplankton in relation to limnological gradients under different stratification and interannual regimes in a deep, tropical crater lake. Annales de Limnologie 53: 293–307.

- Sanful, P.O., S. Aikins, E. Frempong., R.I Hall and R.E Hecky (2017) Temporal dynamics and relationship between climate, limnological variables and zooplankton composition in climate-sensitive Lake Bosumtwi, African Journal of Aquatic Science.42: 21–33:

Conferences/Workshops/Seminars

- Resource person: Aquaculture adaptation to climate change – CIRCLE Workshop, UENR, March 2017

Outreach Programmes/Extension Services

- Reviewer for International Review of Hydrobiology
- Reviewer for International Journal of Fisheries and Aquaculture

MR. AMOS ASASE

Research Activities/ Interests

Research Interests:

- Fish farming principles and practices
- Capture fisheries management
- Biodiversity informatics

Recent Publication(s)

- Asase, A. (2017). Fisheries Management-Need, Process and Data Requirements. in F.K.E. Nunoo (ed.). Training Manual on Fisheries Management. pp. 26-41. Centre for Coastal Management, University of Cape Coast, Ghana. ISBN: 978-9988-2-5134-5.
- Nunoo, F.K.E. &Asase, A. (2017). Comparative growth performance of Oreochromisniloticus (Linnaeus, 1758) in cages at different stocking densities. International Journal of Fisheries and Aquatic Studies, 5, 279-283.
- Asase, A. (2017). Fisheries Management-Scope and Approaches. In: F.K.E. Nunoo (ed.). Training Manual on Fisheries Management. pp. 43-58. Centre for Coastal Management, University of Cape Coast, Ghana. ISBN: 978-9988-2-5134-5.

Conferences/workshops/seminars:

- Tutor, (Modules 2 and 3). Fisheries Management Short Course organized by Centre for Coastal Management, University of Cape Coast. Samrit Hotel, Cape Coast (20-24th March, 2017).
- Trainer (Best sampling practices in fish farming). Climate Change Research Uptake Training Workshop for Fish Farmers and Practitioners organized by Climate Impact Research Capacity and Leadership Enhancement (CIRCLE). University of Energy and Natural Resources Auditorium, Sunyani (16th March, 2017).

Outreach/Extension Services

- Member, Industrial Attachment Committee, School of Natural Resources, UENR. 2015/2016 academic year to present.
- Co-ordinator, Field trips and attachments, Department of Fisheries and Water Resources, UENR, 2015/2016 academic year to present.

DEPARTMENT OF FOREST SCIENCE

The Department of Forest Science is one of the Departments of the School of Natural Resources. It runs undergraduate programmes in Social Forestry and Forest Resources Management and Master of Philosophy/PhD in Social Forestry and Environmental Governance. The Department also supports the School in teaching undergraduate courses in General Land Surveying, Ecology, Biodiversity conservation, Rural Sociology and Extension, Natural Resource Inventory, and Natural Resource Economics.

The Department seeks to empower human resource with requisite knowledge and skills in natural resource management and social forestry to improve livelihoods of forest fringe communities and conservation forest resources. It also trains foresters, to understand the ecology of the nation‟s forest resources, to help restore our forests.

NURSERY PROJECT

The School runs a nursery project which has of a number of plant species which are made up of indigenous tree species and ornamental plants. It also serves as a reserve for maintaining plants security for research and practical purposes for students.

TEACHING STAFF

There are three Senior Lecturers, two Lecturers, one Assistant Lecturer, one Senior Assistant Curator and one Senior Technician in the Department. Their names and qualifications are given in the Table below:

Name	Qualification	Designation	Area of Specialisation
Mr. Isaac K. Abebrese	MPhil (KNUST) Bsc (KNUST)	Senior Lecturer	Silviculture, Forest Mgt & Ecology, Forest Policy
Dr. Simon Abugre	PhD, MSc, ; BSc (KNSUT)	Senior Lecturer	Agroforestry, Agric. Extension.
Dr. (Mrs.) Mercy A. Derkyi	PhD (UvA-AISSR), The Netherlands, MSc. &BSc. (KNUST)	Senior Lecturer	Agroforestry; Natural Resource Governance
Mr. Alexander Baffour Afrifa	MSc. & BSc. (KNUST)	Senior Lecturer / HoD	Devt Policy & Planning; Forest Management
Daniel Akoto Sarfo	MSc. & BSc. (KNUST)	Senior Lecturer	Forest Management
Mr. Lawrence B. Antwi (on Part-time)	MSc. (U.K.), BSc. Dip. (KNUST)	Adjunct Lecturer	Forest Management
Mrs. N. Opuni-Frimpong	MSc. (Michigan Tech) B.A. (KNUST)	Lecturer	Forestry, Policy & Law
Mr. Akwasi Sarpong	BSc.,Diploma (KNUST)	Senior Technician	Forest Management; Land Reclamation & Rehabilitation
Mr. Edward Y. Kander	B.Ed (UEW)	Asst. Snr. Curator	Agriculture

MR. I K. ABEBRESE

Recent Publications

- N Agyeman, V.K., Kyere, B., Abebrese, I., and Veenendaal, E.M. Broussonetiapapyrifera (L.) Vent. Invasion of habitats in degraded forest landscape in Ghana: a menace or contributor to natural regeneration? (In press)
- Akoto, S.D; Abebrese, I. K, Partey, S.T and M.A.Appiah (2016). Earthern storage influence on sprouting of Terminalia ivorensis (A.CHEV) stem cuttings. Journal of Natural Sciences Research, Vol 6 No.10 107-114

DR. MRS. MERCY AFUA ADUTWUMWAA DERKYI

Research interest

- Linkage of social-natural-governing systems.

Recent Publication(s)

- Derkyi, M, Koomson, D., Adinkra F.L. and Baidoo, A (2018) Climate-Smart Agriculture Adaptation Strategies for Farmers in the Transition Zone of Ghana: Lessons from theSavannah Zone. Centre for Climate Change and Gender Studies, University of Energy and Natural Resources, Sunyani, Ghana.p.50 ISBN:978-9988-2-7759-8
- Derkyi, M, Adiku, SGK and D. Koomson (2018) Comparing Farmers' perception of climate change and adaptation strategies in the transition and savannah zones of Ghana. ICCCSDA 2017 Special Issue-Agriculture, Natural Resources and Renewable Energy .JENRM Vol. 1, 43-50.
- Derkyi, M, Adiku SGK, Nelson V et al. (2018) Smallholder farmers' perception of climatic and socio-economic factors influencing livelihoods in the transition zone of Ghana AAS Open Research
- Nyasimi, M., Ayanlade, A., Mungai, C., Derkyi, M.,& Jegede, M. O. (2018) Inclusion of Gender in Africa's Climate Change Policies and Strategies. In: Handbook

of Climate Change Communication: Vol. 1.

.https://link.springer.com/chapter/10.1007/978-3-319- 69838-0_11

MR. ALEXANDER BAFFOUR AFRIFA

Research Interests:

- Non-Timber Forest Products Development as Livelihood Strategies for the Forest Fringe Communities,
- Wildfire Management and Rural Poverty Reduction.

Publication(s)

- Afrifa, A.B. and Adomako, A.A. (2014).Assessing the Growth Performance of Terminalia superba, Ceiba pentandra, Pycnanthus angolensis, and Heritiera utilis In a mixed stand at the Fure River Forest Reserve, Asian Academic Research Journal of Social Sciences & Humanities, 1(22), 536-546.
- Afrifa, A.B. and Essel A. (2014).Integrating Scientific and Indigenous Strategies of preventing Wildfire: A Case Study of Zukpiri and two other Communities in the Nadowli West District of Ghana, Asia Academic Research Journal of Social Sciences & Humanities, 1(21), 201-217.
- Afrifa, A.B., Akoto Sarfo, D., Ghartey, K.K.F., and Ameludze, N.M., (2013). Assessment of Star Rating Species at Mamiri Forest Reserve in Ghana. Agricultural Science Research Journals, 3(2), 62-66,

DR. SIMON ABUGRE

Publication(s)

- **Abugre, S.** Gyamfi, J. and Kumako, M. (2017*) Short-term landscape restoration through optimal management of stockpiled topsoil on plant diversity and growth of tree species.topsoil stockpile*. International Journal of forestry and Horticulture 3: 20 – 26.
- Abugre, S., Twum-Ampofo, K. and Oti-Boateng, C. (2015). Compatibility of Jatropha curca with maize in a hedgerow intercropping system on ferric acrisols. Agriculture, Forestry, Fisheries 4(3): 109 – 116.

- Abugre, S., Apetorgbor, M. M., Abebrese, I. K., Apertorgbor, A. K., Amoako, P. K. (2014). The effect of Triplochiton scleroxylon aqueous extract on initial growth of some vegetable crops in Ghana. JENRM 1(1): 93 – 98.

LAWRENCE B. ANTWI

Research Interests

- Project management, forest resources management
- Wildfire management

MR. DANIEL AKOTO SARFO

Research Interests

- Ecological dynamics of bamboo agroforestry in Ghana; an exploratory study (innovative and multifunctional production of bamboo biomass in a bamboo agroforestry- INBAR project).
- Allometric modelling of Tectona grandis for diameter at breadst height and crown collar diameter estimations
- Macro-fauna habitation in soils under Bambusa vulgaris and other multipurpose agroforestry tree species.

Recent Publication(s)

- **Akoto et al, (2017)**. *Stakeholders' perception on bamboo use for the housing industry in* Ghana. JENR. University of Energy and natural Resources, Sunyani
- **Akoto et al, (2017).***Non-timber forest products marketing in the Sunyani municipality*. JENR. University of Energy and Natural Resources, Sunyani

- **Akoto et al,** (2017). *Socioeconomic indicators of bamboo use for agroforestry development in the dry semi-deciduous forest zone of Ghana. Sustainability MDPI*. June-2018 Special Issue.
- Akoto, S.D; Abebrese, I.K; Partey, S.T and M.A.Appiah (2016). Earthern storage influence on sprouting of Terminalia ivorensis (A.CHEV) stem cuttings. Journal of Natural Sciences Research, Vol 6 No.10 107-114

MRS YEBOAA OPUNI-FRIMPONG

Research Activities / Interests

- Social Forestry, Environmental law
- Forest Policy and Urban Forestry

Publication(s)

- **Opuni-Frimpong, N.Y.** (2018) *E□ects of urbanisation on Livelihoods of peri-Urban Communities in Sunyani Metropolis.* ICCCSDA 2017 Special Issue: Agriculture and Natural Resources Special Vol. 1, 56-62, JENRM
- Opuni-Frimpong N.Y. and Opuni-Frimpong, E. (2014) Urbanization of Ghana; effects on urban forests and peri-urban community livelihoods, Proceedings of IUFRO 2014 Conference, Utah

Conferences / Workshops / Seminars

- International conference on climate change and sustainable development. Sunyani, Ghana, 25th -28thJuly 2017.
- DAAD/Women Advancement Forum, International Exchanges Research, and Academia. KNUST, Kumasi. 28th -30thMarch 2017.
- Genetic/DNA timber tracking workshop. Forestry Research Institute of Ghana. 28th November -1stDecember 2016

Outreach Programmes / Extension Services

- Member -International Society of Arboriculture

DEPARTMENT OF LANGUAGES AND GENERAL STUDIES

The Department was set up in 2012 as an Acadmic Section to service other Departments in general university courses such as Communication Skills, African Studies, Science and Technology among others. In 2013, French was introduced to make UENR‟s students bilingual to enable them compete for jobs in Francophone countries.

In 2015, the Languages and General Studies Section was elevated to a Departmental Status with the following Sections by the University Council:

- French Section (Français Langue Etrangère/ Français sur Objectifs Spécifiques,
- English Section (Critical Thinking/Analytical Reading and Reasoning/ Communication Skills), and
- General Studies Section that offers Ghanaian and African Studies.

Currently, French courses are compulsory for all students from level 100 to 300. The University is the first and the only Ghanaian university whose students learn French for five semesters out of the eight they spend on campus. This, therefore, prepare students of UENR to participate in a „dialogue d‟expertise‟ programme (partenariat AUF/Institut Français). In the years ahead, the Department intends to restructure its French curriculum to meet international standards and focused on the teaching and learning of French for Specific Purposes.

ACTIVITIES OVER THE PAST YEARS

During the year under consideration, some members of the Department attended the French Embassy‟s capacity building /PhD workshop for teachers of French and students who would like to go on industrial attachment in francophone countries.

- UNER signed an MoU with ENIM France for Academic Exchange in Masters Programme / Industrial attachment;

- The Department initiated discussions between UENR and Lomé University for an academic exchange programme;
- UENR received accreditation from Chamber of Commerce and Industry, Paris (CCIP) to prepare candidates for the French for Professional Courses Examinations
- The French Embassy donated ten (10) computers and accessories to the la Maison Française de l'UENR

To help promote language study, the Languages and General Studies Department of UENR offers self-learning lessons on Greena 95.3 FM in English as well as in French. The Department of Languages and General Studies, has developed a BA Professional French Programme which will be mounted in the coming academic year.

FUTURE PLANS

The Department has presented a proposal to the Embassy of France in Accra. The proposal dwells on a 3-year plan for the sustainability and development of the French Programme in UENR,

TEACHING STAFF

The following are the staff of the Department.

Name	Qualification	Designation	Area of Specialisation
Phyllis Bernice Opare	Ph.D (Old Dominion) MSc(Clarion) B.Ed (UEW)	Lecturer/HoD	Research development; Scientific writing; Grant writing; Resource mobilization
Magdalene Mensah	PhD MA, BA (KNUST) Cert „A" (Somanya).	Lecturer	French for Comm Professional French (FOS/FLE)

Richard Baffour Okyere	MPhil, BA (KNUST)	Lecturer	French FOS/FLE
Charity Odumale Roberts	MPhil. B.Ed(UEW)	Lecturer	Gender and Leadership Training
Richard Kyere Boateng	MPhil. B. Ed.	Assistant Lecturer	Development Studies Gender, Environmental Studies
Cosmas Rai Amenorvi	MPhil. English BA English.	Assistant Lecturer	Semantics, Phonetics Sociolinguistics, and Phonology, Literature.
Gertrude YIdanpoa Grumah	MSc. BA.(UDS)	Assistant Lecturer	Dev. Comm., Gender Studies, Phonetics
Max Amuzu	Certificate in Professional French	Technical Instructor	French FOS/FLE
Justin Oduro Adinkra	MPhil, B. Ed (UEW)	Assistant Lecturer	French FOS/FLE
Tahiru Djato	MPhil, BA French	Assistant Lecturer	French FOS/FLE
Daniel	MPhil. BA	Assistant	French
Dapileh	BA French	Lecturer	FOS/FLE

PHYLIS BERNICE OPARE

Research Activities / Interests

- Strengthening Innovations and Technology Dissemination for Sustainable Development in Cereals, Cocoa and Coffee Value Chains in Western and Eastern Africa
- Building small-holder farmer capacity for Climate Smart Agriculture and resilience
- Female participation, persistence and success in Science, Technology, Engineering, and Mathematics (STEM)

Recent Publication(s)

- Akintonde, J.O., Opare, P. B. (2016). Emergence of use of climate change adaptation strategies among arable crop farmers of Oyo and Ekiti States, Nigeria. Advances in Climate Change Research.(Submitted, awaiting publication)
- Opare, P. B. (2016). Analogue tools as an important first step in smallholder farmer capacity building. Kampala, Uganda: 11th International Conference of the African Association of Remote sensing of the Environment.
- Opare, P. B. (2016). Men‟s work, women‟s work: using a daily activity clock to discover gendered responsibilities in order to facilitate capacity building in climate smart agriculture. Kampala, Uganda: National Agricultural Research Organisation - Makerere University Joint Agricultural Dissemination Conference.

Conferences / Workshops / Seminars

- SAG-SEED Replicator Workshop, Accra Ghana, 29th March, 2017
- Attended and presented at the 11th International Conference of the African Association of Remote sensing of the Environment. Kampala, Uganda, November 2016.
- Attended and presented at the National Agricultural Research Organisation / Makerere University Joint Agricultural Dissemination Conference. Kampala, Uganda, November 2016.

Outreach Programmes / Extension Services

- Resource person for Sunyani Diocese of the Anglican Church first girl‟s camp – 2017.
- Resource person and facilitator for Brong Ahafo local chapter of OWSD Career workshop.
- Farmer Field School facilitator for climate smart agriculture.

MAGDALENE MENSAH

Research Activities / Interests

- A literary and sociocultural analysis of Nana Yaa Asantewaa‟s epic story.
- „Nana Yaa Asantewaa – dimensions épique et socio-culturelle d‟une heroine traditionnelle asante‟.
- Didactics: The perception of the teaching and learning of French for Communication / Professional French in UENR – the way forward.

Conferences / Workshops / Seminars

- International Conference on Engineering: Applied Sciences and System. 18-21 April, 2017:
- National Seminar on Status and Modalities for the Teaching of French in Scientific and Technical Universities, organized by the French Embassy and the Ministry of Education, Ghana, at Alliance Française d‟Accra and Urbano Hotel,1-4 November, 2016-

MR RICHARD BAFFOUR OKYERE

Research Activities / Interests

- De la littérature vers la diplomatie: études d‟œuvres sélectionnés et des discours diplomatiques de Ferdinand Oyono et de Paul Claudel.
- La fonction de la langue diplomatique dans l‟art de la communication vue par Ferdinand Oyono dans une vie de boy
- Quand le FOS remplace le FLE dans l‟enseignement de la langue française: le cas de UENR, Sunyani, Ghana

Conferences / Workshop / Seminars

- Training for DELF-DALF evaluation course A1 to B2 Alliance Francaise, Accra
- Training in FOS, Alliance Francaise, Accra
- Linguistics Association of Ghana Annual Conference

Outreach Programmes / Extension Services

- KNUST IDL (professional add-on seminar).
- Organizer: Final year seminar on CV writing / interview skills.
- Networking in the job market, business start-ups and funding, etc.

MRS CHARITY ODUMALE ROBERTS

Research Activities / Interests

- Gender, Stress, counseling culture, Indigenous People and Other developmental issues

Recent Publication(s)

- "Stress Coping Strategies among Ghanaian Women in Managerial Positions". European Scientific Journal May 2014 edition Vol. 10 (ISSN 1857-7881) pp. 205-211.

Conferences / Workshops / Seminars

- 2nd Annual Easter Forum, University of Cape Coast –June, 2016

Outreach Programmes / Extension Services

- Presentation on the uniqueness of a woman‟s body –March, 2016
- A talk on dress code and attitude towards work- March, 2017

MAX ORATIO AMUZU

Outreach Programmes / Extension Services

- Co-ordinator: Paris Chamber of Commerce Exams

JUSTIN ODURO ADINKRA

Research Activities / Interests

- Le discours d‟Aminata Sow Fall et l‟insertion sociale des jeunes : une lecture de Festins de la détresse.(Presented at the International Multi-disciplinary Conference for Postgraduate Students)
- Sony LabouTansi et la politique : une étude de la vie et demie.

Conferences / Workshops / Seminars

- Training workshop for senior members, January 26, 2017 at University of Energy and Natural Resources, Sunyani.

Outreach Programmes / Extension Services

- Academic Tutor: School of Natural Resources, Energy and Natural Resources, Sunyani, 2016-217.
- Co-ordinator of University of Energy and Natural Resources‟ French Club- 2016-2017.

RICHARD KYERE BOATENG

Research Activities / Interests

- Development Studies Issues, Gender and Development,
- Urban Waste Management and Environmental Policy Analysis,
- Development Research Methods and Techniques.

Recent Publication(s)

- Osei, R. D., Osei-Akoto, I. and Kyere-Boateng, R. (2013). "Farmer Training and Household Labour Use"Pentvars Business Journal Vol: 7 No.1, 2 & 3, January-September 2013.

Conferences / Workshops / Seminars

- Training workshop for Senior Members at the Auditorium University of Energy and Natural Resources, Sunyani. 26 January, 2017

Outreach Programmes / Extension Service

- Radio Panelist / Discussant on Socio-Economic and Environmental Issues in Berekum Community,

- Member of the Institute of Economic Affairs, Brong-Ahafo Regional Enforcement Body for General Election 2012

GERTRUDE Y. GRUMAH

Research Activities / Interests

- The use of ICT for teaching and learning in Public Senior High Schools in Ghana.

Outreach Programmes / Extension Services

- Secretary, Research Committee, Department of Languages and General Studies,
- Co-host ; The Pierian Spring of English, Greena FM,
- Resource Person, Women"s Plane: UENR, Topic: Career Development, Oct. 2016.

COSMAS RAI AMENORVI

Research Activities / Interests

- Make it Plain: Lexical Cohesion and literariness in Malcolm X "s "The Ballot or the Bullet"

- The Sociolinguistics of "I ''m Good" and „I ''m fine '': a case among UCC Student
- My Reflections: An anthology of 100 poems.

Publication(s)

- Abreh M. K. & Amenorvi, C.R. (2018). Foundations of Academic Writing: How to Produce Publishable Research Articles from Theses and Dissertations. InternationalJournal of Scientific and Education Research. Vol 2, No 1, pp 14-21
- Amenorvi, C.R. (2015) Bilingualism and Interference: A Case of Ellipsis among Some Coordinate Bilinguals. African Journal of Applied Research. Vol 2, No 2, pp 117-125.

Conferences / Workshops / Seminars

- Rapporteur; Language Documentation Seminar, Cape Coast. July 2017
- Seminar on Quality Assurance Practice in Higher Education, the Institute of Educational Planning and Administration, November 22nd, 2011.
- Seminars on the Teaching and Marking of Communication Skills: Department of Communication Studies, Univ. of Cape Coast. 2006-2015

Outreach Programmes / Extension Services

- Chairman, Research Committee, Department of Languages and General Studies.
- Host and Writer: The Pierian Spring of English, Greena FM.
- Member, UENR Admission‟s Committee / Admission‟s Campaign in the Volta Region fror UENR.
- Director, UENR Debate Society.
- Member Local Organizing Committee for hosting Ghana‟s University Debate Championship, 2017.

TAHIRU DJATO
Research Activities / Interests

- Le rôle de media dans l ''apprentissage du Français au Ghana.

CENTRE FOR CLIMATE CHANGE AND GENDER STUDIES (3CGS)

INTRODUCTION

The Centre for Climate Change and Gender Studies (3CGS), officially started operation on August 1, 2016 after the University Council approved its establishment. The Centre is a research, capacity building and policy advocacy Centre, focusing on issues bordering on climate change and sustainable development under overarching gender and intersectionality perspectives.

Overall objective

To strengthen research capacity and harness it in the service of policy making, planning, sustainable development in the area of climate change and gender, and its linkages with energy, agriculture, natural resources and technology. The objectives of 3CGS among other things are to:

- Promote inter and intra-disciplinary research in the University that keeps up with international research and developments trends through proposal development and strategic institutional collaborations in Ghana and abroad.
- Co-ordinate and promote research that contributes to sustainable development, especially in the area of climate change, gender, poverty reduction, population growth and other social issues.
- Develop a fundraising strategy document in securing research funds from national and international sources.
- Promote community outreach and advocacy on climate change and gender-related issues through existing and new networks

Activities carried out

The Centre during the year under review organised Statistical Analysis with SPSS training in March and November 2016. In all over 40 participants took part in the training. Similarly, a one week Research Methodology and Proposal Writing workshop was also organized by the Centre.

Conference

The Centre spearheaded the organisation of International Conference on Climate Change and Sustainable Development dubbed "Climate Change and Sustainable Development: Strengthening Africa‟s Adaptive Capacity" from 25-28 July, 2017.

Future Plans

In the coming year, the Centre intends to run the following courses:

- Short Course on Climate Change and Energy
- Short Course on Organizational conflict management, succession, planning and monitoring
- Short Course on Proposal Writing and Project Management



SCHOOL OF ENGINEERING

The School of Engineering presently consists of three Departments namely Department of Computer and Electrical Engineering; Department of Mechanical and Manufacturing; and Department of Energy and Environmental Engineering.

The School started with the Department of Energy and Environmental Engineering in 2012 and offered only one programme, Renewable Energy Engineering. In the following academic year, the School of Engineering expanded with two additional Departments; Computer and Electrical and Mechanical and Manufacturing Engineering. With this expansion, three new programmes were introduced namely; Electrical/Electronic Engineering, Mechanical Engineering, and Environment Engineering.

In the 2014/15 academic year, three additional programmes, Computer Engineering, Agricultural Engineering and Petroleum Engineering) were brought on board. The programme offered by each Department is shown in the Table 1 below.

Table: 1 Programmes under each Department.

	Name of Department	Programmes
1	Computer and Electrical	Computer Engineering Electrical/Electronic Engineering
2	Mechanical and Manufacturing	Mechanical Engineering, Agricultural Engineering
3	Energy and Environmental Engineering	Renewable Energy Engineering Environment Engineering, Petroleum Engineering.

STAFFING

The following are the staff at the School's office;

- Dr. Nana Sarfo Agyemang Derkyi – Dean
- Bernice Osei Twenewaa - Junior Assistant Registrar
- Diana Obeng (Ms.) – Senior Admin. Assistant
- Elsie Mark-Anthony – Senior Admin. Assistant

Students Statistics

The School population as at the end of the 2017/2018 academic year stands at 860 for the regular Students. The Departments student population as at the end of 2017/2018 academic year is as shown in Table 2.

Table 2: Number of Students in each Department

Item	Name of Department	Student Population		
		Females	Males	Total
1	Computer and Electrical	19	231	250
2	Mechanical and Manufacturing	14	193	207
3	Energy and Environmental Engineering	68	335	403

Postgraduate Programmes

The Department of Energy and Environmental Engineering started offering MSc/MPhil and PhD programmes in the 2015/2016 academic year. The programmes offered are Sustainable Energy Engineering; Environmental Engineering and Management.

DEPARTMENT OF COMPUTER AND ELECTRICAL ENGINEERING

The Department runs a BSc. in Electrical and Electronic Engineering and BSc. in Computer Engineering programme. The pioneers of the Electrical and Electronic Engineering programme are graduating this year, whilst the first batch of Computer Engineering programme are now in the final year. The total population of students in the Department now stands at 350. Academic staff numbers increased from two in 2013 to seven as of today.

The Department also runs a Top-up programme designed for HND Holders to acquire a BSc. Electrical/Electronic Engineering and it has been running for the past four years. The duration for the Top-up Programme is two and halve years.

Aims and Objectives:

The main aim of the Department of Computer and Electrical Engineering is to develop enterprising professionals who have an innovative disposition, the confidence and abilities to assume leadership roles in engineering, technology, business sectors and in the community. The programmes are designed to give the skills essential for graduate engineers to become immediately employable in the global competitive environment.

ACTIVITIES OVER THE PAST YEAR

The Department participated in the University 2017 2nd edition of the Science Festival with the following projects:

- Home Automation System
- Intelligent Home Security System
- Water Level Detection Simulator
- Electrical Power Inverter for domestic loads

FUTURE PLANS

- Enhancing the competencies of staff through systematic and continuous training for the successful implementation of our academic, research and extension programmes. All categories of staff will be encouraged and motivated to build their capacities through further training both locally and internationally.
- The Department in the near future, also intends to mount another degree programme in Telecommunication Engineering. During the year under review, a Diploma in Electrical and Electronic Engineering was mounted by the Department.

Teaching Staff

The following constitute the teaching staff of the Department. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialization
Nana Dr. K. Diawuo	PhD(Newcastle UK); MSc, BSc (KNUST)	Snr. Lecturer/ HoD	Semiconducting Devices, Linear Electronics, VLSI,
Kankam O. Adu	MSc (London)	Lecturer (on study leave)	Electronics
Mr. Samuel Osei Fobi	MEng (UK) BSc. (KNUST)	Assistant Lecturer	Electrical Machines/ Drives Control
Samuel T. Koduah	MPhil (Korea) BSc (KNUST)	Assistant Lecturer	Semiconductors & Nanotech.
Mr. Isaac Kofi Otchere	MSc. (UAE) BSc. (KNUST)	Assistant Lecturer	Electrical Power Quality Enhancement

Andrew Quansah	MSc, BSc (KNUST)	Assistant Lecturer	Microelectronics and Wireless Systems
Desmond O.i Ampofo	MPhil (KNUST), BSc (KNUST)	Assistant Lecturer	Electrical Power Engineering
Mr. Twum Nana Duah	MPhil (KNUST), BSc (KNUST)	Assistant Lecturer/ Part-time	Electrical Power System Eng./ Solar and Wind Energy

NANA DR. KWASI DIAWUO

Research Activities / Interests

- Spatial distribution of mobile antenna in a relatively low dense environment
- MIMO antenna system application in wireless radio networks

Recent Publication(s)

- Koffi Dotche, K. Diawuo and W. K. Ofosu (2018) "Adaptive Integrated Unit to User's Equipment for the Spectral and Energy Efficiency in Cognitive Networks" International Journal of Interdisciplinary Telecommunications and Networking (IJITN), Volume 10 Number 1.
- E. T. Tchao, K. A. P Agyekum and Kwasi Diawuo (2017) 'Techno-Economic Evaluation of Power Systems for off-Grid Telecommunications Infrastructure in Remote Locations in Ghana" Communications on Applied Electronics 7(7):22-27, October 2017
- Eric Tutu Tchao, Kwasi Diawuo and Willie K. Ofosu. (2017) "Mobile Telemedicine Implementation with WiMAX Technology: A Case Study of Ghana" Journal of Medical Systems ISSN 0148-5598 Volume 41 Number 1

Conferences / Workshops / Seminars

- Participant: Workshop on Nationally Appropriate mitigation Actions (NAMA) at Alisa Hotel, Accra on 22nd October, 2015

MR. SAMUEL TWENEBOAH-KODUAH

Research Activities / Interests

- Nanotechnology application for the provision of renewable clean energy
- Communication systems – Power usage of wireless sensor networks
- Microcontroller and Embedded systems and application

Conferences / Workshops / Seminars

- Participant: Control Automaton Processes, Measurement and Testing using LabView, March, 2016 Participant: Oracle Java Training, University of Ghana. Legon, 22nd February 2016

MR. DESMOND OKWABI AMPOFO

Research Activities / Interest

- Optimization of power system networks
- Investigation of penetration limits of Renewable Generation in electrical power distribution networks
- Power System Stability

Recent Publication(s)

- D.O. Ampofo, Amer Ai-Hinai, and M. S. El Moursi (2015). "Utilization of reactive power resources of distributed generation for voltage collapse prevention in optimal power flow." Solar Energy and Building (ICSoEB), 2015 International Conference on. IEEE, 2015. Doi: 10.1109 / ICSoEB.2015.7244941

Conferences / Workshops / Seminars

- Participant: World Future Energy Summit (WFES), 19 - 22 January, 2015 at Abu Dhabi, UAE
- Participant: REthinking Energy: Towards a new power system, International Renewable Agency (IRENA) lecture series, Sept. 2014, UAE

Outreach Programmes / Extension Services

- Voluntary Service: Part of a team of engineers that develop energy conservation strategies for a remote school in Somaliland. (Funded by Zayed Future Energy prize, UAE and Engineers Without borders(EWB) January, 2014 – June, 2015

MR. ISAAC KOFI OTCHERE

Research Interest

- Power Quality enhancement deploying Active power filters
- Static reactive power compensation.
- Application of power electronics in renewable energy systems
- Grid interconnection issues, electric power quality

Conference / Workshop / Seminars

- Participant: West Africa Clean Energy Corridor (ACEC-WA) Technical Workshop, organized by IRENA, United Arab Emirates, Abu Dhabi 18 September 2015
- Participant: REmap Africa Regional Workshop – Africa Renewable Energy Roadmap to 2030.organized by IRENA. 8 June 2015. Abu Dhabi, UAE

Outreach Programmes / Extension Services

- Voluntary Service: Part of a team of engineers that develop energy conservation strategies for a remote school in Somaliland. (Funded by Zayed Future Energy prize, UAE and Engineers Without borders(EWB) January, 2014 – June, 2015

MR. KANKAM O. ADU

Publication(s)

- Nerrisa E. L. Anku, Adu-Gyamfi, A. Kankam, A. Takyi, R. Amponsah. "A Model for Photovoltaic Module Optimization. Journal of Mechanical Engineering and Automation 5(2):72-79Doi:10.5923/j.jmea.20150502.02

DEPT. OF ENERGY AND ENVIRONMENTAL ENGINEERING

The Department was established in the 2012/2013 academic year to run a four-year BSc Renewable Energy Engineering programme with the aim of fully integrating renewable energy generating technologies and environmental issues to meet the changing demands of the energy industry, particularly in Ghana and the West Africa sub-region.

The Renewable Energy Engineering programme provides knowledge in the scientific and engineering foundations and skills for such needs as alternative fuel technology, renewable energy, hydrogen fuel cell development and utilization, solar energy, energy extraction and geothermal storage, fusion and nuclear energy and the technologies for understanding and mitigating the environmental impacts of energy usage

In the 2013/2014 academic year, another four-year BSc Environmental Engineering programme was mounted by the Department with the aim of fully integrating environmental engineering technologies and management principles to meet the challenging and dynamic demands of the industries as

well as ot her biotic and abiotic activities in Ghana and in the West Africa sub-region.

ACTIVITIES OVER THE PAST YEAR

The Department over the past year, performed the following activities:

- Solar PV training for Energy Commission, Ghana and sponsored by SDF-COTVET (5th February -2nd March, 2018 for 2 sessions)
- Participated in SPE Petrobowl Quiz Competition, March 2018
- Selected by ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE) as a Training Institution to train solar photovoltaic (PV) installers for the sub-region under the Regional Certification Scheme.
- Signed an MOU with Sewerage Systems Ghana Limited on Research and Internship Collaboration Agreement.

FUTURE PLANS

The Department in the near future intends to mount the following programmes.

1. MSc / PhD Climate Change & Environmental Modelling
2. MSc / PhD Petroleum Engineering
3. B.Eng. Building Services Engineering

TEACHING STAFF

The Department is staffed by the following. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialization
Dr. Francis Atta Kuranchie	PhD (ECU-Australia), M.Sc. (LIU-Sweden), B.Sc. (KNUST)	Lecturer	Waste Management, Sustainability, Energy Efficiency, Construction Materials.
Mr. Prosper Anumah	MSc(UG), BSc(KNUST)	Part-Time Lecturer	Petroleum geoscience, Reservoir engineering, Geophysics
Felix Amankwah Diawuo	MSc (KNUST) BSc (KNUST)	Lecturer	Energy engineering Electrical systems
Justice Sarkodie-Kyeremeh	MSc (RGU,) BSc (KNUST)	Lecturer	Drilling Technology, Advance Completions and subsea Systems, Petroleum Production
Emmanuel Acheaw	MSc (RGU, UK) BSc (KNUST)	Lecturer	Petroleum Geoscience and Basin Studies, Seismic Acquisition and Interpretation,
Yaw Akyampon Boakye-Ansah	MSc (Aberden) BSc (KNUST))	Lecturer	General Petroleum Engineering, Reservoir Engineering
Dr. Amos T. Kabo-Bah	Ph (Hohai) MSc(ITC) BSc (KNUST)	Senior Lecturer	Climate Change and Energy, Hydrology and Water Resources,
Dr. Eric Ofosu- Antwi	PhD MPhil BSc. (KNUST)	Senior Lecturer	Water Resources Management Irrigation Development
Dr. Nana Sarfo Agyemang Derkyi	PhD MPhil BSc. (KNUST)	Senior Lecturer	Chemical Engineering Renewable Energy Technologies
Mawufemo Modjinou	MSc. BSc (KNUST)	Lecturer	Renewable Energy

Dr. Francis Attiogbe	Ph.D (SUNY-ESF M.Sc. B.Sc. (KNUST)	Senior Lecturer / HoD	Chemical Eng., Water & wastewater treatment, Bioenergy
Dr. Samuel Gyamfi	PhD(Canterbury), MSc(Aachen, Germany), BSc. (K NUST)	Senior Lecturer	Energy Demand Side Management and Demand Response
Dr. Mark Amo-Boateng	PhD(Hohai)MSc(KNUST) BSc (KNUST)	Lecturer	Optimization Algorithms, Bio-degradable Plastics, Ocean Discovery, Hydrological Modelling

DR. FRANCIS ATTIOGBE

Research Activities / Interest

- Water & Wastewater Treatment
- Air Quality & Pollution Control
- Solid and hazardous waste management

Recent Publication(s)

- Francis Attiogbe and Andrews Nkansah. (2017) The Impact of Mining on the Water Resources in Ghana: Newmont Case Study at Birim North District, Energy and Environment Research; Vol. 7, No. 2; 27-36. ISSN 1927-0569 E-ISSN 1927-0577 doi:10.5539/eer. v7n2p27.

- Francis Atta Kuranchie, Francis Attiogbe, Ama Mbeaba Quarshie (2017) A review of the impacts and management of oily sludge in the oil and gas industry. International Journal of Research in Engineering and Technology, 2017, Volume: 06 Issue: 07 | Jul-2017, pp. 32-37. 7308.https://doi.org/10.15623/ijret.2017.0607006

- Francis K. Attiogbe and Tahir Abdul-Razak, (2016), "Evaluation of the physicochemical properties of Northern Ghana Sclerocarya birrea seed oil and proximate analysis of the process waste", Afr. J. Food Sci., Vol. 10(4) pp. 48-53. DOI: 10.5897/AJFS2016.1425.

Conferences/Workshops/Seminars

- Ghana"s Natural Resources and Sustainable Development-The role of the Engineer organized by Ghana Institution of Engineers (GhIE), Eusbett Hotel, Sunyani, 27th – 31st March, 2017.
- 2016 Seminar on Development and Utilization of Clean Energy and Renewable Energy for Developing Countries sponsored by the Ministry of Commerce, People"s Republic of China & Powerchina Zhongnan Engineering Corporation Limited, Changsha, China (September 26 – October 16, 2016).

Outreach Programmes/Extension Services

- Chair: Planning committee for „Engineering Students Tusk" (product design) competition for the 2017 Annual General Meeting (AGM) and Conference of the Ghana Institution of Engineers (GhIE).
- Reviewer: American Chemical Science Journal, International Research Journal of Pure and Applied Chemistry, British Journal of Applied Science & Technology, Journal of Advances in Biology & Biotechnology, Journal of Global Ecology and Environment, Asian Journal of Environment & Ecology.

MR. MAWUFEMO MODJINOU

Research Activities / Interest

- Application of renewable energy and energy conservation for the provision of energy services and climate change mitigation.
- Energy infrastructure planning, design and turbo machinery.

Recent Publication(s)

- Qin J, Ji J, Huang W, Qin H, Modjinou M, Li G. (2018) Experimental study of a novel direct-expansion variable frequency finned solar/air assisted heat pump water heater. International Journal of Photoenergy ,https://doi.org/10.1155/2018/5986463

Conferences / Workshops / Seminars

- First Australasia and South East Asia Conference in Structural Engineering and Construction

DR. MARK AMO-BOATENG

Research Activities / Interest

- High Performance Computing
- Large-Scale Optimization Algorithms
- Bio-degradable Plastics
- Ocean Discovery

Recent Publication(s)

- Eric A. Ofosu, Mark Amo-Boateng, Martin K. Domfeh, Robert Andoh; (2018) Re-engineering Hydropower Plant for Improved Performance; Sustainable Hydropower in West Africa Planning, Operation, and Challenges; https://doi.org/10.1016/B978-0-12-813016-2.00012-5;
- Derrick M.A. Sowa, Basil Amuzu-Sefordzi, Thelma D. Baddoo, Mark

Amo-Boateng, Martin K. Domfeh; (2018)Climate Change and Hydrovision; Sustainable Hydropower in West AfricaPlanning, Operation, and Challenges; https://doi.org/10.1016/B978-0-12-813016-2.00001-0; Jan, 2018

- Mark Amo-Boateng (2017) Super-speeds with Zero-RAM: Next Generation Large-Scale Optimization in Your Laptop!;CoRR - Computing Research Repository; http://arxiv.org/abs/1709.02500;

Conferences/Workshops/Seminars

- 2018 IEEE 7th International Conference on Adaptive Science & Technology, Accra
- 2nd AI for Good Summit, Geneva - Switzerland ITU, XPRIZE,
- Scientific Computing and Industrial Modeling Conference 2017, Kumasi - Ghana; National Institute for Mathematical Sciences Ghana;

Outreach Programmes/Extension Services

- The Sharks Quiz – Board Member (Academic), Aug, 2017 to date
- Mentor – National Maths and Science Quiz

Dr. Nana Agyemang Derkyi

Research Activities/Interest

- Renewable Energy Technologies and Systems Design
- Gasifiers and biogas digesters for community utilization
- Biomass combustion, pyrolysis and gasification
- Dye-sensitized solar cells.

Recent Publication(s)

- Samuel Gyamfi, Nana S.A. Derkyi, Emmanuel Y. Asuamah and Israel J.A. Aduako (2018). Renewable Energy and Sustainable Development. In:

Sustainable Hydropower in West Africa. Amos Kabo-bah and Chukwuemeka J. Diji (Eds). Academic Press, Elsevier, pp 75-94

- Samuel Gyamfi, Nana S.A. Derkyi, Emmanuel Y. Asuamah (2018). The Potential and the Economics of Hydropower Investment in West Africa. In: Sustainable Hydropower in West Africa. Amos Kabo-bah and Chukwuemeka J. Diji (Eds). Academic Press, Elsevier, pp 95-108.

- Derkyi, N.S.A., Acheampong, M.A., Mwin, E.N., Tetteh, P. Aidoo, S.C. (2018). Equipment Design for Prekese Functional Fruit Drink Processing. Journal of Asian Scientific Research. 8(3): 86-102.

Conferences / Workshops / Seminars

- Speaker: Lecture on "Energy and Environmental Benefits from Biomass Resources". 2017. SENCE, Bavaria, Germany
- Sustainable Rural Energy Systems for Developing Countries. Public Lecture, HFR, Rottenburg, Germany. 2017
- Sustainable Development of Rural Community Gasification. *International Conference on Climate Change and Sustainable Development*, UENR, 2017
- Training in Biogas Industry Promotion and Management, BIOMA, PR China, 2017

Outreach Programmes / Extension Services

- Reviewer: International Journal of Renewable Energy Research, Journal of Energy and Natural Resources Management, Environmental Engineering Research Journal, Journal of Pharmacy and Pharmacology
- Council Member: University of Energy and Natural Resources (UENR)
- President, University Teachers" Association of Ghana, UENR
- Academic Board Member, UENR

DR. ERIC OFOSU-ANTWI

Research Activities / Interest

- Hydropower development and environmental sustainability
- Solid waste characterization in urban areas of Ghana towards resource recovery
- Irrigation development and technologies for sub-Saharan Africa
- Watershed Management for Agricultural Productivity

Recent Publication(s)

- Eric A.Ofosu, Mark Amo-Boateng, Martin K. Domfeh, Robert Andoh (2018). Re-engineering Hydropower Plant for Improved Performance. In (Ed) Amos Kabo-bah and Chukuemekah J. Diji, Sustainable Hydropower in West Africa: Planning Operation and Challenges.
- Yaa Ntiamoah Baidoo, Ben Yaw Ampomah and Eric AntwiOfosu (2017). Dams, Development and Downstream Communities: Implications for Re-optimising the operations of the Akosombo and Kpong Dams in Ghana.
- Eric A. Ofosu, Marloes Mul, Maxwell Boateng-Gyimah, Frank Annor and Ben Y. Ampomah (2017). Overview of the Re-operation and Re-optimisation of the Akosombo and Kpong Dams Project. In (Ed) Yaa Ntiamoah Baidoo, Ben Yaw Ampomah and Eric AntwiOfosu. Dams, Development and Downstream Communities: Implications for Re-optimising the operations of the Akosombo and Kpong Dams in Ghana
- Mortey M. E., Ofosu E. A., Kolodko D. V. and Kabo-bah A. T. (2017). Sustainability Assessment of the Bui Hydropower System. Hydrology 2017,

Conferences / Workshops / Seminars

- Infrastructure and Sustainable Energy Futures in a Changing Environment, Conference, African Institute, Arusha, Tanzania, December 4-9, 2017
- International Conference on Water Management Modelling, Institute for Hydraulic Computation in Guelph Canada, 27th February to 1st March 2018

DR. FRANCIS ATTA KURANCHIE

Research Activities / Interests

- Waste and Environmental Management
- Sustainable development
- Construction materials
- Geopolymer technology

Recent Publication(s)

- **Kuranchie, F.A.**, Attiogbe, F., Quarshie, A, M. (2017). A review of the impacts and management of Oily Sludge in the Oil and Gas Industry. *International Journal of Research in Engineering and Technology, Vol. 6, No. 7, 32 – 37. https://doi.org/10.15623/ijret.2017.0607006*
- Kuranchie, F.A., Shukla, S.K. and Habibi, D. (2016). Utilisation of iron ore mine tailings to produce geopolymer bricks. International Journal of Mining, Reclamation and Environment, UK, Vol. 30, No. 2, 92 – 114. Link: http://dx.doi.org 10.1080/17480930.2014.993834.

Conferences / Workshops / Seminars

- West African Forum for Climate and Clean Energy Financing (WAFCCEF – 3), Abidjan, Cote d'Ivoire, 12th April, 2018.

Outreach Programmes / Extension Services

- Presented for the Ghana National Petroleum Authority on Occupational Exposure of BTEX to gas stations pump attendants in Ghana on 18th April, 2018.

MR. PROSPER ANUMAH

Research Activities / Interests

- Reservoir characterization and modelling
- Geomechanical studies
- Prospect Evaluation & Risk Analysis
- Basin and Petroleum System Modelling

Recent Publication(s)

- Ramaiah, T.K., Anumah, P., (2013) Comparative Study on Hydrocarbon Reserve Estimation Methods. International Journal of Engineering Science & Advanced Technology, ISSN: 2250-3676, Volume 3, Issue 1, Jan-Feb 2013.

Conferences / Workshops / Seminars

- Society of Petroleum Engineers (SPE) Workshop: Ghana Future Leaders, Accra. March 2018.

MR. FELIX AMANKWAH DIAWUO

Research Activities / Interests

- Demand Side Management strategies (Energy Efficiency & Demand Response)
- Renewable Energy Science: Solar, Wind, etc.
- Energy Policies, Energy Economics

Recent Publication(s)

- Diawuo, F.A., Pina, A., Baptista, P.C., Silva, C.A., (2018) Energy efficiency deployment: A pathway to sustainable electrification in Ghana. J. Clean. Prod. 186, 544–557. doi:10.1016/j.jclepro.2018.03.088
- Diawuo F.A., Kaminski J., (2017). An analysis of the Ghana power generation sector using an optimization model. Journal of Power Technologies, 97(1), 15.

Conferences/Workshops/Seminars

- 12th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference, Dubrovnik, Croatia (4th-8th October, 2017)
- Sino-EU Doctoral School for Sustainability Engineering (SESE) Summer School, Karlsruhe Institute of Technology (KIT), Karlsruhe-Germany, August 28th to September 1st, 2017

Outreach Programmes/Extension Services

- Instructor, Solar PV training. Organized by Department of Energy and Environmental Engineering, UENR, Sunyani-Ghana for Energy Commission, Ghana and sponsored by SDF-COTVET (5th February -2nd March, 2018 for 2 sessions)

MR. JUSTICE SARKODIE-KYEREMEH

Research Activities/Interests

- Unconventional Petroleum Systems
- Hydrate Inhibition, Drilling Mechanics
- Advanced Well Control, Petroleum Production Technology

Conferences/Workshops/Seminars

- Participant: GhIE Conference, Eusbett Hotel, Sunyani. 27th to 31st March, 2017.
  Theme: "Ghana"s Natural resources and Sustainable Development – The Role of the Engineer"
- Participant: Workshop for Senior Members, University of Energy and Natural Resources, Sunyani. 26th January 2017

MR. EMMANUEL ACHEAW

Research Activities / Interests

- Basin studies and Petroleum geoscience
- Enhance Oil Recovery Techniques
- Drilling Engineering Techniques

Conferences / Workshops / Seminars

- Participant: 7th Annual Oil and Gas summit Ghana CWC Group at Accra International Conference Centre, 20 - 21st April, 2016.
- Participant: Ghana Institution of Engineers (GhIE) Conference, Eusbett Hotel, Sunyani. 27th to 31st March, 2017.

Outreach Programmes / Extension Services

- Consultant: for Wintech Professional Institute to establish the first International Association of Drilling Contractors (IADC) training program in Ghana.
- Co - organiser: SPE Seminar, UENR Campus, Sunyani. 22nd March, 2018

MR. YAW AKYAMPON BOAKYE-ANSAH

Research Activities / Interests

- Numerical Modelling and Reservoir Simulation
- Enhanced Oil Recovery
- Multi-phase Fluid Flow in Porous Media
- Reserve Estimation

Conferences / Workshops / Seminars

- EUFOAM 2018, Liege, July 2018
- Participant: Ghana Institution of Engineers (GhIE) Annual Conference, Sunyani, April 2017
- Participant: Training Workshop for Senior Members, University of Energy and Natural Resources, Sunyani. January 2017
- Speaker: 2017 SPE PetroBowl Quiz Competition, University of Energy and Natural Resources

Outreach Programmes / Extension Services

- Facilitator, National Service Capacity Building Seminar for Sunyani West NASPA, Sunyani (Speaker on Aptitude Tests)

DR. AMOS T. KABO-BAH

Research Activities / Interests

- Hydrology and Water Resources
- Hydrological Modelling
- Climate Change Modelling
- Applied satellite technologies for improved management of water, energy, disasters, climate, weather, health, ecosystems, agriculture and ecosystems

Recent Publication(s)

- Amuzu, J., Jallow, B. P., Kabo-Bah, A. T., &Yaffa, S. (2018). The Climate Change Vulnerability and Risk Management Matrix for the Coastal Zone of the Gambia, Hydrology, 5(1), 14.
- Amuzu, J., Kabo-Bah, A. T., Jallow, B. P., &Yaffa, S. (2018). Households' Livelihood Vulnerability to Climate Change and Climate Variability: A Case Study of the Coastal Zone, The Gambia, Journal of Environment and Earth Science, 8(1), 35-46.

- Kabo-bah, A. T., Diji, C. J., &Yeboah, K. A. (2018). Hydropower Generation in West Africa—The Working Solution Manual. In Sustainable Hydropower in West Africa (pp. 197-207).
- Yuebo, X., Kabo-bah, A. T., Kabo-bah, K. J., &Domfeh, M. K. (2018). Hydropower Development—Review of the Successes and Failures in the World. In Sustainable Hydropower in West Africa (pp. 53-61).

Conferences/Workshops/Seminars

- Africa. 4th International Conference on GPS Radio Occultation in 2018
- 11th FORMOSAT-3/COSMIC Data Users' Workshop. April 18~20, 2018, Taipei,
- UAV for Precision Agriculture. Presented at AU-ROK STI Workshop 2017, April 25-29, 2017, African Union Commission Conference, Addis Ababa, Ethiopia.

Outreach Programmes/Extension Services

- Programme Board Member, Group on Earth Observation, Geneva, Switzerland
- Steering Committee Member, GEO AquaWatch Programme, Stirling, UK

- Scientific Steering Committee, Global Climate Observing System (GCOS) of World Meteorological Organisation, Geneva, Switzerland

DR. SAMUEL GYAMFI

Research Activities / Interests

- Energy Demand Side Management
- Renewable and Sustainable Energy for Developing Countries

Recent Publication(s)

DR. SAMUEL GYAMFI

Research Activities / Interests

- Energy Demand Side Management
- Renewable and Sustainable Energy for Developing Countries

Publication(s)

- Akolgo G.A, Essandoh E. O, Gyamfi S., Atta-Darkwa T., Kumi E. Y, Maia, C. M(2018) The potential of a dual purpose improved cookstove for low income earners in Ghana – Improved cooking methods and biochar production.Renewable and Sustainable Energy Reviews. 82 (2018) 269–379.http://dx.doi.org/10.1016/j.rser.2017.09.044
- Gyamfi S., Diawuo F. A., Kumi E. N., Frank S., Modjinou M. (2018) Energy Efficiency Situation in Ghana. Renewable and Sustainable Energy Reviews 82 (2018) 1415–1423. https://doi.org/10.1016/j.rser.2017.05.007
- Gyamfi S., Derkyi N.S.A, Asuamah E.Y, Aduako J.A. (2018) Renewable Energy and Sustainable Development. In Kabo-bah A; Diji, C. J., Sustainable Hydropower in West Africa: 75 – 93. Academic Press. An imprint of Elsevier. https://doi.org/10.1016/B978-0-12-813016-2.00006-X
- Gyamfi S., Derkyi N.S.A, Asuamah E.Y (2018) The Potential and the Economics of Hydropower Investment in West Africa. In Kabo-bah A;

Diji, C.J., Sustainable Hydropower in West Africa: 95 – 107. Academic Press. An imprint of Elsevier. https://doi.org/10.1016/B978-0-12-813016-2.00007-1

- Gyamfi, S., Modjinou, Diawuo F. A., Kumi, E. N., Frank S., Modjinou, M. (2017) Energy Efficiency Situation in Ghana. Renewable and Sustainable Energy Reviews. http/dx.doi/10. 1016/j.rser.2017.0

Conferences/Workshops/Seminars

- Ghana Stakeholder Consultations on Draft Energy Policy, Ministry Of Energy, Golden Beam Hotel, Kumasi, 14th March, 2018.
- The Future of Energy in Ghana, Ghana Energy Summit, Kempinski Hotel, Accra. 13th – 14th June 2017.
- ICEASSM 2017 – International Conference on Engineering, Applied Science and System Modeling.

Outreach Programmes/Extension Services

- Chairman: Energy Group Committee
- Reviewer: The Journal of Electric Power Systems Research,
- Reviewer – The Journal of Renewable and Sustainable Energy Reviews.

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

The Department runs a 4-year degree programme leading to the award of a Bachelor of Science (BSc.) degree in Agricultural Engineering and Mechanical Engineering. The Department was established in the 2013/2014 academic year and admitted its first batch of students into the Department in the same year of establishment.

The Department programmes have been designed to produce the next generation of mechanical and agricultural engineers with the necessary knowledge and skills to provide cutting edge solutions to everyday issues confronting society. In addition, students are equipped with the necessary engineering tools and entrepreneurial skills that will make them highly integral and useful for industries in Ghana in particular and the world at large.

The Department‟s areas of specializations are within (1) Thermofluids and Energy Systems Engineering; (2) Applied Mechanics; (3) Automobile Engineering and (4) Design and Manufacturing Engineering. Students enrolled in the Mechanical Engineering programme from first year to third year will have the opportunity to study basic core courses in all the four main sections. However, in the final year, students are allowed to select only one section for specialization that will define the student‟s unique area of interest.

In the course of the academic year, the Department undertook the following activities:

- Visit of MESA, UENR to Kantanka Automobile Assembly Plant at Gomoa Mpota in Central Region of Ghana.
- Staff attended ECOWREX II Regional Stakeholders‟ Meeting held at the E- Classroomof The Energy Center (TEC)-KNUST
- Final year Industrial Field Trip to KNUST
- MKTPlace Project ID 1293: Design, Evaluation and Fabrication of Multifeed-Biomass Gasifier stove for smallholder families (Ongoing project)

- Participation in the 2nd Science Festival organized for pre- tertiary institutions (Junior and Senior High schools) in Brong Ahafo Region.

TEACHING STAFF

The following constitute the teaching staff of the Department: Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialization
Dr. Thomas Atta-Darkwa	PhD(KNUST), MSc.(KNUST), BSc(KNUST)	Lecturer/HoD	Irrigation and Drainage Design Systems Waste Water Treatment and System Design Water Quality Analysis
Dr. Charles Sekyere	PhD(KNUST), MSc.(KNUST), BSc.(KNUST)	Lecturer	Thermo fluids and Energy Systems Engineering
Mr. Ebenezer Nyarko Kumi	MSc.(KNUST), BSc. (KNUST)	Lecturer	Solar PV Systems Energy Planning Power Plant Engineering Solar Air-Conditioning
Mr. Gilbert A. Akolgo	MSc(UG), BSc.(KNUST)	Lecturer	Thermo-chemical conversion of biomass Design of systems and devices, Agricultural mechanization.
Mr. Eric O. Essandoh	MSc.(KNUST), BSc(KNUST)	Lecturer	Wind Energy Studies) Design of innovative farm implements
Mr. Felix Uba	MSc.(KNUST), BSc.(KNUST)	Lecturer	Thermal comfort analysis Heating and cooling load analysis

Mr. Eric Akowuah	MSc. BSc. Diploma in Education.	Assist. Lecturer	Design and Manufacturing, Biomechanics, Applied Mechanics
Mr. Bright O. Adunu	Bsc. Mech. Eng.,	Demonstrator	Thermo-fluid and energy systems

DR. THOMAS ATTA-DARKWA

Research Activities / Interests

- Irrigation and drainage design schemes
- Groundwater flow modelling and pollution transport systems
- Parameter estimation using mathematical models
- Agricultural water management

Recent Publication(s)

- Danso, E.O., Atta-Darkwa, T., Plauborg. F., Sabi, E.B., Kugblenu. Y.O., E., Abenney-Mickson, S, and Anderson, M.N (2018) Development of a Siphon Apparatus and its Application to Automate a Solar Powered Drip Irrigation System for Small Holder Farmers in Sub Saharan Africa. Journal of Irrigation and Drainage Engineering 144 (7):05018003.

- Akolgo, G. A., Essandoh E.O., Gyamfi, S., Atta-Darkwa, T., E. N. Kumi., and Maiab. C.M.B. (2018). The potential of a dual purpose improved cookstove for low income earners in Ghana – Improved cooking methods and biochar production. Renewable and Sustainable Energy Reviews 82 369–379

- Kotei, R., Agyare, W.A., Kyei-Baffour, N., Atta-Darkwa, T. and Atakora, E.T. (2016). Estimation of flow-duration and low-flow

frequency parameters for the Sumanpa River at Mampong in Ghana for the 1985-2009 period. American Scientific Research Journal for Engineering, Technology, and Sciences. Vol. 15, No. 1, pp 62-75.

Conferences / Workshops / Seminar

- Moderator: Conference on Hydropower Energy in West Africa under the theme "Sustaining Hydropower Energy for Economic Growth and Development in West Africa.". 12-14 November, 20015. University of Energy and Natural Resources, Sunyani, Ghana.

GILBERT AYINE AKOLGO

Research Activities / Interest

- Agricultural Machinery Design
- Energy Conversions and Power Systems – Thermochemical Biomass and Municipal Waste conversions to Energy
- Application of Solar to Agricultural / Farm Power, Irrigation System

Recent Publication(s)

- Akolgo, G. A., Essandoh E.O., Gyamfi, S., Atta-Darkwa, T., E. N. Kumi., and Maiab. C.M.B. (2018). The potential of a dual purpose improved cookstove for low income earners in Ghana – Improved cooking methods and biochar production. Renewable and Sustainable Energy Reviews 82 369–379
- David Anaafo and Akolgo G. A (2017) Building the resilience of cities to the impacts of climate change through urban agriculture: A review of global best practices, International Conference on Climate Change and Sustainable Development in Africa (ICCCSDA, 2017).

- Atta-Darkwa T., Kabo-bah A. T., Akolgo G. A., Kotei R. and Amo- Boateng M., (2016). Assessment of groundwater quality for irrigation in the Oda River basin, Ejisu-Besease, Ghana. Internal Journal of Current Research, Vol. 8, (05).

Conferences / Workshops / Seminars

- Participant: The MKTPlace Forum 2015 for Project Leaders organized by Agricultural Innovation MKTPlace, Brasilia - Brazil, from September 15th to 18th, 2015.
- The Brazilian Biochar Training Program, Sinop, Brazil (15/06/15 to 17/06/15)
- Resource Person: Biochar and Ecotoxicology Workshop Organized by UENR, Ghana-EMBRAPA and Sponsored by MKTPlace, Sheila Executive Lodge, Sunyani, 5th November, 2015.
- Participant: Clean Cooking Forum organized by Global Alliance for Clean Cookstoves Ghana, Alisa Hotel, Accra Ghana, 10th and 13th November, 2015.
- The 7th Africa Agriculture Science Week, organized by Forum for Agricultural Research in Africa, 13 – 16 June, 2016, Kigali, Rwanda.

ERIC OSEI ESSANDOH

Research Activities / Interest

- Wind Energy
- Energy Conversions and Power Systems - Plasma Gasification of Fuels and Waste for improving sanitation and Power Generation
- Development of the Welding Industry in Ghana

Recent Publication(s)

- Akolgo, G.A., Essandoh. E.O.,Gyamfi, S., Atta-Darkwa, T., Kumi, E.N. and Maia, C. M.B. de Freitas, 2018. The potential of a dual purpose improved cookstove for low income earners in Ghana – Improved cooking methods and biochar production. Renewable and Sustainable Energy Reviews, Elsivier Ltd.

- Essandoh E. O. Osei E.Y. and Adam F.W. (2014), Prospects of Wind Power Generation in Ghana. International Journal of Mechanical Engineering and Technology (IJMET), Volume 5, Issue 10, October (2014), pp 156-179.

- Osei E.Y. and Essandoh E.O. (2014), RETScreen Assessment of Utility-Scale Wind Power Generation Based on Historical Wind Speed Data- The Case of Mankoadze in the Central Region of Ghana.

Conferences/Workshops/Seminars

- Workshop Facilitator: Biochar and Ecotoxicology Workshop Organized by UENR, Ghana-EMBRAPA and Sponsored by MKTPlace, Sheila Executive Lodge,Sunyani,5th November,2015
- Participant: Ghana Solar Initiative Project Workshop held on 4 April, 2017 at KNUST
- Team Member: ECOWREX II Regional Stakeholders'' Coordination Meeting Organized by TEC-ECREEE and Funded by European Union, KNUST, Kumasi, 5th April, 2016.
- MIDEA Air Conditioner Installation Training held in 2016 at UENR Under the South-South Cooperation Project
- Solar Street Lighting Training and Installation held in 2016 at UENR under the South-South Cooperation Project

Outreach Programmes/Extension Services

- Researcher: Cooking Fuels and Methods of Low Income Earners in Ghana (Funded by MKTPlace)

FELIX UBA

Research Activities/Interest

- Thermal confort analysis
- Heating and cooling load estimation and simulation
- Computational fluid dynamics
- Energy analysis of solar systems

Publication(s)

- Sarsah, E. A., & Uba, F. A. (2013) Emprical Correlations for the Estimation of Global Solar Radiation Using Meteorological Data in Wa, Advances in Applied Science Research, 4(4): 63-71.
- Sarsah, E. A., & Uba, F. A. (2013) Monthly-Specific Daily Global Solar Radiation Estimates Based On Sunshine Hours in Wa, Internal Journal of Technology & Research, 246-254, Vol. 2, Issue 8.

MR. EBENEZER NYARKO KUMI

Research Activities / Interests

- Solar Cooling Systems
- Energy Management, Planning and Policy

Publication(s)

- Kumi, E. N. (2017). "The Electricity Situation in Ghana: Challenges and Opportunities." CGD Policy Paper. Washington, DC: Center for Global Development.
- Gyamfi, S., F. AmankwahDiawuo, E. N. Kumi, F. Sika and M. Modjinou (2017). "The energy efficiency situation in Ghana." Renewable and Sustainable Energy Reviews.
- Obeng, G.Y. and Kumi, E. N. (2014), "Quantitative Impacts of Solar PV on Television Viewing and Radio Listening in Off-grid Rural Ghana", Energy and Environment Research, Vol. 4, No. 1, pp. 62 – 73

Conferences / Workshops / Seminars

- Participant: African Engineering Conference on Energy. Tropicana Conference Centre, Uyo, Akwa Ibom State, Nigeria from 21st – 25th November 2016

DR. CHARLES SEKYERE

Research Activities / Interests

- Fluid and themodynamis
- Energy Management, Planning and Policy

Publication(s)

- Afriyie, J.K., Asare, V., Sekyere, C. K.K.Bart-Plange, 2016. The effect of bulk density on thermal conductivity of powered "Navrongo 4" and "Tom" varieties of Bambara groundnuts.Journal of Applied Science, Technology and Management. Vol 1, No. 1 (2016).
- Afriyie, J.K., Achaw, O. W., Aikins, K. A., Sekyere, C. K. K., Bart-Plange, 2016. Field Drying of Cassava in a Solar Tent Dryer equipped with a Solar Chimney. IJSEA V 5 (3), 161-175 (online). ISSN -2319-7560.
- C. K. K Sekyere, F.K Forson, A Amo-Aidoo,, J.K Afriyie "Experimental Studies on an Evaporative Cooler as an option to mitigate post-harvest losses experienced by commercial producers of vegetables in Ghana", International Journal of Engineering Trends and Technology (IJETT) V33 (9), 453-461 March 2016. ISSN: 2231-5381. www.ijettjournal.org. published by seventh sense research group.
- Sekyere, C.K.K., Forson, F.K., Adam, F.W., 2016. Experimental investigation of the drying characteristics of a mixed mode natural convection solar crop dryer with backup heater. Renewable Energy Journal 92 (2016), 532 – 542.

Conferences / Workshops / Seminars

- Seminar on Development and Utilization of clean and renewable energy for developing countries
- Stakeholders workshop on the results of the early stage hydropower sustainability assessment of six potential hydropower sites in Northern Ghana
- Hydropower Sustainability Protocol Capacity Building IHA (International Hydropower Association) and SECO (State Secretariat for Economic Affairs of Switzerland) V33 (9), 453-461 March 2016. ISSN: 2231-5381. www.ijettjournal.org. published by seventh sense research group.

EARTH OBSERVATION RESEARCH AND NNOVATION CENTRE

The Earth Observation Research and Innovation Centre (EORIC) is a vibrant research Centre of the University of Energy and Natural Resources(UENR) responsible for the acquisition of a near real time satellite-based data, air-borne and in-situ data, metadata and products, automatic weather monitoring, operations and management of unmanned aerial systems, virtual regional fire monitoring and modelling, organization of training programmes in the use of Earth Observation (EO) and Geographic Information Systems (GIS) techniques, collectively towards making informed decisions in the areas of water, disasters, health, energy, climate, agriculture, ecosystems and biodiversity.

Per the current infrastructure, the Centre is capable of covering the whole of the West African sub-region and some portions of North and Central Africa in terms of real-time acquisition of relevant aerial images via ground station satellite receiver.

The ground satellite receiver at the Centre is the first of its kind in the West African sub region and it is currently receiving and processing MODIS and VIRS data. The Centre is currently offering real-time fire detection services to various stakeholders in West Africa.

EORIC‟s vision is to become a leading Research Centre in Africa in the promotion and dissemination of value-added satellite and in-situ based data and information, transfer of ultra-modern affordable space science skills and technologies, enhancing innovations in theoretical and applied sciences for meeting the needs of society. The Centre therefore promotes, facilitates and supports the acquisition and application of geospatial technologies in interdisciplinary research and education in areas of water, disasters, energy, climate, agriculture, ecosystems, weather health and biodiversity.

The Centre consists of the following divisions offering various services:

- Satellite Weather and Climate – Acquisition, processing and analysis of real- time satellite imagery for West Africa and beyond.

- Unmanned Aerial Systems – Consultancy services in the application of unmanned aerial vehicles (drones) in the monitoring and management of natural resources.
- Climate Informatics – Master"s and PhD programs in the application of Earth Observation Technologies in climate change studies.
- Advanced Virtual Fire Lab – Consultancy services in the use of the Advanced Fire Information System (AFIS) – an early warning and alert system - for farmers, governmental agencies, insurance companies and corporate bodies.
- Virtual Environmental Lab – Organizes training programs in the use of GIS &GPS for natural resource management.

- High Performance Computing – Provides services in the computational processing of large geospatial datasets, CFD research and modelling and GPU computing.

CURRENT INFRASTRUCTURE

The Centre is currently resourced with a Direct Broadcast Earth Observation Satellite Ground Station Receiver. The Earth Observation Satellite Receiver receives real-time data from a number of satellites: Metop A&B, TERRA & AQUA, Suomi NPP and NOAA. These data are transferred through optical fiber for further processing at the Earth Observation Satellite Ground Station. At the Ground Station, algorithms are run on the raw data to produce the final products. One relevant outcome of this processing is a real-time fire detection product which is fed into AFIS (AFIS website for West Africa).

Real-time Reports from Automatic Weather Station

The Centre is currently receiving weather data from this station. The station, records data every 15 minutes and this is telecast via a Wi-Fi system into a designated computer at the Centre.

Computational Modelling

The High Performance Computing Laboratory currently has a cluster of computers that runs on CPUs and GPUs. The laboratory processes large geospatial datasets and also undertakes CFD research modelling and GPU computing. The laboratory is currently running Weather Research and Forecasting Model (WRF) for Ghana and the West African Sub-region. Capacity building in areas of climate change, flood, drought and fire disaster management and the use of UAVs for resource management are other services provided by the Centre. The Centre has the in- house infrastructure to support the development of useful apps in the areas of climate, health, disasters, energy and agriculture.

ACTIVITIES

Local and international visits

The Centre has become the most valuable point in the University for most visitors to the University and has attracted several visitors ranging from, diplomats, high schools students to various institutions and universities across the globe and within Ghana.

Reports

The Centre has been regularly sending reports to the Ghana National Fire Service, National Disaster Management Organisation and Forestry Commission on wild fire outbreaks in Ghana. These reports are to facilitate the activities of these national agencies.

Inauguration of COSMIC-2/FORMOSAT Ground Station

During the year under review, the $1.2 million COSMIC II Ground station was inaugurated by the University and its funding partners (NOAA and Taiwan space Agency. The Cosmic II project which is the only one in Africa among other similar projects in the World is aimed at improving numerical weather forecasting in the world.

AfriGeoss International Symposium

During the year under consideration, the Centre hosted the 2nd International AfriGeoss symposium which was attended by aver 180 participants from across the world. The 3-day symposium among other things deliberated on use of the earth observation to address issues related climate change, agriculture, food security among others for sustainable development.

FUTURE PROJECTS

Carbon Monitoring Tower

The Carbon Monitoring Tower is currently being supported by the Global Change Research Institute of the Czech Republic. This project would further strengthen the capacity of the Centre to collaborate with several partners in the sub-region to provide some solutions towards the sustainable development goals and, minimise the potential impacts of climate change in the sub-region.



SCHOOL OF SCIENCES

Introduction

The School of Sciences was established during the 2014/2015 academic year and became fully operational in the same academic year. The overall objectives of the School are to provide students with competitive skills and competencies within the science technology sector and as well as equip students with the necessary leadership skills required to function in the technological world.

Currently, the School consists of three Departments; Department of Computer Science and Informatics, Department of Chemical Science and Department of Mathematics and Statistics. Whilst each Department offers programmes leading to the award of undergraduate and postgraduate degrees, all Departments in the near future, will offer short courses for continued professional development.

These will be offered under part-time and flexible distance learning modes of study. The overall objective will be to provide practical and theoretical grounding in technologies and wider knowledge relevant to the energy sector for engineers and other professionals. The School has also initiated plans to introduce programmes leading to: Diploma in Laboratory Technology, Certificate in Information Technology, MSc. Big Data and Business Analytics and other Mathematics' related Programmes.

Programmes under each Department

Item	Name of Department	Programmes
1	Computer Science and Informatics	Computer Sciences Information Technology
2	Mathematics and Statistics	Actuarial Science Statistics Mathematics
3	Chemical Science	Chemistry

STAFFING

The School currently has a Dean, Prof Adebayo Adekoya, with David Takyi Abeam as the Faculty Officer and other Administrative Assistants who help in the day to day running of the School‟s Office.

STUDENT STATISTICS

The Students‟ population in the School stands at Seven Hundred and Forty-Two (742), Six Hundred and Fifty-Three (653) male and Eighty-Nine (89) Female. The Table below shows the details of the number of students in the School.

ACTIVITIES OVER THE PAST YEAR FOR THE SCHOOL

During the period of review, the departments under the School undertook the following activities.

- The Department of Mathematics and Statistics partnered with the Mathematical Sciences Students Association (MaSSA) to organize Mathematics quizzes for Senior High Schools in the Brong-Ahafo Region to help promote the study of Mathematics especially at the elementary level. This year, students at the Department embarked on a week-long outreach programme at the following Senior High Schools (SHS) in the Brong-Ahafo Region:
- Goka Senior High School
- Nsawkaw State Senior High School

- Nafana Senior High School

A team of five (5) students were sent to each of the above-mentioned schools. The visit was to afford our students the opportunity to share their experiences with the students at those schools. This was to help allay the fear students have for the study of Mathematics.

There was also inauguration of the Students" Chemical Society (UENR Chapter) at which students demonstrated the preparation of soap (through the process of saponification). Some of the soap was sold at the function to raise funds for the society.

- The Department of Computer Science and Informatics also boasts of relationships with international professional training academies which include:
    - Oracle Academy
    - IBM Academy Seven (7) of the students passed the IBM Academy Examination on Big Data in 2015 and were awarded the Big Data Specialist with IBM Big Insights V2.1 Certificate)
- Plans are also underway to establish relationship with
    - CISCO Networking Academy
    - Microsoft Academy

FUTURE PLANS FOR THE SCHOOL

The Department of Computer Science will in the near future mount a BSc. Business Computing Programme. The Department of Chemical Science will in the near Future introduce programmes in;

- BSc. Laboratory Technician
- M Phil Natural Product Chemistry
- M Phil Medicinal Chemistry

DEPARTMENTS OF COMPUTER SCIENCE AND INFORMATICS

INTRODUCTION

The four-year Bachelor of Science in Computer Science programme was introduced in the 2013/2014 Academic Year. The programme was designed in response to a recognized need from the information, communication and technology industry for university graduates who have a detailed knowledge, appreciation and fundamental understanding of the various computers, their production, harnessing, conversion, and environmental concerns associated with the use of IT.

The Department of Computer Science and Informatics is concerned with the theory, design, development and application of computer systems and information processing techniques. The mission of the Department is to educate undergraduate and post graduate students as well as the broader community in the fundamental concepts of the computing to help society solve problems.

STUDENT STATISTICS/POPULATION IN THE DEPARTMENT

PROGRAMME	Year/Level	Male	Female	Total
BSc Computer Science	100	23	2	25
	200	59	3	62
	300	52	4	56
	400	60	9	69
	Total	194	18	212
BSc Information Technology	100	34	3	37
	200	47	3	50
	300	37	6	43
	Total	118	12	130

ACTIVITIES OVER THE PAST YEAR

- The pioneer students of the BSc Computer Science programme graduated last year. The first batch of Information Technology students are graduating this year. The Department mounted its Diploma programme in Computer Science and Information Technology during the year under review.

- The Department of Computer Science and Informatics also boasts of relationships with international professional training academies which include:

    - Oracle Academy

    - IBM Academy: Seven (7) of the students passed the IBM Academy Examination on Big Data in 2015 and were awarded the Big Data Specialist with IBM BigInsights V2.1 Certificate

- Plans are also underway to establish relationship with
    - CISCO Networking Academy
    - Microsoft Academy
- Two Lecturers of the Department are currently pursuing their PhD in China and the South Africa respectively. The Department, during the period under review received a five-year re-Accreditation of its BSc Computer Science programme from the National accreditation programme

FUTURE PLANS

The Department also intends to mount a BSc Business Computing programme in the 2018/2019 Academic Year. Plans are underway for the Department to start Diploma and certificates courses in Network Technology

TEACHING STAFF

The Department has one Associate Professor, six Lecturers (one with PhD, two of them on PhD study leave, and the remaining three are undergoing their PhD programmes in KNUST on part-time basis). Their names and qualifications are given in the table below:

Name	Qualification	Designation	Area of Specialization
Prof A. F. Adekoya	PhD, M.Sc., (Abeokuta) B.Sc, MBA (Ogun), PGD Education (LASU)	Assoc. Prof/HoD	Artificial Intelligence
B. A. Weyori	PhD, MPhil (KNUST) BSc (UDS)	Lecturer	Artificial Intelligence
Augustine Takyi	MEng (HUST, China) BSc (UG, Ghana)	Lecturer	Networking Information Security Community based networks Internet of things
Obed Appiah	MPhil (KNUST), BSc.(KNUST)	Lecturer	Signal Processing
Christopher Bombey Ninfaakang	MSc.(UoM, India), BSc.(UG, Legon)	Lecturer	Computer Security, Big Data, Human Computer Interaction
Peter Appiahene	MPhil(KNUST), BSc(UEW)	Lecturer	Decision Support Systems
Daniel Adu Gyamfi	MEng(UESTC, China), BSc(UDS)	Lecturer	Big Data Processing, Predictive Models, Network Security, Mobile Data Security

The Department, during the period under review, successfully recruited ten (10) teaching staff to augment its staff strength. Two Lecturers of the Department are currently pursuing their PhD in China and the South Africa respectively while four others are also pursuing their PhD within the country.

PROF. A. F. ADEKOYA

Research Activities / Interests:

- Artificial Intelligence, Semantic Web & Ontology, Database Systems, Enterprise Modeling, and Business & Social Informatics.
- Conceptual modeling, designs, development and deployment of intelligent data-driven systems in knowledge economies.
- Trust modeling and management in information systems security.

Publication(s)

- Faith-Michael EUzoka, BoluwajiAkinnuwesi, OluwoleNuga, Adebayo F Adekoya, Oluwadamilola Y Egbekunle (2016). Identifying Factors for Evaluating Software Project Proposals. International Journal of Information Systems and Management. Published by Inderscience Publishers Ltd. Volume 6, Issue 1-2. .DOI: http://dx.doi.org/10.1504/IJQET.2016.081615
- Adedamola O. Oyeniran, Adebayo F. Adekoya, Ademola P. Abidoye and Bamidele A. Oluwade. (2016). Development of A Database for Fishes Using Semantic Web Technologies (Case Study of Lagos State, Nigeria)1st International Conference of the IEEE Nigeria Computer Chapter Wednesday, 23rd - Saturday, 26th November, 2016 at the University of Ilorin, Ilorin, Kwara State, Nigeria.
- Adedamola O. Oyeniran, Adebayo F. Adekoya,Ademola P. Abidoye and Bamidele A. Oluwade. (2016). Development of A Database for Fishes Using Semantic Web Technologies (Case Study of Lagos State, Nigeria)1st International Conference of the IEEE Nigeria Computer Chapter Wednesday, 23rd - Saturday, 26th November, 2016 at the University of Ilorin, Ilorin, Kwara State, Nigeria.

DR. BENJAMIN A. WEYORI

Research Activities / Interests

- Artificial Intelligence
- Computer Visions and Image Processing
- Brain Image Processing

Recent Publication(s)

Benjamin Asubam Weyori (2017) Kwame Osei Boateng, Peter N. Amponsah, Paul K. Yeboah: Efficient Novel Vector Median Filter Design for Impulse Noise Suppression In Color Images, International Journal of Innovative Computing, Information and Control (IJICIC), Volume 13, Number 2

- Benjamin Asubam Weyori, Kwame Osei Boateng, Paul K. Yeboah, Peter N. Amponsah (2016): Design and Implementation of the Block Matching Hybrid Median Filter for Noise Removal in Color Images, International Journal of Innovative Computing, Information and Control (IJICIC), Volume 12, Number 6, pp. 1865-1879
- Benjamin Asubam Weyori, Kwame Osei Boateng, Peter N. Amponsah, Paul K. Yeboah, Stephen Akobre (2016): Simulating The Effect Of Noise And Distortions On The RGB Component Of Real World Color Images, International Journal of Innovative Computing, Information and Control (IJICIC), Volume 12, Number 6, pp. 1929 - 1941.
- Sheng Wang, Jianfeng Lu, Xingjian Gu, Benjamin A. Weyori, Jing-Yu Yang (2016): Unsupervised discriminant canonical correlation analysis based on spectral clustering. Neurocomputing, 171, pp 425-433.

AUGUSTINE TAKYI

Research Activities / Interests

- Internetworking
- Information security
- Community based networks
- Internet of things (IoT)

Recent Publication(s)

- Takyi, Augustine, Melissa Densmore, and David Johnson. "Collaborative Neighbour Monitoring in TV White Space Network." Proceedings of Southern Africa Telecommunication Networks and Applications Conference (SATNAC 2016), George, South Africa. 2016.

- Takyi, Augustine, Melissa Densmore, and David Johnson (2016). "Collaborative Neighbour Monitoring in TV White Space Network." Proceedings Southern Africa Telecommunication Networks and Applications Conference (SATNAC 2016), George, South Africa. 2016.

Conferences / Workshops / Seminars

- SATNAC Conference 2016, George, South Africa. 2016.

OBED APPIAH

Research Activities / Interests

- Signal Processing
- Algorithm Development

Publication(s)

- Appiah, Obed (2015) Improved selection sort algorithm, International Journal of Computer Applications, Volume 110-No.5, January 2015

- Appiah, Obed (2015) Magnetic bubble sort algorithm, International Journal of Computer Applications, Volume 122-No21, July 2015

- Appiah, Obed (2015) Calculation of body mass index using image processing techniques. International Journal of Artificial Intelligence and Mechatronics, Volume 4, Issue 1, ISSN 2320-5121

CHRISTOPHER B. NINFAAKANG

Research Activities / Interests

- Big Data
- Computer Security
- Human Computer Interaction

Publication(s)

- Ninfaakang C.B., (2015) Harnessing Big Data Analytics for Sustainable and Renewable Energy Development in West Africa: A Critique of Some Big Data Projects, Proceedings of Conference on Hydropower Energy in West Africa, University of Energy and Natural Resources, Sunyani, Ghana. 12-14 November 2015

APPIAHENE PETER

Research Activities / Interests

- Decision Support Systems
- Human Computer Interaction

Publication(s)

- Appiahene Peter, Boateng Frank Laud, Floyd-Hockman Anthony, Onworna-Agyeman Anthony Lord and Opoku Michael (2014)" Using Information and Communication Technology (ICT) to Predict Teachers Productivity". International Journal of Innovation and Scientific Research, Vol. 2, No.2, pp. 348-355, June.
- Appiahene, Peter, Opoku Michael and Alorwu D. K. Daniel (2014) Usage of Tonaton.Com by Buyers and Sellers: A Survey of Car Dealers in Kumasi Metropolis. International Journal of Computer Applications 96(14):6-10, June 2014.

- Appiahene Peter, Opoku Michael, Akweittey Emmanuel, Adoba Emmanuel, and Kwarteng Richard, (2014)" Assessing the Challenges of Teaching and Learning of Mathematics in Second Cycle Institutions in Ghana". International Journal of Innovation and Applied Studies, Vol. 6 No. 3, pp. 362-368,

DANIEL ADU-GYAMFI

Research Activities / Interests

- Mobility Data analysis and mining
- Spatio-temporal Trajectories
- Malicious modelling

Recent Publication(s)

- Nerissa E.L Anku, Adu-Gyamfi, D., Kankam, A. Takyi and R. Amponsah (2015) A Model for Photovoltaic Module Optimisation. Journal of Mechanical Engineering and Automation, Volume 5, Number 2

Conferences / Workshops / Seminars

- Participant: November 2, 2016." Network Protocol Security of BitTorrent" Organised by Prof. Wang Yong and the School of Computer Science and Engineering of UESTC, Chengdu, China.

- Participant: October 31, 2016. "Digital Communications" Organised by Prof. Li Xiaofend and the School of Communication and Engineering of UESTC, Chengdu, China.

DEPARTMENTS OF MATHEMATICS AND STATISTICS

The Department of Mathematics and Statistics offers 4-year degree programmes leading to the award of BSc degrees in Mathematics, Statistics and Actuarial Science. The programmes aim at producing graduates capable of using mathematical tools to solve industrial, societal and environmental problems. The Department aims at collaborating with the Schools of Engineering and Natural Resources to provide sustainable solutions to the energy, environmental and natural resources challenges of Ghana.

The Department mounted its postgraduate programmes in Mathematics and Statistics leading to the award of Master of Science (MSc), Master of Philosophy (MPhil) during the period under consideration. The durations of the Masters programmes is two years (full time) and three years (part time) and that of the PhD programmes is three years on full time basis and five year for part time candidates.

ACTIVITIES OVER THE PAST YEAR

Apart from the three bachelor programmes offered by the Department, the Department is responsible for servicing all the Mathematics courses offered by other bachelor degrees at the University. The Department has profited immensely from the University's pragmatic staff development policy. Almost all the Assistant Lecturers who are Masters'' degree holders at the Department have enrolled in PhD programmes in Ghanaian and other foreign Universities. Last year, one of our staff members completed his PhD in Statistics at the University of Development Studies, Navrongo, Ghana.

The Department partnered the Mathematical Sciences Students Association (MaSSA) to organize Mathematics quizzes for Senior High Schools in the Brong- Ahafo Region. Students of the Department also embarked on a week-long outreach programme at the following Senior High Schools (SHS) in the Brong- Ahafo Region:

- Gokati Senior High School
- Nsawkaw State Senior High School
- Nafana Senior High School

FUTURE PLANS

Plans are underway to start postgraduate programmes in Mathematics and Statistics. The Statistics programme has already been sent to the National Accreditation Board (NAB) for accreditation. The Mathematics programme is also ready for onward submission to the National Council for Tertiary Education and NAB. The Department is set to admit its first batch of students to weekend undergraduate programmes in Statistics, Mathematics and Actuarial Science. Furthermore, the Department, in partnership with MaSSA plans to intensify its outreach programme to Senior High and Junior High Schools to promote the study of Mathematics in the Brong-Ahafo Region.

TEACHING STAFF

There is one adjunct full Professor, seven Lecturers and four Assistant Lecturer in the Department. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialization
Kaku Sagary Nokoe	PhD, UBC, Canada	Adjunct Profess	Biometry
Frank Badu Osei	PhD (Twente)	Lecturer	Spatial Statistics
Alex Akwasi Opoku	PhD (Groningen)	Lecturer/HoD	Mathematical Physics Probability Theory
Dominic	Ph.D, MSc, BSc (KNUST)	Lecturer	Mathematical Modeling,
Otoo			Operations Research
Elvis Kobina Donkoh	Ph.D, MSc, BSc (KNUST)	Lecturer	Operations Research, Telecom Systems, Fluid Dynamics
Johnson De-Graft Ankamah	M.Phil(E"dhoven)	Lecturer	Industrial and Applied Mathematics

Baaba Abassawah Ghansah	M.Phil, BSc (KNUST)	Lecturer	Mathematical Modeling of Diseases
Sylvia Ankamah	M.Phil, (UCC)	Assistant Lecturer	Statistics and Modeling
Wahab Abdul Iddrisu	M.Phil (KNUST)	Assistant	Statistics and Modeling
Kwame Frimpong Piesie	M.Phil (KNUST)	Assistant Lecture	Pure Mathematics
Isaac Akoto	M.Phil (Legon)	Assistant	Actuarial Science
Richard Ansah	M.Phil (KNUST)	Assistant	Pure Mathematics
Charles Kwofie	M.Phil. (Legon)	Assistant	Actuarial Science
Iddrisu Abdul-Karim	MSc.(Kwazulu)	Assistant	Medical/Biostatistics

DR. ALEX AKWASI OPOKU

Research Interests:

- Probability Theory, Stochastic Processes, Mathematical Physics.

Recent Publication(s)

- A.A. Opoku, K.O. Edusei and R.K Ansah.(2018) A Conditional Curie–Weiss Model for Stylized Multi-group Binary Choice with Social Interaction, Journal of Statistical Physics, Vol. 171, Issue 1, pp 106-126
- Donkoh E. K. and Opoku A. A. (2016),"Optimal Geometric Disks Covering using Tessellable Regular Polygons. Journal of Mathematics

Research, CanadianCenter of Science and Education, Vol. 8,pp. 25- 36. DOI: http://dx.doi.org/10.5539/jmr.v8n2p25.

- Donkoh E. K. and Opoku A. A. (2016),"Optimal Geometric Disks Covering using Tessellable Regular Polygons. Journal of Mathematics Research, CanadianCenter of Science and Education, Vol. 8, pp. 25- 36.

Conferences / Seminars / Workshop

- School and Workshop on Random Polymers and Related Topics, National University of Singapore, Singapore. 14-25 May, 2012

- Workshop on Transformations in Statistical Mechanics, Pathologies and Remedies, Lorentz Center, University of Leiden10-14 October, 2016:

Outreach Programmes / Extension Services:

- Chairman, Security Committee, Holy Spirit School, Fiapre, Brong-Ahafo Region.
- Referee for Electronic Journal of Probability.
- Referee for Science and Development- the o Journal of Basic and Applied Sciences. December 2016 to date:
- Referee for Journal of Mathematics and Statistics
- Speaker at National Service Personnel Association"s Capacity Building Seminar, Odumase, Sunyani, April 7, 2017:

DR. ELVIS KOBINA DONKOH

Research Activities / Interests

- Operations Research& Telecommunication System Modelling
  -Signals & Systems
  - Control Theory
  - Linear and Network Optimization
  - Non-Linear Optimization
  -

Recent Publication(s)

- Amponsah S. K., Donkoh E. K.,Ansere A. J and Bonsu A. K. (2016). Strong Masting Conjecture for Multiple Size Hexagonal Tessellation in GSM Network Design. Journal of Mathematics Research Vol. 8, No.2; ISSN 1916-9795 E-ISSN 1916-9809
- Donkoh E. K. and Opoku A. A. (2016). Optimal Geometric Disks Covering using Tessellable Regular Polygons. Journal of Mathematics Research, CanadianCenter of Science and Education, Vol. 8, No.2.
- Donkoh E. K. and Opoku A. A. (2016),"Optimal Geometric Disks Covering using Tessellable Regular Polygons. Journal of Mathematics Research, CanadianCenter of Science and Education, Vol. 8, pp. 25- 36.
- Minimum Cardinality for Geometric Disks Covering; Applications To GSM Masts In Telecommunication Network Design. (2017). ISBN: 978-3-659-82089-2, Lambert Academic Publishers. Germany,

Conferences / Workshops / Seminars

- 16th Regional College on Modelling, Simulation & Optimization, Institute of Mathematical Sciences (IMS), University of Cape Coast, Ghana, 28th April-3rd May, 2014.

Outreach Programmes / Extension Services

- Reviewer: Journal Of Mathematics Research, Canadian Journal of Science and Education, Toronto, ON., M3J 3H7, Canada,.
- Reviewer: International Journal of Theoretical and Applied Mathematics, Science Publishing Group
- Moderator: OWSD Africa Regional Conference 2013 Quiz. "Female Science Students Have Important Role(s) In Climate Change Mitigation Than Men" October 2013

- 16th Regional College on Modelling, Simulation & Optimization, Institute of Mathematical Sciences (IMS), University of Cape Coast, Ghana, 28th April-3rd May, 2014.

Outreach Programmes / Extension Services

- Reviewer: Journal Of Mathematics Research, Canadian Journal of Science and Education, Toronto, ON., M3J 3H7, Canada,.
- Reviewer: International Journal of Theoretical and Applied Mathematics, Science Publishing Group
- Moderator: OWSD Africa Regional Conference 2013 Quiz. "Female Science Students Have Important Role(s) In Climate Change Mitigation Than Men" October 2013

SYLVIA ANKAMAH (MS.)

Research Activities / Interests:

- Climate Change and Community Health (Application of Statistics)
- Epidemiology
- General Statistics
- Operations Research

Conferences / Workshops / Seminars

- Organizer: Maiden Female Scientist Career Advancing Summit (Organization for Women in Science for the Developing World (OWSD- Ghana Chapter)) held at UENR held on the 3rd November, 2015.
- Participant: Teaching and Learning workshop in Higher Education held at KCCR, KNUST from 16th to 18th November, 2015.

Outreach Programmes / Extension Services

- Facilitators: Math is Fun Project for Primary and Junior High Schools in Sunyani Municipality, June 2015.

BAABA A. DANQUAH (MRS.)

Research Activities / Interests

- Mathematical Biology - Population Dynamics
- Disease modeling

Publication(s)

- Danquah, B.A.,Chirove,F. and Banasiak, J.(2016), A mathematical model of malaria in children under five years in an endemic area, in preparation.
- Van Den Driessche,P., Danquah, B.A.,Matusse, A.J,Adebimpe, O., Oke, S.I. (2016), Sensitivity analysis of mosquito borne disease models, in preparation.

Conferences / Workshops / Seminars

- Presenter: University of KwaZulu Natal Departmental Seminar.30th March, 2016.
- Participant: 3rd Joint UNISA-UP Workshop on Theoretical and Mathematical Epidemiology. Pretoria, 22-26 February, 2016.

DR. DOMINIC OTOO

Research Activities / Interests

- Mathematical Modelling
- Operations Research

Publication(s)

- Amponsah S. K., Otoo, D. and Sebil C. (2016). An improved ant colony Optimisation Algorithm to a real world application in solid waste collection; a case of TafoPankrono Kumasi, Ghana, International Journal of Mathematical Trends and Technology, Vol. 29 (2) pp 96-104

- Otoo, D., Amponsah S. K. and Ankamah J. D. (2016). Enhanced vehicle routing problem with time windows, a real case of solid waste collection in TafoPankrono Kumasi, Ghana. International Journal of Mathematical Trends and TechnologyVol. 29 (2) pp 87-95

Outreach Programmes and Extension Services

- Chairman, Sports Management Committee
- Chairman, University Welfare Management Committee
- Member, Hostel Management Committee
- Co-ordinator, Internship Programme

MR. CHARLES KWOFIE

Research Activities / Interests

- Heavy tail distributions
- Stochastic calculus and its applications in insurance and finance
- Econometric time series models

Recent Publication(s)

- **Kwofie C**., Ansah R.K. (2018). A study of the effect of Inflation and Exchange rate on stock market returns in Ghana. *International Journal of Mathematics and Mathematical Sciences*.

- Nyarko, E., Owusu-Ansah and C., Kwofie, C. (2015), Modelling Commuter Preferences for a Bus. European Scientific Journal, vol. 11, pp. 420-429.
- Kwofie, C., Owusu-Ansah and C., Boadi, C. (2015). Predicting the Probability of Loan- Default: An application Of Binary Logistic Regression. Research Journal of Mathematics and Statistics, vol. 7(4), pp. 46-52.

MR. RICHARD KWAME ANSAH

Research Activities / Interests

- Algebra
- Number theory

Recent Publication(s)

- Charles Kwofie and Richard Kwame Ansah (2018), "A Study of the Effect of Inflation and Exchange Rate on Stock Market Returns in Ghana". Hindawi International Journal of Mathematics and Mathematical Sciences Volume 2018, https://doi.org/10.1155/2018/7016792.

- Alex AkwasiOpoku, Kwame Owusu Edusei and Richard Kwame Ansah (2018)," A Conditional Curie-Weiss Model for Stylized Multi-group Binary Choice with Social Interaction". J Stat Phys https://doi.org/10.1007/s10955-018-1988-y.

- Dorcas A. Addo, Steve Abel, Richard K. Ansah and Isaac Nkrumah (2018), "Review on investigating the possibility of local hidden variable theories-quantum teleportation". International Journal of Advanced Mathematical Sciences, 6 (1) (2018) 1-9 2018, doi: 10.14419/ijams.v6i1.8755.

- S. Effah-Poku, W. Obeng-Denteh, I. Owusu Mensah and Richard K. Ansah (2018), "Dynamics on Unique Numerators for Generating the Cantor Set". International Journal of Advances in Mathematics Volume 2018, Number 1, Pages 57-72.

IDDRISU ABDUL-KARIM

Research Activities / Interests

- Bayesian Statistics
- Spatial and spatio-temporal Statistics
- Biostatistics / Medical Statistics
- Longitudinal and clinical trials designs, linear mixed-effect and generalized linear models, nonlinear mixed effect models, multi-level modeling and sensitivity analyses to missing data.

Publication(s)

- Iddrisu, Abdul-Karim. (2013), Bayesian Hierarchical Disease Modelling and Mapping of Tuberculosis, Theory of probability, stochastic, mathematical statistics, LAP LAMBERT Academic Publishing, pp. 1-136.

- Iddrisu, Abdul-Karim and Amoako, Yaw (2016), Spatial modelling and mapping of tuberculosis using Bayesian methods, Open Journal of Statistics, Vol 6 (3), pp. 32.

Conferences/Workshops/Seminars

- Presenter: Annual research meeting at the Centre for Epidemiological Modeling and Analysis (SACEMA), Stellenbosch University, South Africa (11^{th}-14^{th}April, 2016).

YAW OSEI

Research Activities/Interests

- Life and general Insurance
- Financial markets
- Claims management and premium auditing

Recent Publication(s)

- **Osei Y.,** Yensu, J. (2017), "Corporate Governance structure and insurance companies performance in Ghana. Research Journal of Finance and Accounting, Vol. 8.

Conferences/Workshops/Seminars

- Participant: Practical Leadership and Management workshop organised by National Insurance Commission, Kumasi, 17^{th}-21^{st} October, 2016.

KILLIAN ASAMPANA ASOSEGA

Research Activities/Interests

- Multivariate Data Analysis
- Spatial Statistics
- Biostatistics

Conferences/Workshops/Seminars

- Participant: Workshop on the Introduction to Genomics Big Data Sciences (GBDS) Organized by Aims Ghana, Biriwa, July, 2017.

DEPARTMENT OF CHEMICAL SCIENCES

The Department of Chemical Science offers a 4-year degree programme leading to the award of BSc degree in Chemistry. The programme aims at preparing students for future careers in the various fields in which a core understanding of the chemical processes is important. Examples include scientific disciplines such as chemistry, biochemistry, chemical engineering, petroleum engineering, medicinal chemistry, biomedical sciences, biotechnology, environmental sciences, as well as the various health-related disciplines such as medicine, dentistry, pharmacy, and veterinary medicine.

The programme has been designed to employ practical and theoretical knowledge to meet the requisite demands of research institutes, academic institutions, pharmaceutical industries, material science and technology-based industries in Ghana and beyond.

The Bachelor of Science in Chemistry has been designed in response to, and anticipates the demand for university graduates trained in chemistry to support the start-up oil and petrochemical industry, chemical, agrochemical, pharmaceutical industries, as well as the medical and herbal research institutions, and food industries. The establishment of Bachelor of Science in Chemistry will help to produce motivated and highly educated chemists with analytical and problem-solving skills needed for the development of science and technology in Ghana, as well as produce graduates well equipped to pursue careers both in chemical sciences and more broadly in industry and the public sector as a whole.

ACTIVITIES OVER THE PAST YEAR FOR THE SCHOOL

- During the year under review, Students'' Chemical Society (UENR Chapter) was inaugurated. The Society demonstrated the preparation of soap (through the process of saponification). Some of the soap was sold at the function to raise fundsfor the Society.

- Our first batch of Level 300 Students were placed in their compulsory Industrial attachment to improve their theoretical knowledge of chemistry and enhance their practical skills.

FUTURE PLANS

The Department of Chemical Science also intends to mount these new Programmes in the near future.

- BSc. Laboratory Technician
- Mphil Natural Product Chemistry
- Mphil Medicinal Chemistry

TEACHING STAFF

The following constitute the staff of the Department. The table below indicates their names and qualifications:

Name	Qualification	Designation	Area of Specialization
Dr. Robert Akuamoah	PhD(Newcastle) Msc, BSc (Ghana)	Senior Lecturer HoD	Organic Chemistry
Dr. David Adu-Opoku	PhD(UK) MA(UK),BSc. (KNUST)	Lecturer	Physical Chemistry
Mr. Benjamin Darko Asamoah	MSc. (Finland)	Assistant Lecturer	Synthetic Inorganic Chemistry
Mr. Edward Annoh	HND	Laboratory Technician	
Mr. Augustine Boakye	BSc. (KNUST)	Laboratory Technician	

BENJAMIN DARKO ASAMOAH

Research Activities / Interest

- Organometallic Compound Synthesis
- Coordination Chemistry
- Physical Chemistry

Recent Publication(s)

- Dau, T, M., Asamoah, B. D.,Belyaev A., Chakkaradhari, G., Hirva, P., JanneJänis, Elena V. G., Tunik, S. P., Koshevoy, I. O. (2016). Adjustable Coordination of a Hybrid Phosphine-Phosphine Oxide Ligand in Luminescent Cu, Ag and Au Complexes. Dalton Trans. 45, 14160–14173.

Conferences / Workshops / Seminars

- Participant in „Scientific Writing Skills" (2 - 4th July, 2014) at the University of Eastern Finland.
- Student Panel in University Study Skills Course (September, 2014) organized for newly admitted students of the University of Eastern Finland.

DR. DAVID ADU-OPKU

Research Activities / Interest

- Surface Science Encompassing Studies
- Thermodynamic
- Kinetic studies.
- Synthesis of catalysts

Publication(s)

- Addo, P. W., Agbenorhevi, K. J. and **Adu-Poku, D**., (**2018**). *'Antinutrient contents of Watermelon seeds'*. MOJ Food processing & Technology; 1(2):146–150

- **Adu-Poku, D**., and Agbenorhevi, K. J.,(**2017**). *'Kinetics of potassium diffusion as influenced by the microstructure of potato.* American Journal of Food Science and Technology; 5(2): 31-37

- Adu-Poku, D., and Agbenorhevi, K. J., (2017) Kinetics of potassium diffusion as influenced by the microstructure of potato. American Journal of Food Science and Technology; Vol. 5, No. 2, , pp 31-37

Conferences / Workshops / Seminars

- Achieving Sustainable Agriculture & Food Security: The Role of Science and Technology" 6th Ghana Science Association (GSA) Research Seminar
  & Poster Presentation, College of Science Allotey Auditorium, KNUST, 12th April, 2017.

- „Agri Innovation 2015: emerging Science and Technologies in Crop Research, SCI, London, 22 April, 2015

DR ROBERT AKUAMOAH

Research Activities / Interests

- Natural Products
- Organic Synthesis
- Environmental & Pollution Studies

Publication(s)

- Y. Serfor-Armah, A. Chatt, D. Carboo and R. K. Akuamoah.(2008) "Simultaneous Cloud Point Extraction of low levels of Cd, Cr and Hg in Seaweed Species prior to Neutron Activation Analysis" Journal of Applied Science and Technology (JAST), Vol. 13, Nos. 1 & 2 , 48 – 54

- Y. Serfor-Armah, D. Carboo, R. K. Akuamoah and A. Chatt, (2006) "Determination of selected elements in red, brown and green seaweed species for monitoring pollution in the coastal environment of Ghana" Journal of Radioanalytical and Nuclear Chemistry, Vol. 269, No. 3, 711-718

- L. K. N. Okine, R. K. Akuamoah, W. S. K. Gbewonyo, K. A. Eli and E. Aidoo, (2004) "Antimicrobial activity and chemical constituent profile of neem seed oil on storage: Effects of Vitamin E and Lecithin" Journal of the Ghana Science Association, Vol. 6, Number 2, 15-29

Outreach Programmes / Extension Services

- Consultancy services for Millennium Development Authority, MiDA
- Consultancy Services for Ghana Commercial Agriculture Project
- Chief Examiner (Chemistry) West African Examinations Council

DR. ISMAILA EMAHI

Research Activities / Interests

- Biological Chemistry
- Bioanalytical Chemistry
- Biosensors for Water Quality Monitoring and Assessment Design and Applications of DNA-based Biofuel Cells

Recent Publication(s)

- Emahi, I., Mitchell, P. M., and Baum, D. A. (2017). "Electrochemistry of PQQ on MultiWalled Carbon Nanotube-Modified Glassy Carbon Electrodes in Biological Buffers". J. Electrochem. Soc., 164, H3097-H3102.
- Emahi, I., Gruenke P. R., and Baum, D. A. (2015). "Effect of Aptamer Binding on the Electron-Transfer Properties of Redox Cofactors". J. Mol. Evol., 81, 186-193.

Conferences/Workshops/Seminars

- B/A Cyber Security Conference (Cybercon 18) held at UENR Auditorium, Sunyani, Ghana. April 04, 2018.
- 69th American Association of Clinical Chemistry (AACC) Annual Meeting and Clinical Lab Expo, San Diego, CA, USA. July 30 - August 03, 2017.
- 2017 Canadian-American Conference for Academic Disciplines, McGill University, Montreal; Ryerson University, Toronto, Canada. May 30 - June 08, 2017.

SELINA AMA SAAH

Research Interest/Activities

- Water Chemistry
- Nanotechnology
- Structural Adhesives and Polymer composites

Recent Publications

- Selina A. Saah, Paul D. McNaughter, Mohammed A. Malik, Johannes A. M. Awudza, NeerishRevaprasadu, Paul O'Brien. (2017) PbS_xSe_{1-x} thin films from the thermal decomposition of lead(II) dodecylxanthate and bis(N,N-diethyl-N′-naphthoylselenoureato)lead(II) precursors, Journal of Materials Science, , DOI 10.1007/s10853-017-1836-5

- Paul D. McNaughter, Selina A. Saah, MasoodAkhtar, KhadijatAbdulwahab, M. Azad Malik, James Raftery, Johannes A. M. Awudza, and Paul O'Brien. The effect of alkyl chain length on the structure of lead(II) xanthates and their decomposition to PbS in melt reactions. Dalton Transaction, 2016, 45, 16345-16353.

- Esther J. Alorkpa, Nathaniel O. Boadi, Mercy Badu andSelina A. Saah. Phytochemical screening, antimicrobial andantioxidant properties of assorted Carica papayaleaves in Ghana. Journal of Medicinal Plants Studies, 2016; 4(6), 193-198.

- Michael B. Mensah, Nathaniel O. Boadi, Frimpomah Baa-Poku, David D. Wemegah, Mercy Badu, Selina A. Saah and Bernard Osei-Dei. Physicochemical properties and levels of heavy metals in selected rivers within the Kumasi Metropolis of Ghana. International Journal of Science and Technology, 2016, 5(12), 616-623.

Conferences/Workshops/Seminars

- 7th international conference on Nanoscience and nanotechnology in Africa. Durban, South Africa 22nd – 25th April 2018.

- Authoraid-PACN research writhing workshop in Accra, 10-11th Nov, 2017.
- RSC sustainable agriculture congress in Accra, Ghana on 7-9th Nov, 2017.

PATRICK OPARE SAKYI

Research Interest

- Synthesis and characterization of Bioactive compounds
- Study of cubaloximes as mimetics of Vitamins B12 and their photolytic cleavage

Recent Publications

- Daniel M. Ayine-Tora, Robert Kingsford-Adaboh, William A. Asomaning, Jerry J.E.K. Harrison, F.C Mills-Robertson, YahayaBukari, Patrick O. Sakyi, Sylvester Kaminta and JóhannesReynisson (2016). 'Coumarin Antifungal Lead Compounds from Millettiathonningii and Their Predicted Mechanism of Action': Molecules 21(10): 1369

ALFRED K. BIENIBUOR

Research interests

- Assessment of groundwater resources potentials and groundwater pollution studies
- Geotechnical site investigations
- Monitoring the effect of rainfall pattern on leachate infiltration rate and groundwater pollution around solid waste disposal sites

Publications

- Nero, C., Bienibuor, A. K. and Preko, K. (2014) Investigation of the Effects of Building Construction Sites on Soil, using Magnetic Susceptibility and Atomic Absorption Spectrophotometer Measurements, International Journal of Environmental Research and Earth Science. Vol. 3, No. 9, pp. 064 – 068.

- Bienibuor, A. K.,Preko, K., Wemegah, D. D and Manu, E (2016). The Use of Electromagnetic and Electrical Resistivity Methods in Assessing Ground water Resource Potentials in Adoe, Sunyani, Ghana. International Journal of Scientific & Technology Research. Volume 5, Issue 09. PP 166 – 170

DEPARTMENT OF BASIC AND APPLIED BIOLOGY

The Department of Basic and Applied Biology was established in September 2017 by the University Council to run both Theoretical and Applied Biology programmes. The Department currently runs 3 undergraduate programmes namely:

BSc. Medical Biodiagnostics Science,
BSc. Biological Sciencesand
BSc. Nursing

The Department is strategically positioned to make meaningful contribution to UENR's quest to become a world- class research and teaching university. In this regard, the Department intends to conduct cutting edge research into the numerous biological and biomedical sciences and health related problems in Ghana and the world at large.

Departmental Research Interest

The research interest of the Department includes the following:

Biomedical Science, Behavioural (Health) Science, Neglected Tropical Diseases (Buruli Ulcer, Schistosomiasis, Lymphatic Filariasis, Onchocerciasis), Oncology (Cancer Research), Malaria, Non-communicable Diseases (Diabetes mellitus, sickle-cell anaemia, Burkitt's lymphoma), Transfusion medicine, Food and Industrial Microbiology, Water Sanitation, & Hygiene, Wastewater Treatment Technologies, Bioremediation and Nanotech Biodiagnostics Sciences among many others

Staff of the Department.

Currently the University has 5 Academic faculty members with 2 Senior Laboratory Technicians. (Please see below)

Name	Qualification	Designation	Specialization
Dr. Samuel Fosu Gyasi	PhD, MSc, BSc	Senior Lecturer /HoD	Clinical Microbiology/ Environmental Microbiology
Dr Daniel Antwi Berko	PhD, MPhil, BSc	Lecturer	Immunology
Kenneth Bentum Otabil	M.Phil., BSc	Assist Lecturer	Parasitology
Miss DoriceAkosuaBerkoh	M.Phil., BSc	Assist Lecturer	Chemical Pathology
Mr. BismarkOfosu-Bamfo	M.Phil., BSc	Assist Lecturer	Ecology
AkwasiAsamoah	BSc	Senior Laboratory Technician	Medical Laboratory Science
Miss BanlemanBanan	BSc	Senior Laboratory Technician	Medical Laboratory Science

DR. SAMUEL FOSU GYASI

ResearchActivities/Interests

- Clinical Micro biology
- Water,Sanitation and Hygiene,
- Public health and Environmental Health,
- Water and Waste Water Treatment and Management,
- Nano-tech Bio-diagnostics,

Recent Publication(s)

- Gyasi SF.,Abeberese JKA,AfriyieV.N,Kwofie, I &Kobina,E(2016).Maternal Mortality ,Proteinuria and Pregnancy Induced Hypertension: Case Study of a Regional Hospital in Brong Ahafo Region, Ghana. Journal of Biology, Agriculture and Healthcare Vol.6, No.14.2016.

- Jerry Lawrence Authur, Samue lFosu Gyasi, Amos T. Kabo-Bah and Esi Awuah 2015. Rainfall Variability and its Impact on Reported OPD Cases of Salmonella Typhiiin Sunyani, 4 Ghana, Research Journal of Environmental

sciences, 9:39-47, DOI: 10.3923/rjes. 2015.39.47

- Jacob Kwadwo Amponsah Abebrese, Samuel Fosu Gyasi, Margaret Gyapong (2015) Assessing the Reporting System of Maternal Mortality: A Case Study of a Health Care Centre in the Asuogyaman District, Ghana, Journal of Biology, Agriculture and Healthcare, Vol.5 ,No.4,

- Awuah E., Gyasi S. F. ,Anipa H.K. and Adjei A, (2014). Microbial Quality of Sachet and bagged Drinking water: A case Study in Kumasi, Ghana. Research Journal of Microbiology, 9:199-207 DOI:10.3923/jm.2014.199.207

Conferences/Workshops/Seminars

i. Participant:Toxic ological responses of environmental arsenicin ICR mice to the development of M.ulcerans infections to Buruli Ulcer Development in the AmansieWest District of Ghana-Water and Sanitation Conference,ISNTD-London,September2017.
ii. Participant: Adaptation of nanotechnologybio-diagnostic fordetecting NTDs, Conference theme: Diagnostics, drug discovery and Development, by ISNTD at WelcomeTrust, London, May 20-21, 2015.
iii. Participant:Environmental sanitation attitudes and Its potential limpacton BU infections in the Asanti Akim Agogo,Ghana,Conferencetheme .Buruli Ulcer Control Programme Meeting at WHO Headquarters(HQ),Executive Board Room,Geneva,Switzerland,March,2015.

Outreach Programmes/Extension Services

- Reviewer,IWPWashDev,UK,2013tilldate,
- Reviewer,IJPEH,UK.,2013tilldate,
- Reviewer,Journal,OALib,2013tilldate
- Reviewer,Journal of Energy and Natural Resources,2014 till date,
- TV and Radio advocacy on Water, Sanitation and Health, 2013 till date.

DEPARTMENT OF BASIC AND APPLIED BIOLOGY

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Dr Daniel Antwi Berko	PhD, MPhil, BSc	Lecturer	Immunology

Kenneth Bentum Otabil	M.Phil., BSc	Assist Lecturer	Parasitology
Miss Dorice Akosua Berkoh	M.Phil., BSc	Assist Lecturer	Chemical Pathology
Mr. Bismark Ofosu-Bamfo	M.Phil., BSc	Assist Lecturer	Ecology
AkwasiAsamoah	BSc	Senior Laboratory Technician	Medical Laboratory Science
Miss Banleman Banan	BSc	Senior Laboratory Technician	Medical Laboratory Science

DR.SAMUELFOSUGYASI

ResearchActivities/Interests

- Clinical Microbiology
- Water,Sanitation and Hygiene,
- Public health and Environmental Health,
- Water and Waste Watr Treatment an dManagement,
- Nano-tech Bio-diagnostics,

Recent Publication(s)

- Gyasi SF.,Abeberese JKA ,Afriyie V.N, Kwofie, I &Kobina,E(2016).Maternal Mortality, Proteinuria and Pregnancy Induced Hypertension: Case Study of a Region l HospitalinBrongAhafoRegion,Ghana.JournalofBiology,AgricultureandHealth careVol.6,No.14.2016.

- Jerry Lawrence Authur, Samuel Fosu Gyasi, Amos T.Kabo-Bahand Esi Awuah 2015. Rainfall Variability and its Impaction Reported OPD Cases of SalmonellaTyphiiinSunyani,Ghana,Research Journalof Environmental sciences,9:39-47,DOI:10.3923/rjes.2015.39.47

- Jacob Kwadwo Amponsah Abebrese, Samuel Fosu Gyasi, Margaret Gyapong(2015)Assessing the Reporting System of Maternal Mortality: A Case Study of a Health Care Centre in the Asuogyaman District, Ghana, Journal of Biology, Agriculture and Healthcare, Vol.5,No.4,

- Awuah E., Gyasi S.F., Anipa H. K. and Adjei A, (2014).Microbial Quality of Sachet and bagged Drinking water: A case Study in Kumasi, Ghana.Research Journal of Microbiology, 9:199-207 DOI:10.3923/jm.2014.199.207

Conferences/Workshops/Seminars

iv. Participant:Toxic ological responses of environmental arsenicin ICR mice to the development of M.ulceran sinfections to Buruli Ulcer Development in the Amansie West District of Ghana-Water and Sanitation Conference, ISNTD-London, September2017.

v. Participant: Adaptation of nanotechnologybio-diagnostic for detecting NTDs, Conference theme: Diagnostics, drug discovery and Development, by ISNTD at Welcome Trust, London, May 20 to 21, 2015.

vi. Participant: Environmental sanitationattitudes and It's potential impacton BU infections in the Asanti Akim Agogo, Ghana, Conference theme. Buruli Ulcer Control Programme Meeting at WHO Headquarters (HQ), Executive Board Room, Geneva,Switzerland, March,2015.

OutreachProgrammes/ExtensionServices

- Reviewer,IWPWashDev,UK,2013tilldate,
- Reviewer,IJPEH,UK.,2013tilldate,
- Reviewer,Journal,OALib,2013tilldate
- Reviewer,JournalofEnergyandNaturalResources,2014tilldate,
- TVandRadioadvocacyonWater,SanitationandHealth,2013tilldat



SCHOOL OF AGRICULTURE AND TECHNOLOGY (SOAT)

The School of Agriculture and Technology was established in 2014/2015 academic year at Dormaa Ahenkro. The School of Agriculture and Technology (SOAT) seeks to bring a paradigm shift in teaching, research and outreach in agriculture to promote performance, modernization, efficiency and competitiveness of the agricultural sector.

The strategy is to bring science, technology, economics and human values to the social, economic and technical processes involved in the production and transformation of raw materials originating through agriculture, livestock and forestry to adapt them for consumption and the markets. To feed more efficient operating systems, new technologies, and increased levels of partnership to meet the nation and promote the inherent strengths of agriculture in a national economy which requires household, national and global food security.

The School of Agriculture and Technology seeks to contribute to this through its academic and research programmes. Areas of specializations in our Bachelor of Science in agriculture programme are as follows:

- Agribusiness
- Animal production
- Crop production and
- Horticulture

The programmes provide graduates with a working knowledge of a broad span of agriculture and introduce them to the critical relationships between agricultural activities and the environment. The programmes also seek to assist students in developing the core skills in job creation and employment-related experiences that are valued by employers, professional organizations and academic institutions.

DEPARTMENTS

Currently, the School has the following Departments:

- Department of Animal Production and Health
- Department of Agricultural Economics, Agribusiness and Extension
- Department of Horticulture and Crop Production
- Department of Geographical Sciences and Planning

ACTIVITIES OVER THE YEAR

University Farm:

The School has established a model farm for training of students and farmers within and outside the Dormaa Ahenkro Traditional Area. Currently twelve (12) acres of land has been put under cultivation: Eight and half acres of maize, one and half acres of cabbage and one half acre of green pepper.

The School of Agriculture and Technology (SOAT) through the Demonstration farm seeks to bring practical realities into modern agriculture teaching, research and outreach in order to promote performance, modernization, efficiency and competitiveness of the agricultural sector thereby increasing food security in Ghana. The strategy is to combine science, technology, business, economics and human values as an integrated tool for improving farming processes to meet market and consumption needs.

The School also won Alexander von Humboldt Foundation award from Germany

with the Humboldt-Universitazu Berliin providing an amount of 54,990 EUR, starting from 2017 to 2020. Part of the funding will be used for the construction of a functional beneficial insect rearing laboratory at the School of Agriculture and Technology. The building will be used as a preservation capacity and serve as a database of beneficial insects of stored product pests in the different agro-ecological zones of Ghana where grains are produced and stored.

FUTURE PLANS

1. Cultivation of perennial crops such as cocoa, citrus, cashew and oil palm. Effort will be devoted to seeds and seedling production for market.
2. Begin the production of poultry farm which focuses on egg production and establishment of Feed mill will be done.
3. The model farm will be expanded to include long term capital intensive production activities such a pigs, grasscutters, small ruminants, cattle foreign security dogs for sale, slaughter house and meat processing and Agriculture Technology and Dissemination Centre will also be established.

STUDENTS STATISTICS/POPULATION IN THE SCHOOL OF AGRICULTURE AND TECHNOLOGY

YEAR/LEVEL	MALE	FEMALE	TOTAL
LEVEL 200	99	34	133
LEVEL 200	24	2	26
LEVEL 300	24	-	24
LEVEL 400	28	3	31
TOP-UP			
LEVEL 200	29	5	34
LEVEL 300	78	11	89
LEVEL 400	35	5	40
PhD	3	-	3
M.Phil	1	1	2
M.Sc.	1	-	1
TOTAL	322	61	383

DEPARTMENT OF ANIMAL PRODUCTION AND HEALTH

The Department of Animal Production and Health was established in the 2014/2015 academic year. The Department offers a 4-year Bachelor of Science undergraduate degree in Animal Production and Health. The programmes have been designed to produce confident professionals who are versatile with the needed knowledge and skill to provide crucial solutions to the ever evolving and expanding livestock industry in Ghana and beyond.

The Department's current areas of specialization are within (1) Animal nutritional science (2) Genetics and Breeding (3) Animal Health and (4) Animal biotechnology.

FUTURE PLANS

The Department in the next academic year will start a small ruminant's farm on the School's permanent site. Plans are far advanced to mount short courses (certificate and Diploma) which are intended to be practical and interactive in scope. Additionally it is the target of the Department in the not too distant future to mount Post Graduate programmes

TEACHING STAFF

Name	Qualification	Designation	Area of Specialization
Yaw Oppong Frimpong	PhD (KNUST), MSc. (KNUST), BSc. (KNUST)	Lecturer	Human –Animal Zoonotic Interaction, Animal nutrition, Organic
Ernest Darkwah Yeboah	MA (JAU- China) BSc. (UG)	Assistant Lecturer	Animal Nutrition, Feed Science, Nutritional Physiology
Addison Duodu	PhD (UEW) MSc. (KNUST) B.Ed. (UEW)	Assistant Lecturer	Animal Breeding and Genetics, Animal welfare
Christian Asumah	MSc. (KNUST) BSc. (UDS)	Assistant Lecturer	Genetics, Applied Poultry Science, Applied feed formulation

YAW OPPONGFRIMPONG

Research Activities / Interests

- Animal Nutrition
- Organic Animal Production
- Use of Non-Conventional Feed Resources in Non-Ruminant Nutrition
- Using insects as a protein source in monogastric livestock diets

Recent Publications:

- Boateng, M., Okai, D. B., Frimpong, Y. O. and Zeebone, Y. Y. 2015. Wet brewers' spent grains and wet brewers' spent yeast: problems associated with their usage and suggested solutions: a case study of the Ejisu-Juaben Municipality of Ghana. Livestock Research for Rural Development, 27 (1), Article No. 5. Available at: http://www.lrrd.org/lrrd 27/1/boat27005.htm
- Manu, F., Okai, D. B., Boateng, M. and Frimpong, Y. O. 2015. Nutrient composition, pest and microbial status and effects of discarded biscuits on the growth performance, carcass characteristics and economic profiles of growing-finishing pigs. African Journal of Food, Agriculture, Nutrition and Development, 15 (4):10241-10254

Conferences / Workshops / Seminars

- Thirty-third Ghana Animal Science Association (GASA) Symposium, International Conference Centre, University for Development Studies, Tamale – 3 – 6th August 2016.
- Twentieth International Biennial Conference and Twenty-Eighth Annual General Meeting of the Ghana Society of Animal Production, University of Cape Coast, Cape Coast – 1st – 5th August 2017.

MR. ERNEST DARKWAH YEBOAH

Research Activity / Interests

- Animal Nutritional Physiology
- Nutrition of young animals
- Functional Additives of livestock

Recent Publications

- Yeboah, D.E., Zhen Yu-G., Adarkwah C. (2017). The Immuno-Nutritional Effects of Dietary Astragalus polysaccharides on Weaned Pigs under Smallholder Conditions, "Future Agriculture: Social-ecological transitions and biocultural shifts" Tropentag, Bonn, Germany

- Adarkwah, C., Yeboah D.E., Asomaning S.K., Obeng-Ofori D. (2017). Climate change implications on biological control and hemetic storage technology for grain protection to improve food security in Ghana, Proceedings of the International Conference on Climate Change and Sustainable Development in Africa, 25-28th July, 2017- UENR

MR. DUODU ADDISON

Research Interest

- Application of principle of inheritance to improve performance of domestic animals
- Improvement of production and reproduction traits, carcass characteristics, docility and survival in domestic animals
- Animal welfare's constructive impact on food security

Recent Publications

- Addison, D. Adomako, K., Olympio, O.S. and Hamidu, J.A. (2014). Feather mutations and egg laying performance of indigenous birds in the Ashanti Region of Ghana. Ghanaian Journal of Animal Science, Vol.1, 136-142.
- Arhin, E., Annor, S.Y., Kagya-Agyemang, J.K., Addison, D. And Zagbede, G.A. (2016). Can Guinea Fowls be Sexed at Day One of Hatched? Proceedings, Ghana Society of Animal Production Conference. Pages 216-222

MR. CHRISTIAN ASUMAH

Research Activity / Interests

- Commercial Poultry (Layer and Broiler) Production
- Cage Layer management
- Phenotypic and genetic characterization of farm animals

Recent Publications

- Asumah C., Boison S.A. and Olympio O.S. 2009. Haematological and Serum Biochemical Indices of Normal Feathered Local Chickens and their Counterparts Carrying the Naked Neck (Na) and Frizzle (F) genes. Proceedings of 16th Ghana Society of Animal Production (GSAP), Faculty of Agriculture, College of Agriculture and Natural Resources, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. August 5th-8th, 2009:91-94.
- Asumah C., Boison S.A. and Olympio O.S. 2009. Effect of the Naked Neck (Na) and Frizzle (F) genes on growth of indigenous chickens in the tropics. Proceedings of 16th Ghana Society of Animal Production (GSAP), Faculty of Agriculture, College of Agriculture and Natural Resources, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. August 5th-8th, 2009: 100-104.

Conferences/Workshops/Seminars

- Thirty-third Ghana Animal Science Association (GASA) Symposium, International Conference Centre, University for Development Studies, Tamale – 3 – 6th August 2016.
- 'Employment Creation along the Poultry Value Chain: Public Private Partnership Approach', a Poultry Value Chain Fair organized by GNAPF, GPP and Amplifiers Ghana on March 2-22, 2018 at Eusbett Hotel, Sunyani-Ghana.

Outreach Programmes and Extension Services

- Vice Chairman-School of Agriculture and Technology Farm Committee, UENR-Dormaa Campus
- School of Agriculture and Technology, Board Member, UENR
- Admissions Outreach on UENR Programmes on Dormaa FM 2018.
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DEPT OF AGRIC ECONOMICS, AGRIBUSINESS AND EXTENSION

The Department offers both undergraduate and post graduate market driven programmes in Agribusiness Management. The programmes are B.Sc. Agribusiness, MBA Agribusiness Management and MPhil Agribusiness Management. The main aim of the Department is to train students who wish to undertake managerial-level, agripreneurship, research, agricultural planning, policy, trade, teaching and consultancy careers in food production, processing, agricultural output and input marketing, agricultural finance, supply chain, food and agribusiness allied sectors. The

Department has well motivated, dynamic and young but experienced and dedicated lecturers who provide excellent theoretical and practical content of courses in agribusiness, applied economics and community development.

ACTIVITIES OVER THE PAST YEAR

During the period under review, the Department undertook the following activities:

- A faculty member won DAAD Research Stays for University Academics and Scientists, 2018 at Hochuschule f. ForstwirtschaftRottenburg University of Applied Forest Sciences in Rottenburg am Neckar.
- Another faculty member was offered CV Raman Post-Doctoral Fellowship for African Researchers by the Department of Science & Technology and Ministry of External Affairs, Government of India through the Federation of Indian Chambers of Commerce & Industry (2017-2018) at National Rice Research Institute, Cuttack, Odisha-India.
- Collaborative Research with scientist from University of Applied Forest Sciences Rottenburg on Value Chain analysis of Cashew nuts in Ghana.
- Developed a programme on B.Sc. Agricultural Economics and Community Development
- Launched UENR Chapter of Agribusiness Students Association of Ghana.

FUTURE PLANS

- Maiden Departmental Biannual Newsletter titled 'The Agripreneur' will be launched by next academic year.
- Commencement of B.Sc. Agricultural Economics and Community Development by next academic year.
- Initiate international exchange programme between staff and students of the department and other universities.
- Develop Certificate programme in Agribusiness.
- Collaborate with professional bodies like Chartered Institute of Management Accountants (CIMA) to give exemptions to graduates of B.Sc. Agribusiness.
- Collaborate with other agribusiness institutions for research and community service.

TEACHING STAFF

There are fivelecturers and two Assistant Lecturers in the Department. Their names and qualifications are given in the table below:

Name	Qualification	Designation	Area of Specialization
Dr. Richard KwasiBannor	PhD (SKRAU) MA (UG) BSc(UCC)	Lecturer and Ag. HoD	Agribusiness and Marketing
Ms. Helena Oppong-Kyeremeh	MPhil (KNUST) B.Sc. (UCC)	Lecturer /Examination Officer	Consumer Economics and Agribusiness
Dr. Nicholas Oppong Mensah	PhD MBA (KNUST), MPhil BSc (UG),	Lecturer	Agribusiness and Business Management
Dr. TekuniNakuja	PhD, M.Sc. (S,tchewan), MPhil Bsc (UG),	Lecturer	Agricultural Economics, International Trade and Policy
Dr. Samuel AfoteyAnang	PhD (SCAU) MPhil,B.Sc. (UG)	Lecturer	Agricultural Economics,
Mr. Anthony Donokor	M.Sc. B.Sc., (KNUST)	Assistant Lecturer	Operations Research and Statistics
Mr. Frank Osei Tutu	MPhil, MBA (KNUST) CIB, ICA (Gh) B.Com(UCC)	Assistant Lecturer	Accounting and Finance

DR. RICHARD KWASI BANNOR

Research Activity/Interests

- Value chain analysis
- Price analysis and forecasting,
- International and domestic commodity marketing
- Food security

Recent Publication(s)

:

- Bannor, R.K., Adjei-Addo, E., and Oppong-Kyeremeh, H. (2018). Marketable Surplus and its determinants among small scale maize producers in Ashanti and Northern Regions of Ghana. SKUAST Journal of Research, 20 (1).

- Oppong-Kyeremeh, H., and Bannor, R.K. (2018). Off Farm Job as Climate Change Adaptation Strategy for Small Scale Rice Producers in the Volta Region. ICCCSDA 2017 Special Issue: Environment, Technology and Sustainable Development. Journal of Energy and Natural Resource Management, 1(1a), 36-42.

- Bannor, R.K., Oppong-Kyeremeh, H. (2018). Extent of Poverty and Inequality among Housholds in the Techiman Municipality of BrongAhafo Region, Ghana. ICCCSDA 2017 Special Issue: Environment, Technology and Sustainable Development. Journal of Energy and Natural Resource Management, 1(1a), 26-36.

- Acquah A., andBannor, R.K. (2017). Motivational Elements effect on Labour Productivity and Retention: The case of Jei River Farms in Central Region of Ghana. Indian Journal of Economics and Development Journal, 13(4), 619-626.

Outreach Programmes/Extension Services

- Editorial Board Member: Indian Journal of Economics and Development published by Society of Economics and Development, Punjab-India.
- Reviewer: BIONFO Business Economics Journal/ International Journal of Agriculture Sciences published by BIONFO Publications.
- Reviewer: for Food Security: The Science, Sociology and Economics of Food Production and Access to Food published by Springer.
- Lead Consultant: Development of five case studies report on Ghana Commercialisation of Rice Project (GCORP) for Alliance for Green Revolution (AGRA) through Agribusiness Systems International (ASI) – January to February, 2016
- Lead Consultant: End of Ghana Commercialisation of Rice Project (GCORP)

Conferences/Workshops/Seminars

1. Participant: Employment Creation along the Poultry Value Chain: Public Private Partnership Approach by USDA Ghana Poultry Project – March 2018, Sunyani-Ghana.
2. Participant and Panelist: 1st International Extension Congress: New Horizons of Extension: Challenges and Opportunities (held on 1-3 February, 2018), ICAR-CIWA, Odisha, India.

3. Participant and Moderator: 1st International Conference on Climate Change and Sustainable Development: Strengthening Africa's Adaptive Capacity by Centre for Climate Change and Gender Studies, University of Energy and Natural Resources (held on July 25-28, 2017), Eusbett International Conference Centre, Sunyani-Ghana.

MS. HELENA OPPONG-KYEREMEH

Research Activity/Interests

- Value Chain Analysis
- Marketing of Agricultural Produce
- Food Security
- Gender Related Research

Recent Publication(s)

- Bannor, R.K. Adjei-Addo, E., and Oppong-Kyeremeh, H. (2018). Marketable Surplus and its determinants among small scale maize producers in Ashanti and Northern Regions of Ghana. SKUAST Journal of Research, 20 (1).

- Oppong-Kyeremeh, H., and Bannor, R.K. (2018). Off Farm Job as Climate Change Adaptation Strategy for Small Scale Rice Producers in the Volta Region. ICCCSDA 2017 Special Issue: Environment, Technology and Sustainable Development. Journal of Energy and Natural Resource Management, 1(1a), 36-42.

- Bannor, R.K. and Oppong-Kyeremeh, H. (2018). Extent of Poverty and Inequality among Housholds in the Techiman Municipality of BrongAhafo Region, Ghana. ICCCSDA 2017 Special Issue: Environment, Technology and

Sustainable Development. Journal of Energy and Natural Resource Management, 1(1a), 26-36.

Outreach Programmes/Extension Services

- Examination Officer for Department of Agricultural Economics, Agribusiness and Extension, UENR.
- Board Member: School of Agriculture Technology, UENR, February, 2016-Date
- Coordinator for B.Sc. Agriculture and B.Sc. Agribusiness Top-Up Programme of the School of Agriculture and Technology, University of Energy and Natural Resources (UENR), 10/16- 12/17.
- Admissions Outreach to Senior High Schools in BrongAhafo Regions on UENR programmes.
- Industrial Attachment Coordinator for Department of Agricultural Economics, Agribusiness and Extension, UENR, 6/17-05/18.

Conferences/Workshops/Seminars

- Participant: Employment Creation along the Poultry Value Chain: Public Private Partnership Approach by USDA Ghana Poultry Project - 21-22/03/18, Sunyani-Ghana.
- Participant and Presenter: 1st International Conference on Climate Change and Sustainable Development: Strengthening Africa's Adaptive Capacity by Centre for Climate Change and Gender Studies, University of Energy and Natural Resources (held on July 25-28, 2017), Eusbett International Conference Centre, Sunyani-Ghana.
- Participant: Monitoring, evaluation and impact assessment of food and nutrition security programmes, at the Wageningen Centre for Development Innovation. 5th to 23rd June, 2017 - 23/06/2017, Wageningen-The Netherlands.

DR. NICHOLAS OPPONG MENSAH

Research Activity/Interests

- Risk Management
- Insurance - Agricultural Insurance Life, Health, and Pensions schemes for farmers/Agribusiness workers.
- Marketing Communications
- Value Chains

Recent Publication(s)

- Nicholas Oppong Mensah, Simon CudjoFialor, Edward Yeboah (2017). Evaluating the Constraints to Development of Agricultural Insurance for Cashew Crop Farmers in Brong-Ahafo Region of Ghana, Open Journal of Business and Management Vol.05, No.02.

- Owusu Alfred, Nicholas Oppong Mensah, Anthony Kofi Badu (2016). Positive contributions of Globalization on Developing Countries; A focus on Ghanaian employees.International Journal of Information, Business and Management, Vol. 8, No. 3.

Outreach Programmes/Extension Services

:

- Deputy lead Consultant: Baseline Survey for Ghana Poultry Project, ACDI – VOCA
- Postgraduate Coordinator for Department of Agricultural Economics, Agribusiness and Extension, School of Agriculture and Technology, UENR-04/18 –Date

Conferences/Workshops/Seminars

- Participant and Presenter: Agricultural Insurance in Ghana: An Examination of Concepts, Structure and Challenges,3rd International Conference on Applied Sciences and Technology (ICAST 2016)held on a(held on September 28-29, 2016).) at Kumasi Technical University,Ghana

DR. TEKUNI NAKUJA

Research Activity/Interests

- International trade policy
- Agricultural policy
- Food security

Recent Publication(s)

- Nakuja, T. and Kerr, W.A. (2018). Do WTO commitments restrict the policy space of countries wishing to provide food security through stockholding programs? Journal of World Trade, 6(52), forthcoming.

- Nakuja, T. and Kerr, W.A. (2018). Food security though public stockholdings and trade distortions. British Food Journal, 120(5): 1089-1105.

- Nakuja, T. (2016).Three essays on trade policy, public stockholding and food security in developing countries.University of Saskatchewan PhD thesis.

- Nakuja, T., Akhand, M., Hobbs, J. E. and W.A. Kerr (2015). Evolving US Food Safety Regulations andinternational competitors: Implementation dynamics. International Journal of Food System Dynamics, 6(4), 259-268

Outreach Programmes/Extension Services

- Reviewer for Agriculture and Food Security Journal.
- School of Science Cognate Member, UENR, 02/18- Date
- Industrial Attachment Coordinator, Dept. of Ag Econ, Agrib. & Extension, 04/18- Date

DR. SAMUEL AFOTEY ANANG

Research Activity/Interests

- Agricultural production value chain
- Socio-economic factors affecting Agricultural production in the developing countries

- Livelihoods and Rural Development.
- International Trade

Recent Publication(s)

- Anang, S.A. &Yanwen, T. (2014). Influence of agricultural trade liberalization policies on poverty reduction among Ghanaian rural smallholder rice farmers. Bulgarian Journal of Agricultural Science, 20 (No 4), 746-753.
- Anang, S.A. &Yanwen, T. (2014). Influence of agricultural trade liberalization policies on production and poverty reduction among Ghanaian rural smallholder cocoa and rice farmers. Journal of Agricultural Economics and Development Vol. 3(1), pp. 001-011.
- Anang, S.A. &Sakyi-Dawson, O. (2013). Influence of Financial Services Sources on the Livelihoods of Small-scale Crop Farmers in the Ashaiman Municipality of Greater Accra Region, Ghana. Journal of Agriculture, Biotechnology & Ecology, 6(1), 57-67.

Outreach Programmes/Extension Services

- Training Facilitator on Entrepreneurial and Business development for Ghana Water Company retiring staff.
- UENR Dean of Student's Board Cognate Member 02/18- Date
- Academic Advisor/Tutor, Department of Agricultural Economics, Agribusiness and Extension UENR, 02/18- Date

Conferences/Workshops/Seminars

- Participant: Workshop on developing the culture of publication and how to prepare a manuscript for publication (held on 1st March, 2018), CUCG-Sunyani, Ghana.

MR. ANTHONY DONKOR

Research Activity/Interests

- Optimization Techniques
- Optimal allocation of funds and raw materials

- Profit maximization
- Reduction of cost of production

Recent Publication(s)

- Optimal Allocation of Funds for Loans using Karmarkar's Algorithm (Already available in "Article in Press" of The Journal of Economics, Management and Trade with manuscript no. 2018/JEMT/40292)

Outreach Programmes/Extension Services

- School of Agriculture Technology Board Member, UENR, 01/18- Date
- Coordinator for B.Sc. Agriculture and B.Sc. Agribusiness Top-Up Programme of the School of Agriculture and Technology, University of Energy and Natural Resources(UENR), 01/18- Date

MR. FRANK OSEI TUTU

Research Activity/Interests

- Corporate Governance
- Corporate Finance
- Microfinance
- International Financial Reporting Standards

DEPARTMENT OF HORTICULTURE AND CROP PRODUCTION

Department of Horticulture and Crop Production is one of the three Departments of the school of Agriculture and Technology (SOAT). The main aim of the Department is to train students to possess in-depth knowledge and technical skills in the areas of sustainable crop production for the benefit of the country. Students are also equipped with practical knowledge such that after the programme, they can easily identify their various fields of interest and specialization, and venture into farming as a business.

Programmes

The Department of Horticulture and Crop Production now offers the following programmes:-

Undergraduate programmes:

Currently the Department runs the following programmes,

- Diploma in General Agriculture
- B.Sc. Agriculture with options (Crop production and Horticulture)

Graduate Programmes

At the graduate level, the Department runs Master of Science (M.Sc.), Master of Philosophy (M. Phil.) and Doctorate degrees (Ph.D.) with specialization in Agronomy, Postharvest Technology, Crop Protection and Plant Pathology

Activities Over the Past Year

- The Department is currently characterising the soils at the new site of SOAT. The soils at the new site are used in cultivating vegetables and maize and characterisation of these soils would help manage them well.
- The Department is currently rearing beneficial insects (Parasitoids) for mass release to curtail the injuriousness caused by major insect pests to crops and grainS. This is funded by the Alexander von Humboldt Research Linkage Programme at a cost of Euro 55,000.00.
- The Department also hosts an Entomophagical Centre that rears the African Palm Larvae (Popularly called 'Akokono' among the Akans). This is spear-headed by Ghana's first and only entomophagical entomologist Dr. Jacob Paarechuga Anankware.

Future Plans

The Department is collaborating with partner universities across Germany and Africa on the African European collaborative research on Sustainable Agriculture and Aquaculture and on Food and Nutrition Security between UENR, Humboldt Universitatzu Berlin, Germany and other institution in Kenya. The total finances available for this collaborative research amounts to Euros 27, 000 000. The Department plans to also establish Africa Research Centre of Excellence for Innovative Technology and Development (ARCETID). The main goal is to serve as a Centre for implementing current new ideas and bringing them to agriculture to ensure food security for the increasing population of Africa especially Ghana.

Teaching Staff and their Qualifications

The names and qualifications of the lecturers currently in the Department are given in the table below:

Name	Qualification	Designation	Area of Specialization
Dr. Charles Adarkwah	PhD, MSc. (Humboldt, B.Sc (UCC)	Senior Lecturer / Ag. Dean	Post-Harvest Entomology
Dr. Samuel K. Asomaning	PhD, M.Phil., B.Sc.(UG)	Lecturer / Ag. HoD	Soil Fertility Mgt, Plant nutrition; Soil chemistry.
Dr. Jacob P. Anankware	B.Sc. (UDS) M.Phil.(UG) PhD (KNUST)	Lecturer	Entomophagy, Stored Product Entomology,
Dr. Francisca Aba Ansah	PhD (Foggia,) M.Phil., B.Sc. (UG)	Lecturer	Post-Harvest Technology

Dr. PaaKwesiBordoh	PhD(Nottingham) M.Phil. (Hebrew) B.Sc. (UDS)	Lecturer	Post-Harvest Biotechnologist
Dr Patrick Norshie	PhD (Harper) M.Sc.(Ghent) B.Sc.(KNUST)	Lecturer	Crop protection
Dr. Abdulai Muntala	PhD (Akdeniz) M.Phil. (Ibadan) B.Sc.(UDS)	.Lecturer	Plant Pathologist
Roger Adjei	B.Sc. (UCC)	Research Assistant	Agronomy

DR CHARLES ADARKWA

Research Activities / Interests

- Research interests are in integrated pest management and biological control of arthropodpests.
- Establishment of a rearing facility for beneficial insects for stored product postmanagement to improve food security in the Dormaa-enkro Municipality of Ghana

Recent Publication(s)

- Adarkwah,C., ObengOfori, D., Ulrichs C., Scholler, M (2017). Insecticidal efficacy of botanical food by-products against selected stored grain beetles by the combined action with modified diatomaceous earth. Journal of Plant Diseases and Protection, 124: 255-267, DOI 10. 1007/ s41348-016-0068-2

- Adarkwah, C.,Nyarko, G., Opoku, N., Badii, B.K., Addai I.K., Prozell, S., Ulrichis C., Scholer, M. (2016). Effectiveness of the egg parasitiodTrigrammmaevanescens preventing rice moth from infesting stored bagged commodities. Journal of Stored Products Research, 61, 102-107.

- Obeng-Ofori D., Adarkwah C.Ulrichis C. (2016). Chemical, physical and organic hermitic storage technology for stored-product protection in Africa countries. Bulletin of the International Organization for Biological Control, 111: 3-27.

Conferences/Workshop/Seminars:

- Facilitator at a stakeholder symposium on Research-practioner on climate change adaptation of agrarian communities in the transitional zone organized by the centre for Climate Change and Gender Studies (3CGS) as part of the CIRCLE research uptake project UENR_Sunyani, 27th February, 2017.
- Participant in the International DAAD Alumni Seminar with the theme" Smart and Adapted Technologies in agriculture for Productive and Sustainable Land Use Systems in Developing Countries" scheduled to take place on November 6th - 13th 2017 at Witzenhausen, Germany.

Outreach Programmes/Extension Services

- Leader/founder: UENR-IARSTE: (UENR-International Association of Exchange of Students for Technical Experience), sponsored by German Academic Exchange Service-DAAD-October, 2016.
- Leader in preparation of proposal for LEAP AGRI-Call 2017 on African European collaborative research on Sustainable Agriculture and Aquaculture and on Food and Nutrition Security between UENR, Humboldt Universitatzu Berlin, Germany and Kenya, The Total finances available for this call for proposals amount to 27,000.00 Euro.
- Reviewer: International Journal of Pest Management, Journal of Bio control and Technology, Journal of Botanicals and Essential Oils, Journal of Stored Products Research.

Dr SAMUEL KWESI ASOMANING

Research Activities / Interests

- Scope of research and practice has been on soil fertility management and plant nutrition.
- Soil chemistry, with special interest in soil phosphorus management and sorption studies.

Recent Publication(s)

- S. K. Asomaning, M. K. Abekoe, G. N. N. Dowuona (2018) Phosphorus sorption capacity in relation to soil properties in profiles of sandy soils of the Ketasandspit in Ghana. West African Journal of Applied Ecology, vol. 27(1), 49 - 60.
- Adarkwah C., Darkwah Y., Asomaning S.K.,ObengOfori D. (2017): Climate change implications on biological and hermetic storage technology for grain protection to improve food security in Ghana, Proceedings of the International Conference on

Climate Change and Sustainable Development in Africa, 25th - 28th July at Universty of Energy and Natural Resources, Sunyani.

Conferences/Workshop/Seminars:

- 30thJanuary - 2nd February, 2018. Instuctional Skills Workshop (ISW) –Vancouver Island Univerisity, Canada. Univ of Energy and Natural Resources.
- 31st August, 2017 Agricultural Science and Technology Indicators (ASTI) Stakeholders andDissemination Workshop.. CSIR, Accra.
- 25th - 28th July, 2017 International Conference on Climate Change and Sustainable Development in Africa. (ICCCSDA, 2017). Sunyani, B/A.

Dr JACOB P. ANANKWARE

Research Activities / Interests

My research interest are in integrated pest management and has leveraged my expertise in entomology to rear nutritious and healthy edible insects like the palm weevil larva (Akokono) to reduce malnutrition and iron-deficiency anaemia in Africa. I also rear the larvae of the black soldier fly as a sustainable protein for animal feed.

Recent Publication(s)

- Ojinnaka, M.C., Anankware, J.P. Shadrack, D.M., Okereke, S. (2018). Production and quality characteristics of African yam bean–wheat cake enriched with edible palm weevil (RhynchophorusphoenicisFabricius). International Journal of Agricultural Research and Review: ISSN-2360-7971, Vol. 6(3): pp, 680-694

- Anankware, P. J. Obeng-Ofori, D. (2016). Edible Insects of Ghana: Opportunities for a Food Secure World. "Solidarity in a competing world - fair use of resources". Tropentag, September 19 - 21, 2016 in Vienna, Austria.

- Anankware, P.J.,Osekre, E.A., Obeng-Ofori, D., and Khamala, C.M. (2016).Identification and classification of common edible insects in Ghana. International Journal of Entomology Research 1 (5): 33-39.

DR FRANCISCA ABA ANSAH

Recent Publication(s)

- Ansah, F.A., Amodio M.L., Colelli, G (2018) Quality of fresh-cut products as affected by harvest and postharvest operations (a review). Journal of the Science of Food and Agriculture 98(10):3614-3626, 2018

- Ansah, F.A., Asare, G.O., Amodio M.L.(2017) Fresh-Cut Markets and Opportunities for Income and Nutrition Security, Peer reviewed conference proceeding 1002 – The 1st all African Postharvest Congress and Exhibition, Kenya, 28-31 March,
- Villalobos, M.C., Ansah, F., Amodio, M.L., Serradilla, M.J., Colelli, G(2017). Application of modified atmosphere packaging with moisture absorber to extend the shelf life of 'DomenicoTauro' breba fruit. Acta Horticulture 1173, 365-370,

Conferences/Workshop/ Seminars/ Poster Presentations

- Presenter: The 5th International Symposium on Figs (ISHS), Naples-Italy, 31 August – 3 September 2015

- Presenter at the North American Colleges and Teachers of Agriculture Conference, Montana State University, Bozeman-United States, 25 – 28 June 2014

- Poster Presenter: International Controlled and Modified Atmosphere Conference, Italy, 3 – 7 June 2013

Dr PAA KWESI BORDOH

Research Activities / Interests

- Alternative management strategies for postharvest diseases using edible coatings from plantcrude extracts, gum Arabic to improve nutritional and keeping qualities of fresh produce.
- Postharvest handling and packaging of fruits and pack house practices.
- Sensory analysis (taste and smell) in harvested fresh produce
- Chilling injuries in tropical fruits

Recent Publication(s)

- Ali, Asgar, Bordoh, P.K, Ajit Singh, Yasmeen Siddiqui, Samir Droby (2016) Post-harvest development of anthracnose in pepper (Capsicum spp): Etiology and management strategies. Crop protection. 90, 132-141.

- NurFatin A. H., Azhane A., Bordoh, P.K. (2017). Effect of Chitosan on chilling injury, antioxidant status and postharvest quality of Japanese cucumber during cold storage. SainsMalaysiana. 45, 287-294.

Conferences/Workshop/Seminars:

- Alternative management to control postharvest anthracnose in dragon fruits using plantextracts, organized by The University of Nottingham Malaysia Campus, second year symposium, 2015

- Global food security Forum, "Meeting Nutritional Needs", organised by Crop for the Future (CFF) with support from The University of Nottingham Malaysia Campus, Malaysia, 2014.

- Antifungal effect of some plant crude extracts to control Colletotrichumgloeosporioidesin Papaya (Carica papaya cv. Eksotika), Monash Science Symposium, 2014, Malaysia. 2014.

- Can reducing ethylene sensitivity by 1-MCP control chilling injury in Cucumber? CAMAconference, Italy, 2013?

DR PATRICT NORSHIE

Research Activities / Interests

Plant Pathology, Nematology, Integrated Crop Pest and Disease Management, Environmental Profiling of Crop Protection Compounds

Publication(s)

- Patrick M. Norshie, Ivan G Grove and Matthew A Back (2017). Sorption of the nematicidefluensulfone in six UK arable soils – implications for control of the potato cyst nematode Globoderapallida. Nematology. 20 (2) 111 – 118.

- Patrick M. Norshie, Ivan G Grove and Matthew A Back (2017). Persistence of the nematicidefluensulfone in potato (Solanumtuberosumssp. tuberosum) beds under field conditions. Nematology, 19(6): 739 – 747.

- Patrick M. Norshie, Ivan G Grove and Matthew A Back (2016). Field evaluation of the nematicidefluensulfone for control of the potato cyst nematode Globoderapallida. Pest Management Science. 72 (10): 2001–2007.

Conferences/Workshop/Seminars:

- 5 - 10 May, 2014: 6th International Congress of Nematology Cape Town, South Africa.
- 11th December, 2012: Advances in Nematology, the Linnean Society of London, Piccadilly London, U.K.
- 23 - 27 September, 2012: 31st International Symposium of the Eupean Society of Nematologist, Adana, Turkey.

DR. ABDULAI MUNTALA

Research Activities / Interests

- Molecular Characterization of plant pathogens such as Bacteria, Fungi and Nematodes using both conventional and the Real-Time Polymerase Chain Reaction (PCR) tools.
- Development of specific Primers and Probes for the Real-Time detection of plant pathogens. Plant pathogens strain typing using Pulsed Field Gel Electrophoresis and RFLP
- DNA sequensing and Phylogenic Analysis based on GenBank database.

Recent Publication(s)

- MuntalaAbdulai,HüseyinBasım, EsinBasım, DeryaBaki&NurhanÖztürk(2017). Detection of Xanthomonas axonopodis pv. manihotis, the causal agent of cassava bacterial blight disease in cassava (Manihot esculenta) in Ghana by polymerase chain reaction, Eur J Plant Pathol. DOI 10.1007/s10658-017-1297-3

- HüseyinBasım, EsinBasım, DeryaBaki, MuntalaAbdulai, &NurhanÖztürk(2017). Identification and Characterization of Alternariaalternata(Fr.) KeisslercausingCeratonia Blight Disease of Carob (Ceratoniasiliqua L.) in Turkey. Eur J Plant Pathol. https://doi.org/10.1007/s10658-017-1354-y.

- Abiodun O. Claudius-Cole, AbdulaiMuntala&BamideleFawole(2017). Characterization of Meloidogyne species and the reaction of tomato Solanum lycopersicum L. cultivars to Meloidogyne incognita and Meloidogyne javanica, 2017, 6(1), 167-179.

Conferences / Workshop / Seminars:

- Abdulai M., Basim H., Identification and Characterization of Xanthomonasaxonopodispv.manihotis (Berthet- Bondar) Dye 1978, Causing Cassava Bacterial Blight Diseases in Ghanaian Agro - Ecological Zones. Konya – 2016, Turkey.

- Abdulai M., Molecular Characterisation and Pathogenicity of Meloidogyneincognita on tomato cultivars (Solanum lycopersicon L.).Chicago – 2017, USA

- Abdulai M., Basim H., Identification and Detection of Xanthomonas axonopodis pvmanihotis causing bacterial blight disease of cassava (Manihot esculenta) by Real-time PCR.Cappadocia – 2017, Turkey

- Basim E., Basim H., Abdulai M., Baki D., "Leaf spot disease of olive tree (Oleaeuropaea L.)caused by Alternariaaltenata (Fr.) Keissler in Turkey. ", Agrosym 2016, Jahorina, BOSNAHERSEK, 6-9 Ekim 2016, pp.470-470.

- Basim E., Basim H., Baki D., Abdulai M., "Gummy spot blight diseases of watermelon (Citrulluslanatus (Thunb.) Matsum&Nakai) caused by Didymellabryoniae (Fuckel) Rehm.in Turkey.", Agrosym 2016, Joharina, BOSNA HERSEK, 6-9 Ekim 2016, pp.472-472

DEPARTMENT OF GEOGRAPHICAL SCIENCES AND PLANNING

The Department of Geographical Sciences and Planning was established in the 2017/2018 academic year and is one of the Departments that run currently under the School of Agriculture and Technology, DormaaAhenkro Campus.

The Department focuses onprogrammes which are of direct and immediate interest to current national development goals: Planning, Sustainability, Climate Change and Sustainable Development. Presently, the Department runs a 4 year degree programme; BSc. Planning and Sustainability and a 2 year master's degree program; MSc/MPhil Environmental Planning and Development.

The Department also runs a 2 year Diploma programmein Geoinformation Science. The Department aims generally at the provision of specialized training in geosciences and allied academic disciplines in order to help address pressing environmental, energy and developmental challenges.

ACTIVITIES OVER THE PAST YEAR

The Department spearheaded the development of a BSc Climate Change and Sustainable Development Programme and also facilitated the development of an MSc/MPhil Environmental Planning and Development Programme. The Department run service courses for selected climate change related courses in sister departments of the university.

TEACHING STAFF

Names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of specialization
Dr. Leslie Danquah	PhD.,MA (KNUST), BA (KNUST)	Lecturer/ Departmental Coordinator,	Biometeorology of Child Health; Child Environmental Health; Domestic water use;
Mrs. Kamila Kaboba	MSc (Hohai),	Lecturer	Remote sensing, GIS, Mathematical modelling in Geography
Caleb Mensah	MPhil Meteorology and Climate Science. BSc. (KNUST)	Assistant Lecturer	Meteorology/ Climatology

DR. LESLIE DANQUAH

Research Activities / Interests

- Biometeorology of child health
- Child environmental health
- Domestic water use
- Domestic water quality assessment and monitoring

Recent Publication(s) Last (3) years

- Danquah, L., Awuah, E., Agyemang, S. & Mensah, C.M. (2015). Investigating the Predictors of Domestic Water Consumption in Urban Households with Children Under-Five Years: A Panel Study in the AtwimaNwabiagya District, Ghana. Journal of sustainable development. Vol 8(8). 1 – 17.

- Geere, J., Bartram, J., Bates, L., Danquah, L., Evans, B., Fisher, M., Groce, N., Majuru, B., Mokoena, M. M., Mukhola, M. S., Hung, N. V., Phuc, P. D., Williams, R. A., Schmidt, W., & Hunter, P. (2018). Carrying water may be a major contributor to disability from musculoskeletal disorders in low income countries: a cross-sectional survey in South Africa, Ghana and Vietnam. Journal of Global Health, 8(1).1-14.

Conferences / Workshops / Seminars

- Plenary and parallel session moderator: International Conference on Climate Change and Sustainable Development (ICCCSDA 2017). University of Energy and Natural Resources. [25th – 28th July, 2017]
- Participant: Mentoring and the Researcher Development Framework (RDF) Planner Workshop. University of Energy and Natural Resources. 10th October, 2017
- Participant: Thesis Supervision Seminar. Organized by the School of Graduate Studies, UENR. Catholic University College, Fiapre. 31st January, 2018.

Outreach Programmes / Extension Services

- Planning Committee Member: International Conference on Climate Change and Sustainable Development (ICCCSDA 2017). University of Energy and Natural Resources. [25th – 28th July, 2017]

MRS. KAMILA J. KABO-BAH

Research Activities / Interests

Remote sensing, GIS, Mathematical modelling in Geography

Recent Publication(s)

- Donkoh, E., Kabo-Bah, K., & Asiedu, S. (2014). The trend of dog rabies with vaccination usingseir model case study: Bolgatanga district, Ghana. International Journal of Applied Mathematical Research, 3(4), 380-389.
- CaiLingyan, Tang Guo'an, XiongLiyang, Lis, K. J., Xie Ting, & Li Yaping. (2014). DEM - based Study on Fractal Features of Typical Topography in Loess Plateau of Northern Shaanxi Province. Soil and Water Conservation Bulletin, 34 (003), 141-144.
- Kabo-bah, A. T., Anornu, G. K., Ofosu, E., Andoh, R., &Lis, K. J. (2014). Spatial-temporal estimation of evapotranspiration over Black Volta of West Africa. International Journal of Water Resources and Environmental Engineering, 6(12), 295-302.

Conferences / Workshops / Seminars

- Participant: Airborn remote sensing for monitoring essential biodiversity variables in forest ecosystems; Bavarian Forest National Park (2017)
- Participant: NOAA Satellite Conference 2017, New York City

Outreach Programmes / Extension Services

- Science Festival Lead Coordinator
- Member of LOC for AfriGEOSS Symposium 2017, Sunyani, Ghana
- Member of Prepartion Team of SEACRIFOG Stakeholder Consultation Workshop, 16th June 2017, Sunyani - jointly with Czech Globe.

MR. CALEB MENSAH

Research Activities / Interests

- Tropical Meteorology / Climatology / Numerical Modeling and Extreme weather conditions forecasting

Recent Publication(s)

- Boateng, K. A., Mensah, C.,Agyei, T., Svik, M. (2018) Effects of Urbanization on the Landscape of a Modern City in Ghana: A Case Study of Sunyani. In Public recreation and landscape protection – with nature hand in hand!: Conference proceeding.1st ed. Brno: Mendelovauniverzita v Brně, 2018, p. 132--139.www.utok.cz/sites/default/files/data/USERS/u24/RaOP%202018_WEB_1.pdf

- Mensah C., Mensah M. M. (2018). Climate Change and the Viability of Renewable Energy in Ghana. Innovative Energy Research 7: 196. doi: 10.4172/2576-1463.1000196.

- Mensah, C.,Kabo-bah, A. T., &Mortey, E. (2017). Assessing The Effects Of Climate Change On Sea Level Rise Along The Gulf Of Guinea. Journal of Energy and Natural Resource Management,4(1),15-22.

Conferences / Workshops / Seminars

- Short Course on Flux Measurement Fundamentals in Karlsruhe Institute of Technology (KIT), IMK- IFU, Garmisch - Partenkirchen, Germany (29th July- 4th August, 2018)
- LOC Member: AfriGEOSS Symposium at Tyco City Hotel, EORIC-UENR (13th - 15th June, 2017)
- Facilitator: Seminar on Climate Data Management and Modeling Tools at UENR (22nd- 24th March, 2017)
- Facilitator: Flood and Drought Modeling Using Earth Observation, UENR-EORIC, 22nd- 24th August, 2016



SCHOOL OF GRADUATE STUDIES

The Graduate School, since its establishment in 2014, seeks to provide excellence in post graduate education in Energy and Natural Resources, in recruiting and maintaining a diverse student population and to foster opportunities in research, creative achievements and professional development.

GRADUATE PROGRAMMES OFFERED

The School offers the following Master's and Doctoral degrees in various fields of discipline:

- Master of Science
- Master of Philosophy
- Doctor of Philosophy

The School of Graduate Studies currently runs the following programmes.

- MSc/PhD Sustainable Energy Management
- MSc/PhD Environmental Engineering Management
- MPhil/PhD Social Forestry and Environmental Governance

- MPhil/PhD Crop Sciences
- MPhil/PhD in Computer Science
- MPhil in Mathematics
- MSc/MPhil in Environmental Planning and Sustainability

STUDENT ENROLMENT

The School has a student population of about Two hundred and forty-six (246). The following is the breakdown of enrolment figures.

STUDENTS ENROLMENT & PROGRAMMES

PROGRAMME	NUMBER OF STUDENTS		
	MALE	FEMALE	TOTAL
MSc Sustainable Energy Management	21	3	24
MSc Environmental Engineering Management	23	1	17
MPhil Computer Science	14	2	16
MPhil Crop Science	2	1	3
MPhil Applied Mathematics	12	2	14
MPhil Environmental Planning and Sustainability	8	3	11
MSc Social Forestry and Environmental Governance	20	4	24
PhD Computer Sciences	10	0	10
PhD Crop Sciences	3	0	3
PhD Social Forestry and Environmental Governance	12	0	12
PhD Sustainable Energy Management	8	0	8
PhD Environmental Engineering Management	8	0	8
TOTAL NUMBER	134	16	150

INTERNATIONAL AFFILIATIONS/MoU'S

The establishment of links with international institutions for postgraduate studies does not only encourage both students and staff but place the University on the global map of academic institutions. In the course of the year, the School entered in to some collaboration with the institutions like University of Applied Forest

Sciences, Rottenburga.N.Germany and University of South Africa where two of our postgraduate students, Genevieve Kwarteng and Martin Kyereh Bonfeh are on the sis research exchange respectively. The School also signed an MoU with the West African Rice Development Association based in the Republic of Benin.

STAFFING

Thefollowing constitute the staff of the School:

S/N	NAME	QUALIFICATIONS	POSITION
1.	Prof. E.OpuniFrimpong	BSc. (KNUST), MPhil (KNUST), PhD (Michigan University))	Ag. Dean
2.	Mr.DavidTwumasi-Ankrah	B.A.(KNUST) MPA(KNUST)	SchoolSecretary
3	Philippa Mensah	BA (UG)	Snr. Admin Asst.
4	George Dzane	Bcom (UCC)	Snr. Admin Asst.

WORKSHOPS/SEMINAR/TRAINING

The School of Graduate Studies, subsequent to its mandate on research and innovation, organized seminars for its postgraduate students and lecturers.

A research seminar was organised for all postgraduate students on "Scientific Research in the 21st Century" as well as "How to generate ideas on specific research topic". The seminar was spearheaded by a renowned distinguished scholar, Prof. Emmanuel Glakpe of Howard University, Washington DC. USA.

There was also a seminar organised for postgraduate lecturers on 31st January, 2018 on thesis supervision which had the Vice Chancellor of Catholic University College and Dean, School of Engineering, UENR as the facilitators. This was geared towards equipping lecturers with how to supervise our growing number of graduate students.

SCHOLASHIP

The University has benefited from the Ghana National Petroleum Commission (GNPC) scholarship for both undergraduate and postgraduate students. There are four (4) postgraduate students currently on the scholarship; three (3) from the Department of Energy and Environmental Engineering and one (1) from the Mathematics and Statistics department.

SCHOOL OF POST GRADUATECO-ORDINATORS

Inordertomakethepostgraduateprogrammeeffective the Schools have coordinators who see to the day today running of the programmes at their various Schools.

S/N	PostgraduateCoordinators	Qualification	School
1.	Dr.M.Amo-Boateng	B.Sc.,M.Sc.,PhD	Engineering
2.	Dr.SimonAbugre	B.Sc.,M.Sc.,PhD	NaturalResources
3	Dr.MichaelLartey	B.Sc.,M.Sc.,PhD	Sciences
4	Dr.RKBannor	B.Sc.,M.Sc.,PhD	Agricultureand Technology

OUTREACHPROGRAMMES

The School recently embarked on an outreach programmes to promote its programmes in some selected institutions in Brong Ahafo, Ashant iand part of Eastern Region. Some of the institutions visited include:

- ForestryCommission
- AdumPostOffice,Kumasi
- ECG,KumasiAandGRIDCO,Kumasi
- KumasiAirportandKumasiCityMall
- GoldenBeanHotel,KumasiandGoldenTulipHotel,Kumasi
- AsankoMine
- GeodrilGhanaLimitedGhanaWaterCompany(KumasiandKoforidua)
- KapitalViewKoforidua
- EPA,(KumasiandKoforidua)
- KoforiduaTechnicalUniversity
- NewmontAhafo
- Ecobank,Kenyasi
- Some Secondary Schools in Brong Ahafo Ashanti and Eastern.

FUTURE PLANS

The Graduate School intends to work with all Academic Departments in the near future, to mount postgraduate programmes in every Department. As a first step, the following programmes have beens ubmitted for accreditation and they are under review:

- MPhil/PhDinComputerScience
- MPhilinMathematics
- MPhilinAppliedStatistics
- MBA/MPhilinAgribusinessManagement
- MSc/MPhilinClimateScience
- MSc/MPhilin EnvironmentalPlanningandDevelopment

CHALLENGES

The School which is in its infantile stage has some challenges which are indicated below:

Infrastructure/Equipments

The Graduate School building houses the Resource Centre which provides internet access and othere-resources to facilitate research activities among graduate students. The Centre, is however small for the increasing number of students. The current seating capacity is eight (8)A much bigger centre should be needed to accommodate more students.

The conference room of the Graduate School which is used fo rmeetings, also serve as proposal/the sis presentations hall. Meanwhiile, Owing to the multiple use for the facility, there is always pressure to find different venues for different events and this has always become aborder to the School. The School also lacks adequate resources for teaching and learning, for example, projectors and projector screen for teaching sessions and presentations.

PowerSupply

The School is also essential in performing various roles in the university and as such need a constant supply of electricity. The school does not have a plant and as such is

affected by any power outage that occurs .The provision of a plant to substitute power supply once there is a power outage will go along way to help the activities being run in theSchool.

UNIVERSITY LIBRARY

University libraries all over the world are classified as the heart of the university system. It is the main information resource centre that supports teaching, learning and research activities in the University. It is the combination of people, collections, buildings and more recently technology whose purpose is to assist users transform information to knowledge.

The role of the library in promoting academic activities is to acquire, process, organize and disseminate relevant, quality, timely and appropriate information in both print and electronic formats to enhance teaching, research and learning in the university. Therefore, the strength of libraries depends on their links to academic faculties and the strength of research and teaching depend on the quality of their libraries.

ACQUISITION

The University of Energy and Natural Resources Library has a total collection of four thousand, six hundred and seventy (4,670) volumes of books and two hundred and fifty-two Journals in the areas of Energy, Mathematics, Forestry and Natural Resources.

The books are on Engineering, Natural Resources Management, Physics, Chemistry, Computer Sciences, Mathematics, Forestry, Business Management, Hospitality Management and Entrepreneurship. New Arrival as of the end of 2016 stood at 307 Volumes books, purchased by the University.

LIBRARY COLLECTIONS:

The Library has a total of 6900 books (excluding the 2663 donated books which are still under processing), thesis, magazines, newspapers and journals as at May 31, 2018. 2670 book donations were received from benevolent individuals as at May 31, 2018.

REGISTRATION WITH LIBRARY ASSOCIATIONS

Library Associations act as major player sin the Continuous Development of the profession within this rapidly changing world. UENR Library is an institutional member of the Ghana Library Association (GLA) and the Consortium of Academic and Research Librariesin Ghana (CARLIGH).

The Ghana Library Association (GLA) provides educational opportunities through conferences, workshops, publications among others to its members and institutions registered with it.

E-RESOURCESSUBSCRIPTIONFOR2017/2018

As a member of CARLIGH, UENR subscribes to the followinge-resources under the CARLIGH umbrella.

- EBSCOhost
- Emerald
- Wiley
- TaylorandFrancis
- Sage
- SageResearchMethods
- ProjectMuse
- WorldBanke-library
- CambridgeUniversityPress
- CredoReference
- InstituteofPhysics

TRAINING/WORKSHOPS ATTENDED BY LIBRARY STAFF

During the year under consideration, staff of the Library attended the following workshops, conferences among others.

Training Programmes And Workshops Attended:

- 36th CULD Regular Meeting
  - The meeting was organized by the Committee of University Librarians and their Deputies (CULD) at the Prempeh II library on 26th March, 2018. The Library was well represented

- Emerald Training Workshop
  - The one day workshop took place at CSIR-INSTI, Accra on 16th November, 2017.Participants were trained on how to effectively use the Emerald Insight platform and other additional products and services that individual member institutions could subscribe to.

- Building Strong Library Association (BSLA)
  - The two-day workshop was organized by the Ghana Library Association at the Balme Library, University of Ghana on the 3rd - 4th AUGUST, 2017.The workshop was attended by twenty-two (22) participants, two from each of the ten (10) regions in Ghana; one of which was a library staff of UENR. Although the focus was on the building of a strong Library Association, the knowledge acquired could be applied to enhancing the services provided by UENR library.

- Annual General Meeting (AGM)
  - The meeting took place at the Balme Library, University of Ghana on 7th December, 2017 with the theme "National Development through the SDGs: the Role of the Librarian".
  - One library staff attended the AGM

FUTUREPLAN

The University Library will hopefully move to the new Library and ICT Complex in the next academic year to have enough space for reading and learning purposes to enhance teaching, research and learning activities in the University.