

UNIVERSITY OF ENERGY AND
NATURAL RESOURCES, SUNYANI

VICE CHANCELOR'S REPORT

TO THE 4TH CONGREGATION

AUGUST 2019

Vice Chancellor's REPORT to the 4th Congregation

August **2019**

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Prof. Harrison Dapaah | Vice Chancellor

FOREWORD

This report covers the general activities of the University over the 2018/2019 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 6000 over the period under consideration. Within the period, the University also submitted accreditation documents for the introduction of new programmes which will be mounted in the 2020/2021 academic year.

In addition, the School of Graduate Studies also made significant progress during the past year and increased its intake to over 400 students pursuing various programmes leading to the award of masters and doctoral degrees in Environmental Engineering, Renewable Energy Management, Social Forestry and Environmental Governance, Crop Sciences, Computer Science, Mathematics and Environmental 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.

During the year under review, the University was selected as one of the World Bank's Africa Centres of Excellence (ACE) in the area of energy and environmental sustainability. Within the period, the University continued its research under the $1.2 Million DANIDA sponsored project on building resilience of Lake Bosomtwi in the wake of climate change in Ghana. The university is collaborating with other institutions, organisations and individuals in and outside the country, in fulfillment of its strategic mandate under the Act establishing the University, Act 830 (2011).

The University also organized the 3rd Science Festival under the lead sponsorship of the Bui Power Authority. During the period under review, the University also assisted some staff to attend conferences and workshops to disseminate research findings and share knowledge within the scientific community. Further, the University supported some staff to 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 and physical and human resources deficit, the University made some gains in the area of teaching and research. In the coming academic year, the University would religiously continue to pursue its mandate of teaching, research and community services to support the development agenda of the community, region, Ghana and the world at large.

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 provision of scholarship by the GNPC Foundation and Barclays Bank to both undergraduate and postgraduate students of the University is also acknowledged.

During the year under review, the University was selected as one of the World Bank's Africa Centre of Excellence (ACE) in the area of energy and environmental sustainability. The World Bank through the Ministry of Education shall provide an amount of $ 6.4 Million US Dollars over the first five year period to fund the Center's activities.

The Bank of Ghana also released an amount of ¢ 1. 3 million towards the construction of the 9million cedis 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.



4th 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 Six Schools and runs 48 academic programs across all the Schools.

The total number of students inclusive of postgraduate and undergraduate students as of July 2019 stood at 6000 distributed across six Schools in the University, namely School of Natural Resources, School of Engineering, School of Sciences, School of Agriculture and Technology, School of Management Sciences and Law and School of Graduate Studies.

The total number of staff in the employment of the University as of July 2019 stood at 625, up from last year's figure of 374. Out of the number 238 are in the senior member category whiles 141 represent the senior staff category. The junior staff category is made up of 128 employees. The university also has 60 contract staff and 58 casual staff.

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

Academic Programmes

The University is currently running 48 accredited programmes. The Table below 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.

Schools	Campus	Number of Programmes	Future Degree Programmes
Engineering	Sunyani	9	Materials Engineering; Geological Engineering; Petro- Chemical Engineering
Science	Sunyani	13	Nanotechnology; Cyber Security and Computer Forensics; Physics; Biological Sciences, Environmental science, Biochemistry
Natural Resources	Sunyani	7	Wood Products Manufacturing;
Agriculture and Technology	Dormaa	6	Landscape Technology, Plant Sciences, Food Science and Technology; Agricultural Economics, Agricultural Extension
School of Management	Sunyani	3	Resource Accounting Resource Economics
Graduate Studies	Sunyani	10	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.

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:

- Officials of Bank of Ghana and the Regional Manager (BoG). The team inspected the construction of Auditorium Block at Sunyani under the sponsorhip of the Bank of Ghana.
- Andrew Barnes, Australian High Commission, Accra
- Ransford Antwi, CEO Suncity FM

Workshops/Conferences/Seminars

In the course of the year 2018/2019, the Vice-Chancellor participated in a number of workshops, conferences and seminars. Notable among them were:

- 10th African Higher Education Centres of Excellence (ACE) workshop and ACE Impact Boot camp, Djibouti City, Djibouti held from 19th to 21st February, 2019.

- The Vice Chancellor also attended a "Project Planning and Proposal Development" training Workshop organized by Association of African

Universities (AAU) in April 2-5, 2019 at Addis Ababa, Ethiopia.

- The Pro Vice-Chancellor attended a workshop organized by the Biodiversity International and Food and Agriculture Organization (FAO) at CSIR-FORIG, Kumasi on the theme "Regional workshop on the conservation and use of Forest Genetic Resource in Sub-Saharan Africa; strengthening tree seed systems." The workshop took place from the 9th to12th April, 2019.

- The Pro Vice-Chancellor also participated in a workshop on Institutional Intellectual Property Policy, which was organized by Ministry of Trade and Industry, Registrar General's Department in collaboration with the World Intellectual Property Organization (WIPO) and the Swiss Federal Institute of Intellectual Property from the 8th to 10th May, 2019. The objective of this workshop was to strengthen the development of Institutional Intellectual Property Policies for tertiary educational and research institutions and to enable the said institutions implement their respective Institutional Intellectual Property Policies on a sustainable basis.

Linkages and Collaborations

During the year under review, UENR entered into an MoU with the University of Houston-Downtown, to further collaboration between the two institutions through academic programs in instruction, research and faculty development among the faculty and students of both institutions.

In order for a young and growing University to reach its potential, exposure to current trends and best practices in teaching, research and extension service is essential. For this reason, the Vice-Chancellor led UENR to sign an MOU with Help International, Canada.

UENR entered into an MOU with Kansas State University, Manhattan, Kansas, USA in exchange of scholars and scientists to conduct research of mutual interest. In the quest to secure places for Student attachment, UENR signed an MoU with the StarLife Assurance Company Limited to help practically equip some selected third year students of the University by offering them field attachment during their long vacation (June-August) with the sales department of StarLife.

UENR also signed an MoU with ACTIVE GROUP (AG) for the establishment of a Joint Venture Company(JVC) to provide laundry services for students, staff of the University and residents living around the University and its surrounding communities. Further, UENR entered into MOU with BLUE NECTAR GROUP (BNG) to form a Joint Venture Company (JVC) to produce yoghurt and other dairy products for students, staff and the general public. The University also began the establishment of collaboration with Jiangsu University in China to offer scholarships to non-PhD Lecturers to acquire PhD at Jiangsu University.

RESEARCH

Research Projects and Related Activities

Research activities at the institutional level continued during the year under consideration.

Building Resilience of Lake Bosumtwi to Climate Change (RELAB)

During the year under consideration, the University continued its research into the RELAB project which is strongly linked to climate change (Theme 4)

and consistent with the UN Millennium Development goals on environmental sustainability, eradicating extreme poverty and hunger, Sustainable Development Goals. The **RELAB Projects** has the following objectives:

- 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.

- 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.

- Obtain requisite data for development of appropriate watershed model and apply model to quantify hydrology and sediment erosion under future climate scenarios.

- Investigate fisheries productivity and fisheries management aimed at development of fisheries management plan.

- 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.

Regional Center for Energy and Environmental Sustainability (RCEES)

During the year under review, the University was selected as one of the

World Bank's Africa Centre of Excellence (ACE) in the area of energy and environmental sustainability. The World Bank through the Ministry of Education shall provide an amount of $ 6.4 Million US Dollars over the first five year period to fund the Center's activities. The Center will focus on building the capacity of faculty to deliver world class teaching and conduct state of the art research in energy and environmental sustainability. The target of the Centre at the end of the five year period is to train 50 PhD students and 250 Masters Students in five (5) different programmes to be mounted by the Center.

British Council Hub

The Business Development Centre of the University, during the year under consideration, trained 500 young entrepreneurs, sponsored by the British Council and GIZ to help create jobs and also, to reduce the number of youth who undertake the risk of travelling to seek greener pastures in Europe. The project, currently at its third phase, is supporting 10 businesses with financial support and accelerated growth strategies.

SCHOLARSHIP PACKAGES

- **The Ghana National Petroleum Corporation (GNPC) Scholarship**

The Ghana National Petroleum Corporation (GNPC), through the GNPC Foundation, awarded scholarship to Sixty-Nine (69) graduate and undergraduate students offering Science, Information Technology, Engineering and Mathematics (STEM) programmes for the 2018/2019 academic year. The Foundation equally renewed the scholarship for its Thirty-Two (32) beneficiaries for the 2017/2018 academic year. The scholarship covers cost of tuition, accommodation, living expenses, book allowance and dissertation/project work.

❖ **The Barclays Tertiary Education Scholarship Scheme**

The Barclays Tertiary Education Scholarship Scheme renewed its scholarship for Eleven (11) students of the University offering programmes in information technology, engineering, science and mathematics for the 2018/2019 academic year since four (4) of the beneficiaries were in final year and had completed the University. The scholarship covers tuition fee, accommodation, printing, laptop and food subsidy.

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 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.

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 faced with a number of challenges. Paramount among which is inadequate infrastructure. 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, books and teaching aids for teaching, learning and research, walling/fencing of UENR lands to prevent encroachment, police posts, police visibility and night patrols on all campuses.

New Programmes Submitted to NAB for Accreditation

During the year under review, the following programmes were submitted to National Accreditation Board:

- BSc Food Science and Post Harvest Technology
- MSc. /MPhil Environment, Water and Sustainability
- MSc. / MPhil Disaster & Humanitarian Emergency
- BSc. Resource Accounting
- BSc. Resource Economics

THE QUALITY ASSURANCE AND PLANNING UNIT

Quality Assurance and Planning Unit is a unit under the office of the Vice Chancellor. The Unit aims at constantly improving standards within the university system especially in the areas of learning, teaching, and service provision in order to improve graduate quality in higher education. However, the Unit has continuously embarked on processes of monitoring and evaluation of teaching, learning, and research and service provision.

The philosophy of the Unit is that, quality assurance is a collective responsibility of the entire University community, and should be fused into the process, leading to doing the right thing at the right time, the very first time. The Unit however, attaches great importance building quality into the structural and systematic process of teaching, learning and other service provision.

Staff

The Unit currently has a staffing capacity as follows a Junior Assistant Registrar, Senior Administrative Assistant and National Service Personnel. The Pro Vice Chancellor oversees the activities of the Unit and reports all activities to the Vice Chancellor, on all issues concerning quality assurance in the University.

Mandate

- Co-ordinate the activities of the University and Departments regarding the preparation, implementation, monitoring and evaluation of strategic plan, as well as quality service delivery in the aspect of

teaching, research, administration and other services in order to ensure that the University attains academic and service excellence.

- Prepare and maintain an up-to-date database on staff and students as well as basic statistics on the University.
- Monitor and evaluate the views of the various stakeholders, including students and lecturers, as well as the review of programmes and courses.
- Ensure that quality teaching is sustained to produce creative, innovative and productive graduates from the University.

Activities

- Organized students' satisfactory survey for freshmen
- Organized curriculum development and capacity building workshops for lecturers.
- Conducted semester-based students' evaluation of courses and teaching.
- Compiled Institutional Report for National Council for Tertiary Education (NCTE).
- Coordinated accreditation procedures with National Accreditation Board (NAB)
- Assessed the account on student trails and withdrawals for some courses offered by the University.

Workshops Organized by Quality Assurance and Planning Unit

- Capacity Building in Curriculum Development-National Council for Tertiary Education (NCTE) and National Accreditation Board (NAB). The aim is to provide guidance and skills to lecturers on the

appropriate and effective ways of developing new programmes.

- ❖ Good Assessment Practices in Higher Education: Improving Teaching and Learning. The aim is to equip teaching staff of the University with the requisite skills and knowledge needed in students' assessment.
- ❖ Skills Development in Proposal Writing. The training was geared towards building the capacity of participants and guiding them in responding to calls for proposals in various disciplines.

Conferences/Workshops Attended

During the year under review, some members of staff of the Unit attended the following Conferences / Workshops / Seminars:

Quality Assurance Knowledge and Skills for the 21st Century Higher Education Personnel", Tamale, 2nd - 5th October, 2018. This Workshop was to equip Quality Assurance personnel in Higher Tertiary Education with knowledge and skills of quality assurance for the 21st century.

National Workshop on Institutional Intellectual Property Policies organized by the Ministry of Trade and Industry and the Registrar General's Department in collaboration with the World Intellectual Property Organization (WIPO) and the Swiss Federal Institute of Intellectual Property in Accra. The purpose was to strengthen development of institutional IP policies for tertiary education institutions and research and also to enable the said institutions to implement their respective institutional IP policies on sustainable bases.

Good Assessment practices in Higher Education: Improving teaching and learning, Accra, 27th - 30th November 2018. The Workshop focused on

improving basic assessment knowledge and skills of participants to make them effective and efficient in their teaching assignments.

Quality Assurance (QA) Knowledge and Skills for the 21st Century Higher Education Personnel, Accra, 21st-24th May, 2019. The aim was to share knowledge and skills related to Quality Assurance in Higher Education.

PROCUREMENT OFFICE

The Procurement Office has the principal mandate to superintend over procurement 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 main objective of the Office is to ensure that, the procurement of goods, works and services are done in a transparent, fair and efficient manner that delivers value for money. The Procurement Office is headed by a Director who reports to the Head of Entity (Vice- Chancellor).

The Procurement Office has made a number of strides over the years. Notable among the achievements, is highest score achieved by UENR during Public Procurement Authority (National Regulator) annual assessment of public entities' procurement practices. UENR achieved highest score of (Excellence) on the Public Procurement Model of Excellence (PPME) Maturity Table.

The Office started with one (1) member of staff who is currently the Ag. Head of the Office in 2012 but currently has a staffing strength of four (4) qualified and seasoned professionals and one administrative staff to support the administrative duties of the Office.

Units and Staff

The Procurement Office comprises of the following units; Goods and Services Procurement, Works Procurement and Contract administration and management. The Staffs of the Procurement Office are:

Name	Rank/Position	Qualification
John Baptist Siddick	Snr. Procurement Officer	MSc (Salford) BSc (GIMPA) MCIP, HND, PgC (Harriot)
Baffour Antoa-Mensah	Procurement Officer	MBA, BSc, HND
Kofi Dwomo	Snr. Procurement Asst.	MBA, BSc, HND
Samuel Kodua	Snr. Procurement Asst.	BSc
Philomina Doku	Snr. Admin. Asst.	BBA

Activities over the Past Year

The Procurement Office during the year under review participated in the following activities:

- The office was selected by AB and David Africa Consultancy, acting on behalf of the Public Procurement Authority to participate in the preparation of legislative instruments for the Public Procurement Act, 2003 (Act 663) as amended.
- The Procurement Office co-ordinated and facilitated the procurement of lecture hall furniture to meet the seating needs and the growing numbers of students in the University.
- The Office also undertook and co-ordinated the procurement of a Mini Van for the Relab Project to help with the movement of the project team to and from the project site.
- Academic gowns (Undergraduates, Masters and Doctorates) were procured for use by Convocation and students.
- The clinic extension and the skills laboratory projects were executed to aid teaching and enhance the delivery of health care to staff and students.
- The Office also facilitated the procurement and supply of other logistics to support teaching, learning, research and administration.

Future Plans

The Procurement Office with the support of Head of Entity plans to further streamline the procurement process in the University, to develop operational manuals for service procurement and to review existing procurement manual for goods and works in line with the changing face of the law. The Office also aims to reduce procurement risk and ensure the security of supply with improved quality standards, manage relationships, pursue innovation and leverage on technology.

Future Development

The Procurement 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.

- ACE Impact Meeting which was held on 18 -20 February 2019 at The University of Djibouti, Djibouti.
- Logistics and Transport: A Catalyst for National Development organized by The Chartered Institute of Logistics & Transport - Ghana in March 2019 at Accra.
- Value Creation through Effective Supply Chain Practices and Change Management organized by The Chartered Institute of Supply Chain Management-Ghana in April, 2019 at Sunyani.
- Effective Integrated Supply Chain Management for the Attainment of the Ghana Beyond Aid Agenda organized by The Chartered Institute

of Supply Chain Management-Ghana in May, 2019 at Sunyani.

- Preparation of Legislative Instruments for the Public Procurement Act, 2003 (Act 663) as amended organized by AB and David Africa for the Public Procurement Authority in March, 2018.
- Electronic Government Procurement (e-GP); A tool for effective Public Procurement organized by Public Service Procurement and Supply Chain Class in October 2018 at Accra.

OFFICE OF THE REGISTRAR



SOLOMON PANFORD, Esq., APR | Registrar

OFFICE OF THE REGISTRAR

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 (or his representative) serves as secretary to all stationary and adhoc committee in the University.

The Registrar's Office is currently made up of five (5) main Divisions and other Sub Units. 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. The following are the five (5) main divisions under the Registrar's offices:

- Human Resources Development Division
- Public Affairs Division
- Academic and Students Affairs Division
- General Administration
- The Legal Office

Other sub-offices under the Registrar's Office Include, but not limited to:

- The Business Development Unit
- Sports Directorate

Conferences/Workshops/Seminars

Some members of staff in the Registrar's Office have been supported by the University to attend seminars and workshop related to their job schedules, to enhance their output. A few of such instances have been highlighted below;

- The SAR-HR and SAR-GA attend a workshop organized by the Institute of Human Resources Management Practitioners (IHRMP) Ghana in Kumasi from December 5, to December 6, 2018.

- The registrar also attended two workshops organized by the Association of African Universities (AAU) as follows:
  - AAU workshop on internationalization in Africna Institutions: Turning Challenges into Opportunities, 28th-31st May, 2019, AAU Headquarters, Accra; and
  - AAU/Stellenbosch University Capacity Building workshop for University Registrar's and Administrators, 25-28th June 2019, Adam Small Theatre Complex, Stellenbosch, South Africa.

Both workshops brought together Registrar's and other Professionals from various African Countries to share ideas on best practices and current trends in University administration and Management.

Summary of Senior Members in the Registrar's Offices

Name	Unit	Rank/Position	Qualification
Solomon Panford	Office of the Registrar	Registrar	BA, LLB (KNUST); BL (GSL) M.Ed (Manchester) BL, APR

Ben Appiah-Kubi	University Relations	Snr. Assist. Registrar	MBA (Leicester) B.Ed (Cape Coast) PgD (CIPR-UK) MCIPR
Hayford Asare	General Administrati	Snr. Assist. Registrar	MA, B.Ed, (Cape Coast)
Mary Yebo-Okra	SMSL	Assistant Registrar	MA, BA (KNUST)
Alfred Appiah	Human Resources	Snr. Assist. Registrar	MBA, BA (KNUST)
Prince Awuah	VC's Office	Assistant 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	Assistant Registrar	CEMBA, BA (KNUST)
Charles Aidoo	SNR	Jnr. Assist. Registrar	BA (UG) MA (Cape Coast)

The Registrar is also assisted by various grades of Administrative Assistants and other staff who perform senior administrative and managerial roles in Academic Departments and Administrative Units on behalf of the Registrar.

During the period under review, the Registrar's Office continued to carry out its mandate as the pivot for administrative and managerial responsibilities in the University by facilitating University business and ensuring effective functioning of the various committees as well as providing essential services

to both lecturers and students alike. Again, Offices under the direction of the Registrar performed some of the following functions or roles in line with the statutory provisions of the Act establishing the University:

- Delivering of accurate, prompt, courteous and consistent service to all students and other internal as well as external publics of the University, consistent with its educational mission.
- Providing efficient leadership role in the accurate and efficient management of data in all functional areas of management.
- Provision of admission services for students
- Serving as the official custodian of University records, interprets and applies academic policies.
- Initiation of policies, rules and regulations for approval 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 as well 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 records, and ensure full compliance with all University regulations.

BUSINESS DEVELOPMENT UNIT

The Business Development Unit under the Registrar's Office and was established to focus on the commercial activities of the University that are not directly linked to academics. The Unit also serves as business incubation hub to promote business ideas from generation to establishment and sustainable stages. The Unit started its operations in May 7, 2018 with Dr. Kusi Boachie Yiadom as the pioneer Assistant Registrar for the Centre.

Activities within the Academic Year

The Centre since its inception has chopped some successes in terms of projects and collaborations. The Centre has signed a MoU with Tong New Energy Ghana Limited, a franchised Chinese based solar company known in China as TONGBO, to be the sole partner in charge of the installation and maintenance of its solar products in Ghana. The Chinese Company has pledged to construct solar laboratory at UENR to ensure effective technology transfer in the special area of Solar systems with invertors.

The Centre in collaboration with the Earth Observation Research Innovation Centre (EROIC) represented the University at the 4th Ghana Renewable Energy Fair held at the Accra International Conference Centre in October 2018, with the Power Tube invented by Dr. Mark Amo-Boateng. In ensuring that the UENR Cafeteria operates efficiently, the Centre undertook a restructuring exercise for the Cafeteria and a Hazards Analysis and Critical Control Points (HACCP) Consultant was engaged to help train the staff restructure and revamp the Cafeteria.

During the year under review, the Centre also trained 500 young entrepreneurs, sponsored by the British Council and GIZ to help create jobs and also reduce the number of youth who undertake the risk of travelling to seek greener pastures in Europe. This programme is currently at its third phase, and the best 10 businesses have been selected for business acceleration with financial support.

The Centre has also applied for a training consultancy for the National Entrepreneurship and Innovation Programme (NEIP) 2019 and is awaiting the outcome. The Centre is collaborating with the Department of Works of the University to establish Civil Engineering Consultancy that will help improve best practices in Civil Engineering activities in the Country. This idea is under consideration by the University Council.

Challenges

The Centre is facing serious challenges with regard to office space for its activities and it is the plan of the Centre to, as a matter of urgency, construct a befitting building to effectively facilitate Hub activities.

SPORTS DIRECTORATE

The Sports Directorate is under the Offices of the Registrar and was established in 2014/2015 with the vision of planning and organization of sporting programmes and making UENR the choice for competitive in recreation and sports as well as champion in leisure and wellness. It seeks to enhance the fitness, health, well-being and holistic development of students, staff and the University Community, through participation in worthwhile

sporting and recreational activities, and will try to become an instrument for change in the academic discipline and the profession of sports, in collaboration with relevant stakeholders while making UENR visible locally and internationally.

Staff

As a young Directorate below are the human resource capacity:

- Ebenezer K. Armoh - Ag. Head
- Simon Bosomtwe - Assistant Coach
- Bismark Osei - Administrator

Achievements

Internally: During the year under review, The Sports Directorate organised fitness games for the Staff of UENR and Radio BAR in football and volleyball, which was hosted and won by UENR.

The Sports Directorate again organised fitness games for the staff of UENR in football, volleyball and indoor games. The groups that were involved in the fitness programme were – University Teachers Association of Ghana (UTAG), Ghana Association of University Administrators (GAUA), Teachers and Educational Workers Union (TEWU) and Federation of University Senior Staff Association of Ghana (FUSSAG). At the end of the programme, Ghana Association of University Administrators (GAUA) won the competition.

The Sports Directorate further organised an Inter- Institutional Fun Games, an initiative of the Vice Chancellor with the aim of cementing the institutional bond and to improve networking and socialization amongst the decentralized

institutions. Sunyani Regional Hospital, SDA Hospital, The Military and UENR were the institutions that were invited for the programme. At the end of the fun games, UENR placed first in volleyball and second position in football while Regional Hospital placed first in football.

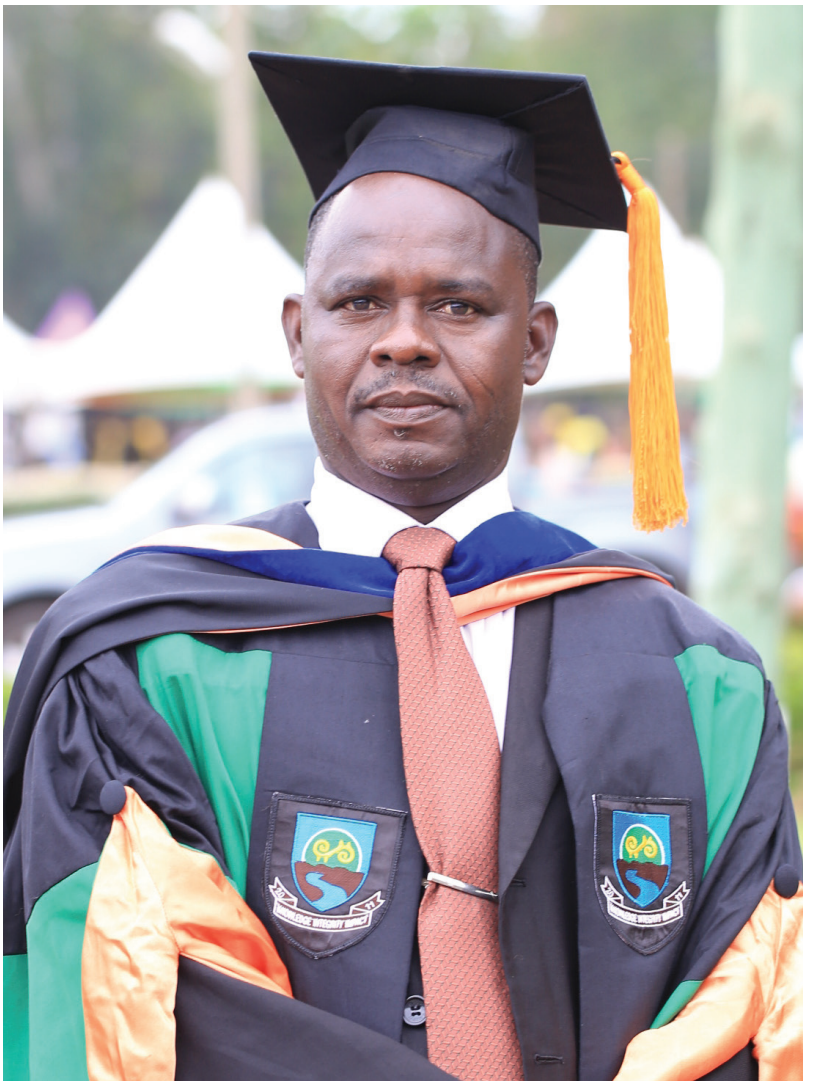
The Sports Directorate supervised and co-ordinated the departmental games of the various schools in UENR. All the departments this time took very keen interest in the sports of their students and made sure that permission was granted for them to fully participate in the games.

The University football team took part in the Inter-University Football Championship organised by Angel F.M in Sunyani against Sunyani Technical University which was played on home and away basis. At the end of the tournament, UENR won the championship.

UENR participated in the Inter- Universities Cross Country Competition which was hosted by the University for Professional Studies Accra (UPSA) and placed 6th out of nine participating Public Universities. Later in the year, UENR Sports Directorate participated in the Inter- University Mini GUSA Competition at University of Cape Coast. The purpose of the MINI GUSA was to select athletes for the World Inter University Games which will be held in Italy. At the end of the competition, UENR won 2 Silver medals and a Bronze in athletics, placed 4th in football and 5th position in the entire contest.

Three football players were identified and selected by the Mini GUSA selection team who will be later invited to camp for final preparation to the World Inter University Games which will be held in Italy-the players involved are Musa Fuseni, Amakye Emmanuel and Frank Yeboah.

FINANCE DIRECTORATE



MR. ALBERT BANAN ABDULAI | Director of Finance

FINANCE DIRECTORATE

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.

Staff of the Directorate

Name	Rank/Position	Qualification
Albert Banan Abdulai	Director	FCCA, MPhil (Bergen) B.Com (UCC)
Paul Nana-Nketia	Deputy Director	ACCA, MBA, BSc (UG)
A. Opoku-Mensah	Snr. Accountant	ICA (Gh), M B A BSc (UG)
Stephen. Y Ntiamoah	Snr. Accountant	ICA (Gh), MBA (UCC) HND
Bosea Victor Kwadwo	Assistant Accountant	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.

Conferences/Workshops/Seminars

During the 2018/19 Academic Year, staff of the Directorate attended the following Conferences/Workshops/Seminars.

- Payroll Management Training organized by KPMG in Accra: April 2019
- Seminar on Compensation of Employees and IGF/Donor Reporting organized by the National Council for Tertiary Education in Accra; May 2019
- Seminar on Upgrade of the Non-Tax Revenue Projection Model organized by the Ministry of Finance in Accra, June 2019
- Financial Management Training Workshop organized by the World Bank in Accra; January 2019
- ACE Impact Lunch and Boot camp organized by the World Bank in Djibouti; February 2019
- Seminar on Developing Your Career in a Dynamic and Competitive Environment organized by the Human Resource Division of UENR in Sunyani, February 2019
- Seminar on Sustainable Leadership Innovation and Transformational Processes in Higher Education Management-the Austria Ghana Experience, organized by Vice Chancellors Ghana in Vienna, Austria, September/October 2018
- Seminar on Creation and Administering of Fixed Assets Register organized by The University of Ghana Business School in Accra:

October 2018

- Workshop on Evolving Role of the 21st Century Accountant, Auditor, Finance Officer, Budget Heads, and Cost Managers organized by Association of African Universities in Accra, November, 2018
- Seminar on Modern Stores and Inventory Management Strategies organized by the Ghana Supply Company in Accra; October 2018

WORKS AND PHYSICAL DEVELOPMENT DIRECTORATE



ING. CHRISTIAN YEBOAH NUAKO | Director of Works

WORKS AND PHYSICAL DEVELOPMENT DIRECTORATE

The core mandate of the Works and Physical Development Directorate is to be in charge of the development and maintenance of the physical and infrastructural works and/or facilities of the University. The directorate also supports the operations and activities of the various Schools and departments of the University in developing their briefs, supervision of works and contracts and ensuring that construction and renovation works are in line with the prevailing industry standards. The directorate fulfils its mandate through a small team of professionals in the built environment, technical staff and junior staff.

The Directorate also exercises oversight responsibility over the operations of the Estate Organisation which is responsible for the management of the University's landed properties and facilities. The Estate Organisation's responsibilities include: space allocation, facilities management, environmental and sanitation management.

Philosophy/Objectives

The Directorate seeks to promote efficiency and productivity by creating a conducive and green environment for the attainment of the overall vision and mission of the University; Lead in the drive of integrating renewable energy in our designs and operations; and also develop innovative ways to ensure that projects are implemented at the lowest cost without compromising quality.

Name	Rank/Position	Qualification
Ing. Christian Nuako	Director	BSc., MPhil, MSc., (KNUST) MGhIE
Cephas A. Yeboah	Architect	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)
Surv. Kwaku Obeng Mireku	Asst. Estate Officer	MSc. (UCEM, UK), LLB (KNUST), BSc
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)

Activities over the past year

Since its establishment in 2012 the University is still facing challenges of inadequate infrastructural facilities for both students and staff use mainly due to lack of adequate funding and inconsistent release of same from the central government through GETFund, to support physical development.

Currently there are thirteen (13) on-going capital projects at different stages of completion under the supervision of the Works and Physical Development Directorate. One is at Kenyasi Campus, three at Dormaa Campus and the rest at Sunyani Campus. Ten (10) of the projects are fully funded by GETFund, one (1) by Newmont GhLtd. (at Kenyasi) and the other two (2) co-funded by Bank of Ghana/University of Energy and Natural Resources (BOG/UENR) and then Ghana National Petroleum Corporation/GETFund (GNPC/GETFund).

Other key activities undertaken during the period under review include the

following:

- Processes were commenced at the Lands Commission to register University Lands in Sunyani, Dormaa, Nsoatre and Kenyasi
- Labelling and tagging of the University Assets
- Exploration of boreholes for domestic use.

Future Plans

Given the University's limited financial resources and the current huge infrastructure deficit, measures would be put in place to attract the support of individual donors/organisations and encourage private sector participation in the provision of infrastructural facilities.

As the University population keeps growing, the demand for water supply is also increasing. There is the need to increase raw water supply and storage facilities, and also improve on the distribution network.

INTERNAL AUDIT DIRECTORATE

The Internal Audit Agency Act of 2003 (Act 658) section 16(i) mandates every public institution to set up their own internal audit units. The University of Energy and Natural Resources Act 830 of 2011Section 30(1) and (2) also makes it compulsory for the establishment of an Internal Audit Unit (IAU).

The IAU is responsible to the Vice-Chancellor and the University Governing Council and acts to help in the effectiveness of systems put in place to mitigate risk, control and governance processes and arrangements to promote value for money, i.e., economy, efficiency and effectiveness in the university's operations.

To be able to function effectively, the IAU has been organised into four (4) main areas; Financial Audits Unit, Performance Audits and Investigations Unit, Compliance Audits Unit and Information Technology Audits Unit.

Staffing

Name	Rank/Position	Qualification
Kodwo Boakye Egyin	Ag. Head	ICA (Gh), CEMBA, BBA
Rosina Addo Asamoah	Internal Auditor	ICA (Gh), MBA, BSc, HND Accounting
Richard Twum Barimah	Snr. Auditing Assistant	ICA (Gh), HND Accounting
Bridget Agyemang	Snr. Auditing Assistant	ACCA,
Vera Doyo F. Setsoafia	Snr. Auditing Assistant	BSc. Admin
Kelvin Kubi Appiah	Snr. Auditing Assistant	Bed Accounting
Evans Sakyi Ampah	Auditing Assistant	HND Accounting
Lydia Obiri	Auditing Assistant	HND Accounting

The Directorate has four (4) other Senior Staff

Activities over the Past Year included but not limited to the following:

- Examination of transactions for accuracy and compliance with institutional policies.
- Evaluation of financial and operational procedures for adequate and effective internal controls and safeguarding of assets.
- Evaluation of the economical and efficient use of resources.
- Liaison with external auditors.

Future Plans

- Evaluation and monitoring of the Information Technology Directorate's system of internal control to ensure adequate security and controls related to hardware, software, data and operating personnel; and to ensure retrieval of necessary data for audit purposes.
- Determination of the level of compliance with required internal policies and procedures, and government regulations; and appraisal of the effectiveness and appropriateness of internal policies and procedures under current conditions.
- Program performance evaluation.
- Continue to liaise with external auditors in matters related to the audit of the University.

Conferences/Workshops/Seminars

Some members of staff attended the following Conferences / Workshops / Seminars during the year under review;

- 2-Day Workshop on Payroll Management organized by Klynveld Peat Marwick Goerdeler (KPMG) in April, 2019 in Accra
- 2-Day Conference on the theme Aligning Governance, Risk Management and Compliance for Institutional Impact organized by The Institute of Internal Auditors Ghana in April, 2019 in Accra
- 3-Day Training Workshop in the Conduct of Annual Public Procurement Assessment Exercise: Pilot Self-Assessment organized by the Public Procurement Authority from 29th January to 2nd February, 2019 in Accra
- 3-Day Training Workshop in IT Auditing; organized by The Institute of Internal Auditors Ghana in November, 2018 in Accra

- 3-Day Training Workshop: Evolving Role of the 21st Century Accountant, Auditor, etc organized by Association of African Universities in November, 2018 in Accra

INFORMATION TECHNOLOGY DEPARTMENT (ITD)

The Information Technology Department (ITD) metamorphosed from the Information Centre for the then Faculty of Forest Resources Technology (FFRT) under the Kwame Nkrumah University of Science and Technology. When UENR was established the Centre became autonomous and was renamed ITD. Since then it has undergone tremendous transformations and has made significant contributions to the growth of UENR.

Progressively, the University has been building capacity in Information and Communication Technologies (ICT) with the objective of facilitating and enhancing the quality of teaching and learning, research and delivery of efficient administrative services. In the last three years the IT Department has engineered a significant improvement in the UENR ICT services. These include:

- Expansion of the University's campuses (Sunyani and Dormaa) Wide Area Network (WAN).
- Redesigned the network to provide high levels of security
- Increase of internet bandwidth from 45Mbps to 155Mbps from Vodafone GH and 155mbps from GARNET
- Provided 1200 meters of fibre backbone
- Secured 2km fibre optic cable from Radius
- Acquisition of managed switches
- Development of in-house application packages

- Connection to the GARNET and announcement of Public IPs
- Develop a Budgeting System for the Finance Directorate which is at its finishing stage.
- Redesign and develop the Online Admissions System with increased functionality and complete automation using modern Software Development Technologies which is also at its finishing stages

It is worth to note that most of these improvements took place this academic year which has made it possible to keep the University's website and all other services running to expectation.

Aim and objective

The ever increasing role of ICT in teaching and learning, research, administration and also in everyday life has led to a point where almost all University activities rely on IT. The IT Department which drives these initiatives must therefore position itself to accomplish this task. To this end the IT Department seeks to achieve the following objectives:

- to extend ICT services to all Units of the University
- to ensure the availability, security and management of the ICT infrastructure
- to ensure sustainability and develop schemes for the funding of ICT resources
- to develop and maintain software packages appropriate for the university
- to regularly train staff and students in the use of ICT resources.

Sections

The IT department is made up of four sections which require specific specialization. These are: Software services, IT infrastructure, Web services and ICT support services

Staffing of the IT Department

Name	Designation	Qualification	Area of Specialization
Gilbert K. Mensah	Programmer Analyst	MSc. Information Technology (SMU, India)	Software Developer
Asare Yawson K. Francis	Snr. ICT Assistant	MSc. IT (C)	Web Design and Application Development
Amura Augustineienc	Snr. ICT Assistant	BSc. Computer Sce	Networking and Security
Bosrotsi Glenn Edwin	Snr. ICT Assistant	BSc. Computer Science	Network and System Analyst
Annan-Fynn George	Snr. ICT Assistant	BSc. Computer Science	Software Development
Afrifa Frederick Gyasi Yaw		BSc. Computer Science	Software Support Services and Help Desk
Amoah-Boateng Seth	Snr. ICT Assistant	BED. Computer Science (CUCG)	Networking
Lawson Kobina Oppong	Snr. ICT Assistant	BSc. Computer Science	Software Development

Conferences/Workshops/Seminars

During the 2018/19 Academic Year, staff of the Directorate attended the following Conferences/Workshops/Seminars.

- E-learning 2 Training workshop, University of Alborg – Denmark, January, 2019
- Communication Skills and Strategies for Higher Education Institutions-AAU-East Legon-Accra, April 2019
- E-learning 1 Training workshop, University of Copenhagen – Denmark, December, 2018
- WACREN 2019 Conference and Training, Marriot Hotel – Accra, March, 2019.
- WACREN 2018 Conference and Training, Lome - Togo, March, 2018.
- WACREN 2019 Conference and Training, Marriot Hotel – Accra, March, 2019.
- WACREN 2019 Conference and Training, Lome – Togo, March, 2018.
- DNS Migration and Relocation Conference, Accra, June, 2019.
- WACREN 2019 Conference and Training, Marriot Hotel – Accra, March, 2019

OFFICE OF THE DEAN OF STUDENTS



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
- Dr. Peter Damoah-Afari - Co-ordinator, Dormaa Campus
- Ms. Kate Mensah - Snr. Administrative Assistant

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.

Orientation for Elected Executives

The University, through the Office of the Dean of Students, organized a two-

day orientation programme for newly elected Executives of the Students Representative Council (SRC)/National Union of Ghana Students (NUGS)

YES Ghana Training

During the period under consideration**, YES-Ghana,** an NGO whose main focus is to prepare tertiary level students to become active citizens and leaders of social change in their communities rolled out the first phase of its leadership empowerment project dubbed Youth Leadership for Social Change (YL4SC) for students of the University. Through the Office of the Dean of Students 30 students were trained in Leadership and Social Change Innovations.

'AnidasoɔNsa' (Hope not lost) support

The SRC through the 'AnidasoɔNsa' Support was able to partially assist Forty-Three (43) very needy, Eleven (11) needy and Two (2) fairly needy students to pay their fees. They were selected after means testing and an interview. The amount that each student got was based on the recommendation of the interview panel.

Fund

The SRC through the Obaasima fund was able to help Nine students to pay half of their fees and other related expenses.

SRC Programmes

As part of their activities for the 2018/2019 academic year SRC had a number of programs, some of them are:

- Akwaaba Night/Summit purposely for the first years.

- They also celebrated the SRC week in the second semester.
- Entrepreneurship workshop with John Dumelo.
- Clean up Exercise
- Excellence Awards by LNUGS

Election of Student Leaders

In the course of the year, the following students were elected into various leadership positions in the University:

Joseph Adomako Junior	SRC President
Afrifa Owusu Boateng	SRC Vice President
Appiah Oppong John	SRC Financial Secretary
Ntim Mavis	SRC General Secretary
Aisha Mohammed	Women's Commissioner
Kwaku Ofosu Frimpong	LNUGS President
Agyakum Frimpong	LNUGS Financial Secretary
Akantepema Webura Diana	LNUGS General Secretary
Appeaning Twum Griffiths	MP Fiapre Constituency
Haruna Abdul Nasir	MP Berlin Constituency

The Dormaa Campus also elected the following students as their leaders. The handing over / swearing in ceremony of the Local-SRC (Dormaa Campus) was held on Tuesday, 21st May 2019 at Dormaa Campus. Below were the names and the respective positions of the newly-sworn in executives of the L-SRC:

Amofa Wisdom	President
AbabioAdu Nana	Vice President
Ackummey Emmanuel	Financial Secretary
Nyame Dominic	General Secretary
Akuba Mensah	Women's Commissioner

- Al-JounairUsain Osman Organizer

UENR NUGS

UENR NUGS in collaboration with Ghana Health Service, Sunyani Regional Hospital organized Blood Donation exercise on campus on 3rd November 2018. One Hundred and Eighty-Six (186) students made up of Sixty-One (61) females and One Hundred and Twenty-Five (125) males participated in the exercise.

Demise of Student

The University lost David Dankwah a level 300 student on 7th November, 2018 on Sunyani – Goaso road through a motor accident. The Dean of Students and and some students and staff attended the final funeral rites of the deceased at Kurosua No. 2 (Sofokrom) in the Sunyani Municipality.

COUNSELLING/CHAPLAINCY UNIT

The Counselling and Chaplaincy Unit of the University is staffed by the following.

- Rev. Dr. Isaac Ishmael Arthur Head, Counselling Unit/Chaplaincy
- Mrs. Eva Atika Bakuri Dinye Assistant Counsellor
- Mr. Prince Kwame Affum Assistant Counsellor, Dormaa
- Ms. Cindy Awuah Pokuaa Snr. Administrative Assistant

Activities

Seminar on Drug Abuse: The Unit organized a programme on the 31st of October 2018 on the theme: "**Dealing with the Drug (Tramadol, Alcohol Etc.)**

Menace among the Youth". A Medical Doctor from the Municipal Hospital, Dr. Solomon Boateng was invited to give a talk on how drugs like tramadol, Alcohol etc. can affect student health negatively.

Valentine's Day Programme: The Counselling Unit in collaboration with the local NUGS organized a relationship programme on the 14th of February 2019. The programme was intended to educate the students on how to balance their studies and their relationships.

Chaplaincy Service: During the period under consideration, Chaplaincy work at both Sunyani (Main) and Dormaa campus was largely successful as most members of the Community participated and co-operated in the activities of the Chaplaincy Board. The Chaplaincy scheduled weekly programmes for Sunday Service (8.00–10.30am) at the Auditorium and this will continue in the ensuing academic years.

Individual Counselling: During the year, the Unit witnessed an upsurge in students' attendance for individual counselling on issues related to relationship matters, time management, study skills and addiction among other issues. Addiction cases were mostly related to gambling, pornography, masturbation, and alcohol. Individual Students came in for counselling on their own whilst others were referred to the Counselling Unit by their Academic Tutors/Lecturers. Others whose issues related to mental health were referred to the Regional Hospital Psychiatric Unit for attention.

Group Counselling: A few students who had similar issues agreed to have group counselling. Sharing similar problems helped them know they were not alone and together they could work it out.

Peer Counsellors: In the course of the year, a 3 hour training programme was held to train Peer Counsellors on good practices as a Peer Counsellor. This was to equip them with the necessary skill to function as Peer Counsellors. The Unit also had a seminar for them on **"Mentoring the next Generation of Peer Counsellors: The Work of Every Student Counsellor".** They undertook some outreach programmes at the Junior High School level for form three students on basic learning skills and time management in the nearby communities.

Challenges

The Counselling Unit is situated at an office which is a thoroughfare of both Staff and Students on campus. This makes it very difficult for those who come with peculiar counselling issues to concentrate. Some of the clients have entertained the fear that other passer-byes may be able to eaves drop their conversation (Confidentiality Issue). This makes it difficult to get some students with issues like pornography and masturbation back to the Unit. Due to that some appointments are scheduled on weekends.

Counselling Unit at Dormaa Campus

Feedback from students and staff at Dormaa campus has been positive as more people seem to be interested in the activities of the counselling Unit. There is massive progress in recovery processes and great support from the university community. On the whole, arguably for a new unit, response and feedback is positive. Students seem to be recognizing the value of the Counselling Unit. The Dean of the School of Agriculture and Technology, Assistant Registrar, the Coordinating Dean of Students, the Heads of Departments and other Staff members have been very instrumental to the progress of the counselling unit especially with referrals.

RESIDENTIAL ACCOMMODATION

The University of Energy and Natural Resources currently operates two residential facilities namely; GetFund and New Hostel for students. The two hostels have a capacity of 257 rooms and can accommodate a maximum of 996 students for four (4) in a room and two (2) in a room. The hostels are made up of apartments of two rooms with shared washrooms while some are self-contained rooms. The University accommodated 916 students for both hostels for the 2018/19 academic year.

Challenges

The two hostels accommodate only 996 students out of over 5000 students as indicted earlier and provide opportunity for only few students to secure accommodation on campus. The University has signed MoU with other private hostels nearby to support the accommodation challenges on campus.

The University hostels have problem with water due to pressure on the only borehole which supplies water to the hostels. In the ensuing year, the University intends to construct additional bore holes to address this challenge. Additionally, the hostel intends to invest in back up power supply to pump water when there is power outage from the national grid.

Training

An in-house fire fighting training was done for the Hall Assistants and the Cleaners of the hostel on October 17, 2018.

SCHOOLS & DEPARTMENTS

SCHOOL OF NATURAL RESOURCES



SCHOOL OF NATURAL RESOURCES

The School of Natural Resources is one of the six (6) schools in the University of Energy and Natural Resources. The mandate of the school among others is to train, conduct research and disseminate knowledge in the area of natural resources management. It trains students to attain knowledge, skills and intellectual independence to contribute their quota towards national development. The school is one of the foundation schools and its vision is to become a centre of excellence in the training of critical human resource for the efficient utilization of our natural resources.

It is dedicated to producing highly skilled graduates' whiles generating, advancing and applying science-based information for the sustainable management and utilization of our natural and environmental resources.

The School with the help of its Research Centre for Climatic Change and Gender Studies (3CGCS) also focuses on climatic change and its impact on our natural resources. Other areas of research include:

- Aqua-culture systems.
- Environmental degradation.
- Preservation and development of heritage site.
- Forest conservation.
- Forest fires.
- Mining activities.
- Wildlife endangered species.
- Ecotourism and hospitality.

Collaborations

Using a partnership approach, the school is currently collaborating with institutions such as:

- Forestry Commission
- Ghana National Fire Service
- Eberswalde University for Sustainable Development- Germany
- Form Ghana
- Ministry of Lands and Forestry
- University of Houston Downtown-USA

These are aimed at building the capacity of staff and students to broaden their knowledge base and enhance our ability to contribute towards national development.

Departments/Research Centre

The school is made up of the following Departments and Centre:

- Department of Forest Science
- Department of Fisheries and Water Resources
- Department of Environmental Management
- Department of Ecotourism, Recreation and Hospitality
- Centre for Climatic Change and Gender Studies

Student Statistics/Population in School of Natural Resources

The school currently has a student population of 691. The enrolment figures are given in the table below:

Year/Level	Male	Female	Total
100	127	197	324
200	74	72	146
300	66	36	102
400	87	32	119
Total	354	337	691

Staffing

The following are the staff at the school's Offices.

- Dr. Simon Abugre - Ag. Dean
- Mr. Charles Kojo Aidoo - Faculty Officer
- Mr. Eric L. Mwintome - Senior Administrative Assistant

DEPT. OF ECOTOURISM, RECREATION AND HOSPITALITY

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 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 Resources Management (Ecotourism option), BSc. Wildlife and Range Management, BSc. Hospitality Management (Regular & Weekend) and Dipl. Hospitality Management.

Activities over the Past Year

- Awarded small grant from Rufford Foundation to study the distribution, and abundance of vulnerable African White-bullied Pangolin (*Phataginustricuspis*) in Asukese Forest Reserve, Brong Ahafo Region.
- Departmental participation in a conference (Transforming hospitality and tourism education: Collaboration with stakeholder) organized by the Institute of Hospitality, Ghana, at Ho Technical University, 15th-17th November, 2018.
- Gained logistical support from Coca Cola Ghana Limited to operate a snack bar on campus.
- Developed BSc. Tourism and Event Management for accreditation.
- MPhil/MSc. Nature Conservation and Rural Development is being developed.
- Initiated Faculty Exchange Programme with the ZENAT Centre for Sustainable Tourism, Eberswalde University for Sustainable Development.
- Organized weekly food bazaar event in the university community to promote the Hospitality Programme and showcase ethnic cuisine in Ghana. It was also intended to generate revenue to support Business Start-up Fund for students who demonstrate entrepreneurial qualities.
- Developed Ecowild Research and Training Centre to provide capacity building and seek small grants for wildlife research (see www.uenr.edu.gh/ecowild).

- Developed a database of the Student Alumni for the purpose of informing and updating them on the programmes and activities of the Department.
- Strengthened the Department-Hospitality Industry relationship. This resulted in the organization of a guest lecture series in which successful personalities and practitioners in the hospitality sector in Sunyani shared entrepreneurial experiences with students and staff of the department. Also, the department celebrated 2018 Brong Ahafo Region Tourism Awards and Chocolate Day with Ghana Tourism Authority.

Future Plans

- The Department in the near future intends to mount MPhil/MSc Nature Conservation and Rural Development and MPhil/MSc. Hospitality Management.
- Developing a training centre and short courses (with Ghana Tourism Authority) to build capacity of the employees in Tourism and Hospitality Sector.

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. Yaw Boakye Agyeman	Lecturer/HOD	PhD(Waterloo) MSc(Wageningen);BSc.(KNUST

Dr. Daniella Delali Sedegah	Lecturer	PhD (UG); MPhil (UG); BSc. (UDS, Tamale)
Mr. Richard Obour	Snr. Lecturer	MPhil (KNUST); BSc. (KNUST).
Mr. James Agyei-Ohemeng	Lecturer	MPhil. (KNUST); BSc. (UCC); PG. Dip. (UCC); Dip. Ed. (UCC)
Mr. Ricky Y. Nutsugbodo	Lecturer	MPhil (UCC); BSc. (UCC)
Miss Olivia Naa Ayorkor Tetteh	Lecturer	MSc. (KNUST); BSc. (KNUST); HND (Accra Poly); Dip. Ed.
Miss Mildred Nuoung Deri	Lecturer	MPhil (UCC); B.Tech (Ho Poly); HND (HCIM, Accra Poly)
Mr. S. Wireko-Gyebi	Asst. Lecturer	MPhil (UCC);BSc (UCC)
Miss Grace N. Baah	Asst. Lecturer	MPhil (UCC);BSc (UCC)
Miss Perpetual Zaazie	Tech. Instructor	B.Ed. (UEW) M.Tech. (UEW)
Miss Abena Gyamfuaa	Tech. Instructor	HND (HCIM, Sunyani Poly)

DR. YAW BOAKYE AGYEMAN

Research Activities/Interests

- Ecotourism development, management and marketing
- Conservation and poverty reduction
- Livelihood vulnerability and adaptation to climate change
- Local ecological knowledge and conservation/climate change
- Human-wildlife conflict

Publication(s)

- Mensah, A., Sanful, P., **Agyeman, Y. B**., Trolle, D. Nunoo, F., & Asase, M. (2019). Sustainable ecosystem services of Lake Bosumtwi, Ghana-implications for livelihoods and food security. *Nature and Fauna, 32* (2), 58-62.
- **Agyeman, Y. B.** (2019). Ecotourism as an adaptation strategy for mitigating climate change impacts on local communities around protected areas in Ghana. In W. L. Filho (Ed.), *Handbook of Climate Change Resilience* (pp. 1-19). Switzerland, Cham: Springer.
- **Agyeman, Y. B**., Yeboah, A. O., &Ashie, E. (2019). Protected areas and poverty reduction: The role of ecotourism livelihood in local communities in Ghana. *Journal ofCommunity Development*, 1-19.
- **Agyeman, Y. B**., Aboagye, O. K. &Ashie, E. (2019). Visitor satisfaction at Kakum National Park in Ghana. *Journal of Tourism Recreation Research*, 1-12.
- Agro, P. P., &**Agyeman, Y. B.** (2018). Governance of river basin: Gender dimension in framing issues at the local community level.*Journal of Ecology and the Natural Environment, 10*(7), 159-171.
- **Agyeman, Y. B**., & Baidoo, S. (2018). Farmers' perceptions of strategies for managing wildlife crop depredation in Ghana. *International Journal of Biodiversity and Conservation, 11* (6), 165-174.

Outreach Programmes/Extension Services

- Acting Head, Department of Ecotourism, Recreation and Hospitality
- Member, University Academic Board
- Member, School of Natural Resources Board
- Member, Quality Assurance and Planning Committee

- Member, School of Natural Resources Appointment & Promotion Committee
- Patron, Natural Resources Student Association
- Technical Advisor, Status, distribution, and abundance of vulnerable African White-bullied Pangolin (*Phataginustricuspis*) in human-dominated forest landscapes around the Asukese Forest (Rufford Funded)
- Lead Scientist, Building resilience of Lake Bosumtwi to climate change
  (RELAB) Project funded by the Ministry of Foreign Affairs of Denmark (MFA) Grant
- **Reviewer:** Journal of Hospitality and Tourism Research, Journal of Wildlife Management and Wildlife Monographs, Journal of Tourism Recreation Research

DR. (MRS.) DANIELLA DELALI SEDEGAH

Research Activities/Interests

- Rural Development
- Climate Change
- Gender Studies
- Natural ResourceManagement & Community Development

Publication(s)

- Agyei-Ohemeng, J., Nyantakyiwaa, G. B., &**Sedegah, D. D. (2018).** Ecotourism potentials of Bui National Park. *International Journal of Interdisciplinary Research and Innovations, 6* (2), 114-125.

- Agyei-Ohemeng, J., **Sedegah, D. D.,** Hasford, B., Mensah-Attah, E. &Alijina, L. (2018). Labor turnover in selected hotels in Sunyani Municipality. *Journal of Hospitality Tourism, 5* (3), 1-12.
- Antwi, M. &**Sedegah**, **D. D**. (2018). Climate change and societal change—Impact on Hydropower Energy Generation. In Amos Kabo-Bah & Chukwuemeka Dijditor (Eds), *Sustainable hydropower in West Africa* (pp. 63-73). Elsevier, Academic Press. https://doi.org/10.1016/B978-0-12-813016-2.00005-8

Outreach Programmes / Extension Services

- Member, University Academic Board
- Member, School of Natural Resources Board

Mr. RICHARD OBOUR

Research Activities/Interests

- Wildlife Ecology and Development
- Environmental Ecology
- Traditional Conservation of Wildlife

Outreach Programmes/Extension Services

- Member, School of Natural Resources Board
- Member, School of Natural Resources Appointment & Promotion Committee
- Member, School Examination Moderation Committee

- Chairman, Advisory Board of the Nursing and Midwifery Training College, Seikwa

MR. RICKY YAO NUTSUGBODO

Research Activities/Interests

- Accommodation
- Tourism Transport
- Service Quality,
- Motivation and Satisfaction studies

Conferences/Workshops/Seminars

- Participant Conference (Transforming hospitality and tourism education: Collaboration with stakeholder) organized by the Institute of Hospitality, Ghana, at Ho Technical University, 15th-17th November, 2018.
- Presenter Ghana Geographers Association (GGA) and Ghana Geography Teachers Association (GGTA) Annual Conference, Winneba, Ghana, August, 2018

Outreach Programmes/Extension Services

- Member, University Academic Board
- Member, Dean of Student Board
- Member, School of Engineering Board
- Patron, Association of Hospitality Management Students
- Member, Natural Resources School Board

- Examination Officer, Department of Ecotourism, Recreation and Hospitality

MR. JAMES AGYEI-OHEMENG

Research Activities/Interests

- Can the charcoal trade be a sustainable enterprise?
- Opportunities in protecting bat colonies in Ghana.
- Nature-based Tourism in Ghana.

Publication(s)

- **Agyei-Ohemeng, J.,** Taylor, A. M., Aziiz, I., Twumasi, A. D. (2019). Monitoring water diseases in communities with WATSAN committees in Brong Ahafo Region, Ghana. *J. Bio. Env. Sci., 14*(1), 266-270.
- **Agyei-Ohemeng, J.,** Nyantakyiwaa B., G. and Sedegah, D. (2018). Ecotourism potentials of Bui National Park, Ghana. *International Journal of Interdisciplinary Research and Innovations, 6*(2), 114-125.
- **Agyei-Ohemeng, J.,** Sedegah, D.D. (2018). Labor turnover in selected hotels in the Sunyani Municipality. Journal of Hospitality Tourism, *5*(3), 1-10.
- **Agyei-Ohemeng, J.** Opare, P., Obeng-Ofori, D. (2018). Inventory of existing and exploitable knowledge and technologies on cocoa in Ghana. *International Journal of Management and Commerce Innovations*, *6*(1), 1911-1921.

Outreach Programmes/Extension Services

- ❖ Coordinator, Student Industrial Attachment, School of Natural Resources
- ❖ Chairman, Student Hostel Committee

MISS MILDRED NUONG DERI

Research Activities/Interests

- ❖ Environmental issues in tourism and hospitality
- ❖ Job satisfaction and turnover intention among hotel employees

Conferences/Workshops/Seminars

- ❖ Participant Conference (Transforming hospitality and tourism education: Collaboration with stakeholder) organized by the Institute of Hospitality, Ghana, at Ho Technical University, 15th-17th November, 2018.

Outreach Programmes/Extension Services

- ❖ Convocation Representative, University Academic Board
- ❖ Departmental Coordinator, Industry Relations

SAMPSON WIREKO-GYEBI

Research Activities/Interests

- Work-related stress
- Tourism Events Management
- Leisure and Recreation
- Accommodation and Transport Studies

Publication(s)

- **Wireko-Gyebi, S**., &Ashiagbor, E. S. (2018). Comparative study on knowledge about Autism Spectrum Disorder among Paediatric and Psychiatric Nurses in public hospitals in Kumasi, Ghana. *Clinical Practice & Epidemiology in Mental Health*, 14, 99-108. Doi: 10.2174/1745017901814010099.

Conferences/Workshops/Seminars

- Participant Conference (Transforming hospitality and tourism education: Collaboration with stakeholder) organized by the Institute of Hospitality, Ghana, at Ho Technical University, 15th-17th November, 2018.

Outreach Programmes/Extension Services

- Coordinator, Industrial Attachment, Department of Ecotourism, Recreation and Hospitality.

NANCY GRACE BAAH

Research Activities/Interests

- Culinary Tourism
- New Technologies and Branding in Tourism and Hospitality
- Social Media and Social Networking in Hospitality Management

PERPETUAL ZAAZIE

Research Activities/Interests

- Gastronomy in Ghana
- Ethnic cuisines

Outreach Programmes/Extension Services

- Departmental Co-ordinator, Special Event

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

The Department of Environmental Management offers a number of academic programmes. These are the 12-weekends Certificate in Public Safety, the 2-year Diploma in Fire, Safety and Disaster Management, the 4-year BSc degree programme in Fire and Disaster Management and the Land Reclamation and Restoration option of the BSc Natural Resources Management. These programmes are aimed at producing graduates capable of efficiently managing disasters from the pre-, during and post-disaster stages, and ensuring workplace health and safety. Graduates from Land Reclamation and Restoration will have the skills and competencies to reclaim mine sites, and improve environmental quality.

Activities over the Past Year

The 2018/19 academic year has been quite eventful. Staff from the Department of Environmental Management were either involved in, or played useful roles in the following activities:

- Development of a Certificate programme in Public Safety which will be run for all Officer Cadet Corps recruited into the Fire Service in June/July of 2019.
- Development of the BSc. Environment, Resources and Sustainability.
- Development of the MSc/MPhil/PhD programmes in Environment, Water and Sustainability.
- Third year BSc Students in the Land Reclamation and Restoration programme and the BSc Fire and Disaster Management duly completed their mandatory industrial attachment exercise.
- Recruited three new staff members to augment the staff strength of the Department.

- ❖ All Assistant Lecturers in the Department have enrolled in PhD programmes within or outside the country.
- ❖ Participated in the science festival organized by the University.

Future Plans

The Department in the near future intends to mount a BSc Programme in Environment, Resources and Sustainability as well as postgraduate programmes in Disasters and Humanitarian Emergencies and Environment, Water and Sustainability.

Teaching Staff

Name	Qualification	Designation	Area of Specialisation
Dr. David Anaafo	PhD (Australia) M.Sc.(Dortmund/ KNUST) BSc (KNUST)	Lecturer	RegionalDevelopment; Planning and Management
Mr. Paul K. Nsiah	MSc., BSc (KNUST)	Lecturer/HoD	Environmental Resources Mgt; Natural Resource Mgt.
Dr. Fred Owusu - Ansah	PhD (SUNY-ESF, USA) MPhil (UG) BSc. (UG)	Lecturer	Environmental Mgt and Policy; Water and Wetland Resources Mgt; Entomology
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; AgricultureTechnology

Austin Asare	MPhil., BSc. (KNUST)	Asst. Lecturer	Forest Management and Silviculture
Kwame Oppong Hackman	PhD (China), MSc. (UK), BSc. (KNUST),	Lecturer	Environmental/ Ecological Modelling and GIS and Remote Sensing
Samuel O. Mensah	MPhil., BSc. (KNUST)	Asst. Lecturer	Environmental Resources Mgt.
Joseph Azumyarn	MSc. (UCC) BSc. (UCC), B.Ed (UEW	Technical Instructor	Fire Science and Disaster Management

DR. DAVID ANAAFO

Research Activities/Interests

- Sustainable Property and Pro-poor Land Policy
- Urban Planning, City Governance and Post Disaster Recovery
- Decentralization and Local Governance
- Environmental change and sustainable development

Publication(s)

- **Anaafo, D.** (2019). Rhetorically decentralised, practically recentralised: A review of the local governance system of Ghana. *Commonwealth Journal of Local Governance*, 21: 6516, - https://doi.org/10.5130/cjlg.v0i21.6516
- **Anaafo, D.** (2019). Between science and local knowledge: improving the communication of climate change to rural agriculturists in the Bolgatanga Municipality, Ghana. *Local Environment*, 24(3), 201-215.

Conferences/Workshops/Seminars

- **Participant:** Leading Integrated Research in Africa (LIRA 2030) Training programme for pre-qualified research grant applicants on how to do Transdisciplinary Research, organised by the International Science Council, Abidjan, Cote D'Ivoire, September, 2018.
- **Participant:** Dialogue on Innovative Higher Education Strategies (DIES), organized for middle level management of University education by the German Academic Exchange Service, in Sunyani and Accra, in March and August 2018, respectively.

Outreach Programme(s)/Extension Service(s)

- Reviewer: Journal of Land Use Policy.

Dr. FRED OWUSU-ANSAH

Research Activities/Interests

- Water Quality Assessment of Sachet Water and Public Health Implications.
- Mining and Rural Livelihood: Promoting Sustainable Livelihood and Compensation Framework.
- Natural Resources Administration Law / Policy
- Environmental Impact Assessment and Auditing
- Environmental Risk Analysis & Management
- Agriculture, Mining and Environment

- Solid Waste Management Decisions and Climate Change Impacts (Green House Gas Emissions)

Conferences/Workshops/Seminars

- UENR – ACU Professional Development Interactive Seminar. Organized by CGCC, UENR, Sunyani. 21st February, 2019. GlobeScan and Sustainability Summit on *The Future of Business and Sustainability Leadership. Under the theme: Building Trusted Leadership to Create a Better Future*. Organized by GlobeScan Incorporated and World Association of Opinion and Marketing Research Professionals, Toronto, Canada. Live Streaming Participation via GlobeScan/ EcoMatcher's Webinar Platform.March 27, 2019, **s**
- The 34th International Conference on *Solid Waste Technology and Management*. Organized by Widener University, School of Engineering and the National Centre for Resource Management and Technology. Live Streaming Participation via Widener University Webinar Platform, Annapolis (Washington, DC area) U.S.A. March 31 – April 3, 2019.
- American Water Resources Association Conference on *Setting Conditions for the Success of Integrated Water Resources Management*. Organized by American Water Resources Association, West Federal St, Middleburg, VA, USA. Live Streaming Participation via AWRA Webinar Platform. March 25-27, 2019
- American Water Resources Association Conference on *Preparing for a Climate with more Extremes: Results from Californial Fourth Climate Change Assessment*. Organized by American Water Resources

Association, West Federal St, Middleburg, VA, USA. Live Streaming Participation via AWRA Webinar Platform. Wednesday, April 10, 2019.

- A 4-Day Erasmus+ Project Workshop on *Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa (EEISHEA)*. Co-funded by the Erasmus+ Programme of the European Union, UENR, Ghana, and AALORG University, Denmark. Sheila's Executive Hotel, Sunyani, Ghana. 30th April – 3rd May, 2019.
- 16thGlobelics International Conference. Under the theme: *Innovation, Economic Growth and Sustainable Development: Strengthening Institutions for Greater Relevance, Effectiveness and Inclusivity*. Organized and hosted by the CSIR - Science and Technology Policy Research Institute (STEPRI) in collaboration with Africalics. Sponsors: SIDA (The Swedish International Development Cooperation Agency, Sweden), CSIR, STEPRI, and MESTI. Mensvic Grand Hotel, Accra, Ghana. 24th – 26th October 2018.

Outreach Programmes/Extension Services

- **Member,** Internal Advisory Committee, Research and Grant Institute of Ghana (REGIG). www.regig.org; OR https://www.regig.org/who-we-are/internal-advisory-committee.html
- **Reviewer**, *Journal of Environmental Protection* (JEP), Scientific Research Publishing, USA.

DR. MARY ANTWI

Research Activities/Interests

- Geographical Information Systems and Remote Sensing technologies/Geospatial analysis
- Integrated soil fertility management
- Land management systems
- Land surveying and mapping

Publication(s)

- **Antwi, M.** and Sedegah, D. D. (2018). Climate change and societal change – impact on hydropower energy generation, In Sustainable Hydropower in West Africa: Planning, operation, and challenges. Academic Press, Elsevier publications. ISBN: 978-0-12-813016-2.
- **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, Special Issue ICCCSDA, 2017. Vol 1, Theme 1: Environment, Technology and Sustainable Development.DOI:https://doi.org/10.26796/jenrm.v1i1%20SPECIAL.84
- Appiahene, P. and **Antwi, M.** (2018). Application Of GIS To Create Social Media Awareness To The Effects Of Illegal Mining On Natural Resources In The Tano North District Of Ghana. Journal of Energy and Natural Resource Management, Special Issue ICCCSDA, 2017. Vol 1, Theme 1: Environment, Technology and Sustainable Development.

Conferences/Workshops/Seminars

- Researcher Connect Workshop on Academic writing and Publications organised by the British Council at the Accra City Hotel from the 13th to 16th March, 2019.
- Good Assessment practices in Higher Education: improving Teaching and Learning Workshop organised by the Quality Assurance Unit of University of Energy and Natural Resources, Sunyani at the Sheila's Executive Hotel from the 16th to 17th January, 2019.
- The 8th African Forum: Futurity in African Realities organised by the Japan Society for the promotion of Science Grant-in-aid for scientific research in Accra, on the 7th to 9th December, 2018.
- Workshop o Curriculum Development organised by Centre for Climate Change and Gender studies, USAID and Winrock International at the University of Energy and Natural Resources on the 14 – 16 August, 2018.
- Workshop facilitator for Geographic Information System training organised by the Earth Observation and Innovation Centre at the University of Energy and Natural Resources, Sunyani on the 6th to 10th August, 2018.
- ASSAf-TWAS-AAAS Regional Workshop on Science Diplomacy organised by the Department of Science and Technology, South Africa, on the 21st May to 25th May, 2018.
- Instructional Skills Workshop, organised by Sunyani Technical University in conjunction with Vancouver Island University at the University of Energy and Natural Resources from 30th January to 2nd February, 2018.

Outreach Programmes/Extension Services

- Co-research scientist – Building Resilience of Lake Bosomtwe in the Ashanti Region
- Assistant Project Manager, Advance Fire Information Systems, EORIC
- Facilitator: Science Festival, UENR
- Facilitator and Trainer: Workshop on Geographic Information Systems and Remote Sensing, EORIC, UENR
- Reviewer: Scientific African, Elsevier Publications

DR. KWAME OPPONG HACKMAN

Research Activities/Interests

- Spatial and temporal analysis of urban areas
- Large-scale land cover/use mapping and change analysis
- Land-use based ecological assessment and modeling
- Customization and use of mobile applications for bulk field data collection and aggregation in environmental and socio-economic studies.

Publication(s)

- Xu, Y., Yu, L., Peng, D., Cai, X., Cheng, Y., Zhao, Y., Zhao, Yy., Feng, D., **Hackman, K.,** Huang, X., Lu, H., Yu, C. Gong, P. (2018). Exploring the temporal density of Landsat observations for cropland mapping: experiments from Egypt, Ethiopia and South Africa. *International Journal of Remote Sensing*, https://doi.org/10.1080/01431161.2018.1468115

- **Hackman, K.O**., Gong, P. (2017). Biodiversity estimation of the Western Region of Ghana using arthropod mean morphospecies abundance. *Biodiversity and Conservation* 26(9), 2083-2097.
- **Hackman, K**. **O**., Gong, P.,Wang, J. (2017). Newland cover maps of Ghana for 2015 using Landsat 8 and three popular classifiers for biodiversity assessment. *International Journal of Remote Sensing* 38(14), 4008–4021.
- **Hackman, K. O**., Gong, P., Venevsky, S. (2017). A rapid assessment of landscape biodiversity using diversity profiles of arthropod morphospecies. *Landscape Ecology* 32, 209-223.
- Cheng, Y., Yu, L., Zhao, Y. Y., Xu, Y., **Hackman, K**., Cracknell, A. P., Gong, P (2017). Towards a global oil palm sample database: design and implications. *International Journal Remote Sensing* 38(14), 4022-4032.
- Li, C. C., Gong,...,**Hackman, K.** O., ... (2017). The first all-season sample set for mapping global land cover with Landsat-8 data. *Science Bulletin*. DOI: 10.1016/j.scib.2017.03.011.

Conferences/Workshops/Seminars

- **Participant:** Workshop on the topic, "Good Assessment Practices in Higher Education" for teaching staff of UENR.

Outreach Programmes/Extension Services

- Reviewer: Methods in Ecology and Evolution (by British Ecological Society)

- Collaboration with Professor (Université de Lorraine) on data science projects in Africa (e.g. MSc. Data Science for Health and Development program to be hosted by Université de Lomé in Togo)
- Data science advisory service to Syecomp Ghana Limited (Accra) on the development of mfarmPay, a credit scoring system for farmers in Ghana and Kenya.

MR. AUSTIN ASARE

Research Activities/Interests

- Biodiversity assessment and conservation
- Climate change and land use
- Adaptation to climate change
- Land use / land cover change and watershed modeling using GIS and Remote Sensing techniques.

Publication(s)

- Krampah, F., Lartey-Young, G., Sanful, P. O., Dawohoso, O., &**Asare, A.** (2019). Hydrochemistry of Surface and Groundwater in the Vicinity of a Mine Waste Rock Dump: Assessing Impact of Acid Rock Drainage (ARD). Journal of Geoscience and Environment Protection, 7, 52-67.
- **Asare, A.,** Asante, W. A., Owusu-Prempeh, N., &Opuni Frimpong, E. (2019). Effects of different silvicultural management regimes on understorey floristic diversity, composition and carbon stock of Tectonagrandis plantations in a dry semi-deciduous ecological zone of Ghana. Abstract accepted for XXV IUFRO Congress in Curitiba, Brazil during 29th September – 5th October 2019.

- Nat Owusu Prempeh, Ernest Frimpong Asamoah &**Austin Asare** (2018). Assessing the Floristic Diversity and Conservation Status of Remnant Forest of Wildlife Sanctuary, Ghana, using Geostatistics and Genetic Heat Index. Global Journal of Science Frontier Research: H Environment & Earth Science Volume 18 Issue1

Conferences/Workshops/Seminars

- **Participant:** Workshop on Data Analysis and Applied statistics and Basic Ecological Modelling organized for students on RELAB Project by Aarhus University at Sheila's Executive hotel, Sunyani, from 6th to 8th May, 2019
- **Participant:** Seminar on University Governance, Research Skill development, University Examinations, Career progressions and Developing good working relations organized for staff by School of Natural Resources (SNR) at Sheila's Executive hotel, Sunyani, 6th September, 2018

MR. SAMUEL MENSAH OPOKU

Research Activities/Interests

- Forest carbon stock (above & below ground) assessment
- Urban agriculture (Water use and management)
- Environmental degradation, monitoring and restoration
- Biodiversity, ecosystems and conservation
- Climate change and land use

Publication(s)

- **S. M. Opoku**, E. Opuni-Frimpong, E. O. Mensah,A. Asare (2019). Early growth and carbon sequestration potential of *Khaya grandifoliola*in a spacing trial. Abstract accepted for XXV IUFRO Congress in Curitiba, Brazil during 29 September to 5 October, 2019.
- E. Opuni-Frimpong, K. N. Baniako, S. A. Owusu, **S. M. Opoku** (2019). Restoration of degraded landscapes and carbon sequestration in different plantation systems in Western Ghana. Abstract accepted for XXV IUFRO Congress in Curitiba, Brazil during 29 September to 5 October, 2019.

Conferences/Workshops/Seminars

- Good Assessment Practices in Higher Education: Improving Teaching and Learning. A workshop by Quality Assurance and Planning Unit of University of Energy and Natural Resources, Sunyani, Ghana. 16-17thJanuary, 2019.
- Seminar for Staff on University of Governance, Research Skills Development, University Examinations, Career Progression and Developing Good Working Relationships. School of Natural Resources, University of Energy and Natural Resources, Sunyani, Ghana, 6th September, 2018.

MR. BENJAMIN OSAFO CARLIS-PAITTOO

Research Activities/Interests

- Fire / Arson Investigation
- Occupational Health and Safety

- Forensic Analysis
- ISO Standards and Compliance (14001, 45001, 9001)
- Disaster Resilience
- Injury Control and Prevention

Publication(s)

- **Carlis-Paittoo**, Benjamin Osafo; GAMBRAH, E. Incident Command System Implementation in Ghana: A Case Study of Sunyani Municipality. **International Conference on Applied Science and Technology Conference Proceedings**, [S.l.], v. 5, n. 1, p. 134 - 143, apr. 2019. ISSN 2467-902X.
- Environmental Management in the Oil & Gas Industry – Ghana Offshore Magazine, Issue 4 – August 2011; Page 20.

Conferences/Workshops/Seminars

- Certificate of Competency – Teaching and Learning in Higher Education – Organized by Waber Professional Education – July 9-10, 2018.
- Certificate of Participation – IFC – EPA Environmental and Social Risk Management Training on IFC Performance Standards – August 27-30, 2018.
- 3rd Caligh/AUU International Conference (2018) – July 9-13, 2018.
- Certificate of Participation – 10th Annual International Applied Research Conference and Technology Fair, Koforidua (Oral Presentation), July 17-20, 2018.

- Participant: ILS-UG Food Safety and Nutrition Training (Hazard Analysis and Critical Control Point, HACCP), August 6-10, 2018.
- 5th International Conference on Applied Sciences and Technology (Oral Presentation), Kumasi – September 26-27, 2018.

Outreach Programmes/Extension Services

- Principal Coordinator-GNFS-UENR joint training programme for Officers' Cadet Corps.
- University of Central Lancashire and UENR proposed partnership programme(s) for Fire Safety Engineering.

MR. ALEX AMERH AGBESHIE

Research Activities/Interests

- Nutrient cycling on reclaimed lands
- Soil sustainability and environmental protection.
- Climate-smart agriculture for sustainable land and water management.
- Biogeochemical characterization of soils
- Soil, plant, water systems and environment science.

Publication(s)

- Tuffour, H. O., Abubakari, A., **Agbeshie, A. A**., Danso, L. (2019). Pedotransfer functions for estimating saturated hydraulic conductivity of selected benchmark soils in Ghana. *As. Soil Res. J*., 2(2): 1-11.

Conferences/Workshops/Seminars

- Participant: Good assessment practices in higher education. Training programme for University Lecturers organised by the Quality Assurance Planning Unit, UENR, Sunyani-Ghana, January, 2019.
- Participant: Capacity Building in Curriculum Development. Training programme for University Lecturers organised by the Quality Assurance Planning Unit, UENR, Sunyani-Ghana, September, 2018.

Outreach Programmes/Extension Services

- Facilitator: Soils and fertilizer management. Training programme for Urban farmers on good land management practices and sustainability, organised by Skill Development Fund (Danida), UENR Call Two Chapter, UENR, Sunyani-Ghana, April, 2019.
- Facilitator: Biochar production. Training programme for farmers on good soil management and amendment production, organised by Building Stronger Universities III(Danida - BSU III), KNUST Call Three Chapter, Kumasi - Ghana, March, 2019

MR. JOSEPH ASAKO AZUMYARN

Research Activities/Interests

- Fire dynamics and effectiveness of firefighting in riparian
- Hazardous materials disaster management
- Structural fire protection

- Fire risk assessment

Conferences/Workshops/Seminars

- Seminar organized for staff of school of Natural Resources on University Governance, Research Skills, Examinations and Career Development on the 6th September 2018.

DEPARTMENT OF FISHERIES AND WATER RESOURCES

The Department of Fisheries and Water Resources (DFWR), was established in 2013 under the School of Natural Resources. DFWR is directly concerned with research and training of fisheries/ aquaculture scientists and practitioners. It is the only Department in Ghana to run combined degree in Fisheries and Aquaculture.

The vision of DFWR is to become a leading Department in teaching, research and community outreach in advancing and promoting food security, employment and water management. Currently, the Department runs BSc. Natural Resources Management with Specialization in Fisheries and Aquaculture (both Regular and Top-Up). Upcoming programmes include BSc. AquaBusiness and Fisheries, MSc. Fisheries Management, MSc. Sustainable Aquaculture.

Activities over the Past Year

During the year under review, DoFWR in collaboration with the Fisheries and Aquaculture Society and Sunyani Fish Farmers Association celebrated the 2018 World Fisheries. The Department with the support of Management

acquired the improved *Ahotor Fish Smoker* which is one of its kind the region.

The Department also mounted Top-Up BSc. Natural Resource Management (Fisheries and Aquaculture option). The Department also made contributions to the national fisheries and aquaculture sector. A staff was nominated to serve on the National Committee on Aquaculture by the Ministry of Fisheries and Aquaculture Development (MoFAD). Two members were appointed as Executive Members of the Fisheries and Aquaculture Society of Ghana (FASoG). Also, the Department assessed the impact of the 2019 closed fishing season by visiting all the four coastal regions.

Aquaculture Production and Research Centre

During the year under review, the Aquaculture Research and Production Centre was used to train students for both theoretical and practical purposes. It was also used to educate fish farmers who normally require technical advice on their farms. One hundred and nine (109) students were trained on various aquaculture operations. The Department has liaised with the Fisheries Commission to supply fingerlings from the farm to fish farmers in the Ahafo, Bono, and Bono East and even beyond the borders of these regions. The Farm has also produced some quality matured fish for sale to UENR staff.

Below is a summary of activities on the farm for 2018/2019 academic year:

Table size Fish Production	**Fingerling Production**	**Number of Students Trained**
234.8kg Fish produced	15,436 fingerlings produced	109 students have been

during period under review	during the period under consideration	trained using the center

Future Plans

The Department is in discussion with Shanghai Ocean University (China) for collaboration in the areas of teaching (undergraduate and post-graduate), research and staff development. The proposed fields are fisheries economics and management, aquaculture, fisheries (resources, fishing technology) and hydrobiology.

The Department is in the process of establishing a new aquaculture facility. Sponsorships have been solicited from some corporate bodies which is yielding positive response so far. Moreover, the Department would be going into fish processing and utilization to ensure that the general public get quality fish for consumption. The Department will be joining a consortium to run the management and capacity building of small pelagic fisheries in West Africa (GREPPAO) project valued at €1.5m Euros.

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	Fisheries, Aquaculture, Bio-economics
Dr. Seyram Sarah B. Sefute	PhD (Ibadan)	Lecturer	Fish Nutrition and Health

Samuel Kweku K. Amponsah	MPhil (Ghana)	Assistant Lecturer	Fish Stock Assessment
Mr. Eric Justice Darko	CEMBA;BSc., HND	Principal Technician	Strategic Aquaculture Marketing, Aquaculture Statistics,

DR. BERCHIEASIEDU

Research Activities/Interests

- Fisheries
- Aquaculture
- Fisheries & aquaculture economics
- Regional fisheries/aquaculture development & policy
- Small pelagic fisheries in West Africa
- fisch value chain analysis and trade
- Economic and social impacts of climate change on aquaculture

Publications

- Apraku, A., Xuxiong, H., Yusuf, A., Cornel, A., Ayisi, C. and **Asiedu, B.** (2019). Impact of dietary oil replacement on muscle and liver enzymes activity, histomorphology and growth-related genes on Nile tilapia.*Comparative Biochemistry and Physiology, Part C 223: 15–25*
- Anokyewaa, A.M and **Asiedu, B.** (2019). Economic Analysis of Small-Scale Aquaculture Enterprise in Ghana; a Case Study of Sunyani Municipality. *Asian Journal of Fisheries and Aquatic Research*, 3(2): 1-12

- **Asiedu B.,** Failler P. andYolaine, B. (2018). Ensuring food security: an analysis of the industrial smoking fishery sector of Ghana. *Agriculture & Food Security*,7:38, 1-11https://doi.org/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.
- **Asiedu, B.**, Malcom, D. and Iddrisu, S. (2018). Assessing the economic impact of climate change in small-scale aquaculture industry of Ghana, West Africa. Africa Academy of Sciences. DOI: 10.12688/aasopenres.12911.1
- **Asiedu, B.**, Nunoo, F. K. E, Alhassan, H. E. and Ofori-Danson, K. P. (2018*). Hydropower Generation and Its Related Impactson Aquatic Life (Fisheries)* In: Sustainable Hydropower in West Africa Planning, Operation, and Challenges. (Editors: Amos T. Kabo-bah. andChukwuemeka J. Diji). Academic Press-Elsevier Inc. p 109-119, 215pp. ISBN 978-0-12-813016-2.https://doi.org/10.1016/B978-0-12-813016-2.00008-3
- **Asiedu, B.** (2018).E-book on "Small-Scale Fisheries in Africa: A Regional Portrait' *Ghana's small-scale fisheries***.** Too Big To Ignore, Memorial University, Canada.

Conferences/Workshops/Seminars

- Meeting on Fisheries and Coastal Environment, 4 – 5 February, 2019, Erata Hotel, Ghana.

- Scientific and Technical Working Group on Fisheries Management in Ghana, 13 – 15 March, 2019, AH Hotel, Ghana.
- **Asiedu, B. (2018).** Comparative study of Liberia and Ghana fisheries development. National Fisheries and Aquaculture Authority/United Nations Mission in Liberia. Link: http://frontpageafricaonline.com/index.php/news/7475-liberia-ghana-compare-fisheries-notes
- **Asiedu, B.** (2018). Protecting our planet, CIRCLE in motion: safeguarding small-scale fish farming in Ghana. The Association of Commonwealth, No. 192: 12

Outreach Programmes/Extension Services

- Focus Group discussion on impact of the closed fishing season at various fishing communities along the coast of Ghana, 2 – 13 May, 2019.
- **Facilitator,** Seminar for Staff in the School of Natural Resources-UENR. September 6, 2018. Sheila's Executive Hotel, Sunyani
- **Facilitator,** Short Course on Academic Writing Proposal, 15-18 August, 2018, Centre for Climate Change and Gender Studies-UENR
- **Reviewer:** Journal of the Ghana Science Association, Fisheries Research, International Journal of Fisheries and Aquatic Studies, Journal of Applied Aquaculture, Lakes and Reserviors, Cogent Biology, Scientific African, Current World Environment Journal, Environment, Development and Sustainability,
- **Editor Board Member:** Journal of Fisheries and Coastal Management

DR. PETER SANFUL

Research Activities/Interest

- Limnology
- Climate change impacts on lakes
- Stream ecology
- Water quality in aquaculture

Publications

- Mensah, A., **Sanful, P.,** Agyeman, Y., Trolle, D., Nunoo F. and Asase A. 2019. Sustainable Ecosystem Services of Lake Bosumtwi, Ghana – Implications for Livelihoods and Food Security. FAO*Nature and Faune* 32, 58-61.
- **Sanful P**, 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**, Aikins S & Hecky R.E. 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.

Conferences/Workshops/Seminars

- April 2018: Participant, National Higher Education Conference
- Mar 2018: Participant, Danida Thematic Meeting on Climate Change Adaptation and Natural Resources Management.

- Resource Person: Feb 2018 IRC/REACH Project in Ghana – Asutifi North District Stakeholder Consultative Workshop on Empowerment in WASH Index Tool Development.
- Jan 2018: Participant, Seminar for Postgraduate Thesis Supervision – Graduate School, UENR

MR. GEORGE INTSIFUL

Research Activities/Interest:

- Freshwater Ecology
- Freshwater health bioassessment using freshwater macroinvertebrates
- Utilization of freshwater macrophytes in farmed fish feed and water quality management

DR. SEYRAMSARAH BLOSSOM SETUFE

Research Activities/Interest

- Fish nutrition and fish health
- Sustainable alternative fish feed additives in fish nutrition and management.
- Environmental-friendly management practices in aquaculture
- Fish processing, preservation and bio-safety
- Climate- smart aquaculture

Publications

- **Setufe S.B**., Ajani E. K., Emikpe B O., and Ogunsanwo S. T. (2019): Growth performance of *Clariasgariepinus*on diets fortified with *Lactobacillus plantarum* and *Psidium guajava* leaf. Acta Vet Eurasia 2018; 44: 105-111.
- **Setufe, S.B**., Ajani, E.K., Emikpe, B.O., and Ogunbanwo, S.T. (2018): Antimicrobial and Phytochemical Potential of *Psidium guajava* (*Linneaus*) Ethanolic and Aqueous Leaf Extracts.Proceedings of 1st Conference of Association of Nigerian Fisheries Scientists. "Science, Innovation and Aquabusiness: A Tripod for Sustainable Fisheries and Aquaculture Development in Nigeria", July 10-12, 2018 in the University of Ibadan, Ibadan, Nigeria.

Conferences/Workshops/Seminars

- Professional Development Interactive Seminar: Organisedby CIRCLE Institutional Strengthening Programme (ISP) UENR, Sunyani-Ghana, 21st February, 2019
- "Enhancing your scientific writing skills for academic excellence". Organised by Ghana Science Association (GSA), 28th, March, 2019.
- First Conference of Association of Nigerian Fisheries Scientists. "Science, Innovation and Aquabusiness: A Tripod for Sustainable Fisheries and Aquaculture Development in Nigeria", July 10-12, 2018 in the University of Ibadan, Ibadan, Nigeria.
- 25th OWSD Anniversary Celebrations: Setting the Stage for achieving the sustainable development goals (SDGs) organised by OWSD Ghana Chapter. Amonoo-Neizer IDL the SDGS Conference Center, KNUST, November, 8-9, 2018.

Outreach Programmes/Extension

- Outreach programmeorganised by Fisheries and Aquaculture Society of Ghana (FASoG) on 3rd-5th February, 2019 at Erata Hotel, Accra.

MR. AMOS ASASE

Research Activities/Interest

- Marine and inland capture fisheries management
- Lake ecology and fisheries
- Aquaculture business, practices and management

Publications

- Mensah, A., Sanful, P., Agyeman, Y., Trolle, D., Nunoo F., and **Asase A** (2019).Sustainable Ecosystem Services of Lake Bosumtwi, Ghana – Implications for Livelihoods and Food Security. FAO*Nature and Faune* 32, 58-61.

Conferences/Workshops/Seminars

- One-day Workshop organized by Ghana Science Association (GSA), Sunyani-Branch in collaboration with the office of the Pro Vice Chancellor, UENR. Topic *Enhancing Your Scientific Writing Skills for Academic Excellence*, 28th March, 2019.
- UENR-ACU Professional Development Interactive Seminar, 21st and 28th February, 2019.

- Training Workshop for Teaching Staff of University of Energy and Natural Resources (UENR) on *Good Assessment Practices in Higher Education: Improving Teaching and Learning.* Sunyani (16th -17th January, 2019).
- RELAB Project Seminar **Presented** at Sheila's Executive Hotel, Sunyani (7th December, 2018). Fisheries Management and Productivity of Lake Bosumtwi, work package 3.
- Seminar for Staff. School of Natural Resources, University of Energy and Natural Resources: University Governance, Research skills development, University Examinations, Career progression, developing good working relationships. Participated at Sheila's Executive Hotel, Sunyani. 6th September, 2018.

Outreach Programmes/Extension

- **Examinations Officer,** Department of Fisheries and Water Resources
- **Assessor,** Students'Industrial Attachment School of Natural Resources,
- **Academic Tutor**, School of Natural Resources
- **Member,** Science Festival Implementation Committee, 2018/2019.

MR. SAMUEL KWEKU KONNEY AMPONSAH

Research Activities/Interest

- Fish Stock Assessment
- Fisheries Impact Assessment
- Conservation of Marine mammals

Publications

- Olopade, O.A., Dienye, H., E. and **Amponsah, S.K.K.** (2019). A Preliminary Study of Growth Pattern, Condition Factor and Population Structure of Sicklefin Mullet, *Liza falcipinnis* (Valenciennes, 1836) in the New Calabar River, Nigeria. *Turkish Journal of Science & Technology*, 14(1), 15-22.
- Asiedu, B., Afriyie, G. and **Amponsah, S.K.K**. (2018). *Overview of Marine Stock Enhancement, Restocking and Sea Ranching in Ghana*. Public Management and Administration, dx.doi.org/10.5772/intechopen.79454.
- Cazcarro, I., Arto, I., Hazra, S., Bhattacharya, R.N., Adjei, P.-W.; Ofori-Danson, P.K., Asenso, J.K., **Amponsah, S.K.K.,** Khondker, B.; Raihan, S.; Hossen, Z. (2018). Biophysical and Socioeconomic State and Links of Deltaic Areas Vulnerable to Climate Change: Volta (Ghana), Mahanadi (India) and Ganges-Brahmaputra-Meghna (India and Bangladesh). *Sustainability,* 10, 893.
- Ali, F.A., **Amponsah, S.K.K.,** Ofori-Danson. And Addo, S. (2018). Diets and Feeding Patterns of Big Eye Grunt (*Brachydeuterusauritus*, Valenciennes, 1831) in Ghana. *Elixir Fisheries Sciences***.** 117, 50425-50427.

Conferences/Workshops/Seminars

- Meeting on Fisheries and Coastal Environment, 4 – 5 February, 2019, Erata Hotel, Ghana.
- Scientific and Technical Working Group on Fisheries Management in Ghana, 13 – 15 March, 2019, AH Hotel, Ghana.

Outreach Programmes/Extension

- Focus Group discussion on impact of the closed fishing season at various fishing communities along the coast of Ghana, 2 – 13 May, 2019.

JUSTICE ERIC DARKO

Research Activities/Interest

- Production and Marketing Strategies in Ghanaian Aquaculture Companies - (Marketing of Commercial Fish Farming in Ghana)
- Assessing the survival rate of Tilapia fish from the Fry, post Fry to the Fingerling stage; a practical approach

Workshops/Seminars

- **30th April, 2019:** Challenges of the Aquaculture Industry (Fish Farmers), the Role of the Feed Industry in Ghana; A Workshop/Seminar organized by RAANAN Fish Feed West Africa in consultation with the Brong Ahafo Regional Fisheries Commission of Ghana.

Outreach Programmes/Extension/community services

- Extension services and free consulting for most fish farmers within Sunyani Municipality and beyond.

DEPARTMENT OF FOREST SCIENCE

The Department of Forest Science is one of the five Departments of the School of Natural Resources. The Department seeks to empower human resources with requisite knowledge and skills in natural resources management, especially in the area of forest resource management, social forestry and environmental governance. The rationale is to train professionals to sustainably manage the nation's forest resources for enhanced resource conservation, revenue generation and fringe communities' livelihood security.

The Department runs an undergraduateprogramme in Natural Resource Management with options in Social Forestry and Forest Resource Management. At the Graduate level, Masters of Philosophy and Doctor of Philosophy programmes in Social Forestry and Environmental Governance are also run.

Curatorial Unit

The Department also has a curatorial unit responsible for producing quality forest and ornamental seedlings for commercial purposes and also for the beautification of the University landscape. The Unit serves as a practical learning field for the students in nursery management. The Unit has 11 staff members made up of the Principal Curator of the unit, National Service Person (annually posted), four permanent workers (a male and three females) and five casual workers (a male and four females).

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 / HoD	Agroforestry; Natural Resource Governance
Mr. A. B. Afrifa	MSc. & BSc. (KNUST)	Senior Lecturer	Devt Policy & Planning; Forest Management
Daniel A. 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-	MSc. (Michigan Tech) B.A. (KNUST)	Lecturer	Forestry, Policy & Law
Mr. Akwasi Sarpong	MPhil (UENR) BSc.,(KNUST)	Senior Technician	Forest Management; Land Reclamation & Rehabilitation
Mr. Edward Y. Kander	B.Ed (UEW)	Asst. Snr. Curator	Agriculture

DR. MRS. MERCY AFUA ADUTWUMWAA DERKYI

Research interest

- Linkage of social-natural-governing systems
- Forest-agriculture landscape from social and governance perspectives.
- Forest governance, forest conflict management, food security value chain
- Natural resource policy and law, forest ergonomics

Publication(s)

- **Derkyi, M.,** Adiku SGK, D. Koomson (2018) Comparing Farmers' Perception of Climate Change and Adaptation Strategies in the Transition and Savannah Zones of Ghana. *ICCCSDA 2017 Special Issue: Environment, Technology and Sustainable Development Vol 1, 43-50, 2018 JENRM*
- Ros- Tonen, M and **M., Derkyi** (2018) "Conflict orcooperation? Social capital as a power resource and conflict mitigation strategyin timber operations in Ghana's off-reserve forest areas.*Ecology and Society* 23(3):44. https://doi.org/10.5751/ ES-10408-230344
- **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
- Deans, H., Ros-Tonen, M.A.F. &**Derkyi, M**. (2018). Advanced value chain collaboration in Ghana's cocoa sector as an entry point for integrated landscape approaches. Environmental Management (IF 1.857)**.**
- **Mercy Derkyi (2018)** 'Intersecting issues: climate change, gender, and development' ACU April 2018 Bulletin (p 6-7)
- 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. Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-319- 69838-0_11
- **Derkyi, M.,** Koomson, D., Adinkra, Forson L., and Baidoo, A. (2018). Climate-Smart Agriculture Adaptation Strategies for the Transition Zone of Ghana: Lessons from the Savannah Zone. --- A Simple Guide---

Centre for Climate Change and Gender Studies, University of Energy and Natural Resources, Sunyani, Ghana, p. 46

Conferences/ Seminars/Workshop

- Global Challenges Research Fund (GCRF), Global Impact Acceleration Account (GIAA) International Forum on Global Health and Wellbeing in Accra, Ghana20-22 March 2019
- Joint UEA –JIC workshop –Responding to Environmental Changes University of East Anglia, Norwich, United Kingdom,19th January-2nd February 2019
- International Workshop on Forest landscapes in times of changing climate and water resources in Corvallis, Oregon, United States of America. IUFRO Taskforce, September 13-14, 2018

DR. SIMON ABUGRE

Research Interest

- Agroforestry
- Collaborative forest management
- Soil and water management

Publications

- **Abugre, S.,** Adusu, D. and K.T. Ampofo (2019). Performance of tree stands growth and nutrient status of a reclaimed land. International Journal of Agricultural Technology 15(3): 387-398.
- Owusu, S., L. C. N. Anglaaere and **S. Abugre** (2018) Aboveground biomass and carbon content of a cocoa-*gliricidiasepium* agroforestry

system in Ghana. Ghana Journal of Agricultural Sciences. Vol. 53: In Print

Conferences/ Seminars/Workshop

- Dialogue on Innovative Higher Education Strategies (DIES), organized for middle level management of University education by the German Academic Exchange Service, in Sunyani and Accra, in March and August 2018, respectively.
- Resource Person, Seminar for Staff of School of Natural Resources on University of Governance, Research Skills Development, University Examinations, Career Progression and Developing Good Working Relationships held on 6th September, 2018 at Sheila hotel, Sunyani.

MR. DANIEL SARFO AKOTO

Research Interest

- Socio-economic and ecological dimensions of forest and other woody plants

Publication(s)

- Mensah, A., **Akoto, S.D**., Partey, S.T., (2018). Assessment of vegetation dynamics using remote sensing and GIS: A case of Bomostwe Range Forest Reserve, Ghana. *Egypt.J. Remote Sensing Sci*. 21(1110-9823), 2-10

MR. ISAAC K. ABEBRESE

Research Interest

- Forest Ecology and Management

Publication

- Obour, R., Oppong, S.K. and **Abebrese I.K** (2017). Chemical composition and nutritive value of an invasive exotic species, *Broussonetiapapayrifera* in Ghana. Journal of Natural Sciences Research. Vol 7, No.20. Pp45-53

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
- Sustainable Wood fuel Enterprise Development to Enhance Community Climate Resilience and Poverty Reduction in the Transitional Zone of Ghana.

Publication(s)

- **Afrifa, A.B,** Ofori-Attah, R., and Sarpong A. (2019**).** The Growth Performance of *Triplochitonscleroxylon, Terminalia superba*and *Ceiba pentandra*in Pure and Mixed Stands at the Jimira Forest Reserve in the

Nkawie Forest District. Journal of Natural Sciences Research, 9(4),56 – 61.

- **Afrifa, A.B.,** Baidoo, A. and Opoku, O.T. (2019**).**Adaptation Strategies of Rural Farmers to Climate Change at Wawasua Community in Brong Ahafo Region of Ghana. *Journal of Earth Science and Climate Change* (Accepted for publication).
- Agyei, F.Y**, Afrifa, A.B.** and Agyei-Ohemeng, J. (2019). Human-Monkey Conflict and community Wildlife Management: A Case of Boabeng-Fiema Monkey Sanctuary and Fringed Communities in Ghana. International Journal of Biosciences (Accepted for publication)

Conferences/ Seminars/Workshop

Farmers' sensitisation workshops organised Environment and Women Association of Ghana (EAWAG) with financial support from Global Greengrants Fund, 12th to 19thFebruary 2019 at Boffourkrom, Nkwadum, Pepewase, AsantefoSreso, and Koase. The workshop was under the theme "Promoting best Farming Practices that conserve Biodiversity, Mitigate Climate Change and Promote Environmental Sustainability".

MRS. NANA YEBOAA OPUNI-FRIMPONG

Research Interest

- Urban forestry, Natural Resources Economics, and climate change and sustainable rural economies/ livelihoods

Publications

- **Opuni-Frimpong, N.Y.** 2018. Effects of urbanisation on Livelihoods of peri-Urban Communities in Sunyani Municipality. ICCCSDA 2017

Special Issue: Agriculture and Natural Resources Special Vol. 1, 56-62, 2018. JENRM.

Conferences/Workshops

- Africa Climate Week Conference. 18 -22nd March 2019. Accra International Conference Centre, Accra.
- 4th FLARE annual meeting. 17th – 20th Oct. 2018. University of Copenhagen, Denmark
- Food Security in an urbanising society. CDI-Wageningen UR, Netherlands, 10th – 21stSeptember 2018

MR. SARPONG AKWASI

Research Interest

- Forest ecology and Non-Timber Forest Products Conservation.

Publication

- Afrifa, A.B., Ofori - Attah, R., and **Sarpong, A.** (2019). The Growth Performance of *Triplochitonscleroxylon, Terminalia superba* and *Ceiba pentandra* in Pure and Mixed Stands. Journal of Natural Sciences Research. Vol. 9.

Conferences/ Seminars/Workshop

- 'Two Penny Tree' and Floating Fields Tree and Plant Production System British Council Auditorium, Accra. 24th July 2018.
- Raising Entrepreneurs: The Future for Reforestation and Food Security: Nyinahin District Assembly Hall. 25th April 2019

CENTRE FOR CLIMATE CHANGE AND GENDER STUDIES (3CGS)

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

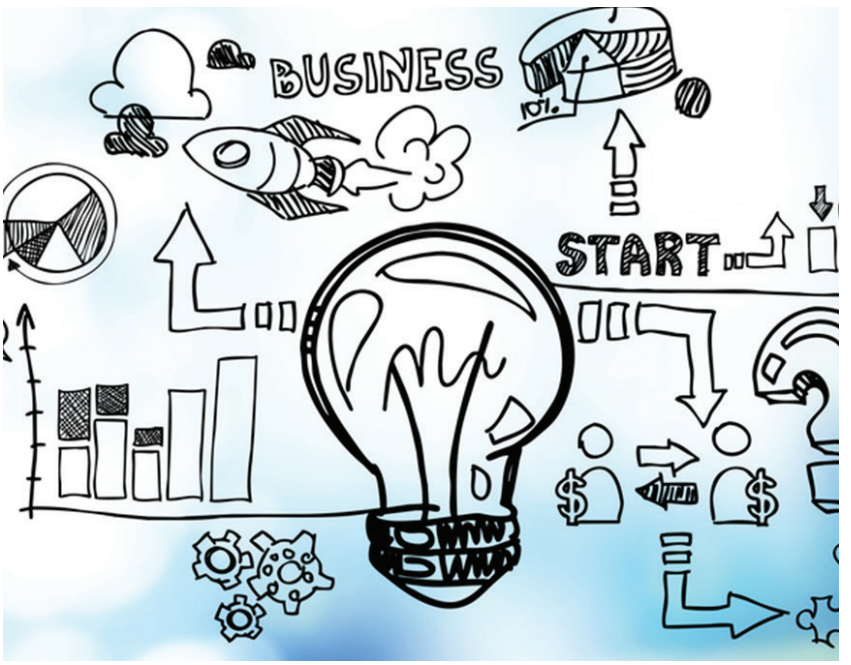
The Centre during the year under review organised Statistical Analysis with SPSS training in March and November 2016. In all over 40 participants took part in the training. Similarly, a one week Research Methodology and Proposal Writing workshop was also organized by the Centre.

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 MANAGEMENT SCIENCES AND LAW



SCHOOL OF MANAGEMENT SCIENCES AND LAW

The School of Management Sciences and Law was established in 2018/2019 academic year. Its mandate includes grooming young people to acquire technical, analytical, and entrepreneurial skills so that they can competently establish their own businesses and in so doing help reduce unemployment in the country. The School also assists the entire undergraduate students of the University to improve their language and communication skills in English and French and provides courses in African Studies. The School is also engaged in various research activities to contribute to the knowledge base of the University and the nation as a whole.

It is currently headed by Prof. Yaw Ofosu-Kusi as the acting Dean, Mrs. Mary Yebo-Okrah as the Faculty Officer while Miss Stephanie Aidoo and Miss Lydia Yirviel Kuusoyir provide support as administrative assistants.

Overview

The School is made up of the following Departments:

- Department of Entrepreneurship and Business Sciences
- Department of Languages and General Studies

The Department of Entrepreneurship and Business Sciences offers a degree programme, a BSc. Resource Enterprise and Entrepreneurship and a diploma programme in Enterprise Management. The Department of Languages and General Studies on the other hand services the entire University by offering courses in African Studies, Science and Technology in Society, in addition to a degree programme, BA Applied Communication in French.

Student Statistics

Level	Male	Female	Total
100	104	68	172
200	150	53	203
300	91	24	115
400	134	44	178
Dip 100	51	55	85
Dip 200	45	40	85
Total	**575**	**284**	**859**

DEPARTMENT OF ENTREPRENEURSHIP AND BUSINESS SCIENCES

The Department of Entrepreneurship and Business Sciences was established in August, 2016. The Department currently runs two programmes: A four-year programme leading to the award of Bachelor of Science (BSc.) Resource Enterprise and Entrepreneurship and a two-year programme leading to the award of Diploma in Enterprise Management. The Department seeks to develop students analytical, teaching and entrepreneurial skills to enable them take optimal socio-economic decisions and conduct research when necessary.

Activities over the Past Year

- Introduction of Top-up Programme: The Department introduced a Top-up programme for Higher National Diploma (HND) and other Diploma Holders in 2018/2019 academic year. This programme is run on weekends to give opportunity to workers who cannot get time off their work schedule to pursue full time higher education.

- New Programme Development: The Department is in the process of developing Bachelor of Science (BSc.) Resource Accounting and Bachelor of Science (BSc.) Economics programmes. These programmes will be mounted as soon as accreditation processes are completed.

Future Plans

The Department intends to mount MBA/MPhil programmes in Entrepreneurship, Accounting, Finance, Human Resource Management and Marketing as well as a Doctorate (PhD) programme in the near future.

Teaching Staff

The Department has one Professor, six Lecturers, four Assistant Lecturers and one Administrative Assistant, as indicated below.

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

PROF YAW OFOSU KUSI

Research Activities/ Interests

- Research Interests: Urban childhood and the informal economy, with specific attention given to children's mobility, child labour, and children's agency.
- Current Research Activity: Children's rights and perceptions of justice and equality: The challenge of children's representation. Funded by the British Academy.

In collaboration with researchers from the University of Sheffield (UK); Linkoping University(Sweden); University of Geneva (Switzerland); Rutgers University (USA) and University College, Ghent (Belgium).

Publication(s)

- Mizen, P. & Ofosu-Kusi, Y. (Forthcoming August 2019) Street Life as Labour: The Work, Labour and Economic Life of Accra's Street Children, London: Policy Press/Bristol University Press
- Ofosu-Kusi, Y. (2018) 'Childhood, Children and the Future: An African Perspective'. In Kleeberg-Niepage, A., Ofosu-Kusi, Y., Rademacher, S. &Tressat, M. (Eds.) Images of Childhood and the Future: Cross-cultural Perspectives, Flensburg: Europa-Universitat Flensburg [16pp]
- Ofosu-Kusi, Y. (2017) (Ed.) Children's Agency and Development in African Societies, Dakar, Senegal: Council for the Development of Social Science Research in Africa (CODESRIA) [16chapters, 221pp]
- Ofosu-Kusi, Y. (2017) 'Informality as space: Children's visualizations and experiences of streets and markets in Accra, Ghana'. In H. Jancke, A. Schlottmann& M. Dickel (Eds.) Raumevisualisieren (Space Visualization), Munster, Germany: ReadboxUnipress [15pp]

- Ofosu-Kusi, Y. (2017) 'Establishing a Foothold in the Informal Sector: Children's Dreams, Agency and Street Life in Ghana'. In Ofosu-Kusi, Y. (Ed.) Children's Agency and Development in African Societies, Dakar: CODESRIA, [17pp]

Conferences/ Workshops/ Seminars

- December 2018: The Future African Society: Informality as a Potential for Development and Progress, Keynote Address at the 8th African Forum on Futurity in African Realities Organized by the Japan-Africa Society, Accra; 7-9th December 2018
- August 2018: Citizenship Education in National Development, Keynote Address at First Ghana Association of Social Studies Conference. Organized by the Department of Social Studies Education, University of Education, Winneba, 16th August, 2018
- March 2018: Education and Development: The Role of Government, University and Industry, Keynote Address at the 5th Biannual International Social Science Conference: Organised by the Faculty of Social Science Education, University of Education, Winneba, 13th to 15th March, 2018
- February 2018: Student Internationalization: Address at Workshop on Internationalization: Organised by the Centre for International Programmes at the University of Education, Winneba, 7th February, 2018

BERKO DANIEL

Research Activities/ Interests

- Emerging issues in Microfinance
- Sustainability of Small, Medium and Large Enterprises
- Entrepreneurial Finance
- Corporate Governance

Publication(s)

- An Analysis of Work-Related Stress on Employees' Job Performance at Mfantsiman Community Bank, Central Region of Ghana. International Journal of Humanities and Social Science, 8(7), 107 – 115. (2018)

Conferences/ Workshops/ Seminars

- Erasmus+ Project Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa (EEISHEA), Erasmus Programme of the European Union, Sheila's Executive Hotel Sunyani, 30th April, 2019
- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning, University of Energy and Natural Resources, Sheila's Executive Hotel Sunyani, 16th January, 2019.
- New Programme Development Workshop, School of Management Sciences and Law, UENR Sheila's Executive Hotel Sunyani, 21st November, 2018.
- Capacity Building in Curriculum Development, University of Energy and Natural Resources, University Auditorium, 27th September, 2018

REGINALD DJIMATEY

Research Activities/ Interests

- Entrepreneurship
- Creativity & Innovation
- Social and Corporate Entrepreneurship & Small Business Development

Publication(s)

- Quarshie, M.A., **Djimatey, R.,** & Abaka – Anaman, A. (2018). Service Quality Delivery of Rural Banks: Perception of Customers in Emerging Economies. Asian Business Research Journal, ISSN: 2576-6759, 3(1), 33-40. (2018)

Conferences/ Workshops/ Seminars

- Erasmus+ Project Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa (EEISHEA), Erasmus+ Programme of the European Union, Sheila's Executive Hotel, 30th April, 2019
- Erasmus+ Programme of the European Union (Part 2) Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa, Erasmus+ Programme of the European Union, University of Copenhagen, Denmark, 25th February, 2019
- Erasmus+ Programme of the European Union (Part 1) Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa, Erasmus+ Programme of the European Union, KTH University, Stockholm, Sweden, 4th December, 2018

- School of Management Sciences and Law, UENR, Sheila's Executive Hotel Sunyani, 21st November, 2018

PAUL HAMMOND

Research Activities/ Interests

- Entrepreneurial Finance
- Corporate Governance and Taxation
- Corporate financial Reporting
- Small and Medium Enterprise Development

Conferences/ Workshops/ Seminars

- Professional Development Interactive Seminar, Centre for Climate Change, UENR University Auditorium, 21st February, 2019.
- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning University of Energy and Natural Resources, Sheila's Executive Hotel, 16th January, 2019.
- New Programme Development Workshop, School of Management Sciences and Law, UENR, Sheila's Executive Hotel, 21st November, 2018.
- Capacity Building in Curriculum Development, University of Energy and Natural Resources, University Auditorium, 27th September, 2018

JUSTICE DANKWAH BOATENG

Research Activities/ Interests

- Electronic Business and Social Media Marketing

- Enterprise Development and Customer Experience Management
- Social Marketing
- Green Marketing

Conferences/ Workshops/ Seminars

- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning, University of Energy and Natural Resources, Sheila's Executive Hotel, 16th January, 2019.
- New Programme Development Workshop, School of Management Sciences and Law, UENR, Sheila's Executive Hotel, 21st November, 2018
- Capacity Building in Curriculum Development, University Auditorium, 27th September, 2018

EDMOND AMISSAH

Research Activities/ Interests

- International Financial Reporting Standards
- Earnings Management
- Auditing and Assurance
- Family Business Management

Conferences/ Workshops/ Seminars

- Erasmus+ Project Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa (EEISHEA), Erasmus+ Programme of the European Union, Sheila's Executive Hotel, 30th April, 2019.

- ❖ Professional Development Interactive Seminar, Centre for Climate Change, UENR, University Auditorium, 21st February, 2019
- ❖ Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning, University of Energy and Natural Resources, Sheila's Executive Hotel, 16th January, 2019
- ❖ New Programme Development Workshop, School of Management Sciences and Law, UENR, Sheila's Executive Hotel, 21st November, 2018
- ❖ Capacity Building in Curriculum Development, University of Energy and Natural Resources, 27th September, 2018

GENEVIEVE GYASI

Research Activities/ Interests

- ❖ Banking
- ❖ Finance

Publication(s)

- ❖ **Gyasi, G.** (2016). The Impact of domestic debt on private investment in Ghana. A Published Dissertation at the Kwame Nkrumah University of Science and Technology, Business School, KNUST Library

Conferences/ Workshops/ Seminars

- ❖ Strengthening Innovation Ecosystems in Universities in West and Central Africa, Centre of Excellence in Reproductive Health Innovation (CERHI), University of Benin, 29th April, 2019
- ❖ Professional Development Interactive Seminar, Centre for Climate Change, UENR, University Auditorium, 21st February, 2019

- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning, University of Energy and Natural Resources, Sheila's Executive Hotel, 16th January, 2019
- New Programme Development Workshop, School of Management Sciences and Law, UENR, Sheila's Executive Hotel, 21st November, 2018
- Capacity Building in Curriculum Development, University of Energy and Natural Resources, University Auditorium, 27th September, 2018

MICHAEL AYIKWEI QUARSHIE

Research Activities/ Interests

- Financial Accounting and Business Management
- Environmental and Corporate Social Reporting
- Corporate Governance and Taxation
- Accounting Education and Entrepreneurial Education
- Management Accounting and Public Sector Accounting

Publication(s)

- **Quarshie, M.A**., Djimatey, R., &Abaka – Anaman, A. (2018). Service Quality Delivery of Rural Banks: Perception of Customers in Emerging Economies. Asian Business Research Journal, ISSN: 2576-6759, 3(1), 33-40. (2018)

Conferences/ Workshops/ Seminars

- Participant: Workshop on Skills Development in Proposal Writing, University of Energy and Natural Resources, Sunyani, 24th May, 2019.

- Participant and Rapporteur: 4th International Conference for postgraduate Students, University of Cape Coast, Cape Coast, 12-14th June, 2018. Theme: Changing the Orientation of Postgraduate Education for the 21st Century.
- Participant: Workshop on Capacity Building in Curriculum Development, University of Energy and Natural Resource, Sunyani, 27th September, 2018
- Participant: Seminar on Conscientizing Postgraduate Students on Critical Issues in Research, University of Cape Coast, 14th November, 2018

DR. EMMANUEL ADU BOAHEN

Research Activities/ Interests

- Development Economics

Conferences/ Workshops/ Seminars

- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning, University of Energy and Natural Resources, Sheila's Executive Hotel, 16th January, 2019
- New Programme Development Workshop, School of Management Sciences and Law, UENR, Sheila's Executive Hotel, 21st November, 2018
- Capacity Building in Curriculum Development, University of Energy and Natural Resources, University Auditorium, 27th September, 2018

DR. MICHAEL KWAME ASIEDU

Research Activities/ Interests

- Macro Economics
- Economic Growth

Conferences/ Workshops/ Seminars

- Erasmus+ Project Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa (EEISHEA), Erasmus+ Programme of the European Union, Sheila's Executive Hotel, 30th April, 2019
- Erasmus+ Programme of the European Union (Part 2)
- Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa, Erasmus+ Programme of the European Union, University of Copenhagen, Denmark, 25th February, 2019
- Erasmus+ Programme of the European Union (Part 1)
- Workshop on Enhancing Entrepreneurship, Innovation and Sustainability in Higher Education in Africa, Erasmus+ Programme of the European Union, KTH University, Stockholm, Sweden, 4th December, 2018

DR. EMMANUEL OPOKU MARFO

Research Activities/ Interests

- Mergers and Acquisition,
- Corporate Ethics and Social Responsibilities,
- Multinational Mining Corporations Social Responsibilities.

Publication(s)

- **Marfo, E.O** (2019) "Heralds of Corporate Irresponsible Behavior: Using Partial Least Square Approach of Structural Equation Modeling" International Journal of Engineering Research in Africa, http://www.scientific.net. (SCI, EI, SCOPUS)
- Corporate Social Responsibility for Extractive Industries in the Governance Systems in Africa" International Journal of Engineering Research in Africa, Vol. 24, pp 181-194, http://www.scientific.net. (SCI, EI, SCOPUS)

Conferences/ Workshops/ Seminars

- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning, University of Energy and Natural Resources, Sheila's Executive Hotel, 16th January, 2019
- New Programme Development Workshop, School of Management Sciences and Law, UENR, Sheila's Executive Hotel, 21st November, 2018.
- Capacity Building in Curriculum Development, University of Energy and Natural Resources, University Auditorium, 27th September, 2018

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 (Dominion) MSc (Clarion)	Lecturer/HoD	Research development; Scientific writing; Grant writing
Magdalene Mensah	PhD MA, BA (KNUST)	Lecturer	Professional French (FOS/FLE)
Richard B. Okyere	MPhil, BA (KNUST)	Lecturer	French FOS/FLE
Charity 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 Y. Grumah	MSc. BA.(UDS)	Assistant Lecturer	Dev. Comm., Gender Studies, Phonetics
Max Amuzu	Certificate in Professional French	Technical Instructor	French FOS/FE
Justin Adinkra	MPhil, B. Ed (UEW)	Assistant Lecturer	French FOS/FE
Tahiru Djato	MPhil, BA French	Asst. Lecturer	French FOS/FLE
Daniel	MPhil. BA	Asst. Lecturer	French

PHYLLIS BERNICE KWARTENG DONKOR (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)
- Project based pedagogies and developing requisite 21st Century skills among learners
- Organic Vegetable growing for health and environmental sustainability amidst climate change
- Adult Literacy as an empowering tool to overcome poverty
- Appropriate technologies and community development

Publication(s)/Presentations

- Opare, P. B., (2019). *Strategizing institutions to promote female success and persistence in science, technology, engineering and mathematics.* Japan Africa collaboration Accra Forum – Futurity in African Realities.
- Opare, P. B., and Sedegah, D. D. (2018). *Climate Change Adaptation & Mitigation in West Africa- Ghana & Nigeria*. Poster presented at the 10th Anniversary Celebration of the African Women in Agricultural Research and Development (AWARD) @ 10
- Opare, P. B., (2018). *Using climate analogue tools to explore and build smallholder farmer capacity for climate smart agriculture.* AAS open research. https://doi.org/10.12688/aasopenres.12822.1

Conferences/Workshops/Seminars

- Participant: DAAD/DIES Workshop on Gender Equity 'Navigating Women's Careers in Higher Education. 10th - 12th April 2019
- Facilitator: CIRCLE Institutional Strengthening Programme (ISP) Professional Development Interactive Seminar.21st February 2019
- Participant: Workshop on Good Assessment Practices in Higher Education.16th - 17th January, 2019
- Participant/Presenter: Japan Africa collaboration Accra Forum (Futurity in African Realities) 7th – 9th December 2018
- Presenter: African Women in Agricultural Research and Development (AWARD) 25th Anniversary Dialogue and interaction.29TH November 2018

KWASI SARFO

Research Activities/Interests

- Land Tenure in Africa
- Chieftaincy
- African Traditional Religion
- Democratization and Development in Africa
- Africa Social and Political Institutions

Conferences/Workshops/Seminars

- Good Assessment Practices in Higher Education: Improving Teaching and Learning. (17th -18th January, 2019). Quality Assurance Unit, UENR
- Building Resilience of Lake Bosomtwi to Climate Change-Relab Project Seminar (7th December, 2018). Department of Fisheries and Water Resources-UENR.
- E-Learning Workshop 4 for National Core Trainer (28th -29th November, 2018). USAID Partnership for Education, *Learning*/Ghana Education Service.
- Languages and General Studies Seminar (30th October, 2018). Department of Languages and General Studies-UENR.
- Capacity Building Workshop in Curriculum Development to Mount New Programmes - NCTE and NAB Requirement (27th-28th September, 2018). Quality Assurance Unit, UENR

Outreach Programmes/Extension Services

- Quiz Master- The 62nd Independence Anniversary SHS Inter-zonal Quiz Competition for the Brong Ahafo Region, Organized by the Ghana Education Service (6th February, 2019)
- Academic Tutor, 2018/2019 Academic Year-UENR
- Patron- University of Energy and Natural Resource Cultural and Literary Club (August 2018-To date)
- National Core Trainer- Facilitating and Monitoring workshops for District Teacher Support Teams and Teachers; USAID Partnership for Education, *Learning* Project (June 2017- To date)
- Secretary- Plot Allocation Committee-Atebubu Traditional Council (August 2015-to date)
- Church Leader- Mem S.D.A. Church, Atebubu-B/A (2015- to date)

TAHIRU DJATO

Publication(s)/Presentations

- Le role de media dans l'apprentissage de Francais au Ghana
- Triomphe de la Negritude
- L'Art: Le Passe, Le Present et Le Futur de l'homme noir
- French as second language in Ghana, the way forward

Conferences/Workshops/Seminars

- July 2018: Stage a I'Universited'ete – BELC, Nantes-France
- April 2018: Participation of Habilitation DELF-DALF, Alliance Francaise, Accra-Ghana

CECILIA AGYEIWAH AGYEMANG

Research Activities/Interests

- Genre Analysis,
- Sociolinguistics,
- Literacy,
- Semantics,
- Professional development of instructors.

Conferences/Workshops/Seminars

- Mentor-Mentee Pairing Workshop for Young Faculty Members- University of Energy and Natural Resources, Sunyani. 22nd February, 2019,
- Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning. Organized by the Quality Assurance and Planning Unit of the University of Energy and Natural Resources-Sunyani. 16- 17 January, 2019,

DR. MAGDALENE MENSAH

Research Activities/Interests

- Literary debates on African Cultural / Literature / Civilization that directly contribute to the elevation of socio-cultural / epic development of Africa.
- An emphasis on the return to the viability and application of renewable energy to enable Ghana effectively meet the energy needs of Ghanaians.

Publication(s)

- MENSAH C, Mensah MM (2018), *Climate Change and the Viability of Renewable Energy in Ghana,* Innov Ener Res 7: 196.dol:10.4172/2576-1463.1000196
- MENSAHMagdalene, (2018) *L'épopée antique – des études sur l'épopée qui ont permis de la sortir de l'impasse de son enfermement*, 978-613-8-40936-6;

Conferences/Workshops/Seminars

- Seminar on the promotion of teaching and learning of French in Ghana's Education System, Winneba. 10-14 December 2018:
- French Multimedia Resource Centre Management Training, Accra. April 2018:

GERTRUDE YIDANPOA GRUMAH

Research Activities/Interests

- Sociolinguistics
- Language use and Variation
- Development Communication
- Public Speaking

Conferences/Workshops/Seminars

- Participant, Good Assessment Practices in Higher Education: Improving Teaching and Learning Quality Assurance and Planning Unit, UENR, Sunyani. (January, 2019)
- UENR-ACU Professional Development Interactive Seminar, UENR, Sunyani. (February, 2019)
- Workshop on Instructional Skills (Presenter): Department of Languages

and General Studies, UENR (August, 2018)

- Developing New Academic Programmes. School of Management Sciences and Law, Sunyani. (November, 2018)

ALBERTA DANSOAH NYARKO ANSAH

Research Activities/Interests

- Pragmatics (Language use in context)
- English for Specific Purposes (Academic writing. Gender. Religion)
- Discourse Analysis
- Semantics (of functional words)
- Public Speech and Relations
- Grammaticalization

Conferences/Workshops/Seminars

- Good Assessment Practices in Higher Education: Improving Teaching and Learning. Quality Assurance Unit, UENR, 19-18 Jan., 2019
- UENR-ACU Professional Development Interactive Seminar, 21 Feb., 2019

MRS CHARITY ODUMALE ROBERTS

Research Activities/Interests

- Gender
- Stress
- counseling culture

- Indigenous People and Other developmental issues

Publication(s)

- Odumale, Charity (2014) *Stress Coping Strategies among Ghanaian Women in Managerial Positions*". European Scientific Journal, Volume 10 (ISSN 1857-7881) pp. 205-211.

Conferences/Workshops/Seminars

- Conferences/Workshops/Seminars 2nd Annual Easter Forum, University of Cape Coast –June, 2016

JUSTIN ODURO ADINKRA

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 in the School of Natural Resources at the University of Energy and Natural Resources, Sunyani- 2016-Date
- Organizing French Immersion Programme for students of French. 2014-present.
- Coordinator of University of Energy and Natural Resources' French Club- 2016-2017.

COSMAS RAI AMENORVI

Research Activities/Interests

- Semantics, Sociolinguistics,
- Phonetics and Phonology,
- Grammar, Literature, Discourse Analysis,
- Contact and Literary Linguistics

Publication(s)

- M. K. Abreh & **Amenorvi, C.R**. (2018). Foundations of Academic Writing: How to Produce Publishable Research Articles from Theses and Dissertations. International Journal of Scientific and Education Research. Vol 2, No 1, pp 14-21

Conferences/ Workshops/ Seminars

- Participant and Presenter: Instructional Skills Workshop, University of Energy and Natural Resources, Sunyani. February 2018
- Rapporteur: Language Documentation Seminar, University of Cape Coast, Cape Coast. July 2017
- Master of Ceremony: Second AfriGEOSS Symposium, University of Energy and Natural Resources, Sunyani. June 2017

Outreach Programmes

- Research Coordinator: Department of Languages and General Studies, University of Energy and Natural Resources, Sunyani. July 2017 to date
- Host and Writer: The Pierian Spring of English, Greena FM. November 2016 to date

- Director and Patron: University of Energy and Natural Resources Forensic (Debate) Society. January 2017 to date
- Member: University of Energy and Natural Resources Undergraduate Admissions Committee. June 2017 to date
- Member: Local Organizing Committee for hosting Ghana's Universities Debate Championship, 2017 Secretary: University of Energy and Natural Resources UTAG Community Outreach Committee, December 2016 to date

SCHOOL OF ENGINEERING



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.

Name of Department	**Programmes**
Computer and Electrical	Computer Engineering Electrical/Electronic Engineering
Mechanical and Manufacturing	Mechanical Engineering, Agricultural Engineering
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
- Elsie Mark-Anthony – Senior Admin. Assistant

Student Statistics

The School population as at the end of the 2018/2019 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

Name of Department	**Student Population**		
	Females	Males	**Total**
Computer and Electrical	19	231	**250**
Mechanical and Manufacturing	14	193	**207**
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 3rd 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, D iploma 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

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

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

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

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
- ❖ 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 other 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

- 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.

- MSc / PhD Climate Change & Environmental Modelling
- MSc / PhD Petroleum Engineering
- 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)	Lecturer	Petroleum geoscience, Reservoir engineering, Geophysics
Felix A. 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 & Interpretation,
Yaw A. Boakye-Ansah	MSc (Aberden) BSc (KNUST))	Lecturer	General Petroleum Engineering, Reservoir Eng.
Dr. Amos T. Kabo-Bah	PhD (Hohai) MSc (ITC) BSc (KNUST)	Snr.Lecturer /HoD	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(Germany), BSc. (KNUST)	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

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

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.
- 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.

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

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.

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

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 Antwi Ofosu** (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

Conferences/Workshops/Seminars

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

DR. FRANCIS ATTA KURANCHIE

Research Activities/Interests

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

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.org10.1080/17480930.2014.993834.

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

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.

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)http://www.dubrovnik2017.sdewes.org/
- 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"

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

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)

- 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- Classroom of 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 3rd 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

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

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).

Conferences/Workshops/Seminars

- The 7th Africa Agriculture Science Week, organized by Forum for Agricultural Research in Africa, 13 – 16 June, 2016, Kigali, Rwanda.
- 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.

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

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, Issue8.

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.*

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

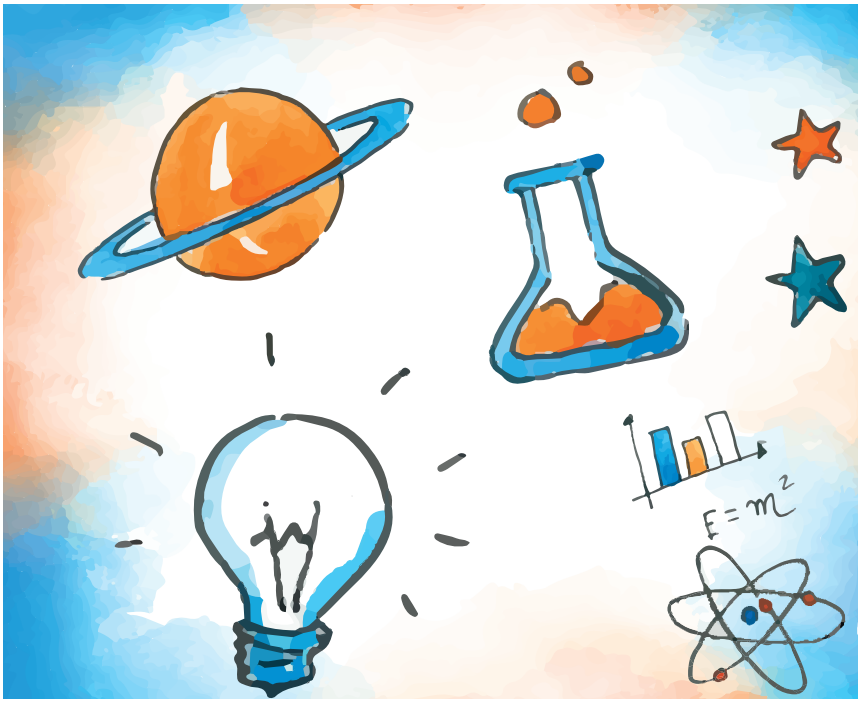
During the year under review, the $1.2 million COSMIC II Ground station was inaugurated by the University and its funding partners (NOAA and Taiwan space Agencyin US. The Cosmic II project which is the only one in Africa among other similar projects in the World is aimed at improving numerical weather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

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



SCHOOL OF SCIENCES

The School of Sciences was established during the 2014/2015 academic year and became fully operational in the same academic year. The overall objective of the School is to develop students' competitive skills and competencies in science and technology sectors and as well as equip students with the necessary leadership skills required to function in the technological world.

Currently the School consists of four Departments; Department of Computer Science and Informatics, Department of Chemical Sciences, Department of Mathematics and Statistics and Department of Basic and Applied Biology. Whilst each Department offers programmes leading to the award of undergraduate and post-graduate degrees, all Departments intend to 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.

Programmes under each Department

Name of Department	**Programmes**
Computer Science and Informatics	Computer Sciences Information Technology
Mathematics and Statistics	Actuarial Science Statistics Mathematics
Chemical Science	Chemistry
Aplied Biology	Nursing. Biological Science Medical Biodiagnostics

Staffing

The School currently has a Dean, Prof. Adebayo Felix Adekoya and a Faculty Officer Mr. David Abeam Takyi who help in the day to day running of the School.

Student Statistics

The Students' population in the School stands at One Thousand Three Hundred and Seventy Seven (1377) with One Thousand and Sixty Seven (1067) Males and Three Hundred and Ten (310) Females. The table below shows the details of the number of students in the School.

Programme	**Year/Level**	**Male**	**Female**	**Total**
BSc Computer Science	100	66	7	73
	200	23	2	25
	300	59	3	62
	400	52	4	56
	Total	**194**	**18**	**212**
BSc Information Technology	100	103	12	115
	200	34	3	37
	300	47	3	50
	400	37	6	43
	Total	**118**	**12**	**130**
Diploma Computer Science	100	34	8	44
	200	26	3	29
Dip. Information Technology	100	71	15	86
	200	53	12	65
	Total	**79**	**15**	**94**
MSc Computer Science	First Year			
	Second Year	1	0	1

MPhil Computer Science	First Year			
	Second Year	12	2	14
PhD Computer Science	First Year			
	Second Year	9	0	9
	Total	**22**	**2**	**24**

Department of Mathematics and Statistics

Level	**Male**	**Female**	**Total**
100	34	10	44
200	65	16	81
300	118	12	130
400	45	9	54
Total	262	47	309

Students Distribution in the Department of Chemical Sciences

Year/Level	**Male**	**Female**	**Total**
100	24	7	31
200	10	3	13
300	13	0	13
400	25	3	28
Total	72	13	85

Department of Basic and Applied Biology

Year/Level	**Male**	**Female**	**Total**
100	187	136	323
200	133	67	200

Total	320	203	523

DEPARTMENTS OF COMPUTER SCIENCE AND INFORMATICS

The mission of the Department is to educate undergraduate and graduate majors as well as the broader community in the fundamental concepts of the computing discipline, to create and disseminate computing knowledge and technology, and to use our expertise in computing to help society solve problems.

The aim of the Department is to fully integrate both the theoretical and practical technologies of computer science in teaching and learning to meet the changing demands of the information, communication and technology industry particularly in Ghana and the West Africa sub-region. These programmes were designed in response to a recognized need from the information, communication and technology industry for university graduates who have a detailed knowledge and fundamental understanding of various computers, their production, harnessing, conversion, and environmental concerns associated with the use of IT.

The Bachelor of Science in Computer Science programme was the first programme to be introduced in the Department in the 2013/2014 Academic Year and the following year, the BSc Information Technology was also introduced by the Department.

Student Statistics

Programme	**Year/Level**	**Male**	**Female**	**Total**
BSc Computer Science	100	66	7	73

	200	23	2	25
	300	59	3	62
	400	52	4	56
	Total	**194**	**18**	**212**
BSc Information Technology	100	103	12	115
	200	34	3	37
	300	47	3	50
	400	37	6	43
	Total	**118**	**12**	**130**
Dip. Computer Science	100	34	8	44
	200	26	3	29
Dip. Information Technology	100	71	15	86
	200	53	12	65
	Total	**79**	**15**	**94**
MSc Computer Science	First Year			
	Second Year	1	0	1
MPhil Computer Science	First Year			
	Second Year	12	2	14
PhD Computer Science	First Year			
	Second Year	9	0	9
	Total	**22**	**2**	**24**

Activities over the Past Year

The Department of Computer Science and Informatics graduated the pioneer class of the BSc Information Technology programme at the University's Third Congregation.The Department also boasts of relationships with international professional training academies which include:

- Oracle Academy

- IBM Academy
- Plans are also underway to establish relationships with:
- CISCO Networking Academy
- Microsoft Academy
- Huawei

The Department has also initiated links with the following High Commissions and institutions with the aim of securing positions for IT and computing training programmes to enlighten and equip the staff and graduate students of the Department in their specific areas of interest:

- Indian High Commission with a proposal for IT and Computing Training in India.
- Ghana Investment Fund for Electronic Communications (GIFEC) with a proposal for ICT Laboratory Equipment.
- Korea International Cooperation Agency (KOICA) for training support in Korea.
- Japan International Cooperation Agency (JICA) for training support in Japan.

In the academic year under review, the Department also successfully rolled out the following programmes:

- PhD Computer Science
- MPhil Computer Science
- MSc Computer Science
- Diploma Computer Science
- Diploma Information Technology

Future Plans

The Department intends to mount a BSc Business Computing programme in the 2020/2021 Academic Year while plans are far advanced for the Department

to start bachelor, diploma and certificate programmes in the following areas:

- ❖ Computer Crime and Forensics
- ❖ Network Technology

Teaching Staff

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

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)

- K.A. Baffour, C. Osei-Bonsu, A.F. Adekoya (2017). A Modified Apriori Algorithm for Generating Fast and Accurate Frequent Item Set. International Journal of Scientific & Technology Research. Volume 6, Issue 08, August 2017 ISSN 2277-8616. www.ijstr.org
- Adesegun D. A., Adekoya, A. F., and Rahman, M. T., (2017). Predicting Stock Trends Using Tsk-Fuzzy Rule Based System. Journal of Energy and Natural Resource Management, University of Energy and Natural Resources, Sunyani, Ghana. JENRM, Vol. 3, No. 2, 15-22, 2017

Workshop/Conference/Seminar

International Deans' Course Africa 2017/2018. A Three-part (Training, Workshop & Seminar) training programme on Dialogue on Innovative Higher Education (DIES) being jointly organized by German Academic Exchange Service (DAAD) and German Rectors Conference (HRK) and which would be held in Osnabruck & Berlin (June 2017), Uganda (November 2017) and Ethiopia (February 2018)

DR. BENJAMIN A. WEYORI

Research Activities/Interests

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

Publication(s)

- **Benjamin Asubam Weyori**, 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**, June 2017
- **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

Workshop/Conference/Seminar

- Workshop on Securing Ghana Digital Journey, Accra International Conference Center, 23rd – 27th October 2017.

Service Extension

- Member, Promotion Policy Review Committee
- Panel Member, Ghana Institution of Engineers, Engineering Students Tusk
- Chairman, School of Sciences Sports Committee
- Editorial Member, Journal

AUGUSTINE TAKYI

Research Activities/Interests

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

Publication(s)

- Takyi, Augustine, Melissa Densmore, and David Johnson. "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.
- Workshop on teaching methodologies, by University of Energy and Natural Resources, University Auditorium 2014

Conferences/Workshops/Seminars

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

OBED APPIAH

Research Activities/Interests

- Signal Processing
- Algorithm Development

Publication(s)

- Obed Appiah, James Ben Hayfron-Acquah (2018)."Fast Generation of Image's Histogram Using Approximation Technique for Image Processing Algorithms", International Journal of Image, Graphics and Signal Processing (IJIGSP), Vol.3, No.2, pp.25-35, 2017, DOI: DOI: 10.5815/ijigsp.2018.03.04
- Obed Appiah, James Ben Hayfron-Acquah (2017)."A Robust Median-based Background Updating Algorithm", International Journal of Image, Graphics and Signal Processing (IJIGSP), Vol.9, No.2, pp.1-8, 2017, DOI: 10.5815/ijigsp.2017.02.01
- Obed Appiah, Michael Asante, James Ben Hayfron-Acquah (2017). Adaptive Approximation Median Filtering Algorithm for Impulse Noise Reduction, Asian Journal of Mathematics and Computer Science Research, Vol. 12, Issue 2, pp. 134-144

Service Extension

- Departmental Examination Officer

CHRISTOPHER B. NINFAAKANG

Research Activities/Interests

- Big Data
- Computer Security
- Human Computer Interaction

Publication(s)

- Peter Appiahene, Bryce Yaw Kesse and **Christopher Bombie**

Ninfaakang (2016). "Cloud Computing Technology Model for Teaching and Learning of ICT". International Journal of Computer Applications (0975-8887) Volume 143-No.5.

Workshop/Conference/Seminar

- Member of The Instructional Skills Workshop (ISW) Community under Vancouver Island University organized on UENR campus from January 30th to February 2nd, 2018.
- Workshop on Securing Ghana Digital Journey, Accra International Conference Center, 23rd – 27th October 2017.

Service Extension

- Departmental Weekend Programmes Co-oordinator

APPIAHENE PETER

Research Activities/Interests

- Decision Support Systems
- Human Computer Interaction

Publication(s)

- **P. Appiahene**, M. Antwi (2018). "The role ICT in the management of natural Resources. Case study of applying GIS and Social Media in the fight against illegal mining in Ghana".International Conference on Climate Change and Sustainable Development in Africa(ICCCSDA 2017) Special Issue: Environment, Technology and Sustainable Development. JENRM, Vol 1, 19-25.
- M. Antwi, **P. Appiahene**, Y. A. Boakye-Ansah (2018). "Promoting

Afforestation for Sustainable Communities Using Gamification". International Conference on Climate Change and Sustainable Development in Africa (ICCCSDA 2017) Special Issue: Agriculture, Natural Resources and Renewable Energy. JENRM, Vol 1, 43-49.

Conferences/Workshops/Seminars

- "Raising Students Programming Skills Using Appiahene Gamification Model" at the 11th European Conference on Game-Based Learning, ECGBL 2017, Graz, Austria, October 2017.
- "Promoting Afforestation for Sustainable Communities Using Gamification". International Conference on Climate Change and Sustainable Development in Africa (ICCCSDA) July 2017 Sunyani-Ghana.

Service Extension

- Designated Reviewer ICCISN' 2018: International Conference On Computer Intelligent Systems & Networking Sousse, Tunisia, January 3-5, 2018
- Technical Program Committee Member For WSCAR 2017 (2017 World Symposium On Computer Applications & Research) Istanbul, Turkey
- University Academic Board Member (August 2016-Date)

DANIEL ADU-GYAMFI

Research Activities/Interests

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

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.
- Participant: October 08, 2016. "How to write a research paper for IEEE Journals and Navigate the Review Process". Organised by Prof. George E. Ponchak, National Aeronautics and Space Administration, Glenn Research Center, Cleveland, Ohio, USA. and UESTC, Chengdu, China.

MR. PETER NIMBE

Publication(s)

- Patrick Ohemeng Gyaase, **Peter Nimbe**, Vincent Amankona: Deductions Based On Left-To-Right and Right-To-Left Binary Tree Traversal, Journal of Computer Science and Technology (Under Review)
- Prosper Kandabongee Yeng, **Peter Nimbe**, Benjamin Asubam Weyori, Investigation Into Some Vulnerabilities In Web Template Systems, IEEE (Submitted)

Conferences/Workshops/Seminars

- Symposium on Smart Evolution Digitized Ghana, UENR Auditorium, 19th January, 2018.

Service Extension

- Member, Departmental Audit Committee

MR. EBENEZER QUAYSON

Publication(s)

- Peasah, K. O. **Ebenezer Quayson,** Osie Agyei and Danso Ansong (2017). Survey of Digital Forensic Models and proposed thematic scheme. International Journal of Computer Application 169(11), pp. 41 – 45.
- Amponsah, S. K., Otoo, D., Salhi, S. and **Quayson, E. (2016).** Proposed Heuristic Method for Solving Assignment Problems. American Journal of Operations Research, 2, pp. 436 – 441, DOI: http://dx.doi.org/10.4236/ajor.2016.66040

Conference/Workshop/Seminar

- Workshop on SMS, Mobile web, Voice application development and entrepreneurship. Organised Mobile Web Ghana, From 25th July - 12th August 2011

ANOKYE ACHEAMPONG AMPONSAH

Publication(s)

- **Amponsah, A. A.,**& Pabbi, K. A. (2016). Enhancing Direct Marketing using Data Mining: A Case of YAA Asantewaa Rural Bank Ltd. in Ghana. *International Journal of Computer Applications, 153(7), Pg. 6-12*.
- Norvor, G. E., Asante, M., &**Amponsah, A. A.** (2016). Dynamic Routing Implementation Decision between OSPFv3 and IS–IS in IPv6 Networks, *Communications on Applied Electronics, 6(3) Pg. 25-34.*

Conferences/Workshops/Seminars

- Workshop on developing the culture of publication and how to prepare a manuscript for publication, UENR, 1st March 2018.

Service Extension

- Deputy Coordinator, Top-up Program

KWAME BAFFOUR AGYEMANG

Publication(s)

- **Kwame Baffour Agyemang**, Charles Osei-Bonsu, Adebayo Felix Adekoya: A Modified Apriori Algorithm for Fast and Accurate Generation of Frequent Item Sets, International Journal of Scientific and Technology Research (IJSTR), Volume 6, Issue 8, August 2017.

Conferences/Workshops/Seminars

- Research Seminar. Organized by the School of Graduate Studies, University of Energy and Natural Resources, Sunyani between 4th February and 5th February, 2017.
- IBM Big Data Analytics Training. Organized by the Department of Computer Science and Informatics, University of Energy and Natural Resources, Sunyani, 23rd May and 3rd June, 2016.

Service Extension

- Departmental Webometrics Committee Chairperson

OWUSU NYARKO-BOATENG

Publications

- Nyarko-Boateng, O., Asante, M., & Nti, I. K. (2017). Implementation of Advanced Encryption Standard Algorithm with Key Length of 256 Bits for Preventing Data Loss in an Organization. International Journal of Science and Engineering Applications, volume 6 Issue 3, 2017. p88-94. ISSN-2319-7560. IJSER Publications.
- Appiah, V., Nti, I. K., & Nyarko-Boateng, O. (2017). Investigating Websites and Web Application Vulnerabilities: Webmaster's Perspective. International Journal of Applied Information Systems (IJAIS) – ISSN: 2249-0868 Foundation of Computer Science FCS, New York, USA Volume 12 – No. 3, June 2017. IJAIS Publications.

Conferences/Workshops/Seminars

- Symposium on Smart Evolution, Smart Ghana on Friday, 19th January 2018 at the University of Energy and Natural Resources.
- Cyber Security Awareness Conference organized by Cyber Ghana at the University of Energy and Natural Resources on 6th April 2018.
- Workshop on Best Engineering Health & Safety Practice on 26th May 2017 at the Electrical and Electronics Engineering Department, Sunyani Technical University, Sunyani.

Service Extension

- Chairman of the Cyber Security Society of IIPGh. Editorial board member, Institute of ICT Professional of Ghana (IIPGh).
- A member of the Ghana Cyber Security Policy review committee of IIPGh.
- Regional Coordinator, Cyber Ghana, Brong Ahafo Branch.

- President, Computing Research Association of Ghana (CRAG)

FAIZA UMAR BAWAH (MRS)

Publication(s)

- Faiza Umar Bawah, Najim Ussiph (2018). Appraisal of the classification technique in data mining of student performance using J48 decision tree, K- nearest neighbour and Multilayer perceptron algorithms IJCA, Volume 179 Number 33, pp. 36 - 46.

JUSTICE NUETEH TERKPER

Publication(s)

- Terkper Justice Nueteh, James Ben Hayfron-Acquah, Twum Frimpong, An Efficient and Secure One Way Cryptographic Hash Function (2017), International Journal of Computer Science and Information Security, Volume 15 No. 2 Feb 2017, pages 191-198

Conferences/Workshops/Seminars

- Building Stronger Universities (BSU II KNUST) Conference, 28-30th March 2017, Golden Bean Hotel, Kumasi.
- Enterprise Life Assurance Focused Group Forum on Client retention, 23rd November 2017, Golden Tulip Hotel, Kumasi.

Service Extension

- IT Management Board Member, University College of Management Studies, Kumasi, Ghana

NICODEMUS AWARAYI SONGOSE

Publication(s)

- Nicodemus Songose Awarayi, Edward Danso Ansong, J. B. Hayfron-Acquah (2017). Plant Leaf Disease Diagnosis using Image Processing and Multi-Class Support Vector Machine, IAETSD Journal for Advanced Research in Applied Sciences, Volume 4, Issue 2.

Conferences/Workshops/Seminars

Workshop on Quality Assurance in High Tertiary Education, September 2017.

PATRICK KWABENA MENSAH

Publications

- K.P. Mensah and S. Akobre, (2017). Ensemble Classification of Sentiments for Monitoring Students' Academic Progress, *American International Journal of Research in Science, Technology, Engineering & Mathematics*, ISSN (Print): 2328-3491, ISSN (Online): 2328-3580, ISSN (CD-ROM): 2328-3629, pp. 27-41.

Service Extenstion

- ❖ Reviewer, International Journal on Advanced Science, Engineering and Information Technology, January 2017-Now

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 has introduced two diploma programmes in Insurance and Statistics. The Department is currently running an M. Phil programme in Applied Mathematics.

The Department is about to start Postgraduate programme in Statistics leading to the award of Master of Science (MSc), Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) degrees. The durations of the Masters' programmes are two years (full time) and three years (part time) and that of the PhD programmes would be three years on full time basis and five year for part time candidates.

Student Statistics/Population

The first batch of fifty-four (54) students were matriculated and admitted into the Department in October, 2013. The second batch of hundred and thirty (130) students were admitted and brought to the Department in October,

2014. In October 2015 another batch of eighty-one (81) were admitted into the Department. A total of forty-four (44) students were admitted to the department in 2016. Currently the student population at the Departments stands at 309. The table below provides detailed information on the number of male and female students at the Department.

Level	Male	Female	Total
100	87	32	119
200	66	19	85
300	37	9	46
400	67	16	83
Total	**262**	**47**	**333**

Activities over the Past Year

Apart from the 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. Most of the Assistant Lecturers who are Masters' degree holders at the Department have enrolled in PhD programmes some in Ghanaian and others in foreign Universities.

The Department organized a day's workshop to sensitize students on the need to study mathematical sciences. At this programme, an official from AIMS Ghana delivered the keynote address.

Future Plans

Plans are underway to start weekend undergraduate programmes in Mathematics Statistics, and diploma in Insurance.

Teaching Staff

Name	Qualification	Designation	Area of Specialization
Kaku Sagary Nokoe	PhD, UBC, Canada	Adjunct Professor	Biometry
Frank Badu Osei	PhD (Twente)	Lecturer	Spatial Statistics
Alex Akwasi Opoku	PhD (Groningen)	Lecturer/HoD	Mathematical Physics Probability Theory
Dominic Otoo	Ph.D, MSc, BSc (KNUST)	Lecturer	Mathematical Modeling, Operations
Elvis Kobina Donkoh	Ph.D, MSc, BSc (KNUST)	Lecturer	Operations Research, Telecom Systems, Fluid Dynamics
Johnson De-Graft Ankamah	M.Phil (Edhoven)	Lecturer	Industrial and Applied Mathematics
Baaba A. 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 Lecturer	Statistics and Modeling
Kwame Frimpong	M.Phil (KNUST)	Assistant Lecturer	Pure Mathematics
Isaac Akoto	M.Phil (Legon)	Assistant Lecturer	Actuarial Science
Richard Ansah	M.Phil (KNUST)	Assistant Lecturer	Pure Mathematics
Charles Kwofie	M.Phil. (Legon)	Assistant Lecturer	Actuarial Science
Iddrisu Abdul-Karim	MSc.(Kwazulu)	Assistant Lecturer	Medical/Biostatistics

DR. ALEX AKWASI OPOKU

Research Interests

- ❖ Probability Theory
- ❖ Stochastic Processes
- ❖ Mathematical Physics

Publications

- **Opoku**, **Alex.,** G. Osabutey, C. Kwofie, Parameter evaluation for a statistical mechanical model for binary choice with social interaction, Journal of Probability and Statistics, Vol. 2019, Article ID 3435626, https://doi.org/10.1155/2019/3435626, Hindawi. (2018)
- **Opoku, Alex.** G. Osabutey, Multi-population spin models: A view from large deviations theoretic window, Journal of Mathematics, Vol. 2018, Article ID 9417547, https://doi.org/10.1155/2018/9417547, Hindawi. (2018)
- **Opoku**, **Alex.,** K.O. Edusei, R.K. Ansah, A Conditional Curie–Weiss Model for Stylized Multi–group Binary Choice with Social Interaction, Journal of Statistical Physics, Vol. 171, Issue 1, 106–126, (2018).

Conferences/ Seminars/Workshop

- Good Assessment Practices in Higher Education: Improving Teaching and Learning**,** Akosombo Continental Hotel, **27-30 November, 2018**
- Quality Assurance Knowledge and Skills for the 21st Century Higher Education Personnel, Association of African Universities (AAU Conference Hall), Accra. **21-24 May, 2019**

DR. DOMINIC OTOO

Research Activities/Interests

- Mathematical Modelling
- Operations Research

Publication(s)

- Iddrisu, A. K., **Otoo, D**., Iddrissu, W. A. Ankamah, s. (2019): Modelling and Forecasting of Ghana's Inflation Volatility; American Journal of Industrial and Business Management
- **Otoo, D**. Wahab, W. A. Afful, B. A. Larbi, E. (2019): Multivariate analysis of Factors Underlying Female Under Representation in Learning Mathematics
- **Otoo**, B. AsamoahAfful, E. Larbi, E. Acheampong (2018): Analysis of Low Birth Weight of Newly Born Babies in Sunyani Municipality. International Journal of Science and Research (IJSR). Vol 7, Issue 6, June 2018. DOI: 10.21275-ART20182368
- **Otoo, D**., Iddrisu, W.A., Kessie, K.A., Larbi, E. (2018). Structural Model of Students' Interest and Self-Motivation to Learning Mathematics. Education Research International. Vol. 2018, pp. 1-10

Conferences/ Seminars/Workshop

- Seminar on: How to Answer Questions in Core and Elective Mathematics in WASSCE held at Wesley Girls Senior High School, Kumasi on 17th and 18th January, 2019.
- Seminar on: Teaching of Mechanics and its Applications to a Senior High School Student held at Assin State College, AssinPrasoon 11th and 12th February, 2019.

DR. SAMPSON TAKI APPIAH

Research Activities

- 2018: Using Mathematics to analysis Gold Production Ghana

- 2018 to date: Mathematical modeling of Skin thermal pain

Publication(s)

- **Appiah, S. T**., Buabeng, A., Odoi, B. (2018), "Comparative Study of Mathematical Models for Ghana's Gold Production", *Ghana Mining Journal,* Vol. 18, No. 1, pp. 78 - 83.
- **Appiah, S. T**., Buabeng, A., Dumakor-Dupey, N. K. (2018), "Multivariate Analysis of the Effect of Climate Conditions on Gold Production in Ghana", *Ghana Mining Journal,* Vol. 18, No. 1, pp. 72 - 77.
- Agyarko, K., **Appiah, S. T**., Simons, A. (2018), 'Application of Generalized Estimating Equations to Non-Life Insurance Claims Reserve in Ghana -A Case Study', *International Journal of Sciences,* Vol. 42, No. 1, pp. 72-80.

Conferences/ Seminars/Workshop

- Workshop on Enhancing Research Support at the University, 2nd May, 2018, UMaT, Tarkwa.
- Seminar on Financial Management and Internal Audit Unit Operating System in the University, 1st February, 2018, UMaT, Tarkwa.

DR. ELVIS KOBINA DONKOH

Research Activities/Interests

- Operations Research & Telecommunication System Modelling
  - Signals & Systems

- Control Theory
- Linear and Network Optimization
- Non-Linear Optimization

❖ Fluid (Gas, Solids) Dynamics with Analysis

- Functional & Fourier Analysis
- Dynamical Systems
- Fluid Mechanics with Hydrodynamics
- Mathematical Models in Biology

Publication(s)

- ❖ **Donkoh E.K**. Adu-Ansere J., A.G Samuel. (2018). Generalized Frequency Re-use Ratio for Uniform and Non-uniform Cell Range in Telecommunication Network Design. *British Journal of Mathamatics and Computer Science*. 26(3): 1-14, 2018;
- ❖ Davis R., **Donkoh E.K**., Mawah B., Amonoo B. (2018). Internal Financial Risks Management in Microfinance Companies: A Case Study of Akuapem Rural Bank. *International Journal of Statistics and Probability;* Vol. 7, No. 5, ISSN 1927-7032
- ❖ **Donkoh E.K**. A.G Samuel, K. A. Ababio (2018). Existence And Uniqueness of Green's Function And it Application To Boundary Value Problems; Case Study of Bessel Operator of Order "n". *Asian Journal of Mathematics and Computer Research, 25*(5), 315-330.
- ❖ **Donkoh E.K**., Davis R., Owusu-Ansah D.J, Antwi E, Mensah M. (2019) Application of Combinatorial Techniques to the Ghanaian Board GameZaminamina Draft. *European Journal of Pure and Applied Mathematics (2019).*

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 (SPG),* USA.

SYLVIA ANKAMAH (MS.)

Research Activities/Interests

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

Publication(s)

- Iddrisu, A.-K., Otoo, D., Abdul, I.W. and **Ankamah, S**. (2019). Modeling and Forecasting of Ghana's Inflation Volatility American Journal of Industrial Business Management, 9,930-949.
- **Ankamah, S., Nokoe**, K. S. and Abdul, I. W. (2018) Modelling Trends of Climatic Variability and Malaria in Ghana Using Vector Auto Regression Malaria Research and Treatment. Vol 2018, pp 1-11.

Conferences/Workshops/Seminars

- Good Assessment Practices in Higher Education: Sheila's Executive Hotel, Sunyani held on 21 - 24 May, 2019.
- Capacity Building in Curriculum Developmentheld at UENR on 27th September, 2018.

- UENR-ACU Professional Development Interactive Seminar held atUENR- French Lab on 21st May, 2019

MR. CHARLES KWOFIE

Research Activities/Interests

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

Publication(s)

- **Kwofie C**., D. D. Yormekpe, S. O. Mensah, &P. Botchway, (2018). Choosing between alternative motor insurance policies: A Discrete Choice Experiment. *International Journal of Mathematics and Mathematical Sciences*.
- **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*.
- Opoku, AA, Osabutey, G., & **Kwofie, C**. (2019). Parameter Evaluation for a Statistical Mechanical Model for Binary Choice with Social Interaction. *Journal of Probability and Statistics*.

MR. RICHARD KWAME ANSAH

Research Activities/Interests

- Algebra
- Number theory

Publication(s)

- **Richard K. Ansah**, S. Effah-Poku, Dorcas A. Addo, Bernard A. Adjei, Beatrice K. Bawuah, Prince Antwi, Relevance of Elliptic Curve Cryptography in Modern Day Technology. Journal of Mathematical Acumen and Research 3(2): 1-10, 2018.
- Charles Kwofie and **Richard Kwame Ansah,** 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, Article ID 7016792, https://doi.org/10.1155/2018/7016792.
- S. Effah-Poku, W. Obeng-Denteh, I. Owusu Mensah3 and **R. K. Ansah**," Constructing the Cantor Set: An Alternative Approach".International Journal of Mathematical Archive-9(5), 2018, 203-207.
- Alex AkwasiOpoku, Kwame OwusuEduseiand **Richard Kwame Ansah**, 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**,**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**, Dynamics on Unique Numerators for Generating the Cantor Set. International Journal of Advances in Mathematics Volume 2018, Number 1, Pages 57-72, 2018.

Conferences/Workshops/Seminars

- Good Assessment Practices in Higher Education: Improving Teaching and Learning Worksho held at Shiela's Executive Hotel, Sunyani on 16th to 17th January, 2019

MR. IDDRISU ABDUL-KARIM

Research Activities/Interests

- Bayesian Statistics, Spatial Statistics.
- Biostatistics/Medical Statistics.
- Longitudinal Studies and Clinical Trials.
- Survival Analysis and Joint Models.
- Missing Data and Sensitivity Analysis.
- Linear/Generalized linear mixed effects models.

Publication(s)

- **Iddrisu, Abdul-Karim** and Gumedze, Freedom (**2019**), An application of a pattern-mixture model with multiple imputation for the analysis of longitudinal trials with protocol deviations, Pages 9:10, *Springer Nature, BMC Medical Research Methodology*.
- **Iddrisu, Abdul-Karim,** Domnic, Otoo, Iddrisu, Wahab Abdul, Ankamah Sylvia (2019): Modelling and forecasting of Ghana's inflation volatility, Pages 930-949,*Scientific Research Publishing, Journal of Industrial and Bussiness Management.*
- **Iddrisu, Abdul-Karim** and Gumedze, Freedom (**2018**), Application of sensitivity analysis to incomplete longitudinal cd4 count data, Pages 754-769,*Taylor and Francis,Journal of Applied Statistics*.
- **Iddrisu, Abdul-Karim;** Alhassan, Abukari; and Amidu, Nafiu**(2018):**

Investigating spatio-temporal pattern of relative risk of tuberculosis in Kenya using Bayesian hierarchical approaches, Pages 175-197,*Scientific Research Publishing, Journal of Tuberculosis Research*.

Outreach Programmes/Extension Services

- Reviewer: Journal of Chest and Pulmonary Medicine, Open Journal of Statistics and Global Health action.

DR. IDDRISU ABDUL WAHAB

Research Activities/Interests:

- Spatio-Temporal Modelling
- Bayesian Analysis and Modelling
- Mathematical Statistics
- Biostatistics
- Multivariate Analysis

Publication(s)

- Iddrisu, A.-K., Otoo, D., **Iddrisu, W.A.**, Ankamah, S. (2019). Modelling and Forecasting of Ghana's Inflation Volatility. *American Journal of Industrial and Business Management*. Vol. 9, pp. 930-949
- Otoo, D., **Iddrisu, W.A.**, Kessie, K.A., Larbi, E. (2018). Structural Model of Students' Interest and Self-Motivation to Learning Mathematics. *Education Research International*. Vol. 2018, pp. 1-10

- Ankamah, S., Nokoe, K.S., **Iddrisu, W.A.** (2018). Modeling Trends of Climatic Variability and Malaria in Ghana Using Vector Autoregression. *Malaria Research and Treatment.* Vol. 2018, pp. 1-11

Conferences/Workshops/Seminars

- Participant and MC: UENR-ACU Professional Development Interactive Seminar, Under the Circle Institutional Strengthening Programme, UENR, Sunyani, 21st February, 2019.

Outreach Programmes/Extension Services

- Investigator: Multilevel Multivariate Analysis of Equity in Maternal, Child Health and Nutrition under the project "Ghana Inclusive Development Research Network" (Funded by UNICEF).
- Mentor: UENR Early Career Faculty Members' Professional Development and Mentor-Mentee Programme under the Circle Institutional Strengthening Programme.
- Provide Voluntary Consultancy Services for Postgraduate Students.
- Reviewer: Journal of African Business (Taylor and Francis Group) and European Scientific Journal.

DR. KWAME PIESISE FRIMPONG

Research Activities/Interests

- Operator Theory
- Convergence of sequences emanating from solutions of integral equations and ODEs

- Juxtaposing analytical and numerical methods for solutions of equations.

Conferences/Workshops/Seminars

- 15th - 17th January 2019: Good Assessment Practices in Higher Education: Improving Teaching and Learning Workshop hosted by the University of Energy and Natural Resources, Sunyani
- 9th - 10th January 2019: A two-day workshop facilitated by Repram on the topic: The why, The What and The How of Organizational Purpose".

MR. ERIC OKYERE

Research Activities/Interests

- Mathematical Biology
- Optimal Control Theory
- Fractional Calculus
- Numerical Methods and Computations
- Nonlinear Dynamical Systems
- Scientific computing in differential equations

Conferences/Workshops/Seminars

- Participant: University of Energy and Natural Resources, Third training workshop for ERAMUS +Project (EEISHEA) Sheila's Executive Hotel, Sunyani, Ghana (30th April to 3rd May, 2019)

- Participant: University of Energy and Natural Resources Good Assessment Practices in Higher Education, Improving Teaching and Learning Sheila's Executive Hotel, Sunyani, Ghana (16th -17th January, 2019)

Outreach Programmes/Extension Services

- Reviewer: Complexity (Hindawi), (One paper reviewed), 2019
- International Journal of Biomathematics (One paper reviewed), 2018

MR. FRANCIS BUKARI

Research Activities/Interests

- Pension Mathematics
- Financial Mathematics
- Survival Analysis
- Actuarial models

Publication(s)

- Frempong NK, Nartey E, **Bukari FK**, Berchie RO (2018) Modelling the force of infection for Hepatitis B among heterogeneous groups at the Komfo-Anokye Teaching Hospital. *J Biostat Biometric App* 3(1): 109
- Frempong NK, **Bukari F.K**, Appiah S.K and Owusu D.A (2018) Investigating Heterogeneity in Mortality of Male Pensioners. J Biostat Biometric App 3(2): 203

Conferences/Workshops/Seminars

- Date: 21st February, 2019 Participant (Seminar) The Association of Common-Wealth Universities (ACU), Professional Development Interactive Seminar, Circle Institutional Strengthening Program (ISP),Project Title: UENR Early Career Faculty Members, Professional Development and Mentor, Mentee Pairing.
- Date: 26th - 27th September 2018, Participant, 5th International Conference on Applied Sciences and Technology, *Skills Acquisition and Job Creation through Science, Technology and Innovation for National Development* at Anita Hotel, Kumasi organized by Kumasi Technical University, Kumasi.

MR. WILLIAMS KUMI

Research Activities/Interests

- Spatial Statistics
- Option pricing
- Insurance Mathematics

Conferences/Workshops/Seminars

- Participant: Professional development interactive seminar by the Association of Common Wealth Universities at UENR campus, February18, 2019
- Main Speaker: Statistical Analysis of Spatial point patterns at the Mathematics Department, Technical University of Kaiserslautern, Germany on April 07, 2016

MR. DANIEL GYAMFI

Research Activities/Interests

- Mathematical Modelling
- Modelling Physical problems using Genetic Algorithm
- Operation Research

Conferences/Workshops/Seminars

- Participant: Professional development interactive seminar by the Association of Common Wealth Universities at UENR campus, February18, 2019

MR. YAW OSEI

Research Activities/Interests

- Risk Management
- Insurance
- Claims Management
- Underwriting
- Marketing Insurance Products

Conferences/Workshops/Seminars

- Resource Person – Workshop on Agency Certification Course, Ghana Insurance College, Sunyani, held on 22nd May – 24th May 2019.
- Participant – Good Assessment Practices in Higher Education: Improving Teaching and Learning Workshop, University of Energy and Natural Resources, Sunyani, 16th – 17th January, 2019.

- Participant – UENR-ACU Provisional Development Interactive Seminar, University of Energy and Natural Resources, Sunyani, 21st February, 2019.

Outreach Programmes/Extension Services

- Industrial Attachment Coordinator, Department of Mathematics and Statistics, School of Sciences, University of Energy and Natural Resources, Sunyani.
- Department Co-ordinator, Town and Gown (School Industrial Linkages), Department of Mathematics and Statistics, University of Energy and Natural Resources, Sunyani

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. The four-year Bachelor of Science in Chemistry programme was introduced during the 2014/2015 academic year with the aim of preparing students for future careers in 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 in which a core understanding of chemical processes is important.

The programme, designed to employ practical and theoretical knowledge

that meet the requisite demands of research institutes, academic institutions and relevant industries, graduated its first batch of students in August, 2018.

Activities over the Past Year

- The Department successfully graduated its first batch of students for the BSc Chemistry programme.
- The Department also developed and submitted to NCTE & NAB for approval, a proposed BSc Biochemistry programme.
- A developed proposal for the commencement of MPhil Chemistry programme is under consideration by the Postgraduate Committee of the School of Sciences.
- The Department also boasts of relationships with some academic institutions and various relevant industries including KNUST, CSIR, TOR, GHACEM, GSA, GWCL, ENTRANCE Pharmaceuticals, just to mention a few, where students embark on a compulsory 4 months industrial attachment.
- During the year under review, the UENR Chapter of the Students' Chemical Society hosted the Society's National Seat. The 20th Annual National Conference doubling as the 30th Anniversary of the society was also hosted by UENR local. This conference brought together chemistry students and some teaching staff of the main public Universities in Ghana. The department played a critical role in these endeavors.

Students Distribution

YEAR/LEVEL	MALE	FEMALE	TOTAL
100	24	7	31
200	10	3	13
300	13	0	13
400	25	3	28

Future Plans

The Department intends to mount the following programmes in the future:

Undergraduate

- BSc. Biochemistry
- BSc. Physics

Postgraduate

- MPhil Chemistry (major: Bioanalytical, Environmental, Material Science, Polymer)
- PhD 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	Organic Chemistry
Dr. David Adu-Opoku	PhD(UK) MA(UK),BSc. (KNUST)	Lecturer/HoD	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	

ROBERT AKUAMOAH

Research Interest

- Natural Products Chemistry
- Synthetic Organic Chemistry
- Pollution Studies

Publications

- Sakyi P.O., Bienibuor A. K., **Akuamoah R.K.**, Ismaila E., Brimah A. K. (2019) "The Photolytic Cleavage of Methylpyridinecobaloxime as a Mimetic of Vitamin B12" International Journal of Advances in Science Research and Engineering (IJASRE), **Vol 5, Issue 4, 2019**
- Y. Serfor-Armah, D. Carboo, **R. K. Akuamoah** and A. Chatt, "Micelle-mediated extraction and neutron activation determination of nanogram levels of vanadium in seaweeds" Journal of Radioanalytical and Nuclear Chemistry **(2018) 318:2039-2047**
- Sakyi P.O., Bienibuor A. K., **Akuamoah R.K.** "Assessing the Physicochemical Parameters of Water Sources in the Fiapre Vicinity a suburb of Sunyani in the Brong Ahafo Region of Ghana" International Journal of Advances in Science Research and Engineering (IJASRE), **Vol 4, Issue 9, 2018**

Conferences/Seminars

- ‘Mentor-mentee pairing’, UENR, Sunyani, 28th February, 2019.
- ‘Building Resilience of Lake Bosomtwe to Climate Change’, Organized by RELAB, Sheila’s Executive Hotel, Sunyani, 7th December, 2018.
- ‘Capacity Building in Curriculum Development – NCTE and NAB Requirements’, UENR Auditorium, 28th September, 2018.
- ‘Ghana Science Association, 16th Biennial Workshop: Combating pests through climate smart agriculture’, KNUST, Kumasi, 16th August, 2018.
- ‘Curriculum Development Workshop, Centre for Climate Change and Gender Studies, University of Energy and Natural Resources’, UENR, Sunyani, 15th August, 2018.

DAVID ADU-POKU

Research Interest/Activities

- Kinetics/Thermodynamics of Adsorption and Desorption processes
- Catalysts for Renewable energy production
- Applications of nanotechnology in water treatments and energy
- Safety and security food and food products

Publication(s)

- Addo, P. W., Agbenorhevi, J. K. 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

Conferences & Seminars

- Materials for Renewable and sustainable Energy: from research to development, Amonoo Neizer IDL center, KNUST, 3rd - 5th June, 2019.
- 'Enhancing your scientific writing skills for academic excellence' Ghana Science Association (GSA)- UENR Local, UENR, Sunyani, 28th March, 2019.
- 'Capacity Building in Curriculum Development ', NCTE and NAB, UENR, Sunyani, 28th September, 2018.
- 'Combating Pests through Smart Agriculture', 16th Biennial', Ghana Science Association (GSA), KNUST, Kumasi, 16th August, 2018.
- B/A Cyber Security Conference (Cybercon 18), UENR, Sunyani, 4th April, 2018.
- '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.

ISMAILA IMAHI

Research Areas

- Biological Chemistry
- Bioanalytical Chemistry

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

Publication(s)

- **Emahi, I.,** The Photolytic Cleavage of Methylpyridinecobaloxime as a Mimetic of Vitamin B_{12}. **2019**. *IJASR,* 5,28-41.
- **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.

Conferences & Seminars

- 'Enhancing your scientific writing skills for academic excellence' Ghana Science Association (GSA)- UENR Local, UENR, Sunyani, 28th March, 2019.
- 'WASH and the Sustainable Development Goals (SDGs): Successes, Challenges, Lessons Learnt and the Way Forward',2nd UDS-DRI International WASH Conference, UDS Campus, Tamale, Ghana, 17th January, 2019.
- 'Capacity Building in Curriculum Development ', NCTE and NAB, UENR, Sunyani, 28th September, 2018.
- 'Combating Pests through Smart Agriculture', 16th Biennial', Ghana Science Association (GSA), KNUST, Kumasi, 16th August, 2018.
- B/A Cyber Security Conference (Cybercon 18) held at UENR Auditorium, Sunyani, Ghana. April 04, 2018. Chaired on behalf of Prof. F. A. Adekoya (Dean of School of Sciences, UENR) and gave keynote address on the theme "Safely Embracing ICT Innovations – The Role of All Stakeholders".

SELINA AMA SAAH

Research Interest/Activities

- Nanotechnology
- Structural Adhesives and Polymer composites
- Water Chemistry

Publications

- **Selina A. Saah,** Nathaniel O. Boadi and Christopher Wilkins, Deposition of PbS thin films from lead hexadecyl and octadecyl xanthate complexes using the spin coating method, MRS Advances, https://doi.org/10.1557/adv.2019.106
- **Selina A. Saah**, Malik D. Khan, Paul D. McNaughter, Johannes A. M. Awudza, Neerish Revaprasadu, and Paul O'Brien, Facile synthesis of a PbS1−xSex (0≤ x≤ 1) solid solution using bis (N, N-diethyl-N′-naphthoylchalcogenoureato) lead (II) complexes, New Journal of Chemistry, 2018, 42, 16602-16607
- **Selina A. Saah,** Paul D. McNaughter, Mohammed A. Malik, Johannes A. M. Awudza, Neerish Revaprasadu, and Paul O'Brien, PbSxSe1−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, 2018, 53 (6), 4283-4293.
- **Selina A. Saah**, Paul D. McNaughter, Mohammed A. Malik, Johannes A. M. Awudza, Neerish Revaprasadu, Paul O'Brien. 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, 2017*, DOI 10.1007/s10853-017-1836-5

Conferences/Workshops/Seminars

- Materials for Renewable and sustainable Energy: from research to development, Amonoo Neizer IDL center, KNUST, 3rd - 5th June, 2019.
- DAAD workshop on Navigating Women's Careers in Higher Education, Capital View Hotel, 10th – 12th April, 2019.
- 'Enhancing your scientific writing skills for academic excellence' Ghana Science Association (GSA)- UENR Local, UENR, Sunyani, 28th March, 2019.
- 'Mentor-mentee pairing', UENR, Sunyani, 28th February, 2019.
- Good Assessment Practices in Higher Education: Improving Teaching and Learning organized, Shiela's Executive Lodge Fiapre, 16th -17th January, 2019.
- 'Building Resilience of Lake Bosomtwe to Climate Change', Organized by RELAB, Sheila's Executive Hotel, Sunyani, 7th December, 2018.
- The Royal Society-DFID Africa Capacity Building Initiative Award Holders' Meeting, Framissima Palm Beach Hotel in Saly, M'bour – Senegal, 2nd – 4th December, 2018.
- 25th OWSD Anniversary Ghana Chapter celebration, Amonoo Neizer IDL center, KNUST, 8th – 9th November 2018.
- Launching of WiSTEM Ghana, Great hall, KNUST, 19th October, 2018.
- 'Capacity Building in Curriculum Development – NCTE and NAB Requirements', UENR Auditorium, 27th - 28th September, 2018.
- 'Ghana Science Association, 16th Biennial Workshop: Combating pests through climate smart agriculture', KNUST, Kumasi, 16th August, 2018.

- ‘Curriculum Development Workshop, Centre for Climate Change and Gender Studies, University of Energy and Natural Resources’, UENR, Sunyani, 15th August, 2018.
- The 7th international conference on Nanoscience and nanotechnology in Africa. Durban, South Africa 22nd – 25th April 2018.

BENJAMIN DARKO ASAMOAH

Research Interest

- Environmental Inorganic chemistry
- Bioaccessibility of Heavy Metals
- Organometallic Compounds Synthesis and Characterization
- Coordination Chemistry
- Material Chemistry.

Publication

- Dau, T, M., **Asamoah, B. D.,** Belyaev A., Chakkaradhari, G., Hirva, P., Janne Jänis, 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

- Materials for Renewable and Sustainable Energy: From Research to Development. An International Conference Organized by The Royal

Society at Kwame Nkrumah University of Science and Technology, Kumasi. Monday, 3rd to Wednesday, 5th June, 2019.

- ‘Enhancing your scientific writing skills for academic excellence’ Ghana Science Association (GSA)- UENR Local, UENR, Sunyani, 28th March, 2019.
- 16th Biennial Workshop of the Ghana Science Association (GSA) theme: Combating Pests through Smart Agriculture, KNUST, Kumasi, 16th August, 2018.
- Participant in Instructional Skills Workshop (30th -2nd February, 2018) organized for some lecturers of UENR.
- Good Assessment Practices in Higher Education: Improving Teaching and Learning, Sheila’s Lodge, Sunyani, 16th – 17th January, 2018.

PATRICK OPARE SAKYI

Research Interest

- Isolation and Characterization of Bioactive Compounds
- Synthesis of Bioactive Compounds
- Water Quality Analysis
- Soil Analysis

Publication(s)

- The Photolytic Cleavage of Methylpyridinecobaloxime as a Mimetic of Vitamin B_{12}. 2019. IJASR, 5, 28-41.

- Assessing the Physicochemical Parameters of Water Sources in the Fiapre Vicinity a Suburb of Sunyani in the Brong Ahafo Region of Ghana: 2019. IJASRE, 4, 9.
- Daniel M. Ayine-Tora, Robert Kingsford-Adaboh, William A. Asomaning, Jerry J.E.K. Harrison, F.C Mills-Robertson, Yahaya Bukari, **Patrick O. Sakyi**, Sylvester Kaminta and Jóhannes Reynisson (2016). 'Coumarin Antifungal Lead Compounds from Millettia thonningii and Their Predicted Mechanism of Action': Molecules 21(10): 1369

Conferences/Workshops/Seminars

- 'Materials for renewable and sustainable Energy: From Research to Development', Organized by Africa Capacity Building Initiative (ACBI), KNUST, 3rd to 5th June, 2019.
- 'Enhancing your Scientific Writing Skills for Academic Excellence', Organized by GSA Sunyani Chapter, UENR, 28th March, 2019
- 'Building Resilience of Lake Bosomtwe to Climate Change', Organized by RELAB, Sheila's Executive Hotel, Sunyani, 7th December, 2018.
- 'Capacity Building in Curriculum Development – NCTE and NAB Requirements', UENR Auditorium, 28th September, 2018.
- 'Ghana Science Association, 16th Biennial Workshop: Combating pests through climate smart agriculture', KNUST, Kumasi, 16th August, 2018.
- 'Curriculum Development Workshop, Centre for Climate Change and Gender Studies, University of Energy and Natural Resources', UENR, Sunyani, 15th August, 2018

ALFRED K. BIENIBUOR

Research interests

- Assessment of groundwater resources potentials and groundwater pollution studies
- Study of soil pollution and their effects on groundwater quality
- Magnetic susceptibility measurement of soil and its adverse effect on crop production
- Geotechnical site investigations
- Monitoring the effect of rainfall pattern on leachate infiltration rate and groundwater pollution around solid waste disposal sites

Publication(s)

- Sakyi, P. O., **Bienibuor, A. K**., Akuamoah, R. K., Emahi, I. and Brimah, A. K. 2019. The Photolytic Cleavage of Methylpyridinecobaloxime [Co(CH3)(dmgH)2(py)] as a Mimetic of Vitamin B12. International Journal of Advances in Scientific Research and Engineering (IJASRE), 5,28-41
- Sakyi, P. O., **Bienibuor, A. K.** and Akuamoah, R. K., 2018. Assessing the Physicochemical Parameters of Water Sources in the Fiapre Vicinity, a Suburb of Sunyani in the Brong Ahafo Region of Ghana. International Journal of Advances in Scientific Research and Engineering (ijasre). Vol. 4, Issue 9, E-ISSN: 2454-8006. PP. 153 - 163.

Conferences/Workshops/Seminars

- Presenter: UDS-DRI/CIWAS International WASH Conference. UDS, Tamale Campus, Wednesday 16th – Thursday, 17th January, 2019.

- Participant: Seminar on Building Resilience of Lake Bosomtwe to Climate Change. Shiela's Executive Hotel, Friday, 7th December, 2018.
- Participant: Workshop on Capacity Building in Curriculum Development, University of Energy and Natural Resources, Sunyani, 27 – 28th September, 2018.
- Participant: Ghana Science Association, 16th Biennial Workshop: Combating pests through climate smart agriculture, Kwame Nkrumah University of Science and Technology, 16th August, 2018
- Participant: Curriculum Development Workshop, Centre for Climate Change and Gender Studies, University of Energy and Natural Resources, Sunyani, 14 – 15th August, 2018.

BENJAMIN DARKO ASAMOAH

Research Activities/Interest

- Organometallic Compound Synthesis
- Coordination Chemistry
- Physical Chemistry

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

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

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

Publication(s)

- **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 and**Selina A. Saah.** Phytochemical screening, antimicrobial andantioxidant properties of assorted *Carica papaya*leaves 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

Publication(s)

- 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

Publication(s)

- 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 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 numerous biological and biomedical sciences and health related problems in Ghana and the world at large.

The Department currently runs 3 undergraduate programmes namely, BSc. Medical Biodiagnostics Science BSc. Biological Sciences and BSc. Nursing. The Department has a total student population of 523 as indicated below:

YEAR/LEVEL	MALE	FEMALE	TOTAL
100	187	136	323
200	133	67	200
Total	320	203	**523**

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.

Staffing

The Department has the following staff:

Name	Qualification	Designation	Area of specialisation
Dr. Samuel Fosu Gyasi	PhD,MSc BSc (KNUST)	Senior Lecturer, HoD	Microbiology
Dr. Daniel Antwi-Berko	PhD,MSc BSc (KNUST)	Lecturer	Immunology
Dr. Mrs. Sandra A. Kwarteng	PhD, MSc BSc (KNUST)	Lecturer	Entomology
Dr. Emmanuel Timmy Donkoh	PhD, MSc BSc (KNUST)	Lecturer	Chemical Pathology
Mr. Kenneth Bentum Otabil	MSc (KNUST) BSc (KNUST)	Assistant Lecturer	Parasitology
Dorice Serwaa Berkoh	MSc (KNUST) BSc (KNUST)	Assistant Lecturer	Chemical Pathology
Mr. Bismark Ofosu-Bamfo	MPhil (KNUST) BSc (KNUST)	Assistant Lecturer	Ecology
Mr. Albert Henyo	BA (UG) MPhil (UG)	Assistant Lecturer	General Nursing
Mr. Atinga Ba-Etilayoo	MPhil (KNUST) BSc MPhil (UG)	Assistant Lecturer	Human Anatomy
Mr. David Ntiamoah Ofosu	MSc.(Westminster), BSc (KNUST)	Assistant Lecturer	Hematology
Miss Diana Baafi	BSc (UG) MPhil (UG)	Technical Instructor	Family, Population and Reproductive Health
Miss Vicentia Safo-Brobbey	BA MPhil (UG)	Assistant Lecturer	Maternal and Child Health
Asamoah Akwasi	BSc (KNUST)	Snr. Laboratory Technician	Laboratory Technician
Banan Banleman	BSc (KNUST)	Snr. Laboratory Technician	Laboratory Technician
Baatuolkuu Paschalina	BSc. (KNUST)	Snr.Admin. Assistant	Administration

DR SAMUEL FOSU GYASI

Research Activities/Interests

- Clinical Microbiology Diagnostics and Control
- Clinical, Haematological and Histopathological Responses *invivo* to Arsenic Toxicity
- Susceptibility of Arsenic *invivo* to Buruli Ulcer Infections
- Molecular Biology Techniques in Genomics
- Environmental Microbial Isolation and Control
- Microbial Assessment of Food and Drinking Water Quality
- Water and Waste Water Management

Publication(s)

- **Gyasi S F.,** Abeberese JKA, Afriyie VN, c Kwofie I & E Kobina (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 www.iiste.org ISSN 2224-3208 (Paper) ISSN 2225-093X (Online), Vol.6, No.14. 2016

Conferences/Seminars

- **Evaluator:** Renewal of Grants Application, International Foundation for Science (IFS), 2016
- **Reviewer,** IWP WashDev, UK, 2013 till date,
- **Reviewer,** IJPEH, UK., 2013 till date,
- **Reviewer**, Journal, OALib, 2013 till date
- **Reviewer,** Science Alert, 2016 till date

- **Member;** Global Buruli Ulcer Control Programme WHO, Geneva, Switzerland,
- **Member:** International Society of Neglected Tropical Diseases, ISNTD, London.
- **Member:** American Microbiology Society, USA, 2017 till date
- **Member:** Bristish Microbiology Society, UK, 2017 till date

DR. DANIEL ANTWI-BERKO

Research Activities/Interests

- Pathogenesis Management of Buruli Ulcer
- Clinical Microbiology and Immunology
- Haematology
- Histopathology and Cytology,
- Chemical pathology and Clinical chemistry

Publication(s)

- Norman Nausch, **Daniel Antwi-Berko**, Yusif Mubarik, Kabiru Mohammed Abass, Wellington Owusu, Ellis Owusu-Dabo, Linda Batsa Debrah, Alexander Yaw Debrah, Marc Jacobsen, Richard O. Phillips. "Analysis of *Mycobacterium ulcerans*-specific T-cell cytokines for diagnosis of Buruli ulcer disease and as potential indicator for disease progression." PLoS Negl Trop Dis 11, no. 2 **(2017)**: e0005415.
- Linda Batsa Debrah, Norman Nausch, Vera Serwaa Opoku, Wellington Owusu, Yusif Mubarik, **Daniel Antwi Berko**, Samuel Wanji, Laura Layland, Achim Hoerauf, Marc Jacobsen, Alexander

Yaw Debrah. "Epidemiology of *Mansonella perstans* in the middle belt of Ghana." Parasites & Vectors 10, no. 1 **(2017)**: 15.

Conferences/Workshops/Seminars

- **Poster Presentation**, **5th European Congress of Immunology**, September 2 – 5, 2018 in Amsterdam, The Netherlands
- **Participant**, American Association of Immunologist Introductory Course in Immunology, 9th-14th July, Long Beach, California (USA)

MR. KENNETH BENTUM OTABIL

Research Activities/Interests

- Parasites and Vectors of Neglected Infectious Diseases
- Parasitic Enzymes as Novel Therapeutic Targets for Treatment of Onchocerciasis and Lymphatic Filariasis
- Xenomonitoring of Onchocerciasis and Lymphatic Filariasis

Publication(s)

- **Otabil, K.B**., Gyasi, S.F., Awuah, E., Obeng-Ofori, D., *et al* (2019). Prevalence of onchocerciasis and associated clinical manifestations in selected hypoendemic communities in Ghana following long-term administration of ivermectin. *BMC Infectious Diseases* 19(1);doi: 10.1186/s12879-019-4076-2
- **Otabil, K.B.,** Gyasi, S.F., Awuah, E., Obeng-Ofori, D., *et al* (2018). The Search for an Efficient Black Fly Trap for Xenomonitoring of Onchocerciasis. *Journal of*

Parasitology Research. Volume 2018: 5902367; https://doi.org/10.1155/2018/5902367.

- Gyasi, S.F., Boamah, B., Awuah, E., **Otabil, K.B.** (2018). A Perspective Analysis of Dams and Water Quality: The Bui Power Project on the Black Volta, Ghana. *Journal of Environmental and Public Health*. Volume 2018; 6471525, https://doi.org/10.1155/2018/6471525

Conferences/Workshops/Seminars

- **Participant**, workshop on skills development in proposal Writing, organized by the Pro Vice-Chancellor in collaboration with the Quality Assurance and Planning Unit of the University of Energy and Natural Resources, Sunyani, Ghana, 24th May, 2019
- **Participant**, workshop on Enhancing your scientific writing skills for academic excellence, organized by Ghana Science Association in collaboration with University of Energy and Natural Resources, Sunyani, Ghana, 28th March 2019
- **Participant,** workshop/course on design and analysis of qPCR experiments; pitfalls and damage control, AMC Graduate School, University of Amsterdam, The Netherlands, 18th-20th February, 2019
- **Presenter,** seminars in Medical Microbiology, Department of Medical Microbiology of the Academic Medical Center, University Medical Center, University of Amsterdam, The Netherlands, 7th February, 2019
- **Presenter,** seminars in Medical Microbiology, Department of Medical Microbiology of the Academic Medical Center, University Medical Center, University of Amsterdam, The Netherlands, 24th January, 2019
- **Participant,** seminars in Medical Microbiology, Department of Medical Microbiology of the Academic Medical Center, University

Medical Center, University of Amsterdam, The Netherlands, 10th January, 2019.

- **Participant,** workshop on developing the culture of publication and how to prepare a manuscript for publication, organized by the University of Energy and Natural Resources, University Auditorium, Sunyani, 1st March 2018.
- **Participant,** workshop for capacity building in curriculum development to mount new programmes – NCTE and NAB requirement, UENR Auditorium, Sunyani, 27th to 28th September, 2018.

Outreach Programmes/Extension Services

- **Peer Reviewer**, BMC Infectious Diseases (journal), USA
- **Peer Reviewer**, PLOS ONE (journal), USA, 2019-present
- **Peer Reviewer**, PLOS Neglected Tropical Diseases (journal), USA, 2019-present
- **Peer Reviewer**, Russian Open Medical Journal, Russia, 2013-present
- **Associate Co-ordinator (Campus Pastor)**, Deeper Life Campus Fellowship, UENR, Sunyani 2018- present

MISS DORICE AKOSUA SERWAA BERKOH

Research Interests/Areas

- Effect of vegetable oil consumption on type 2 diabetes.
- Medicinal plants and effects on diabetes.
- Diet and Nutrition
- Cancers and Lymphomas
- Neglected tropical diseases
- Other non-communicable diseases

Publications

- R. A. Dickson, B.K. Harley, **D. Berkoh**, R. A. Ngala, N.A. Titloye and T. C. Fleischer. (2016), Antidiabetic and Haematological Effects of Myrianthus arboreus P. Beauv. in Streptozotocin-Induced Diabetic Rats, International Journal of Pharmaceutical Sciences, Vol 7(12):4812-4826.

Workshops/Conferences

- Participant: Workshop on "Good Assessment Practices in Higher Education", organized by the Quality Assurance and Planning Unit, UENR at Shiela's Lodge, Fiapre from 16th January, 2019 to 17th January, 2019.
- Participant: Workshop on "Enhancing your Scientific Writing Skills for Academic Excellence", organized by the Ghana Science Association, Sunyani Chapter in collaboration with the Office of the Pro-Vice Chancellor, UENR at the French Lab, UENR on 28th March, 2019.
- Participant: Workshop on "Developing the culture of publication and how to prepare a manuscript for publication", organized by the Office of the Pro-Vice Chancellor, UENR-Sunyani at the UENR Auditorium on 1st March, 2018.
- Participant: Seminar and Official launching of the Women in Science, Technology, Engineering and Mathematics Ghana (WiSTEMGh), organized by the KNUST branch of WiSTEMGh at the Great Hall, KNUST on 5th October, 2018.
- Delegate: Conference- 25th OWSD Anniversary Ghana Chapter Celebration on the theme "OWSD @ 25: Setting the stage for Achieving the SDGs", organized by OWSD KNUST chapter at the

Amonoo-Neizer Conference Centre, KNUST from 8th November, 2018 to 9th November, 2018.

MR. BISMARK OFOSU-BAMFO

Research Activities/Interests

- Tropical forest ecology
- Plant biodiversity conservation
- Ethnobotany and ethnomedicine
- Forest ecosystem studies
- Bioquality assessments and monographs
- Ecosystem services assessment and valuation
- Studying plant community attributes response to climate and land use changes
- Assessing direct impact of forest governance policies on forest biodiversity enhancement

Conferences/Workshop/Seminars

- Participant: Faculty of Biosciences Seminar on "Internationalization of Career Profile for Academics" and "New guidelines for Thesis Examination." Held on 10th October, 2018, KNUST, Kumasi.
- Participant: 1st West African Regional Workshop on Oxidative Stress and Immunohistochemistry techniques at the Department of Biochemistry and Biotechnology, KNUST organised in collaboration with the School of Veterinary Medicine, University of Ibadan, Nigeria (11th and 12th September, 2018).

MR. ALBERT HENYO

Research Activities/ Interests

- Adult health issues in nursing.
- Coping patterns of patients with non – Communicable diseases (Diabetes and Hypertension).
- Client satisfaction with nursing care.
- Challenges associated with teaching and learning in nursing

Outreach Programmes/Extension Service

- Health Educator: Education on Mental Health and Family Planning under the Presbyterian Primary Health Care Programme (Funded by Ghana Health Service, Dormaa Municipal).
- Participant: Preparation of UENR Nursing curriculum
- Preacher: Deeper life Campus Fellowship (UENR)

MR. ATINGA BA-ETILAYOO

Research Activities/Interests

- Dermatoglyphics and its relationship to our innate ability
- Client satisfaction of nursing care
- Human identification and variation
- Morphological study of human skeletal remains
- Evidential remains identification in crime scene

Publication(s)

- Twum Barimah, **Atinga Ba-Etilayoo**, Ofori E.K, Anim-Sampong S., (2019), Sonographic Findings of Non-Alcoholic Fatty Liver Diseases

among Diabetic Subjects Attending a District Hospital in Ghana *International Journal of Research in Medical and Health Sciences*, Vol. 33 (101), (*accepted for publication*)

Conferences/Workshop/Seminars

- **Participant**, Enhancing Healthcare and Forensic Science Research-the Role of the Anatomist, Anatomical Society of Ghana, Amonoo-Neizer IDL Conference Center, KNUST, Kumasi, 28th -30th June., 2019
- **Participant**, Good Assessment Practices in Higher Education: Improving Teaching and Learning (University of Energy and Natural Resources), Sheila's Executive Hotel, Sunyani, 16th-17th January, 2019.
- **Presenter**, Dermatoglyphics and academic achievement, Anatomical Society of Ghana, University of Ghana Medical School, Korle Bu, 8th -10th Sept., 2017
- **Presenter**, Dermatoglyphics and academic achievement, 5th AfriNEAD & 7th College of Health Sciences and Scientific Conference, Kwame Nkrumah University of Science and Technology, Kumasi, 7th-9th August, 2017

Outreach Programmes/Extension of service

- **Co-ordinator,** Health outreach on community physiotherapy in Brong Ahafo Region, 7th-19th May, 2018.

MR. DAVID NTIAMOAH OFOSU

Research Activities/ Interests

- Coagulation and haemostasis with emphasis on Haemophiliac
- Malariology and malaria microscopy
- Haematological Malignancies

Publication(s)

- Ofosu, D.N., Opoku-Okrah, C., Bam, V. and Segbefia, S.P., 2019. Evaluation of the Diagnostic Value of Ret-He among Sickle Cell Disease Children with Iron Deficiency Anaemia on Haematinics. Asian Hematology Research Journal, pp.1-7.
- Ofosu, D.N., Mensah, O.A., Boateng, L.A., Anane, K. and Owiredu, E.W., 2019. Reference Intervals of Prothrombin Time and Activated Partial Thromboplastin Time and Their Association with Age among Healthy Adults in Kumasi, Ghana. Asian Hematology Research Journal, pp.1-8.
- Otchere Addai-Mensah, Daniel Gyamfi, Richard Vikpebah Duneeh, Kwabena O. Danquah, Max E. Annani-Akollor, Lillian Boateng, Eddie-Williams Owiredu, Francis A. Amponsah, Edward Y. Afriyie, Renate Asare, and David Ntiamoah Ofosu. 2019: Determination of Haematological Reference Ranges in Healthy Adults in Three Regions in Ghana. BioMed Research International, Vol 2019, pg1-6.https://doi.org/10.1155/2019/7467512
- Addai-Mensah, O., Gyamfi, D., Amponsah, F.A., Annani-Akollor, M.E., Danquah, K.O., Boateng, L., Owiredu, E.W., Afriyie, E.Y., Duneeh, R.V., Asare, R. and Ofosu Ntiamoah, D., 2019. Antierythropoietin Antibody Production Is Not Associated with Malaria and Malaria-Related Anaemia in Humans. The Scientific World Journal, 2019.

- David Ntiamoah Ofosu, Mr, Clement Opoku-Okrah, Prof, Victoria Alorm Bam, Dr, (2019). The Level And Effect Of Haemoglobin F On Sickle Cell Anaemia Among Selected Sickle Cell Disease Patients In Ashanti Region, Ghana. (In press/production)

Conferences/Workshop/Seminars

- Facilitator, Impact Malaria Programme, Malaria Diagnostics Refresher Training, by National Malaria Control Programme, Tyco City Hotel, Sunyani, 27th May-31st May, 2019
- Participant, National Competency Assessment on Malaria Microscopy (NCAMM) by Ghana Health Service and National Malaria Control programme, February 2019
- Assessor, National Accreditation Board for Professional and Technical Examinations, NABPTEX, for Afia Kobi Medical Laboratory Program, February, 2019

Outreach Programmes/Extension of service

- Supervisor, Outreach Training and Supervisory Support, for Ashanti and Brong Ahafo Regional laboratory facilities, USAID PMI, March – April 2019

MS. DIANA BAAFI

Research Activities/Interests

- Adolescent reproductive health
- Maternal and child health
- Palliative Health/oncology
- Pain Management

Publication(s)

- Asare BYA, Preko JV, **Baafi D**, Dwumfour-Asare B. "Breastfeeding practices and determinants of exclusive breastfeeding in a cross-sectional study at a child welfare clinic in Tema Manhean, Ghana. BMC International Breastfeeding Journal 2018; 13:12 https//doi.org/10.1186/s13006-018-0156-y
- Yeboah-Asiamah B., Yirenya-Tawiah D., **Baafi D**., Ackumey M. M. (2017). "Perceptions and knowledge about prostate cancer and attitudes towards prostate cancer screening among male teachers in the Sunyani Municipality, Ghana", African Journal Urolology 2017;23(3):184-191 http://dx.doi.org/10.1016/j;afju.2016.12.003

Conferences/Workshops/Seminars

- Participant- Workshop on "Enhancing The Professional Development Of The Higher Education Teaching Staff", organized by Centre For Teaching Support, University of Cape Coast School of Educational Development and Outreach, College of Health and Wellbeing, Kintampo, 2nd – 4th December, 2017
- Participant-Trainers Workshop on Lactation Management and Baby and Mother Friendly Hospital Initiatives organized by Family Health Division of Ghana Health Service and UNICEF, Sky Plus Hotel, Ho, 19th – 23rd September, 2016

Outreach Programmes/Extension Services

- Examiner for Ghana Nurses and Midwives Council licensing Examination, July, 2016 - To Date

- Chairperson - Ghana Registered Nurses and Midwives Association, Sunyani West Chapter -March, 2016 To Date
- Co-ordinator - Baby Friendly Hospital Initiative, Sunyani Municipal Hospital, June 2016 – July 2018

MS. VINCENTIA SARFO-BROBBEY

Research Activities/Interests

- Reproductive health services and its relationship with maternal and child health
- Postpartum contraception

Conferences/Workshops/Seminars

- Enhancing your Scientific Writing Skills for Academic Excellence, (Ghana Science Association), University of Energy and Natural Resources, Sunyani, 28th March, 2019
- Professional Development Interactive Seminar, (CIRCLE), University of Energy and Natural Resources, Sunyani, 21st - 22nd February, 2019
- Evidence-based Specialist Nursing and Midwifery Practice: Accelerating Effective Leadership for Universal Health Coverage, (Ghana College of Nurses and Midwives), Pentecost Convention Centre, Gomoa Fetteh, 25th- 28th November, 2018

Outreach Programmes/Extension of Services

- Facilitator, Ghana College of Nurses and Midwives in Specialist Paediatric Nursing, 2017 - to date
- Facilitator, University of Ghana Distant Education, Bachelor of Science in Nursing, 2015 - to date
- Examiner, Nursing and Midwifery Council of Ghana, 2008 - to date

DR (MRS) SANDRA ABANKWA KWARTENG

Research Activities/Interests

- Medical Entomology
- Parasites and vectors of diseases in humans in low and middle-income countries
- Zoonotic diseases
- Susceptibility of the *Anopheles* mosquito to insecticides

Publication(s)

- Agyemang, A.N., Badu K., **Baffour-Awuah, S**., Owusu-Dabo, E., Biritwum, NK., Garms, R., Kruppa, T.F. (2018). Evaluation of onchocerciasis control in the Upper Denkyira East Municipal in the forest area of Ghana: Responses of participants and distributors to the CDTI programme. *Acta Tropica*. 185, p 357-362.
- **Baffour-Awuah, S**., Annan, A. A., Maiga-Ascofare, O., Dieudonné, S. D., Adjei-Kusi, P., Owusu-Dabo, E., & Obiri-Danso, K. (2016). Insecticide resistance in malaria vectors in Kumasi, Ghana. *Parasites & Vectors*, *9*, 633. http://doi.org/10.1186/s13071-016-1923-5.

- Amegashie, E.A., Owusu-Dabo, E., Salifu, S.P., Awuah, A.A.A., **Baffour-Awuah, S**., Addofoh, N., Annan, A. and Winter, C.H. (2016). Sero-prevalence and occupational risk factors for Brucella infection among slaughterhouse workers and butchers in Kumasi, Ghana. *Journal of Epidemiological Research*, *3*(1), p.17.
- Dogbe, J., Owusu-Dabo, E., Edusei, A., Plange-Rhule, G., Addofoh, N., **Baffour-Awuah, S**., Sarfo-Kantanka, O., Hammond, C. and Owusu, M. (2016). Assessment of prison life of persons with disability in Ghana. *BMC international health and human rights*, *16*(1), p.20.

Conferences/Workshops/Seminars

- **Mentee**, Professional Development Interactive Seminar, UNER, Sunyani, Ghana, 28th February 2019
- **Participating Lecturer,** Good Assessment Practices in Higher Education, UNER, Sunyani, Ghana, Sunyani, Ghana, 16th &17th January 2019
- **Member,** OWSD at 25 - Setting the Stage for Achieving the SDGs, KNUST, Kumasi, Ghana, 8th to 9th November 2018
- **Participant**, First aid course, Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) Training, Kumasi, Ghana, 2nd July 2013 & 11th May 2018
- **Participant,** 10th Ghana Biomedical Convention- A New Era of Biomedical Research and Development in West Africa, Convention of Biomedical Research, Ghana (CoBReG), Accra, Ghana, 26th to 28th July 2017

- **Participant,** Research Protocol Development USAID/Ghana Evaluate for Health Project Workshop, Kumasi-Ghana, 3rd to 4th July 2017
- **Participant,** Research Project Management and Contract Negotiations USAID/Ghana Evaluate for Health Project Workshop, Kumasi-Ghana, - 19th to 20th June 2017
- **Participant,** Introduction to Clinical Research and Development Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) Workshop, Kumasi, Ghana, 15th to 26th May 2017
- **Participant,** Knowledge Management and Knowledge Translation**,** USAID/Ghana Evaluate for Health Project Workshop, Kumasi-Ghana, 27th to 28th February 2017

Outreach Programmes/Extension of Services

- **Member**, Women In Science, Mathematics, Engineering And Technology (STEM), UENR, Local, Ghana
- **Member**, Organisation of Women in Science in Developing countries (OWSD)
- **Member**, Ghana Science Association, Sunyani Chapter
- **Member**, Convention For Biomedical Research Ghana (COBReG), Ghana
- **Preacher**, Trinity Congregation, Presbyterian Church Of Ghana, Sunyani
- **Leader**, Bible Studies, Trinity Congregation, Presbyterian Church Of Ghana, Sunyani

MR. ASAMOAH AKWASI

Research Activities/Interests

- Immuno-Haematology.
- Histopathology and Cytopathology.
- Environmental and Clinical Microbiology.
- Prevalence and distribution of the different species of malaria parasites.

Conferences/Workshops/Seminars/Webinars

- Participant: Research Ethics for Successful Graduate Studies, University of Energy and Natural Resources, Sunyani, 5th July, 2018.
- Participant: HPLC Technique and Results Interpretation, Haematology Unit-– Komfo Anokye Teaching Hospital, Kumasi, 26th April, 2016.
- Participant: Malaria Diagnostic Training, Haematology Unit- Komfo Anokye Teaching Hospital, 10th March, 2016.
- Participant: Concepts of Cell Count and Prospects After Internship, The Research and Development Unit – Komfo Anokye Teaching Hospital, Kumasi, 3rd February, 2016.
- Participant: A Short Course on Ebola Diagnostic Training At K.C.C.R, K.N.U.S.T- Kumasi, 21st-23rd January, 2016.

Extension Services

- Biomedical Scientist: Clinical Diagnostic Laboratory, University of Energy and Natural Resources, Sunyani

BANLEMAN BANAN (MISS)

Research Activities/Interests

- Microbiology(Bacteriology)
- Quality control in Histopathology
- Biomedical Engineering
- Chemical pathology & Haematology

Conferences/Workshops/Seminars

- Participant: National Sensitization and Dissemination of Health of Health Professions Regulatory Bodies ACT(857:2013), Health Institutions and Facilities ACT(829:2011) and AHPC Approved CPD Guidelines Workshop, organized by Ghana Association of Medical Laboratory Scientists (GAMLS) in partnership with Ghana Federation Of Allied Health Professions (GFAHP), Allied Health Professions Council (AHPC) and Health Facilities Regulatory Agency (HEFRA), Sunyani Technical University, Sunyani, 12th January, 2018

SCHOOL OF AGRICULTURE AND TECHNOLOGY



SCHOOL OF AGRICULTURE AND TECHNOLOGY

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 planning and sustainability
- Department of Geographic Science

Student population

Year One (Level)	**Male**	**Female**	**Total**
LEVEL 100	129	69	**198**
LEVEL 200	141	47	**188**
LEVEL 300	101	16	**117**
LEVEL 400	107	12	**119**
PhD/MPhil/MSC./MBA	60	7	**67**
GRAND TOTAL	**538**	**151**	**689**

Activities of SOAT over the Past Year

University Farm: The School has cultivated about twenty-acre maize Demonstration/Model farm used for training of students and farmers within and outside the Dormaa Ahenkro area. The farm is also envisaged

to serve as the demonstration farm for the planting for food and jobs program initiated by the current Government of Ghana. About two acres of land is currently being used for the cultivation of green pepper, cabbage, carrots and lettuce.

In the long term, the model farm will focus on the following:

- Begin with the cultivation of perennial crops e.g. cocoa, citrus, cashew and oil palm. At this stage also, effort will be devoted to seeds and seedling production for market.
- The model farm will be expanded to include longer term capital intensive production activities such a pigs, grasscutter, small ruminants, foreign security dogs for sale, slaughter house and meat processing and Agriculture Technology and Dissemination Centre will also be established.

Top-Up programme: The School started a Degree Top-Up programme for Diploma and certificated students in the 2015/2016 academic year to enable them fulfil their academic ambitions of obtaining the B.Sc. in Agriculture degree. The students admitted are workers and professionals in nature.

Future Plans

The School intends to rear small ruminant including pigs, cows, goats, poultry and foreign security dogs. The School intends to expand its current 20-acre maize farm and two acres vegetable production at the School's demonstration farms to a substantial size. The School has also won Alexander von Humboldt Foundation, award from Germany within the

Research Group Linkage Programme, Research cooperation with the Humboldt-Universität zu Berlin with funding in the amount of **54,990 EUR**). Part of the funding will be used for the construction of a functional beneficial insect rearing laboratory at the School of Agriculture and Technology, Dormaa Ahenkro Campus of the University of Energy and Natural Resources, Ghana. The building will be used as a preservation capacity and serve as database of beneficial insects of stored product pests in the different agro-ecological zones of Ghana where grains are produced and stored.

DEPARTMENT OF HORTICULTURE AND CROP PRODUCTION

The Department of Horticulture and Crop Production offers undergraduate level programme leading to the award of BSc (Hon.) degree in Agriculture with options in Horticulture, Crop Production and Animal Production and Health. We also offer Diploma in Agriculture. All our undergraduate programmes are run on regular and as well as on weekend basis (top-up only). At the postgraduate level, we offer MSc/MPhil/PhD degrees in Crop Science with options in Agronomy, Plant Pathology, Postharvest Technology and Entomology.

The breadth of expertise that we have also facilitates our involvement in large scale research activities both at the national and international levels. Our over 2,000 acres of land provides us the opportunity to set-up demonstration, research and commercial farms, laboratories and a conducive learning environment. We provide expertise that informs sustainable management policies to support the agricultural and food

industries in Ghana.

The Department is also currently mentoring and having administrative oversight for the Department of Animal Production and Health and the Department of Food Science and Technology.

Activities over the Past Year

Major activities undertaken within the Department in the past year include:

- Expansion of school farm activities with the production of 1000 broiler birds.
- Partnership with Ghana Standards Authority (GSA) on the National Aflatoxins Sensitization and Management (NASAM) project.
- Partnership with researchers at the University of Otago to undertake research on "Assessing the efficacy of traditional lactic fermented milk product, *nunu*, as a natural probiotic to promote recovery from diarrhoea in children below five years of age (5) in Ghana" through the OGHI seed grant programme for emerging researchers.
- Construction of Alexander von Humboldt entomology laboratory in progress.

Future Plans

The Department in the near future intends to:

- Set-up technology technology transfer centre to provide continuous training on new technologies to farmers and food/feed processors on Good Agricultural and manufacturing practices.

- ❖ Expand its farming activities to include non-traditional agriculture such as apiculture and mushroom culture.

Teaching Staff

There are two Senior Lecturers, one adjunct Professor, ten Lecturers, one Assistant Lecturer and two Senior Research Assistants in the Department. Their names and qualifications are given in the table below.

Name	Qualification	Designation	Area of specialization
James Owusu-Kwarteng	PhD,(Ghana/Copenhagen), MPhil (Ghana), BSc (Tamale)	Snr. Lecturer/HoD	Food Microbiology
Daniel Obeng-Ofori	PhD (Cambridge)	Professor	Agronomy, Entomology
Charles Adarkwah	PhD, MSc (Germany), BSc (UCC)	Snr. Lecturer/Dean	Entomology, Crop Protection
Samuel K. Asomaning	PhD, MPhil, BSc (Ghana)	Lecturer	Soil Science
Jacob P. Anankware	PhD (Kumasi) MPhil (Ghana), BSc (Tamale)	Lecturer/ post-graduate Coordinator	Entomology
Paa Kwesi Bordoh	PhD (Nottingham), MSc (Jerusalem), BSc (Tamale)	Lecturer	Postharvest Biotechnology
Francisca A. Ansah	PhD (Italy), MPhil, BSc (Ghana)	Lecturer	Postharvest Science & Technology
Patrick Norshie	PhD (UK), MSc (Ghent), BSc (Kumasi)	Lecturer	Nematology, Insecticide Science
AbdulaiMuntala	PhD (Turkey), MSc (Ibadan), BSc (Tamale)	Lecturer	Crop Protection
Kwadwo Gyasi Santo	PhD, MSc (Kumasi), BSc (UCC)	Lecturer	Agronomy
AfrehNtiamoah	PhD (China), MSc (Germany), BSc (Kumasi)	Lecturer	Soil Fertility Management and Climate Change

Publication(s)

Khalid Abdul-Aziz	PhD, MSc (Kumasi), BSc (UCC)	Lecturer	Soil Science
Kwasi Adusei-Fosu	PhD (Nottingham)	Lecturer	Plant Biotechnology
Esther F. Donkor	MPhil (UEW), MSc (Ethiopia), BEd (UEW)	Assistant Lecturer	Agronomy, Plant Breeding
Samuel Novor	MPhil (Sunyani)	Senior Research Assistant	Agronomy
Remember R. Adjei	BSc (UCC)	Senior Research Assistant	Plant Breeding

DR. JAMES OWUSU-KWARTENG

Research Activities/Interests

- Value added processing of traditional African fermented foods
- Probiotics, prebiotics and Health
- Food safety

Publication(s)

- Johansen, P., **Owusu-Kwarteng, J**., Parkouda, C., Padonou, W.S., Jespersen, L. Occurrence and importance of yeasts in indigenous fermented food and beverages from sub-Saharan Africa. *Frontiers in Microbiology* (Accepted for publication).
- Agyei, D., **Owusu-Kwarteng, J**., Akabanda, F., Akomea-Frimpong, S. (2019). Indigenous African fermented dairy product: Processing technology, microbiology and health benefits. *Critical Reviews in Fo.od Science and Nutrition*, Doi: 10.1080/10408398.2018.1555133.
- **Owusu-Kwarteng, J**., Wuni, A., Akabanda, F., Donkor, A-M., Jespersen, L. (2018). Prevalence and characteristics of *Listeria monocytogenes* isolates in raw milk, heated milk and nunu, a

spontaneous fermented milk beverage, in Ghana. *Beverages* 4(2), 40. doi:10.3390/beverages4020040.

Conferences/Workshops/Seminars

- Akabanda F., **Owusu-Kwarteng, J**., Wuni, A., Tano-Debrah, K. (2018). Virulence potential and antibiotic resistance of shiga toxigenic *Escherichia coli* (STEC) isolates from raw cow milk in Ghana. Poster presentation at 26th International ICFMH Conference - FoodMicro 2018 held at Freie Universität Berlin, Germany, from September 3-6, 2018.
- **Owusu-Kwarteng, J**., Akabanda, F., Donkor, A.M., Tano-Debrah, K. (2018). Prevalence and characteristics of shiga-toxigenic *Escherichia coli* (STEC) isolates in raw cow milk from agro-pastoral farms in Ghana. Poster presentation at International Association of Food Protection Annual Meeting-2018 held in Salt-Lake city, Uttah, USA, from July 8-11, 2018.

DR. CHARLES ADARKWA

Research Activities/Interests

- Integrated pest management and biological control of arthropod pests.
- Biology, behaviour and population dynamics of stored-product arthropod pests and their natural enemies and to use the information acquired to optimize pest management strategies.

- **Adarkwah, C**., Obeng-Ofori, D., Opuni-Frimpong, E., Ulrichs, C. &Schöller M. (2019). Predator-parasitoid-host interaction: biological control of *Rhyzoperthadominica* and *Sitophilus oryzae* by a combination of *Xylocorisflavipes* and *Theocolax elegans* in stored cereals. *EntomologiaExperimentalis et Applicata* 1–11, 2019, doi: 10.1111/eea.12760.

- Tetteh, N. A. O., Ulrichs, C., Huyskens-Keil, S., Inga M., Amaglob, NK., Oduro in **Adarkwah, C**., Obeng-Ofori, D., Förster N., (2019). Effects of harvest techniques and drying methods on the stability of glucosinolates in *Moringa oleifera* leaves during post-harvest. *Scientia Horticulturae* 246,998–1004.

- **Adarkwah, C**., Obeng-Ofori, D., Prozell, S., Asante, V., HörmannV., Ulrichs C., Schöller, M. (2018). Toxicity and protectant potential of *Piper guineense* (Piperaceae) and *Senna siamea* (Fabaceae) mixed with diatomaceous earth for the management of three major stored product beetle pests. *International Journal of Pest Management*. DOI: 10.1080/09670874.2017.1346327.

Conferences/Workshops/Seminars

- **Adarkwah C.,** Anankware J.P., Obeng-Ofori D., Ulrichs C., Schöller M. (2018). Insect infestation and quality loss of major stored products in Ghana. DOI 10.5073/jka.2018.463.211. In the 12th International Working Conference on Stored Product Protection (IWCSPP) in Berlin, Germany, October 7-11, 2018, Julius-Kühn-Archiv 463, 972.

DR. PAA KWESI BORDOH

Research Activities/Interests

- Postharvest Biotechnology of fruits and vegetables.

Publication(s)

- Adlan, Nur. A., **Bordoh, P.K.**, Ahmad A. 2018. Dried *Garcinia atroviridis* crude extracts incorporated with Gum Arabic coating controlled postharvest anthracnose diseases in dragon fruits. *Pertanika Journal of Tropical Agriculture Science* 41 (4), 1643-1658.

DR. FRANCISCA ABA ANSAH

Research Activities/Interests

- Postharvest Science and Technology
- Postharvest Physiology perishables

Publication(s)

- **Ansah, F. A**., Amodio, M. L., De Chiara, M. L. V., Colelli, G. (2018). Effects of equipment and processing conditions on quality of fresh-cut produce. *Journal of Agricultural Engineering* 49, https://doi.org/10.4081/jae.2018.827

DR. JACOB P. ANANKWARE

Research Activities/Interests

- Commercial Insects
- Entomophagy

Publication(s)

- Ojinnaka, M.C., Madulu, D.S, **Anankware, J.P.**, Odinkemere-Davidson, V.N. (2018). Formulation, proximate analysis and quality evaluation of cocoyam–wheat cake enriched with edible palm weevil (*Rhynchophorusphoenicis*). *ACTA Scientific Nutritional Health*, 2 (11), 19-25.
- **Anankware, P. J**., Ayizanga A. R., Opoku O., and Obeng-Ofori D. (2018). Potential of black soldier fly (*Hermetiaillucens*) as a replacement for fish/soybean meal in the diet of broilers. *Global Advanced Research Journal of Agricultural Science* 7(8), 272-280.
- 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* 6(3), 680-694.

Conferences/Workshops/Seminars

- Adarkwah, C., **Anankware, J.P.**, Obeng-Ofori, D., Ulrichs, C., SchÖller, M. (2018). Insect infestation and quality loss of major stored products in Ghana. Proceedings of the 12th International Working Conference on Stored Product Protection (IWCSPP): in Berlin, Germany, October 7-11, 2018; Volume 1, DOI: 10.5073/jka.2018.463.211.

DEPARTMENT OF ANIMAL PRODUCTION AND HEALTH

The Department of Animal Production and Health was established as one of the Departments in the School of Agriculture and Technology in the 2014/2015 academic year. Currently, the Department offers an option in Animal production and Health in the 4-year BSc (Agricultural Science) programme. The option in Animal Production and Health has been designed to produce graduates who are versatile with the needed knowledge and skill to support the ever evolving and expanding livestock industry in Ghana and Africa. The department's current areas of specialization are Animal nutrition, Genetics and Breeding, Animal Health and Applied Feed Formulation. The Department is currently under the mentorship of the Department of Horticulture and Crop Production.

Activities over the Past Year

Major activities undertaken within the Department in the past year include:

- Expansion of school farm activities with the production of 1000 broiler birds.
- Partnership with Ghana Standards Authority (GSA) on the National Aflatoxins Sensitization and Management (NASAM) project.
- Partnership with researchers at the University of Otago to undertake research on "Assessing the efficacy of traditional lactic fermented milk product, *nunu*, as a natural probiotic to promote recovery from diarrhoea in children below five years of age (5) in Ghana" through the OGHI seed grant programme for emerging researchers.
- Construction of Alexander von Humboldt entomology laboratory in progress.

Future Plans

The Department in the near future intends to:

- ❖ Set-up technology technology transfer centre to provide continuous training on new technologies to farmers and food/feed processors on Good Agricultural and manufacturing practices.
- ❖ Expand its farming activities to include non-traditional agriculture such as apiculture and mushroom culture
- ❖ Develop and mount a separate degree programme in Animal Production and Health.

Teaching Staff

The Department currently has one Lecturer and three Assistants Lecturers. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialization
Ernest Darkwah Yeboah	MSc (China), BSc (Ghana)	Lecturer	Animal Nutrition, Feed Science, Nutritional Physiology
Yaw Oppong Frimpong	MSc (Kumasi), BSc (KNUST)	Assistant Lecturer	Human –Animal Zoonotic Interaction, Animal nutrition
Duodu Addison	MSc (Kumasi), B.Ed. (UEW)	Assistant Lecturer	Animal Breeding and Genetics
Christian Asumah	MSc (Kumasi), BSc (Tamale)	Assistant Lecturer	Animal Breeding, Applied Poultry Science

MR. YAW OPPONG FRIMPONG

Research Activities/Interests

- ❖ Human –Animal Zoonotic Interaction
- ❖ Animal nutrition

Publication(s)

- El-Duah, P., Meyer, B., Sylverken, A., Owusu, M., Gottula, L. T., Yeboah, R., Lamptey, J., **Frimpong, Y. O**., Burimuah, V., Folitse, R., Agbenyega, O., Oppong, S., Adu-Sarkodie, Y. and Drosten, C. (2019). Development of a whole-virus ELISA for serological evaluation of domestic livestock as possible hosts of human coronavirus NL63. *Viruses* 11 (43), 1-18.
- El-Duah, P., Sylverken, A., Owusu, Yeboah, R., Lamptey, J., **Frimpong, Y. O**., Burimuah, V., Antwi, C., Folitse, R., Agbenyega, O., Oppong, S. and Adu-Sarkodie, Y. (2019). Potential Intermediate Hosts for Coronavirus Transmission: No Evidence of Clade 2c Coronaviruses in Domestic Livestock from Ghana. *Tropical Medicine and Infectious Disease* 4, 34; doi: 10.3390/tropicalmed40100 34. 11pp
- Okai, D. B., Boateng, M., **Frimpong, Y. O**., Anane, E., MacAire, C. O. (2018). Origin and condition of pigs slaughtered at the Kumasi Abattoir Company Limited (KACL) at Kaase, Kumasi. *Ghanaian Journal of Animal Science* 9 (1), 44-48.
- Okai, D. B., Boateng, M., **Frimpong, Y. O**., MacAire, C. O., Anane, E. (2018). Trends in pig slaughtering at the Kumasi Abattoir Company Limited (KACL) from 2010 to 2015. *Ghanaian Journal of Animal Science* 9 (1), 108-111.
- Boateng, M., Okai, D. B., **Frimpong, Y. O**., Ntim, A., Acheampong, Y. S. (2018). Entomophagous response of albino rats to cockroach (*Periplaneta Americana*) meal. *Open Agriculture De Gruyter* 3, 220-225.
- Amoah, K. O., Boateng, M., Okai, D. B., **Frimpong, Y. O.** (2018). Anti-nutritional factors and their relevance to monogastric animal

agriculture in Ghana: Some important considerations. *Ghanaian Journal of Animal Science* 9 (2), 1-15.

MR. DUODU ADDISON

Research Activities/Interests

- Animal Breeding and Genetics
- Animal welfare
- Applied genetics

Publication(s)

- Arhin, E., Annor, S. Y., Kagya-Agyemang, J. K., **Addison, D**., Zagbede, G. A. (2018). Innovation for sexing guinea fowls (*Numida meleagris*) at day one of hatching. *Livestock Research for Rural Development* 30,157.
- **Addison, D.**, Annor-Serekye K., Kagya-Agyemang, J.G., Kyere, C. (2018). Influence of Strain on Production and Some other traits of indigenous guinea fowls (*Numida meleagris*) in Ghana. *Current Journal of Applied Science and Technology* 30, 1-7. 10.9734/CJAST/2018/44123.

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. Our programmes are designed to cover all business, economics and community development disciplines so that students will be able to apply concepts from these disciplines to agribusiness and allied industries. The main aim of our programmes 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.

Our innovative programmes, distinguished faculty and competitive students place the Department among one of the best in the provision of agribusiness, applied economics and community development education in the sub region.

Activities over the Past Year

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

- The Department in collaboration with the Agribusiness Students Association launched the maiden Departmental Biannual Newsletter titled '*The Agripreneur*'.
- An exchange programme between the University of Applied Forest Sciences in Rottenburg and the Department was actualised.
- Collaborative Research with scientist from University of Applied Forest Sciences Rottenburg on Regional Marketing of Agricultural Produce in South Western Germany; A nexus to improve the competitiveness of the Ghanaian poultry industry.
- Departmental members were part of the team that won two Social Development Fund (SDF) projectsontools for ensuring sustainable urban agriculture in the Sunyani municipality and project on advanced fire information system (afis) for farmers.

Future Plans

- Commencement of B.Sc. Agricultural Economics and Community Development by next academic year.
- Initiate several international exchange programmes between staff and students of the department and other universities.
- Develop special modules for training of communities around the University.
- Finally, the department is to create a centre for bridging the gap between academia and industry (Practical Mentorship) which will be called Centre for Agribusiness Research and Incubation (CARI).

Teaching Staff

The following are members of staff in the Department. Their names and qualifications are given in the table below:

Name	Qualification	Designation	Area of Specialization
Dr. Richard Kwasi Bannor	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

PROF. JOHN K. M. KUWORNU

Research Interests/Activities

- Agribusiness Management
- Agricultural Economics
- Agribusiness Marketing

- Agricultural Policy
- Climate Change Economics
- Food Security
- Commodity Futures Markets

Publication(s)

Book

- *Climate change and Sub-Saharan Africa*: *The Vulnerability and Adaptation of Food Supply Chain Actors*. **Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series onClimate Change and Society), 2019, ISBN:978-1-62273-265-4, 382 Pages.

Book Chapters

- Adu, D. T., **Kuwornu, J. K. M.** (2019). The Policy environment of climate change adaptation, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors*. **Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 1-25.
- Alhassan, S. I., Osei-Asare, Y. B., **Kuwornu, J. K. M.** (2019). Assessing the vulnerability of smallholder women rice farmers to climate variability in the Northern Region of Ghana: The livelihood vulnerability index approach, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors*. **Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 27-59.

- ❖ Alhassan, S. I., Osei-Asare, Y. B., **Kuwornu, J. K. M.** (2019). What factors influence farmers' vulnerability to climate change and variability? Empirical evidence from smallholder women rice farmers in the Northern Region of Ghana, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 131-155.
- ❖ Armah, A. R. N., Al-Hassan, R. M., **Kuwornu, J. K. M.** (2019). Impacts of participation in climate change projects on Ghanaian maize farmers' yields, income and resilience to climate shocks, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 157-171.
- ❖ Sadiq, M. A., Al-Hassan, R. M., **Kuwornu, J. K. M.** (2019). Vulnerability of smallholder maize farming households to climate variability in the Eastern Region of Ghana, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 173-189.
- ❖ Alhassan, S. I., **Kuwornu, J. K. M**., Osei-Asare, Y. B. (2019). A Multinomial Logit Analysis of Farmers' Adoption of Climate Variability Adaptation Strategies: The Case of Smallholder Women Rice Farmers in the Northern Region of Ghana, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 191-221.

- Amikuzuno, J., **Kuwornu, J. K.M**., Osman, D. T. (2019). Gender-based climate change impacts and adaptation strategies among smallholder farmers in Northern Ghana – What lessons for nationally-appropriate mitigation actions exist?, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 241-269.
- Adu, D. T., **Kuwornu, J. K. M**., Datta, A. (2019). Smallholder maize farmers' constraints to climate change adaptation strategies in the Brong-Ahafo Region of Ghana, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 271-287.
- **Kuwornu, J. K. M**., Adu, D. T. (2019). General discussion on the vulnerability and adaptation of food supply chain actors to climate change, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 289-319.
- **Kuwornu, J. K. M**. (2019). Conclusions and recommendations, In *Climate change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors.***Kuwornu, J. K. M.** (Ed.), Vernon Press, USA (Series on Climate Change and Society), pp. 321-328.

Journal articles

- Meangbua, O., Dhakal, S., **Kuwornu, J.K.M.** (2019). Factors influencing energy requirements and CO_2 emissions of households in Thailand: A panel data analysis. *Energy Policy*, 129, 521-531.
- Alhassan, I. Suhiyini, **Kuwornu, J.K.M**., Yaw B. Osei-Asare (2019). Gender Dimension of Vulnerability to Climate Change and Variability: Empirical Evidence of Smallholder Farming Households in Ghana, *International Journal of Climate Change Strategies and Management*, 11(2), 195-214.
- Parmar, I.S., Soni, P., **Kuwornu, J.K.M**., Salin, K.R. (2019). Evaluating farmers' access to agricultural information: Evidence from semi-arid region of Rajasthan state, India. *Agriculture*, 9(3), 60, 1-17. doi:10.3390/agriculture9030060
- Amevenku, F.K.Y., Asravor, R.K., **Kuwornu, J. K. M.** (2019). Determinants of livelihood strategies of fishing households in the volta Basin, Ghana. *Cogent Economics & Finance*, 7: 1595291, 1-15. https://doi.org/10.1080/23322039.2019.1595291
- Pandit, S.S., **Kuwornu, J.K.M**., Datta, A. Muhammad Yaseen, Anal, A.K. (2019). Analysis of marketing information sources among smallholder vegetable farmers. *International Journal of Vegetable Science*, https://doi.org/10.1080/19315260.2019.1609148
- Apipoonyanon, C., Szabo, S., **Kuwornu, J.K.M**., Ahmad, M. M. (2019). Local participation in community forest management using theory of planned behaviour: evidence from Udon Thani Province, Thailand. *European Journal of Development Research*, DOI: 10.1057/s41287-019-00219-1

- Martey, E., Kuwornu, J.K.M., Adjebeng-Danquah, J. (2019). Estimating the Effect of Mineral Fertilizer Use on Land Productivity and Income: Evidence from Ghana. *Land Use Policy*, 85, 463-475.
- Jitmun, T., **Kuwornu, J. K. M**., Datta, A., Anal, A. K. (2019). Farmers' perceptions of milk collecting centres in Thailand's dairy industry. *Development in Practice*, 10(2), 123 – 140.
- Sathapatyanon, J., **Kuwornu, J. K. M.** (2019). Assessment of the role of cooperative networks in the fruit supply chain in Thailand, *International Journal of Value Chain Management*, 10(1), 53-85.
- Sadiq, M.A., **Kuwornu, J.K.M**., Al-Hassan, R.M., Alhassan, S.I. (2019). Assessing Maize Farmers' Adaptation Strategies to Climate Change and Variability in Ghana. *Agriculture*, 9(5), 1-17.
- Gunawan, E., **Kuwornu, J.K.M**., Datta, A., Nguyen, L.T. (2019). Farmers' perceptions of the warehouse receipt system in Indonesia. *Sustainability*, 11(6), 1690, 1-21.
- Alhassan, S. I., Shaibu, M. T., **Kuwornu, J. K. M.** (2018). Is land grabbing an opportunity or a menace to development in developing countries? Evidence from Ghana, *Local Environment*, 23(12), 1121-1140.
- Alhassan, I. S., Shaibu, M. T., **Kuwornu, J. K. M**., Damba, O. T. (2018). Assessing smallholder women farmers' adaptive capacity to climate change and variability in the Northern Region of Ghana: A Composite Index Approach. *Journal of Energy and Natural Resource Management*, *Special Issue: Environment, Technology and Sustainable Development*, 1, 1-9.
- Alhassan, I. S., Osei-Asare, Y. B., **Kuwornu, J. K. M**., Shaibu, M. T. (2018). Indigenous and research-based adaptation strategies of

smallholder women rice farmers to climate variability in the Northern Region, Ghana. *Journal of Energy and Natural Resource Management, Special Issue: Agriculture, Natural Resources and Renewable Energy*, 1, 1-16.

- Osei-Asare, Y. B., Ansah, M. O., Mensah-Bonsu, A., **Kuwornu, J. K. M.** (2018). Effect of gold mining on total factor productivity of farmers: Evidence from Ghana, *Acta AgriculturaeSlovenica*, 111(2), 327-340.
- Alhassan, I. S. Shaibu, M. T., **Kuwornu, J.K.M**., Damba, O. T. (2018). Factors Influencing farmers' awareness and choice of indigenous practices in adapting to climate change and variability in Northern Ghana. *West African Journal of Applied Ecology*, 26(SI), 1 – 13.
- Anuman Chanthawong, A. Dhakal, S., **Kuwornu, J. K. M**., Farooq, M. K. (2018). Impact of Subsidy and Taxation Related to Biofuels Policies on the Economy of Thailand: A Dynamic CGE Modelling Approach, *Waste and Biomass Valorization*, 4(3), DOI 10.1007/s12649-018-0417-4
- Saqib, S. E., **Kuwornu**, **J. K. M**., Ali, U., Panezai, S., Rana, I. A. (2018). Price risk management using forward contracts: the case of farmers in Pakistan. *International Journal of Value Chain Management*, 9(3), 241-256.
- Sathapatyanon, J., **Kuwornu**, J. K. M., Shivakoti, G. P., Soni, P., Anal, A. K., Datta, A. (2018). The role of farmer organizations and networks in the rice supply chain in Thailand. *Journal of Agribusiness in Developing and Emerging Economies*, 8(3), 554-578.

- **Kuwornu, J. K.M**., Osei, E., Osei-Asare, Y. B., Porgo, M. (2018). Off-farm work and food security status of farm households in Ghana. *Development in Practice*, 28(6), 1-17.
- **Kuwornu, J. K. M**., Saqib, S. E., Moreno, M. L. (2018). Bargaining power, market risk, and coordination costs in the Thailand cassava starch marketing channel: A three stage principal-agent model and application. *International Journal of Value Chain Management*, 9(2), 166–186.
- **Kuwornu, J. K. M**., Oduro, E., Amegashie, D. P. K., Fening, K. O., Yangyouru, M., MacCarthy, D. S., Amoatey, C., Datta, A. (2018). Cost-benefit analysis of conventional and integrated crop management for vegetable production, *International Journal of Vegetable Science*, 24(6), 597-611.
- Shahab, S. E., **Kuwornu**, **J. K. M**., Ahmad, M. M., Panezia, S. (2018). Subsistence Farmers' Access to Agricultural Credit and its adequacy: Some Empirical Evidences from Pakistan, *International Journal of Social Economics*, 45(4), 644-660.
- Panichvejsunti, T., **Kuwornu, J. K. M**., Shivakoti, G. P., Grunbuhel, C., Soni, P. (2018). Smallholder farmers' crop combinations under different land tenure systems in Thailand: The role of flood and government policy. *Land Use Policy*, 72, 129-137.
- Porgo M., **Kuwornu, J. K. M.**, Zahonogo P., Jatoe, J. B-D., Egyir, I. S. (2018). Credit constraints and cropland allocation decisions in rural Burkina Faso, *Land Use Policy*, 70, 666-674.
- Suwansin, R., **Kuwornu, J. K. M**., Jourdain, D., Datta, A., Shivakoti, G. P. (2018). Salvaging mortgage loans and land title redemption

with revolving funds in Thailand, *Agricultural Finance Review*, 78(1), 2-24.

Outreach Programmes/Extension Services

- Curriculum Development in Sustainable Seafood and Nutrition Security for selected Asian and European Universities
- Member of the quality board, Curriculum Development for Sustainable Seafood and Nutrition Security, 11th-15th February 2019, University of Sterling, Scotland, UK.
- Member of the quality board, Curriculum Development for Sustainable Seafood and Nutrition Security, 5th-9th November 2018, Norwegian University of Science and Technology (NTNU), Trondheim, Norway.
- **Journal Editorial Review Board Member:** Asian Journal of Agriculture and Rural Development (AJARD), of The Asian Economic and Social Society (AESS).
- **Journal Editorial Review Board Member**: International Journal of Value Chain Management
- **Journal Referee Activities**; Agricultural and Food Science; Aquaculture Economics and Management; Agricultural Economics; World Applied Sciences Journal; Institute of Statistical, Social and Economic Research (ISSER) Technical Publication; Agricultural Finance Review; Asian Journal of Agricultural Extension, Economics & Sociology; Food Security; International Journal of Development and Sustainability; Agribusiness: An International Journal; Journal of Climate Change Strategies and Management; Development in

Practice; Land Use Policy; Acta AgriculturaeSlovenica; Operations Research Perspectives; Annals of Public and Cooperative Economics; Journal of Agribusiness in Developing and Emerging Economies.

Conferences/Workshops/Seminars

- **Kuwornu, J. K. M.** (2018). Climate Change adaptation – mitigation interactions in food systems in Africa with special reference to Sub-Saharan Africa: A systematic review. Learning on Climate Solutions - Knowledge synthesis in the social sciences for climate change assessments. 15-17 October 2018, *Mercator Research Institute on Global Commons and Climate Change*, Berlin, Germany.
- Discussant at the Workshop on Roadmaps for Disaster Resilience and Climate Change Adaptation in the CLMV countries, organized by the Economic Research Institute for ASEAN and East Asia, 30th August – 1st September 2018 - Siam Reap, Cambodia.

DR. R.K. BANNOR

Research Interests/Activities

- Supply and value chains of agricultural commodities
- Price analysis and forecasting,
- Agricultural and rural marketing
- Agricultural Intellectual property

- Human Resource Management
- Corporate Governance
- Small and micro enterprise development

Publication(s)

- Oppong-Kyeremeh, H., Creppy, P., &**Bannor, R. K.** (2019). Marketing outlets choice modelling for commercialisation analysis of smallholder rice producers in Ghana. *International Journal of Value Chain Management*, 10(2), 162-179.
- Wongnaa, C. A., Adams, F., **Bannor, R. K.,**Awunyo-Vitor, D., Mahama, I., Osei, B. A., ... &Ackon, A. (2019). Job creation and improved consumer health through commercialisation of tiger nut yoghurt: a willingness to pay analysis. *Journal of Global Entrepreneurship Research*, *9*(1), 4.
- **Bannor, R.K.,** Kumar, G.A.K., Oppong-Kyeremeh, H., and Wognaa, C.A. (2019).Adoption and Impact of Modern Rice Varieties on Poverty in Eastern India**.** *Rice Science, 26*(5).
- **Bannor, R.K**., Abele, S., Kyire, S.K. C. Oppong-Kyeremeh, H., and Mensah., E. (2019). Value Chains and Comparative Advantage Assessment of the Ghanaian Cashew Sector. *International Journal of Value Chain Management*, 10(3).
- **Bannor., R.K.,** Oppong-Kyeremeh, H., Wognaa, C.A. and Atwene, S. (2019). Influence of Non-Price Incentives on the choice of Cocoa Licensed Buying Companies in the Western North of Ghana. *Journal of Agribusiness in Developing and Emerging Economies*, 9(4).

Outreach Programmes/Extension Services

- **Editorial Board Member:** Indian Journal of Economics and Development published by Society of Economics and Development, Punjab-India.
- **Editorial Board Member:** Small Enterprises Development Management and Extension Journal published by Sage Publishers
- **Project Team Member**: Tree Farm Project by UENR, Resource Management Support Centre (RMSC), University of Amsterdam (UVA), Rural Development Youth Association (RUDEYA), 03/17-Date.
- **Consultant:** Feasibility study on hybrid mini-hydro – solar system for pilot project implementation in Ghana by CSIR – December 2018-February 2019
- **Marketing Committee Member**: Ghana Poultry Project, 2018- Date
- **Project Team Member:** Tools for ensuring sustainable urban agriculture in the Sunyani municipality. A Social Development Fund (SDF) Project ,2019- Date
- **Project Team Member:** SDF Project on advanced fire information system (afis) for farmers.
- **Member:** Brong Ahafo Research-Extension-Farmer Linkages Committee
- **Journal Referee Activities**: BIONFO Business Economics Journal/ International Journal of Agriculture Sciences published by BIONFO Publications; Food Security, The Science, Sociology and Economics of Food Production and Access to Food published by Springer; Agriculture and Food Security; Journal of Research in Marketing

and Entrepreneurship; and International Journal of Value Chain Management.

Conferences/Workshops/Seminars:

- **Participant**: UENR-ACU Professional Development Mentor and Mentee Workshop (held on 21st-28 February 2019), University of Energy and Natural Resources, Ghana.
- **Participant and Panellist**: 1st International Extension Congress: New Horizons of Extension: Challenges and Opportunities (held on 1-3 February 2018), ICAR-CIWA, Odisha, India.

MS. HELENA OPPONG-KYEREMEH

Research Interest/Activities

- Value Chain Analysis
- Marketing of Agricultural Produce
- Food Security
- Women Empowerment
- Poverty Research
- Rural Development and Sustainable Development Issues
- Climate Change

Publication(s)

- **Oppong-Kyeremeh, H.**, Creppy, P. and Bannor, R. K. (2019). Marketing outlets choice modelling for commercialisation analysis

of smallholder rice producers in Ghana. *International Journal of Value Chain Management*, 10(2), 162-179.

- Bannor, R.K.,Kumar, G.A.K., **Oppong-Kyeremeh, H.,** and Wognaa, C.A. (2019). Adoption and Impact of Modern Rice Varieties on Poverty in Eastern India**.** *Rice Science, 26*(5).
- Bannor., R.K., **Oppong-Kyeremeh, H.,**Wognaa, C.A. and Atwene, S. (2019). Influence of Non-Price Incentives on the choice of Cocoa Licensed Buying Companies in the Western North of Ghana. *Journal of Agribusiness in Developing and Emerging Economies*, 9(4).
- Bannor, R.K., Abele, S., Kyire, S.K. C. **Oppong-Kyeremeh, H.,** and Mensah., E. Value Chains and Comparative Advantage Assessment of the Ghanaian Cashew Sector (2019). *International Journal of Value Chain Management*, 10(3).
- **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., 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), 9-18.

Outreach Programmes/Extension Services

- **Participant/Panellist**- USAID Agriculture Development and Value Chain Enhancement (ADVANCE) Knowledge Management Forum on Economic Impact of Out-grower Business' agents: Fall Army Worm

(FAW) incidence, monitoring and management; Ability of the Out-grower Business (OB) to engage the end market, Sunyani – Ghana, 18-17th July 2018

- **Participant:** USAID - Agriculture Development and Value Chain Enhancement (ADVANCE) Project 6th Annual Pre-harvest Agribusiness Event- Sunyani-Ghana, October 2016.
- **Journal Referee Activities**: African Journal of Science, Technology, Innovation & Development published by Taylor and Francis.

Conferences/Workshops/Seminars

- **Participant**: UENR-ACU Professional Development Mentor and Mentee Workshop (held on 21st-28 February 2018), University of Energy and Natural Resources, Ghana.
- **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. 05/06/2017 - 23/06/2017, Wageningen, Netherlands.

DR. TEKUNI NAKUJA

Research Interest/Activities

- International trade policy
- Food markets
- Food safety and food security

Publication(s)

- **Nakuja, T.** and W.A. Kerr (2019). International trade and food security: Can public stockholding be dismissed? *International Journal of Food and Agricultural Economics*, 7(2), 91-106.

Outreach Programme/Extension Service

- Departmental Industrial Attachment Coordinator, University of Energy and Natural Resources

Conferences/Workshops/Seminars

- **Participant**: Ghana Export Promotion and Market Hub Awareness Raising Workshop (held on 13 December 2018), Eusbett Hotel, Sunyani -Ghana.
- **Participant**: Good Assessment Practices in Higher Education: improving teaching and learning workshop (held on 16th – 17th January 2019), Sheila's Executive Hotel, organised by University of Energy and Natural Resources, Sunyani.

DR. SAMUEL AFOTEY ANANG

Research Interest/Activities

- Agricultural production value chain
- Livelihoods and Rural Development
- International Trade
- Sustainable Agriculture
- Gender issues and empowerment
- Poverty Reduction research

Outreach Programmes/Extension Services

- 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

Conference/Workshop/Seminar

- **Participant**: Good assessment practices in higher Institutions of learning, UENR, Sunyani, 2019.

DR. NICHOLAS OPPONG MENSAH

Research Interests/Activities

- Agric Insurance and Risk Management
- Pensions
- Corporate social responsibility
- Marketing

- International Business and Trade

Publication(s)

- **Oppong, M. N.,**Commey V. and Bylon, A. B. (2018). The Nexus between Innovative Communication and Life Insurance Marketing.*Africa Development and Resources Research Institute Journal*, 27(4), 30-50.
- **Mensah, N. O.,** Yeboah, E., and Amartey, B. K. (2018), Credit Risk in Microfinance Institutions: Empirical Evidence from Accra Metropolis of Ghana. *Journal of Economics and Business*, 1(3), 234- 241.
- **Mensah N. O.,** Fialor S.C., Vitor, D. A., Yeboah, E. (2018**)** Agricultural Insurance in Ghana: An examination of Concepts, Structure and Challenges.; *Advance Research Journal of Multidisciplinary Discoveries,* 28(1), 01-08.

Outreach Programmes/Extension Services

- Departmental Postgraduate Coordinator, University of Energy and Natural Resources
- Internal Examiner for MPhil Social Forestry and Governance for Department of Forestry
  Science, University of Energy and Natural Resources.
- Supervisor of PhD theses at American Texila University Distance learning Programme.
- Board Member, Ideal Voice Theological Seminary, Awomaso, Kumasi
- Guest Speaker, 6th Graduation Ceremony of Ideal Voice Theological Seminary, Awomaso, Kumasi

- MSc/MPhil Thesis Supervision for Institute of Distance learning, KNUST

Conferences/Workshops/Seminars

- Chemical Society Conference held at UENR, Sunyani, Ghana on 7th-9th February 2019: Present as a Guest speaker On the Topic: Job Prospects and Career Guidance, The Modern Perspective of Employers and the Marketable Traits of Employees in Ghana
- Developing the culture of publication and how to prepare a manuscript for publication, CUCG-Sunyani, Ghana, 1st February 2018.

MR. ANTHONY DONKOR

Research Interest/Activities

- Optimization Techniques
- Profit maximization
- Reduction of cost of production
- Agribusiness and sustainable development issues

Publication(s)

Donkor, A., Darkwah, K., Appati, J., Gakpleazi, P., & Wisdom, N. (2018). Optimal Allocation of Funds for Loans Using Karmarkar's Algorithm: Capital Rural Bank, Sunyani-Ghana. *Journal of Economics, Management and Trade*, 1-13.

Outreach Programmes/Extension Services

- School of Agriculture and 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
- Integrated Science Team Leader for West African Examination Council, Brong Region, 2009 - Date

Conferences/Workshops/Seminars

- Good assessment practices in higher Institutions of learning, UENR, Sunyani, 2019.
- Developing the culture of publication and how to prepare a manuscript for publication, UENR-Sunyani, 2018

MR. FRANK OSEI TUTU

Research Interest/Activates

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

Outreach Programmes/Extension Services

- **Coordinator-** Departmental Projects and Seminar

DEPARTMENT OF PLANNING AND SUSTAINABILITY

The Department of Planning and Sustainability was established in 2018 to promote planning education in the University of Energy and Natural Resources. The Department seeks to promote a unified study of planning and sustainability science to produce graduates capable of driving the national and global sustainable development agenda, particularly in the built environment. The Department currently offers a 4-year degree programme leading to the award of BSc degree in Planning and Sustainability. The Department also runs a 2-year MPhil/MSc programme in Environmental Planning and Development.

Activities over the Past Year

The Department started its practical planning training workshop for students of BSc. Planning and Sustainability programme.
The Department also undertook community outreach programmes involving field studies in eight communities in the Dormaa Municipality.

Future Plans

The Department in the near future intends to work closely with local communities in the catchment area to produce community development/action plans to facilitate their development.

Teaching Staff

The Department currently has one Senior Lecturer and three Assistant Lecturers. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of specialization
Dr. Jonas Ayaribilla Akudugu	PhD(Bonn), MSc(KNUST) BA(UDS)	Senior Lecturer/HoD	Local Economic and Regional Development
Rejoice Selorm Wireko-Gyebi	MSc (KNUST) BSc (KNUST)	Assistant Lecturer	Development Policy and Planning
Benjamin Bilalam Jabik	MSc (KNUST) BSc (KNUST)	Assistant Lecturer	Development Policy and Planning
Kingsley Atta Nyamekye	MSc. (Ger & Chile), BSc (KNUST)	Assistant Lecturer	Regional Planning

DR. JONAS AYARIBILLA AKUDUGU

Research Activities/Interests

- Local Economic Development Planning
- Decentralisation and Local Development
- Community Development Planning
- Participatory Planning Approaches

Publication(s)

- Samaddar, S., **Akudugu, J. A**., Oteng-Ababio, M., Dayour, F. and Yokomatsu, M. (2019): Stakeholders Perception on Effective Community Participation in Climate Change Adaptation. In A. Sarkar, S. R. Sensarma and G. W. vanLoon, (Eds.): Sustainable Solutions for Food Security: Combating Climate Change by Adaptation (pp. 355-379), Cham, Springer
- **Akudugu, J. A**. (2018): Institutionalising Local Economic Development Practice in Ghana. Local Economy, 33(4), pp.405-420

Conferences/Workshops/Seminars

- Participant: Planned Cities: A key factor in effective Sanitation Service Delivery. Organised by the Ghana Institute of Planners, 30th Nov. – 1st Dec. 2018, Kumasi
- Participant: Good Assessment Practices in Higher Education Workshop, Organised by Quality Assurance Planning Unit (UENR), Sunyani, 16th January 2019.

Outreach Programmes/Extension Services

- Field Supervisor: Community Outreach programme organized by the Department of Planning and Sustainability in 8 communities in the Dormaa Municipality.
- Reviewer: Ghana Journal of Development Studies; Canadian Journal of African Studies; Area Development and Policy; The Journal of International Development.

REJOICE SELORM WIREKO-GYEBI

Research Activities/Interests

- Occupational Health and Safety
- Environmental Management
- Policy Analysis
- Transportation Planning

Conferences/Workshops/Seminars

- Participant and Presenter: "Visible Risk: Do they care? A theoretical perspective of why miners engage in small-scale mining." A paper presented at SETAC Conference at the University of Ghana, Legon (7th – 10th October, 2018)
- Participant: Good Assessment Practices in Higher Education Workshop, Organised by Quality Assurance Planning Unit (UENR), Sunyani, 16th January 2019.

BENJAMIN BILALAM JABIK

Research Activities/Interests

- Climate Change Adaptation Approaches
- Sustainable Urban Development
- Impact Studies

Conferences/Workshops/Seminars

- Participant: Good Assessment Practices in Higher Education Workshop, Organised by Quality Assurance Planning Unit (UENR), Sunyani, 16th January 2019.

KINGSLEY ATTA NYAMEKYE

Research Activities/Interests

- Promoting sustainable development
- Land use planning in promoting sustainable cities

- Environmental Sustainability

Conferences/Workshops/Seminars

- Participant: Enhancing your scientific writing skills for academic excellence Workshop, Organised by Ghana Science Association (Sunyani Chapter), French Lab (UENR), Sunyani, 28th March 2019.
- Participant: Good Assessment Practices in Higher Education Workshop, Organised by Quality Assurance Planning Unit (UENR), Sunyani, 16th January 2019.

Outreach Programmes/Extension Services

- Field Supervisor: Community Outreach programmes organized by the Department of Planning and Sustainability in 8 communities in the Dormaa Municipality.

DEPARTMENT OF GEOGRAPHIC SCIENCE

The Department of Geographic Science was established in the 2018/2019 academic year and is one of two (2) departments under the School of Geosciences, Dormaa Ahenkro Campus.

The Department focuses on key programmes which are of direct and immediate interest to current national developmental goals. These include Climate Change, Sustainable Development, and Geoinformation Science. At present, the department runs one 4-year Bachelor's degree programme - BSc. Climate Change and Sustainable Development; one 2-year Master's degree program - MSc/MPhil Climate Change; and one 2-year diploma programme (Dip. in 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 conducted service courses for selected climate change related programmes in sister departments of the university.
- The Department celebrated its maiden Climate Change and Geoinformation Science week (25th-27th March 2019) under the theme: *The role of geoscientists' in the socio-economic development of Ghana*. It aimed at exposing students to current trends in Earth Observation and related disciplines and how they could be leveraged to support the development of Ghana.

- ❖ As part of student sensitization, the department facilitated student participation in climate change workshops on the Sunyani campus. Global Climate and Ecosystems (26th Feb, 2019- 27th Feb, 2019).
- ❖ The Department collaborated with the Department of Geomantic Engineering, KNUST to provide student practical training and exposure to evolving photogrammetry, mapping and surveying equipment and techniques (15th November 2018).

Future Plans

- ❖ The Department is spearheading a collaboration with the Earth Observation and Research Innovation Centre (EORIC) for the installation of GEONETCAST System on the Dormaa campus to facilitate teaching, learning and research on geographical data acquisition, processing and interpretation.
- ❖ As part of the strategic plan of the University(2016-2026), the Department plans to mount BSc. Geoinformation Science and short courses (Certificate and Diploma) in Surveying, Mapping and allied disciplines.

Teaching Staff

Names and qualifications are given in the Table below

Name	Qualification	Designation	Area of specialization
Dr. Leslie Danquah	PhD,MA, BA (KNUST,	Lecturer/Ag HoD	Biometeorology of Child Health; Child Environmental Health;
Dr. Peter Damoah-Afari	PhD (Hong Kong), MSc (ITCEnschede, BSc. (KNUST)	Lecturer	Remote sensing; GIS; Synthetic Aperture Radar (SAR) Cadastral Surveying

Dr. Nana Agyemang Prempeh	PhD, MEng (NUIST, China)	Lecturer	Atmospheric Pollution Monitoring and Control
Dr. Abdul-WadoodMoomen	PhD (Curtin), BSc (UG, Ghana)	Lecturer	Remote Sensing; Geographic Information Systems
Mr. Richard Kyere-Boateng	MPhil (UG, Ghana), B.ED. (UCC, Ghana)	Lecturer	Population Studies; Development Studies; Climate Change
Mr. Caleb Mensah	MPhil., BSc. (KNUST)	Assistant Lecturer	Meteorology; Climatology

DR. LESLIE DANQUAH

Selected Publication(s)

- 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

- ***Participant***: Quality Assurance Practice Unit (QAPU), UENR/Office of the Pro-Vice Chancellor, UENR, Capacity Building in Curriculum Development, 27th-28th September, 2018, University of Energy and Natural Resources (UENR) Auditorium, Sunyani.

- ***Participant***: Global Climate and Ecosystems. Public lecture by Prof. Michal V. Marek, Professor, Czech Globe, 26th Feb, 2019- 27th Feb, 2019.

Outreach Programmes/Extension Services

- **Coordinator:** Department of Geographical Sciences and Planning (Apr, – Aug.2018)
- **Committee Member:** Committee on harmonization of Grading System and classification of Degrees for Diploma Programmes.
- ***Member***: School of Agriculture and Technology Board
- ***Member***: Academic Board
- ***Ag. Head***: Department of Geographic Science

DR. PETER DAMOAH-AFARI

Publication(s)

- Maximilian Brell, Holger Eichstaedt, and **Damoah-Afari Peter**. Fusion of Full Waveform LiDAR and Hyperspectral Data. RIEGL LiDAR 2015 International User (RIEGL LIDAR 2015), 5-8 May 2015, Hong Kong.
- **Damoah-Afari, P.**, Ding, X.L., Li, Z.W., Lu, Z. and Omura, M. Magnitude and Extent of six years of land subsidence in Shanghai revealed by JERS-1 SAR data. In: Imperatore, P. and Riccio, D. eds. Geoscience and Remote Sensing, New Achievements. India: IN-TECH, 2010 (Book Chapter).

Conferences/Workshops/Seminars

- ***Participant*:** The mine monitoring workshop, PDSA Ghana, Golden Tulip Hotel, April 15-16, 2019.

Outreach Programmes/Extension Services

- ***Member***: School of Agriculture and Technology
- ***Member***: Academic Board

DR. NANA AGYEMANG PREMPEH

Selected Publication(s)

- Dagang Liu, Yu Chang, Donglin Tian, Wenqi Wu, Ang Lv, **Nana Prempeh**, Meijuan Tan, Yifeng Huang, Lyotropic Liquid Crystal Self-assembly of H2O2-hydrolyzed Chitin Nanocrystals, *Carbohydrate Polymer***2018**, 196, 66-72.
- Song Weiguang, Liu Dagang, **Nana Prempeh**, Song Renjie, Fiber Alignment and Liquid Crystal Orientation of Cellulose Nanocrystals in the Electrospun Nanofibrous Mats. *Biomacromolecules***2017**, 18 (10), 3273-3279
- Dai Shidong, **Nana Prempeh**, Dagang Liu, Yiming Fan. Cholesteric Film of Cu(II)-doped Cellulose Nanocrystals for Colorimetric Sensing of Ammonia Gas. *Carbohydrate Polymers* **2017**, 174:531-539 DOI: http://dx.doi.org/doi:10.1016/j.carbpol.2017.06.098
- Chengming Hu, Jinlei Li, Dagang Liu, Renjie Song, Jiefan Gu, **Nana Prempeh,**Huiyan Li. Effects of Coagulation Temperature on the

Properties of Wet-spun Poly(vinyl-alcohol)/Graphene Oxide Fibers. *Journal of Applied Polymer Science* **2017**. DOI:10.1002/app.45463

Conferences/Workshops/Seminars

- ***Participant***: Ghana Standards Authority/Alliance for Green Revolution in Africa (AGRA), National Aflatoxin Sensitization and Management Project, 31st May, 2019, University of Energy and Natural Resources (UENR) Auditorium, Sunyani.
- ***Participant***: Quality Assurance Practice Unit (QAPU), UENR/Office of the Pro-Vice Chancellor, UENR, Capacity Building in Curriculum Development, 24th May, 2019, University of Energy and Natural Resources (UENR) Auditorium, Sunyani.
- ***Participant***: Ghana Science Association (GSA), UENR Chapter/Office of the Vice Chancellor, UENR, Enhancing your Scientific writing skills for Academic Excellence, 28th March 2019, French Laboratory, UENR, Sunyani.
- ***Participant***: University of Energy and Natural Resources, UENR/The Association of Commonwealth Universities (ACU), Professional Development Interactive Seminar, 21st February 2019, French Laboratory, UENR, Sunyani.
- ***Participant***: Quality Assurance Practice Unit (QAPU), UENR/Office of the Pro-Vice Chancellor, UENR, Good Assessment Practices in Higher Education: Improving Teaching and Learning, 16th–17th January 2019, Sheila's Lodge, Sunyani-Fiapre.
- ***Participant***: Quality Assurance Practice Unit (QAPU), UENR/Office of the Pro-Vice Chancellor, UENR, Capacity Building

in Curriculum Development, 27th-28th September, 2018, University of Energy and Natural Resources (UENR) Auditorium, Sunyani.

Outreach Programmes/Extension Services

- ***Examinations Officer***: Department of Geographic Science (2019- to date)
- ***Outreach Coordinator***: Department of Geographic Science (2018- to date)
- ***Member***: School of Agriculture and Technology (2018- to date)
- ***Member***: Academic Board (2019- to date)
- ***Member***: Examinations Malpractice Committee (2019- to date)

DR. ABDUL-MOOMEN WADOOD

Publication(s)

- Abdul-WadoodMoomen, Ashraf Dewan, and Robert Corner (2016). Landscape Assessment for Sustainable Resettlement of Potentially Displaced Communities in Ghana's emerging North-west Gold Province.*Journal of Cleaner Production*, 133: 701–711. http://dx.doi.org/10.1016/j.jclepro.2016.06.004.
- Abdul-WadoodMoomen and Ashraf Dewan (2016). Investigating Potential Mining Induced Water Stress in Ghana's North-West Gold Province.*Extractive Industries and Society*, 3(3): 802–812. http://dx.doi.org/10.1016/j.resourpol.2016.04.002.

Conferences/Workshops/Seminars

- **Participant and Presenter:** The 8th International Conference on Agro-Geoinformatics, George Masons University, Tarbil, Turkey & The Istanbul Technical University, Turkey. July 16-19, 2019.
- ***Participant***: Quality Assurance Practice Unit (QAPU), UENR/Office of the Pro-Vice Chancellor, UENR, Good Assessment Practices in Higher Education: Improving Teaching and Learning, 16th–17th January 2019, Sheila's Lodge, Sunyani-Fiapre.

Outreach Programmes/Extension Services

- ***Reviewer***: Resources Policy, Elsevier Journal
- ***Reviewer***: Land Degradation and Development, Wiley Journal
- ***Reviewer***: Environment, Development and Sustainability, Springer Journal
- ***Reviewer***: Aviation, Taylor & Francis
- ***Reviewer***: Corporate Social Responsibility and Environment, Wiley Journal
- ***Reviewer***: Journal of Environmental Planning and Management, Taylor & Francis

MR. CALEB MENSAH

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. ISBN978-80-7509-550-3, http://www.utok.cz/sites/default/files/data/USERS/u24/RaOP%202018_WEB_1.pdf
- Kabo-bah, A. T., &**Mensah, C**. (2018). Hydropower and the Era of Climate Change and Carbon Financing: The Case from Sub-Saharan Africa. In *Sustainable Hydropower in West Africa* (pp.37-51).
- **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

- ***Participant***: EGU General Assembly Conference 2019, Geosciences Union, Autria. (7th-12th April, 2019)
- ***Participant***: Silvanet – Woodnet Student Scientific Conference, 1st Ed. Brno: MendelovaUniverzita V Brně, Faculty of Forestry and

Wood Technology, Mendel University, Czech Republic. (28th November, 2018).

- ***Participant***: The 3rd Integrated Carbon Observation System (ICOS) Science Conference 2018, Praque, Czech Republic. (11th-13th November 2018).
- ***Participant***: 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)

SCHOOL OF GRADUATE STUDIES



SCHOOL OF GRADUATE STUDIES

Philosophy/Objectives

The school seeks to provide excellence in postgraduate 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
- Master of Business Administration
- Doctor of Philosophy

The School of Graduate Studies currently runs Nine (9) Programmes in the various Schools in the University, through regular but weekend modes namely:

- MSc/PhD Sustainable Energy Management
- MSc/PhD Environmental Engineering Management
- MPhil/PhD Social Forestry and Environmental Governance
- MPhil/PhD Crop Sciences
- MPhil/PhD Computer Science
- MPhil Mathematics
- MSc/MPhil Environmental Planning and Sustainability
- MBA/MPhil Agribusiness Management
- MSc/MPhil Climate Change

Student Enrolment

The School has a student population of about Four Hundred and Eleven (411).

Breakdown of Students Enrolment & Programmes

2018/2019 Academic Year

Programme	**Number Of Students**		
	Male	**Female**	**Total**
Msc Sustainable Energy Management	11	1	12
MSc Environmental Engineering Management	7	0	7
MSc/MPhil Computer Science	21	2	23
MSc/MPhil Crop Science	32	2	34
MPhil Applied Mathematics	17	1	18
MSc/MPhil Environmental Planning and Sustainability	10	4	14
MPhil Social Forestry and Environmental Governance	19	4	23
MPhil/MBA Agribusiness Mgt	23	4	27
MPhil Climate Change	2	0	2
PhD Computer Sciences	6	0	6
PhD Crop Sciences	1	0	1
PhD Social Forestry and Environmental Governance	10	1	11
PhD Sustainable Energy Management	7	0	7
PhD Environmental Engineering Management	6	0	6
Total Number	**172**	**19**	**191**

Overall Total Number of Students

Academic Year	**Number of Students**		
	Male	**Female**	**Total**
2016/2017	63	8	71
2017/2018	133	16	149
2018/2019	172	19	191
Total Population	**368**	**43**	**411**

Scholarships

The University continually benefits from the Ghana National Petroleum Commission (GNPC) Scholarship for both undergraduate and postgraduate students. The scheme gave scholarships to five (5) postgraduate students in addition to four (4) postgraduate students who were already on the scholarship.

Staffing

The current staff strength of the School is as follows:

Name	Qualifications	Position
Prof. John K.M. Kuwornu	B.A (UG, Legon) MSc.,PhD (Wageningen)	Dean
Mr. David Twumasi-Ankrah	B.A. (KNUST),MPA (KNUST)	School Secretary
Ms. Ellen Adoma Boateng	B.A. (KNUST)	Principal Administrative Asst.
Mr. George Nii Amon Dsane	B.Com (UCC)	Senior Administrative Asst.

Activities

The SGS, which acts as a co-coordinator to all Departments that run graduate programmes in the University, performs among other duties, the following:

- Co-ordinates and liaises with the Central Administration, Schools and Departments on general graduate issues.
- Organizes seminar for students and members of staff on graduate issues.
- Organizes and conducts oral examinations for final year graduate students to defend their thesis, which is one of the major activities of the school.

- Administers and process applications for prospective applicants.
- Assists various Departments in the organization of interviews for applicants seeking admission into various programmes, issuing of admission letters and registration of students.
- Receive and approves thesis synopsis, examination results, proposals for new programmes and withdrawal of non-performing and present graduating students at congregation.
- Assist in the screening and appointment of External and Internal Examiners for Departments.

Future Plans

The Graduate School in the near future intends to have graduate programmes in all of the departments. In view of this, the following programmes have been submitted for accreditation and they are under review:

- MPhil in Applied Statistics
- MBA in Information Technology Management
- MPhil/PhD in Information Technology
- MPhil Applied Statistics
- MSc/MPhil Climate Science

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 other 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 is needed to accommodate more students.

- The conference room of the Graduate School which is used for meetings, also serve as proposal/thesis presentations hall. Meanwhile, owing to the multiple use for the facility, there is always pressure to find different venues for different events and this has always become a bother to the School. The School also lacks adequate resources for teaching and learning, for example, projectors and screens for teaching sessions and presentations.

Power Supply

- The School is also essential in performing various roles in the University and as such needs constant supply of electricity. The school does not have a plant and therefore affected by any power outage that occurs .The provision of a plant to substitute power supply once there is power outage will go a long way to help the activities being run in the School.

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 (4670) 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 Science, Mathematics, Forestry, Business management, Hospitality Management and Entrepreneurship. New arrivals 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, 2019. About 2670 book donations were received from benevolent individuals as at May 31, 2019.

Registration With Library Associations

Library Associations act as major players in 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 Libraries in 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-Resources Subscription for 2018/2019

- As a member of CARLIGH, UENR subscribes to the following e-resources under the CARLIGH umbrella.
- EBSCO host, Emerald, Wiley, Taylor and Francis, Sage, Sage Research Methods, Project Muse, World Bank e-library, Cambridge University Press, Credo Reference, Institute of Physics

Training/Workshops Attended By Library Staff

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

- **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

- **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.

Future Plan

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.



UNIVERSITY OF ENERGY AND NATURAL RESOURCES,
SUNYANI

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