Vice Chancellor's REPORT to the Maiden Congregation

June 2016

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Prof Mrs Esi Awuah
Vice Chancellor

FOREWORD

This report covers the general activities of the University since its inception in 2012. The report provides information on all major constituents of the University particularly from the Office of the Vice Chancellor, Schools and Academic Departments, Library, and Administrative and Service Departments such as Registrar's Office, Finance Directorate, Works and Physical Development Directorate.

The University has recorded major progress in academic activities since the matriculation of the first batch of students in 2012. Over the period of four years, enrolment has since increased from 154 students in 2012 to about 2800 during the beginning of the 2015/2016 academic year. Within the period, the University also mounted a total of nineteen (19) programmes including flagship programmes such as Bsc. Fire and Disaster Management, BSc Resource Enterprise and Entrepreneurship, Renewable Energy Engineering, Computer Engineering and Natural Resources.

In addition, the School of Graduate Studies was also established during the period under review with an initial student population of thirty (35). The postgraduate students are pursuing various programmes leading to the award of master's and doctoral degrees in Environmental Engineering, Renewable Energy Management among others.

In line with our vision of becoming a centre of academic excellence, the University, during the four year period, stimulated research across its academic departments and other units, leading to significant research output and publications in national and international peer-reviewed journals. At the institutional level, UENR also participated in internationally funded research projects such as the EU sponsored SATIFF, NWO-TRO, TIGER Research Project, the Volta Basin Research Project and the African Academy of Sciences sponsored CIRCLE Programme.

The Earth Observation Research and Innovation Centre (EORIC) equipped with a Virtual Fire Laboratory for the detection and prediction of wildfire in the West African sub-region and part of North Africa was established by the University with Support from SDF/COTVET and CSIR South Africa.

During the period under review, the University also supported some staff to attend conferences to share knowledge with the scientific community as well as pursue terminal degrees.

In spite of challenges such as inadequate funding, physical and human resources, the University also made modest gains in infrastructure for smooth academic, research and administrative activities. Some of these projects include the ICT/Library Complex, the 12 Unit Lecture Block, development of Dormaa Campus, 4 Storey Hostel Block and a host of others, all under GETFund sponsorship. The investment in some of the projects indicated above is a demonstration of our commitment to invest in infrastructure and equipment to improve upon the learning and teaching experience in the University.

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

Prof Mrs Esi Awuah

Vice Chancellor

June 2016

BENEFACTORS OF THE UNIVERSITY

The University will like to acknowledge the benevolence of a number of companies, corporate organisations and philanthropic individuals whose magnanimity has supported the institution over the period. The University benefitted from Ghana Commercial Bank's donation of GH¢1,000,000 towards the construction of the ICT/Library Complex.

Additionally, SDF/COTVET funded the acquisition of equipment for the Fire virtual Laboratory whilst Sambus Geospatial Limited (SGL), distributors of ESRI Geographic Information System (GIS) software donated ArcGIS Software valued at $500,000.00 to the University

The Ghana Fund for Electronic Communication also donated over 40 Desktop Computers and Accessories, Servers, and Air-conditioners to the University. Similarly, the Ghana National Petroleum Corporation also donated GH¢1,000,000 towards the Construction of the first phase of Applications Laboratory for the University. Other benefactors include Nana Osagyefo Oseadeayo Nana Agyeman Badu II, Dormaahene, Ministry of Energy, The Chinese Government, VRA/NEDCo among others.



MAIDEN 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. Out of 154 students who gained admission for the 2012/2013 academic year, 72 pursued Renewable Energy Engineering whereas 82 pursued Natural Resource Management.

In the 2013/2014 and 2014/2015 academic years, 763 and 947 students were admitted respectively. For the 2015/2016 academic year, total admitted students numbered 1040. The 2015/2016 student population represents an increase of about 10% over that of 2014/2015. Between 2012 and 2016, the highest intake was the 2014/2015 academic year. The transition from the 2013/2014 academic year to the 2014/2015 academic year saw an increase in the student population by 24%.

The total number of students inclusive of postgraduate and undergraduate students as of May 2016 stood at 2,894 distributed across five Schools in the University. These are School of Natural Resources, School of Engineering, School of Sciences, School of Agriculture and Technology and School of Graduate Studies.

The number of teaching staff appointments as at 2012 was 37 and as of May 01, 2016, it stood at 83. A total of 6 staff have left the service of the University. With respect to the proportional distribution of staff, the School of Natural Resources leads with 41%. This is followed by School of Engineering with 27 %. School of Science and School of Agriculture and Technology follow in 3rd and 4th place with 26% and 3% respectively. This report therefore covers the four years from 2012 to 2016.

OFFICE OF THE VICE CHANCELLOR

The Vice Chancellor is the Chief Executive Officer of the University and responsible for the overall planning, direction, organisation, management and discipline 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:

S/N	Name	Qualification	Rank/Position
1	Prof. Mrs. Esi Awuah	PhD (IHE) MSc (Syracuse) BSc (KNUST)	Vice Chancellor

2	Prof D. Obeng-Ofori	PhD, Mphil (Cambridge) BSc (Ghana)	Pro Vice Chancellor
3	Abigail Yeboah-Kyere	BA (Ghana)	Snr. Admin Assist.
4	Millicent Daghar	HND (S-Poly)	Admin Assistant

Academic Programmes

The University is currently running 19 accredited programmes. The Table shows a distribution of the number of programmes and future programmes that would be rolled out depending on the country's need, infrastructure and UENR Council's approval.

Table: UENR Schools and the number of accredited programmes.

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

Human Resource

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. Upon receipt of an appointment, the University mandates all lecturers who have not

gained their terminal degrees do so within two years or show evidence of having been enrolled on one.

Resource Mobilization & Donations

Financial resource mobilization for infrastructural development was mostly through external donor funding particularly, the GETFund. Funding also came from the Ministry of Energy for the provision of a transformer and electricity to the Nsoatre Campus. VRA/NEDCo also provided a transformer and undertook power line upgrade on the Sunyani Campus. The Ghana National Petroleum Cooperation (GNPC) supported the construction of the Applications Laboratory Phase One. Osagyefo Oseadeayo Agyeman Badu II, Omanhene of the Dormaa Traditional Area also supported the construction of a Syndicate Hall and gave out his hotel to be used by the Dormaa Campus until the GETFund buildings were completed.

The Ministry of Environment Science and Technology presented 250 'Better Ghana Laptops' whereas the Ministry of Education provided 1000 desks and chairs for student's use. The Ghana Investment Fund for Electronic Communication (GIFEC) provided fifteen (15) desktop computers and accessories. Sambus Geospatial Ltd. donated GIS software worth $500,000.00 to UENR.

Under the Energy Conservation and Climate Change South-South Co-operation Project, the Chinese Government donated 500 Solar Street lights during the period. Under the same Co-operation, the Chinese Government also donated 1,000 Air-Conditioners. The Council for Technical and Vocational Education and Training (COTVET) funded the installation of a Virtual Fire Laboratory facility with an Advanced Fire Information System for the detection and prediction of wild fire in West Africa and parts of Northern Africa. The facility is the only one installed in the West African Sub Region and it is aimed at facilitating earth observation and research.

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 her tenure by receiving a number of visiting individuals and group. Notable amongst them were:

1. The Canadian Ambassador to Ghana
2. The US Ambassador to Ghana
3. The Australian Trade Commissioner
4. Dr. Ing. Frank Newmann, President of the Board Technik Ohme Grezen e.V.
5. Prof. Dr. Ing. Michal V. Marek – CzechGlobe, Czech Republic
6. Prof. Francis K. A. Allotey – President of the Ghana Academy of Arts and science
7. South African Council for Scientific and Industrial Research staff
8. Parliamentary Select Committee on Education
9. Parliamentary Select Committee on Lands and Natural Resources.

Workshops /Conferences /Seminars

In the course of the year 2015 - 2016, the Vice Chancellor participated in a number of workshops, conferences and seminars. The Vice Chancellor attended a Project Meeting in the Netherlands on the topic 'Stimulated local innovation on sanitation for the urban poor in Sub-Saharan Africa and South East Asia. She also attended the 6th African Regional Conference of Vice Chancellors, Provosts and Deans of Science, Engineering and Technology Universities held in Nigeria by UNESCO on the 5th to the 6th of October 2015.

The Vice Chancellor attended a conference organized by UNESCO IHE in Thailand from October 24 to November 2, 2015. The conference was under the theme Stimulated local innovation on Sanitation for the urban poor in Sub-Saharan Africa and South East Asia.

On the 7th to 12th December 2015, Prof. Esi Travelled to Kenya and participated in the Institutional Strengthening workshop for the Climate Impacts Research Capacity Leadership Enhancement (CIRCLE) programme. The workshop was aimed at examining strategic organizational approaches to conducting climate change research.

Lastly, the Vice Chancellor made another trip to Kenya from the 22nd to 27th February, 2016. The purpose was to follow up on a Memorandum of Understanding which had been signed between University of Energy and Natural Resources and the University of Kabianga.

Convocation Meetings

The Vice Chancellor made efforts to strengthen management and staff relationships through engagements with members of staff and convocation. This platform afforded the Vice Chancellor the opportunity to communicate her vision, discuss progress of key infrastructural and academic projects. Prof. Mrs. Esi Awuah also took the opportunity during convocation to discuss the challenges that the University faced and how management intended to solve problems in the short, medium and long term.

Linkages and Collaborations

In order for a young and growing University to reach it potential, exposure to the current trends and best practices in teaching, research and university outreach is essential. For this reason, Management initiated linkages with other institutions and organizations. They include an MOU with the Planetarium Science Center of Ghana to promote the study of astronomy and space science, an MOU with Center de Langue Française to establish La Maison Française in UENR for the teaching and learning of the French Language.

During the 2015/2016 academic year, the Vice Chancellor also signed memoranda of understanding for academic exchange between three universities, namely University of Ibadan, Nigeria, University of Kabianga, Kenya and Bangor University, UK. Similarly, the Global Change Research Institute of the Czech Republic entered into an MOU with UENR to establish a Carbon Monitoring Centre on the Dormaa Ahenkro Campus of the University. The building of the capacity of UENR in terms of renewable energy technologies is vital for the development of the energy industry in Ghana.

As part of efforts aimed promoting knowledge in solar technologies, UENR entered into an MOU with Orgone Foundation for Solar PV solutions research and renewable energy related project implementation.

RESEARCH

Research Projects and Related Activities

The University has been active in research over the period. At the institutional level, the School of Engineering was engaged in consultancy work by the DFID on a project titled 'Baseline Study of Riparian Communities in the Volta Basin Ghana' and also involved in a capacity building project under the 'Akosombo, Kpong Dam Re-operation and Re-optimization project'.

The University has been involved in another research project titled "Strengthening Innovations and Technology Dissemination for Sustainable Development in Cereals, Cocoa and Coffee Value Chains in Western and Eastern Africa" (SATTIFS).

This is a collaborative project involving the University of Molise in Italy, Bio Economic Africa (BEA), in Ethiopia, Gulu University in Uganda and UENR Ghana. The project involves training and strengthening technology dissemination in the value chains of Cocoa and Maize in the Brong Ahafo and Ashanti Regions of Ghana. Stakeholders are farmers, artisans, processors, agricultural extension agents, scientists and students. The project was carried out in conjunction with COCOBOD, Cocoa Research Institute of Ghana, Ministry of Food and Agriculture and GRATIS Foundation. Under this project, a Centre for Innovation and Technology Dissemination (CITED) was established.

CITED carried out the following:

- Workshops were organized to identify the best production technologies in cocoa and maize value chains in Ghana;
- Three demonstration farms were established to demonstrate the effect of the prominent technologies using the Farmer Field School (FFS) approach in Nkoranza and Techiman for maize and Akrodie for Cocoa.
- Monitoring and evaluation of the appropriate technologies on farmer output are in place.
- A total of 40 farmers were trained as a Trainer of Trainers.
- Project outputs and outcomes were shared with the public, through the press interactions, dissemination workshops and publications.
- Mid-year dissemination and review conference was done on the 30th of September, 2015.

UENR is also involved in the Netherlands Organization for Scientific Research (NWO)-WOTRO Global Challenges Programme on inclusive value chain collaboration. It is a 4-year (2014-2018) research programme on partnerships between the private sector and smallholder tree crop (cocoa, oil palm, macadamia, and mango) farmers in Ghana and South Africa. It is an innovative combination of the value chain and livelihood trajectory analysis, action research in learning platforms, and a landscape approach. It sought to generate knowledge and methodologies that enable these partnerships enhance food sovereignty, inclusive value chain collaboration, and landscape sustainability.

The programme has a wide range of consortium and partners from academia, practitioners and private sectors, being led by the University of Amsterdam, and UENR is a consortium member. It also covers two Ghanaian Ph.D. students studying at the University of Amsterdam.

Another research project the University is undertaking is the NWO-WOTRO Food & Business Applied Research Fund 'Improving smallholders' food and income security by introducing non-timber forest products in reforestation schemes and

tree-crop farms: A collaborative learning process in Ghana'. This project employed a gender-sensitive and stepwise collaborative learning approach. It is a 3-year (2016-2019) project which sought to integrate nutritious shade-tolerant non-timber forest products (NTFPs) (black pepper, grains of paradise and honey) in Ghana's modified taungya (reforestation) system and off-reserve tree farms, and enhance their production, processing and marketing.

As research is a core function of a University, centers of research in the University setting serve as catalysts for engaging staff and allied institutions for in-depth research for the promotion of a better understanding of a subject. Since inception, UENR has established two research centers namely, the Earth Observation Research and Innovation Center (EORIC) and the Center for Climate Change and Gender Studies (CCCGS).

The Earth Observation Research and Innovation Centre (EORIC) was established on 26th September, 2013 with the mandate of promoting, facilitating and supporting the acquisition and application of geospatial technologies and data in interdisciplinary research and education. The Centre focuses on the following:

- Water, disasters, energy, climate,
- agriculture, ecosystems, weather,
- health and biodiversity.

The Center has 6 research divisions. They include the Satellite, Weather and Climate division, Applied Computational Modeling and Research Laboratory, Advanced Virtual Fire Laboratory and Virtual Environmental Laboratory. The last two divisions are Climate Informatics and Unmanned Aerial Systems.
The Primary target groups of EORIC include researchers, students, the Government of Ghana agencies; Forestry Commission, Ghana National Fire Service and National Disaster Management Organization. Others include Regional Research and Training Organizations as well as International Organisations interested in earth observation data research, processing and modeling. The active systems at the center include a Direct Broadcast Reception Station, the GEONETCast System and an Automatic Weather Station.

The Center of Climate Change and Gender Studies aims to promote, coordinate, facilitate and disseminate research and developmental initiatives that deal with the nexus between Climate Change and Gender in Ghana and beyond. It also provides a platform for capacity building and training in cutting edge research skills and project implementation for sustainable development.

The objectives of the center 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.
- Coordinate and promote research that contributes to sustainable development, especially in the area of climate change, gender, poverty reduction, population growth and other social issues.
- Provide a platform to build the capacity of University staff, post graduate and undergraduate students in up-to-date social qualitative and quantitative research methods.
- Engage in consultancy services in the area of climate change and social issues across different disciplines.

The premier journal of the University, "Journal of Energy and Natural Resources Management" (JENRM) was also set up to disseminate research. It is managed by an editorial team made up of experts of international repute from sister universities in Ghana and abroad. It is published quarterly under the authority of the University Council. Two volumes comprising three issues each have been produced since the inception of the University.

Awards and Honours

During the tenure of the Vice Chancellor, a number of staff, students and the University as an institution won awards. Dr. Emmanuel de-Graft Johnson Owusu-Ansah, a lecturer of the Department of Mathematics and Statistics won the "2015 Microbial Modeling Specialty Merit Award" at the World Society for Risk Analysis (SRA) Annual Meeting held at Crystal City Arlington Virginia, USA.

Dr. Mark Amo Boateng, a lecturer in the Department of Energy and Environmental Engineering was awarded the "Best Young Innovator Finalist" by the Falling Walls Lab in Germany 2015. The University was also awarded 'The most supportive institution' during the 4th Edition of National Union of Ghana Students (NUGS) and Vice-Chancellors Ghana (VCG) Excellence Awards Ceremony. Again, the University was awarded 'Outstanding New Entrant' by Ghana University Sports Association in 2016 at the GUSA Games held at the University of Education, Winneba.

The UENR ENACTUS team made up of level 200 and 300 students was the winner of a Ford C3 grant in recognition of the efforts towards building sustainable communities. Other awards include the Tigo Digital Platform Award 2015 and the admission of the University as an institutional member of the Oracle Academy in 2016.

The Vice Chancellor and Pro-Vice Chancellor were also appointed as Honorary Fellow of the Ghana Institution of Engineers and Humboldt Ambassador Scientist for Ghana respectively.

Governance and Administration

Policies serve as guide to ensure that staff and students are able to make good decisions whilst performing their roles in the interest of the University. The University Administration put in efforts to lay a solid base by drafting and promulgating policies that will help in the governance and administration of the University. The policies which have been promulgated include Examination policy, Code of Ethics, Quality Assurance among others.

The following policies are at the draft stage; Mentoring policy, Plagiarism policy, Staff Developing policy, Appointments and Promotion policy, Anti-Sexual Harassment policy, Health policy, Environmental policy and ICT policy.

UENR is a member of the Association of African Universities (AAU) and after the graduation of the first batch of students, in June 2016; the university will join the Association of Commonwealth Universities (ACU). Recognized staff unions and student associations on the University campus include; University Teachers Association of Ghana (UTAG), Tertiary Educational Workers Union (TEWU), Federation of University Senior Staff Associations of Ghana (FUSSAG), Ghana Association of University Administrators (GAUA), the Students representative Council and Several Departmental and Programme Associations

Challenges

As a young and growing University, it is worth acknowledging that UENR is faced with a number of challenges. Major infrastructural challenges that UENR faces include the need for a multipurpose Auditorium and Library for each of the 3 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.

QUALITY ASSURANCE AND PLANNING UNIT (QAPU)

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

The Unit is staffed by the following:

- Prof. Daniel Obeng Ofori – Head
- Mr. George Kwadwo Anane – Assistant Registrar
- Mr. Michael Addaney – Snr. Administrative Assistant

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

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



A.K. Boateng Registrar

REGISTRAR'S OFFICE

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

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

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

Summary of Senior Members in the Registrar's Offices

Name	Unit	Rank/Position	Qualification
A.K. Boateng	Office of the Registrar	Registrar	MPhil, BA, Dip Ed(Cape Coast),
Hayford Asare	Human Resource	Assistant Registrar	MA, B.Ed, (Cape Coast)
Mary Yebo-Okra	General Administration	Assistant Registrar	MA, BA (KNUST)
Alfred Appiah	Academic Affairs	Assistant Registrar	MBA, BA(KNUST)
Ben Appiah-Kubi	University Relations	Senior Assistant Registrar	MBA (Leicester) B.Ed (Cape Coast) PgD (CIPR-UK) MCIPR
George Anane	Quality Assurance	Assistant Registrar	MSc (KNUST) BSc (Cape Coast)
Mrs Linda Mensah	Legal Unit	Assistant Registrar	LLB (KNUST) BL
Ms Salomey Mbrah	Office of Vice Chancellor	Assistant Registrar	MBA, BA (Ghana)

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 work 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 role in line with the statutory provisions of the Act establishing the University:

- Delivering of accurate, prompt, courteous and consistent service to all students and constituents 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.



Dr Simon Abugre 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. 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 Simon Abugre	-	Dean
Ms Abena Ahenkora	-	Hostel Manageress, GETFund Hostel
Rev. Dr. Ishmael Arthur	-	Guidance and Counselling Co-ordinator
Eva Bakuri	-	Senior Counselling 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.

Seminar on Drug Abuse

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

Seminar by the Trade Union Congress

The Trade Union Congress (TUC) in collaboration with the Office of the Dean of Students organized a day's seminar for about 70 students of this University. It centred on job opportunities, work ethics and the working of the TUC. This was to equip our students with the necessary skills to enable them become competitive in the job market.

Students Health Services

With the appointment of a Medical Officer, health delivery and confidence in our facilities has improved. Students are quickly attended to when they report ill. Despite these improvements, most students still patronized the SDA Hospital. When students are admitted at SDA Hospital and our Medical Officer is made aware, he makes a follow-up to assess the situation. With the current renovation of our facilities, health delivery is likely to improve.

Academic Tutors

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

Anti-cheating Campaign

The SRC organized an anti-cheating campaign to sensitize students on the ramification of cheating during examinations. The campaign was highly patronized. This has helped reduced malpractices during examinations.

Housing for Students

This continues to be a major concern to the University community as it affects student's welfare. The standard of service provided by some of the private hostels is poor. The Office has advised some of the hostels to improve the standard of services at their hostels. Generally, most students live in private houses mostly located at Fiapre, Berlin Top and Zinko areas. In these areas, some students are sometimes subjected to attacks and their possessions taken. Most of these incidences have been reported to the police and they promised to intensify patrols in these areas. As a temporary measure, the police have established a check-point on campus. This has greatly improved security on campus. The Office, in collaboration with the SRC have come out with a flyer to provide the necessary security tips to students. It is hoped that the two Hostels under construction when completed, would solve the accommodation problem on campus.

Provision of Benches

During the period under review, the SRC assisted in providing 25 benches which is currently being used by students for relaxation after lectures.

USAG Elections

The University last year (2015) had the privilege of hosting the University Students Association of Ghana (USAG). The occasion was for the Association to elect its leaders. All the public universities in Ghana were represented.

NUGS Hostel

The Local NUGS and their National leadership are planning to build a hostel at UENR to ease the accommodation problems that our students face.

Debaters Club

In 2014, the debaters club took part in a national competition held at KNUST. One of the teams that we presented was able to progress to the final. In 2015, the Pan Africa debating competition was held at the University of Ghana from the 8 – 17th December, 2015, unfortunately UENR could not participate as it coincided with our end of semester examination.

The Office would continue to provide the necessary welfare support to our students. Working with the SRC, it is our hope that we will continue to have a peaceful environment for teaching and learning.

SPORTS

Sports constitute a vital component of the training of holistic individuals. The University during the period under review, established the Sports Directorate

responsible for the training and coordination of students and staff sporting activities. It is also responsible for the provision of technical advice on sporting equipment, staff exercise and students sporting logistics in general. The following are sporting disciplines managed by the Directorate; Soccer, Basketball, Badminton, Volleyball, Table Tennis and Athletics.

The University is a member of the Ghana University Sports Association (GUSA) and is required to participate in sporting activities organized by the Association. In January 2016, UENR participated for the first time in the 24th edition of the GUSA Games which was held at the University of Education Winneba.

UENR was awarded the 'Most Outstanding New Entrant' in the history of GUSA Games whereas Mr. Robert Ameyaw was awarded the 'Most Entertaining Athlete' in the history of GUSA. Mr. Clement Acheampong scored a hat-trick during a soccer competition at the GUSSA games and was awarded a football. With respect to Basketball, UENR was the proud winner of the Brong Ahafo Universities, Polytechnics and Colleges (UPAC) Basketball competition held in 2016. The Vice-Chancellors Cup has been established as an annual sporting event aimed at the promotion and development of sports amongst the students on the various campuses.



Osei-Assibey, D. Director of Works

WORKS AND PHYSICAL DEVELOPMENT

The Works and Physical Development Directorate of the University is responsible for the designing, supervision and the development of the infrastructural requirements of the University. The Directorate conceptualizes projects in line with the needs of the University and implements such projects based on the approval by Management and the University Council. The Directorate is headed by a Director who is assisted by other built environment professionals. Below is a summary of staff in the Directorate.

Name	Rank/Position	Qualification
Osei-Assibey, D.	Director	MSc, BSc, LLB(KNUST) BL
Cephas A. Yeboah	Architect	MSc(KNUST)
John Awotwi	Maintenance Engineer	BSc.(KNUST)
Mathew Arhin	Quantity Surveyor	MSc, BSc(KNUST)
Kwaku Safroadu	Architect/Clerks of Work	MSc, BSc(KNUST)

PROJECTS

In 2013, an amount of GHS5,000,000.00 was allocated by the GETFund for development of projects. In 2014, a total amount of GHS 9,700,000.00 was allocated by the GETFund to the University for development.

The 2015 allocation increased to GHS 12,052,000.00 whereas the total allocation from the GETFund in 2016 was GHS 12,606,000.00, bringing the total allocation for the four years to GHS 41,550,000.00.

GETFUND PROJECTS FROM 2013 TO 2016

No.	Project	2013	2014	2015	2016	Total
1.	Construction of 2-storey Classroom Block with Offices for UENR	1,900,000.00	-	-	-	1,900,000.00
2.	Construction of 2-storey Library and ICT Complex Building for UENR	2,000,000.00	-	-	-	2,000,000.00
3.	Conversion of Girls Hostel for Laboratory Block for University of Energy and Natural Resources	600,000.00	150,000.00	-	-	750,000.00
4.	Construction of Security Entrance Gate for UENR	200,000.00	-	-	-	200,000.00
5.	Consultancy services on Construction/Renovation of Lecture Halls and Associated Facilities	300,000.00	-	-	-	300,000.00
6.	Master Plan & Survey for Nsoatre		220,000.00	-	-	220,000.00

	Campus					
7.	Construction of Hostel Block at Sunyani – South Wing	_	1,500,000.00	2,000,000.00	764,000.00	4,264,000.00
8.	Conversion of Residence into Graduate School Block	_	100,000.00	30,000	-	130,000.00
9.	Renovation of Development office Block	_	200,000.00	50,000	-	250,000.00
10.	Construction of Syndicate Hall 1		-	500,000.00	500,000.00	1,000,000.00
11.	Construction of Syndicate Hall 2	_	200,000.00	50,000.00	-	250,000.00
12.	Construction of 4-storey Laboratories and Offices Block at Dormaa Ahenkro	_	1,350,000.00	1,020,000.00	1,000,000.00	3,370,000.00
13.	Construction of 4-storey Library and Auditorium Block at Dormaa Ahenkro	_	1,500,000.00	1,300,000.00	1,000,000.00	3,800,000.00
14.	Construction of 2-storey Food Court and Business Centre at Sunyani	_	200,000.00	700,000.00	300,000.00	1,200,000.00
15.	Ceiling of Sawmill Lecture Hall Block at Sunyani	-	30,000.00	-	-	30,000.00
16	Completion of Sawmill Lecture Hall Block at Sunyani	-	200,000.00	-	-	200,000.00
17.	Construction of 4-storey	-	3,000,000.00	1,000,000.00	1,900,000.00	5,900,000.00

	Lecture Hall Block at Dormaa Ahenkro					
18.	Construction of 4-storey Lecture Hall Block at Sunyani	-	450,000.00	1,500,000.00	1,000,000.00	3,500,000.00
19	Construction of Office Block at Sunyani	-	-	500,000.00	500,000.00	1,000,000.00
20	Extension of Main Administration	-	-	1,000,000.00	500,000	1,500,000.00
21	Road Networks at Sunyani – Phase 1 (Resealing /Sealing)	-	-	1,000,000.00	-	1,000,000.00
22	Road Networks at Sunyani – Phase 2 (Sealing)	-	-	-	1,000,000.00	1,000,000.00
23.	Mechanisation of Borehole	-	_	-	750,000.00	1,000,000.00
24.	University Hospital (Clinic)	-	_	_	750,000.00	1,000,000.00
25.	Construction of Applications Laboratory- Phase 2	-	-	-	1,300,000.00	1,300,000.00
26.	Construction of Sports Complex – Phase 1 (Earthworks)	-	_		500,000.00	500,000.00
27.	Construction of Food Court and Business Centre at Dormaa	-	_	-	400,000.00	400,000.00
28.	Construction of Syndicate Hall at Dormaa	-	_	-	400,000.00	400,000.00
29.	Construction of Field Station	-	_	-	500,000.00	500,000.00

	at Mim					
30.	Renovation Works (Staff Bungalows)	_	150,000.00	300,000.00	386,000.00	836,000.00
31.	Municipal Services	_	100,000.00	200,000.00	100,000.00	400,000.00
32.	Consultancy Services (UENR)	-	550,000.00	700,000.00	850,000.00	2,100,000.00
	TOTAL	**5,000,000.00**	**9,700,000.00**	**12,050,000.00**	**15,000,000.00**	**41,550,000.00**

NUGS Project

The National Union of Ghana Students (NUGS) has expressed its intention to construct a new 4 Storey Hostel, 4 Storey Staff Apartment and Commercial Centre at UENR. The estimated cost of the project is GHS35, 000,000.00. The Council has approved the project and it is anticipated that the project will take off soon. A Memorandum of Understanding between NUGS and UENR will be signed by the beginning of the next academic year.

PROPOSED INFRASTRUCTURAL PLAN FOR SUNYANI CAMPUS

1. New road shall be constructed to link the existing GETFund Hostel, new Hostel (under Construction), Food Court & Business Centre (Under Construction) and proposed NUGS Hostel, Sports Complex and Auditorium Complex (UENR Tower).
2. Another new road shall be constructed from the Existing Laboratory to link the Nursery road.
3. Junior Staff Quarters will be converted into Stores for both central store and stores for Estate Department
4. Two Detached Quarters along the Hostel Link will be renovated and converted into Counselling Centre and Sports Department
5. All Lecturers at the Old Administration Block shall be accommodated at new Offices to be allocated to them. The existing offices shall be used as part of the Finance Department, Internal Audit and Procurement Office – 2016/2017.
6. The First Floor of Applications Laboratory shall be used as Examination Office with 4 Examination Halls and photocopy unit – 2016 Projects.

7. The residences of Messrs Debrah, Clement Kuusoyir and Akoto and old Guest House shall be converted into Staff Offices to house Estate Department, Distance Learning, Languages Centre and Geonetcast Centre and others.

8. The sanctuary shall be well fenced to serve as research and tourism centre – 2016 IGF.

9. Land behind the existing Laboratory Block shall be grassed and reserve for other outdoor Engineering Equipment.

10. New Library is hopeful to be ready and the existing Library converted to Languages Centre.

PREPARATION FOR 2016/17 ACADEMIC YEAR

Plan has been put up for about 30 offices to be available for 2016/17 academic year. This may be able to provide for 40 office spaces. Eight (8) lecture halls shall also be available when the proposed Applications Laboratory, Library & ICT Block and Syndicate Hall 1 are completed by August 2016. Two (2) Staff Bungalows and two (2) staff Quarters will be completed for Staff.

The new 4 storey Lecture Hall Block (Engineering Block) and Extension of Aperl Office Block are intended to meet demands of 2017/18 academic year



Albert Banan Abdulai Ag. Dir. 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.

SENIOR MEMBERS IN THE DIRECTORATE

Albert Banan Abdulai; FCCA, MPhil (Admin & Org), B. Com, Dip. Educ.; Ag Director of Finance
Paul Nana-Nketia; ACCA, MBA, B Sc. Administration; Senior Accountant, Treasury and Hostel financial Management
Augustine Opoku-Mensah: ICA (GH), B Sc Administration; Accountant, Payroll & Management Accounting
Stephen Yaw Ntiamoah; ICA (GH); Accountant, HND Accounting; Accountant, Financial Accounting

SCHOOLS & DEPARTMENTS



Prof. Daniel Obeng-Ofori Pro V.C

SCHOOL OF AGRICULTURE AND TECHNOLOGY

Introduction

The School of Agriculture and Technology was established in the 2014/2015 academic year at the Dormaa Ahenkro Campus of UENR. The School of Agriculture and Technology is poised to provide a strong and vibrant leadership to the agricultural industry to meet the increasing demand for food, raw materials for industry and agricultural commodities for export. This will require an intimate knowledge of climate, soil, species, infrastructure, political, social and legal systems. Issues of interest include: the increased demand for agricultural produce for local consumption and export; land availability for commercial agriculture and natural resource conservation; sustainable agricultural production; postharvest management, agriculture and climate change and agriculture and oil-driven 'Dutch Disease'.

The School of Agriculture and Technology of the University of Energy and Natural Resources 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 the nation and promote the inherent strengths of agriculture in a national economy requires more efficient operating systems, new technologies, and increased levels of partnership to meet 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 and Crop production,
- Horticulture and mechanization.

The programmes will 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 will assist students in developing the core skills in job creation and employment-related experiences that are valued by employers, professional organizations and academic institutions.

The Bachelor of Science in Agribusiness programme seeks to equip students to be able to use fundamental knowledge and skills gained practically to solve the nation's problems pertaining to the management of Agribusinesses. Among others, The objectives of the programme are to train graduates in Agribusiness who are expected to:

- Have knowledge and technical skills in the areas of Agribusiness management.
- Possess skills that meet the nation's demand for high level professional manpower in Agricultural Agribusiness.
- Provide extension services to government agencies, private companies, and private individuals in the field of Agribusiness, and rural development in general.
- Conduct demand-driven research and disseminate appropriate technologies to farm managers, companies/industries and relevant policy-making agencies of Government.
- Demonstrate the importance of agribusiness in the national economy with particular reference to its contribution to agricultural enterprise development among rural communities in Ghana.
- Apply the acquired knowledge and practical skills to up-scale agribusiness management, farmer based organizations, agribusiness

supply chain management and improve marketing of processed agricultural commodities as well as creating jobs in agribusiness enterprises.

- Make use of the problem solving skills acquired to create a policy environment to sustain the agribusiness systems spanning from production to consumption
-

Bachelor of Science in Agriculture (Animal Production) also focuses on a strong partnership approach, prepare future leaders who would provide solutions to animal production problems in Ghana and beyond. The objectives of the programme are to train graduates in Animal production who are expected to:

- Have knowledge and technical skills in the various areas of animal husbandry and marketing.
- Have skills meet the nation's demand for high level professional manpower in Agriculture.
- Provide consultancy and extension services to government agencies, private companies and private individuals in the field of animal production and related areas.
- Conduct demand-driven research and disseminate appropriate technologies to farm managers, companies/industries and relevant policy-making agencies of Government.
- Employ problem solving skills acquired to participate in creating a policy environment to sustain an integrated animal production sector in Ghana in order to reduce Ghana's dependence on imports to meet her animal protein requirements.
- Apply the knowledge and skills acquired to engage in animal production as a business.

The Bachelor of Science in Agriculture (Crop Production). The programme provides a conceptual basis for understanding sound professional practice in improving crop productivity in a sustainable manner. The programme represents the theoretical foundation and practical expertise for effective management and implementation of a variety of crop production based opportunities that are underpinned by the philosophies of improved productivity and sustainability. The course is designed to enhance the student's knowledge and interest in the nature, theoretical basis and practice of crop production in Ghana and internationally. The following are the objectives of the four-year degree programme:

- Sustainable production of crops as food and raw materials for value addition
- Development of environmentally sustainable strategies for the efficient management of pests and diseases of crops.
- To acquire skills to develop cropping systems for food and value-added products, which are compatible with environmental safeguards.

- To acquire skills for the identification, development and application of advances in science and technology leading to improved production of safe and nutritious food.
- To train competent and highly motivated graduates for careers in agriculture, food and environmental science, and capable of making significant contributions to the national effort in crop production and protection, and to foster in these graduates life-long habits of leadership, innovation, and extension service delivery.
- Assisting governments and other stakeholders in developing agriculture policies that will facilitate and enhance increased crop productivity.
- Conduct demand-driven research and disseminate and transfer of appropriate technologies to farm managers, companies/industries and relevant policy-making agencies of Government

DEPARTMENTS

Currently, the School is non-departmentalized and by the following year, the following distinctive Departments will be established:

- Department of Animal Production and Health
- Department of Agricultural Economics, Agribusiness and Extension
- Department of Horticulture and Crop Production
- Department Food Science and Technology

STUDENT STATISTICS/POPULATION IN SCHOOL OF AGRICULTURE

The first batch of thirty-four (34) students were matriculated and admitted into the School in October, 2014. The second batch of twenty-two (22) students were admitted and brought to the School in October, 2015. Currently we have thirty-one level 200 students, and twenty-one (21) level 100 students making a total of 52 students

Year/Level	Male	Female	Total
100	21	0	21
200	27	4	31
Total			52

ACTIVITIES OVER THE PAST YEAR

University Farm: The School initiated a Model Farm Project which is to be used for training of students and farmers in the Dormaa Ahenkro Municipality. For a start a 5 acre land has been prepared to start the University farm

FUTURE PLANS

In the future, the School intends to achieve the following

- Start a Top-Up Programme for workers and professionals in the 2016/17 academic year.
- Establish a Model Farm as soon as funding is secured

Proposal for Model Farm

The School of Agriculture and Technology (SOAT) at Dormaa Ahenkro seeks to bring a paradigm shift in agricultural teaching, research and outreach in order to promote performance, modernization, efficiency and competitiveness of the Ghanaian agricultural sector. The strategy is to combine science, technology, business, economics and human values as an integrated tool for improving farming processes to meet market and consumption needs.

An important means to achieve the kinds of hands-on and practical training strategies which the SOAT has set for itself is a Model Farm. The SOAT has therefore developed a proposal for the establishment of an Integrated Model Farm, that is situated close to the SOAT's campus in Dormaa Ahenkro and which will showcase good agricultural practices along the agribusiness value chain. With this model farm, training of students, extension agents, farmers and agribusiness entrepreneurs will be greatly enhanced.

The model farm will incorporate Agriculture Technology Training and dissemination and Consultancy models which will allows us to leverage our experiences in agriculture to assist farmers, Agricultural Extension Agents and NGOs implementing different agriculture projects in the northern zone of the country. The training and consultancy accessed under the Agriculture Technology Training and Dissemination Centre will attract approved percentage amount to UENR. This will enable staff, graduates and students to get further experience in the field of agriculture and concurrently generate revenue for the sustainability of the model farm. With this proposal, we seek to source funding of GH¢500,000.00, which will serve as initial capital for the establishment of integrated model farm.

The model farm when fully established will be an integrated farm with the following features:

Overall goal: The overall goal of the model farm is to establish a self-sustaining commercial and demonstration farm for extending knowledge, practical skills, and entrepreneurship training to students, farmers, and other stakeholders in sustainable and ecological agriculture in Ghana.

Specific areas of focus: The model farm will focus on vegetables, cereals, tree crops, mono gastric and small ruminant's production, and establishment of on- station Feed Mill and Agriculture Technology and Agripreneurship Centre for the training

of farmers, Extension Agents, Agripreneurs for the agricultural and economic development of Ghana.

Implementation strategy: The proposed model farm is to be implemented in three (3) stages.

- **Stage 1:** The model farm will begin with short-term all-year-round crops (e.g. vegetables, cowpea, maize, plantain) and perennial crops (e.g. cocoa, citrus and oil palm). At this stage also, effort will be devoted to seeds and seedling production.
- **Stage 2:** In the second stage, a poultry farm which focuses on egg production and establishment of Feed mill will be done.
- **Stage 3:** The model farm will be expanded to include longer term capital-intensive production activities such as pigs, grasscutter, small ruminants, slaughter house and meat processing, and Agriculture Technology and Dissemination Centre will be established.

Management of the farm: A five (5) member Farm Management Committee drawn from faculty and private entrepreneurs will be appointed and mandated to ensure that the rationale and core objectives of the farm concept are achieved in terms of both environmental and economic sustainability.

TEACHING STAFF

There is one full Professor; one Senior lecturer, two Lecturers and two Assistant Lecturers at the School of Agriculture and Technology. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialization
Prof. Daniel Obeng-Ofori	PhD(Camb,UK); M.Phil Camb, UK; BSc (UG)	Prof/Acting Dean	Entomology
Dr. William Quarmine	PhD (WUR), MPhil (UG) BSc (UG)	Lecturer	Agricultural Economics
Ms Helena Oppong-Kyeremeh	MPhil (KNUST), BSc (UCC)	Assistant Lecturer	Agribusiness
*Dr. Charles Adarkwa	PhD (Humboldt, Germany); MSc (Humboldt, Germany) BSc (UCC)	Senior Lecturer	Crop Science/ Entomology
*Dr. Richard Kwasi Bannor	PhD (RAU, India); MA (UG); BSc (UCC)	Lecturer	Agribusiness & Agric.

			Administration
*Dr. Samuel Asomaning	PhD (UG); M.Phil (UG); BSc (UG)	Lecturer	Soil Science
Ernest Darkwah Yeboah	MA (JAU, China); BSc (UG)	Assistant Lecturer	Animal Science
Mr. Joseph Yeboah	MSc (KNUST), BSc (KNUST)	Assistant Lecturer (Part-Time)	Biochemistry & Environmental Science
Mr. Vasco Kwasi Duku	CEMBA (KNUST), BSc (UCC)	Assistant Lecturer (Part-Time)	Accounting & Business Administration
Mr. Benfield Osei	MSc (KNUST), BSc (UDS)	Assistant Lecturer (Part-Time)	Agriculture & Environmental Science
Mr. Anthony Donkor	MSc (KNUST), BSc (KNUST)	Assistant Lecturer (Part-Time)	Electrical Engineering & Mathematics

*Part Time Lecturers

PROF. DANIEL OBENG-OFORI

Research Activities/Interests

- Insects as food and feed
- Botanicals as biopesticides for IPM
- Inclusive commodity chains and innovation platforms and partnerships in increasing food sovereignty in oil palm and cocoa in Ghana
- Strengthening innovation and technology dissemination for sustainable development in maize and cocoa value chains in Ghana
- PostHarvest management

Publication(s)

- **Obeng-Ofori, D.,** Charles Adarkwa and Christian Ulrichs (2016) Chemical, physical and organic hermetic storage technology for stored-product protection in African countries, IOBC –WPRS Bulletin 11, 3-27.

- David Tembong Cham, **Obeng-Ofori, D.,** Henry Ekow Davis, Ebenezer Oduro Owusu (2015) Potential of indigenous Lepidopterans as biocontrol agents

against the newly invasive mealybug species Paracoccus marginatus in Ghana. Trends in Entomology 10, 63-71.

- **Obeng-Ofori, D.,** and George Kwadwo Anane (2015) Establishment and Operationalisation of a Quality Assurance and Planning Unit (QAPU) at the University of Energy and Natural Resources (UENR), Sunyani, Ghana. In: Managing Change at Universities-A selection of case studies from Africa and Southeast Asia–Volume II Peter Mayer and Marc Wilde (eds.), Nachdruck mit Benachrichtigung des Herausgebers und unter Angabe der Quelle, Germany, ISBN 978-3-934394-xx-x, pp. 25-57.

- Opare, P., Agyei-Ohemeng, J., Lartey, M., **Obeng-Ofori, D.,** Panfili, G. and Cinquanta, L. (2015) Enhancing the productivity of maize by resource-poor farmers in Ghana using effective technology dissemination system. Conference Proceedings of 10th AISTEC Conference on Grains for feeding the world jointly organized with ICC on the occasion of the World Expo Milan 2015, R. Acquistucci, M. Blandino, M. Carcea, M.G. D'Egidio, S. Iametti, E. Marconi, A. Marti, M.A. Pagani, M. Palumbo and R. Redaelli (eds.), AISTEC – Italian Association for Cereal Science and Technology, Rome, Italy, ISBN: 978-88-906680-4-3, pp. 95-98.

- Badii, K. B.,Billah, M. K., Afreh-Nuamah, K. and **Obeng-Ofori, D.** (2015). Species composition and host range of fruit-infesting flies in northern Ghana. International Journal of Tropical Insect Science 35, 137–151.

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- Ampiah, A.S., Fening, K.O., Ofosu-Anim, J., **Obeng-Ofori, D.** and Ntaanu, P.K. 2015. The Status of Sericulture in Ghana, Journal of Energy and Natural Resources Management 1 (2), 75-79

- Ansah, A.F., Anankware, P.J., Fatunbi A.O., Afreh–Nuamah, K. and **Obeng-Ofori, D.** (2015) Environmental conditions and the use of Hermetic Triple Layer Biodegradable bags For Maize Storage in Ghana, Legon Journal of Science and Technology (accepted and in press).

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and G. Colelli (eds.), ISHS Acta. Hort., Proceedings XI International Controlled and Modified Atmosphere Research Conference, pp. 695-702.

- **Obeng-Ofori, D.** 2014. Sustainable management of pests of okra and cucumber in the Greater Accra Region of Ghana with neem bio-pesticides for food safety and environmental protection, Journal of Energy and Natural Resources Management 1 (1), 1-7.

- Appiah, E.F., Ekesi, S., Afreh-Nuamah, K., **Obeng-Ofori, D.** and Mohamed, S.A. (2014) African weaver ant-produced semiochemicals impact on foraging behaviour and parasitism by the Opiine parasitoid, Fopius arisanus onBactrocera invadens (Diptera: Tephritidae). Biological Control 79, 49-57

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- Adarkwah, C., Ulrichs, C., Schaarschmidt, S., Badii, K. B., Addai, I.K. **Obeng-Ofori, D.** and Schöller, M. (2014).Potential of Hymenopteran larval and egg parasitoids to control stored-product beetle and moth infestation in jute bags Bulletin of Entomological Research 104, 534–542.

- Gloria Agyeiwaa, Ken Okwae Fening, **Daniel Obeng-Ofori,** Nguku Evelyn and Raina Suresh Kumar, (2014) Assessment of the Quality of Cocoons and Silk Fibre Produced by Five Bivoltine Bombyx mori (Lepidoptera: Bombycidae) Strains Fed on Three Mulberry Varieties in the Coastal Savanna Agro- Ecological Zone of Ghana. Sericologia 54 (2), 103-112.

- Jacinter Atieno Otieno Odhiambo, Winfred S.K. Gbewonyo and **Daniel Obeng-Ofori** 2014. Insecticide use pattern and residue levels in cabbage (Brassica Oleracea Var capitataL.) within selected farms in southern Ghana. Journal of Energy and Natural Resources Management 1, 25

- Badii, K. B., Adarkwah, C., Ulrichs, C. and **Obeng-Ofori, D.** 2013. Efficacy of diatomaceous earth formulations against Callosobruchus maculatus F. (Coleoptera:Bruchidae) in Kersting's groundnut (Macrotylomageocarpum Harms): influence of dosage rate and relative humidity. Journal of Pest Science 87,285-294.

- Kyere E., Bani, J.K. and **Obeng-Ofori, D.** (2013) Effect of cassava processing equipment on quality of gari produce in selected processing site in Ghana. International Journal of Agriculture Innovations and Research 2 (2), 145-156.

- Anankware, J.P., **Obeng-Ofori, D.,** Afreh–Nuamah, K., Oluwole, F.A., Bonu-Ire, M. (2013) Triple-Layer Hermetic Storage: A Novel Approach Against Prostephanus truncatus (Horn) (Coleoptera: Bostrichidae) and Sitophilus zeamais (Mot) (Coleoptera: Curculionidae), Entomology, Ornithology and Herpetolog y 2, 11321.

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- Anankware P. J., **Obeng-Ofori, D.** and Osekre E (2013) Neglected and underutilized insect species for nutrition and health. In: International Conference on Neglected and Underutilized Species for a Food-Secure Africa. Accra, Ghana, 27-29 September, 2013.

- Badii, K. B.,Billah, M. K., Afreh-Nuamah, K. and **Obeng-Ofori, D.** (2012) Farmers' knowledge and perceptions of fruit fly pests and their management in northern Ghana. Greener Journal of Agricultural Sciences 2 (8), 412-423.

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- Caroline Foba Ngichop, Kwame Afreh-Nuamah, Maxwell Kelvin Billah and **Daniel Obeng-Ofori,** (2012) Species composition of fruit flies (Diptera: Tephrotodae) in the Citrus Museum orchard at the Agricultural Research Centre (ARC), Kade, Ghana. International Journal of Tropical Insect Science 32 (1), 12–23.

- Charles Adarkwa, **Daniel Obeng-Ofori,** Carmen Buttner, Christoph Reichmuth and Matthias Scholler, (2012) Potential of Lariophagus distinguendus (Forster) (Hymenoptera: Pteromalidae) to suppress the maize weevil Sitophilus zeamais Motschulsky (Coleoptera: Curculionidae) in bagged and bulk stored maize. Biological Control 60, 175-181.

- Anankware, P.J., Ansah, A.F., Fatunbi A.O., Afreh–Nuamah, K. and **Obeng-Ofori, D.** (2012) Efficacy of the multiple-layer hermetic storage bag for biorational management of primary beetle pests of stored maize. Academic Journal of Entomology 5 (10), 47-53.

Books

- **Obeng-Ofori, D.** (2015) Important Vertebrate and Mite Pests of Agriculture and Health. Scholar's Press, ISBN: 978-3-639-76611-0, 208 pp.

Outreach Programmes/Extension Services

- Trainer of Trainers (TOT) on innovations and technologies along the cocoa and maize value chains in Ghana and Ethiopia.
- Senior High Schools in the Brong Ahafo and Ashanti Regions on UENR programmes.

Conferences/Workshops/Seminars

- First Ghana Humboldt Club Meeting, Yiri Lodge, University of Ghana, Legon, 2016, Jan. 27-30
- First International Congress on Postharvest Loss Prevention, Rome, Italy 2015,Oct. 4-7

- Mid-Term Dissemination Conference SATTIFS Project, UENR, Sunyani, Ghana, 2015, Sept. 29
- ACP-EU Stakeholder meeting on projects, ACP Secretariat, Bruxelles, Belgium, 2015, July 7- 8
- ICC/IASTEC conference on grains for feeding the world, University of Milan, Italy, 2015, July1-3
- OBC conference o integrated protection of stored product pests. Paranoma Hotel, Zagreb, Croatia, 2015, June 28-Jul
- ACU CIRCLE Trainer of Trainers Workshop on Mentoring, Indaba Hotel, Johannesburg, South Africa, 2015, May 15-17
- Higher level information meeting of Champions on the CIRCLE Project, AAS, Nairobi, Kenya, 2015, Feb. 1-5
- TrainIQAfrica-High Level Information Meeting, Duisberg, Germany, 2014, Nov. 3-7
- DIES International Deans Course Part III, Addis Ababa, Ethiopia. 2014, Feb. 10-14
- Training Workshop on Management of Higher Education Institutes, Galilee International Management Institute, Israel, 2014, Jan15-29
- DIES Conference on balancing quality and access in higher education in Africa (IDCII) UPSA, Accra, Ghana, 2013, Nov 4-5
- DIES International Deans Course Part 1, Osnabrueck and Berlin, Germany, 2013, July 1-12
- Postharvest Loss Convening Workshop, Windsor Hotel, Nairobi, Kenya 2013, Feb. 06.
- International Conference of COS-SIS, Elmina, Ghana, 2012, Nov. 23-28.

WILLIAM QUARMINE

Research Activities/Interests

- Institutional economics
- Adoption and productivity
- Value chain analyses
- Rural and Agricultural Finance
- Poverty

Publication(s)

- **Quarmine, W.** Predicting Ghanaian farmers' intention to sustain the supply quality cocoa beans. Journal of Energy and Natural Resources. 2016. Accepted.
- **Quarmine, W.,** Haagsma, R., Sakyi-Dawson, O., Asante, F., van Huis, A., & Obeng-Ofori, D. (2012). Incentives for cocoa bean production in Ghana: Does

quality matter? NJAS-Wageningen Journal of Life Science, 60-63(60-63), 7-14

- **Quarmine, W.,** Haagsma, R., Sakyi-Dawson, O., Asante, F., van Huis, A., & Obeng-Ofori, D. (2013). Did the price-related reforms in Ghana's cocoa sector favor farmers international Journal of Agricultural Sustainability

- **Quarmine, W.,** Haagsma, R., Sakyi-Dawson, O., Asante, F., van Huis, A., & Obeng-Ofori, D. (2012). Farmer participatory research and adoption in smallholder Ghanaian cocoa farming. Working paper submitted to Agricultural Systems (2013)

- **Quarmine, W.,** Haagsma, R., Sakyi-Dawson, O., Asante, F., van Huis, A., & Obeng-Ofori, D. (2012). Incentives to produce quality cocoa under certification. Working paper, Wageningn University

- **Quarmine, W.,** Haagsma, R., Sakyi-Dawson, O., Asante, F., van Huis, A., & Obeng-Ofori, D. (2012). Does price differentiation with self-selection motivate the production of quality cocoa by smallholders? Working paper, Wageningn University

Conferences/Workshops/Seminars

- Participant: Conference: "Strengthening Innovations and Technology Dissemination for Sustainable Development in Cereals, Cocoa and Coffee Value Chains in Western and Eastern Africa" on 29th September, 2015, UENR
- Participant: Inception Workshop: "Improving Smallholders' Food and Income Security by Introducing Non-Timber Forest Products" Organized by Forest Commission, NWO, RUDEYA and UENR, Kumasi, 31st March, 2015.

Outreach Programmes/Extension Services

- Team Member: School of Agriculture and Technology Model Farm Project
- Team Member: "Tree Farm Project" run by University of Energy and Natura Resources, RUDEYA, and University of Amsterdam.

HELENA OPPONG-KYEREMEH

Research Activities/Interests

- Postharvest loss technologies
- Climate change
- Resource economics

Conferences/Workshops/Seminars

- Participant: Conference: "Proposal-Writing Workshop" Organized by CIRCLE Fellowship for Female Scientists, at Nairobi, Kenya from 13th – 15th February 2016.

Outreach Programmes/Extension Services

- Member: School of Agriculture and Technology Model Farm Project
- Member: Planning Committee for School of Agriculture and Technology's "Top-Up Programme"



Prof Emmanuel Owusu Marfo Dean

SCHOOL OF SCIENCES

The School of Sciences is dedicated to research, teaching and generating scientific knowledge in its social context. It comprises of three Departments; Department of Computer Science and Informatics, Department of Mathematics and Statistics, Department of Chemical Sciences.

The overall objective of the School is to provide practical and theoretical grounding in technologies and wider knowledge relevant to the energy sector for engineers and other professionals as well as to equip students with the skills they need to change their lives for the good of society.

Through its teaching, research and extension, the School plays a notable role in building the emerging discipline of Science & Technology Studies (STS) in Ghana and the World at large. In research, faculty members during the year under review

have conducted investigations in Science and Technology (S&T) both in industry and in contemporary societies. In the near future, the School of Sciences would

introduce programmes in Engineering Physics, Biology and Environmental Sciences to diversify its portfolio of programmes to train a critical mass of scientists the national economy

STAFFING

The following are the staff of the School's Office:

Prof Emmanuel Owusu Marfo	-	Dean
Vida Avasong (Ms)	-	Snr. Admin Assistant
Abigail Amo Boatemaa	-	Snr. Admin Assistant

DEPARTMENTS OF MATHEMATICS AND STATISTICS

INTRODUCTION

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

The Department will soon mount postgraduate programmes in Mathematics and Statistics leading to the award of Master of Science (MSc), Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) degrees. The duration of the proposed Master's programmes will be two years (full time) and three years (part time) while that of the PhD programme is three years (full time) and five year (part time).

STUDENT STATISTICS/POPULATION

The first batch of fifty-four (54) students were matriculated and admitted into the Department in September, 2013. The second batch of hundred and thirty (130) students was admitted to the Department in September, 2014. In September 2015 another batch of eighty-one (81) students were admitted into the Department. Currently the student population at the Departments stands at 265. The table

below provides detailed information on the number of male and female students at the Department.

Level	Male	Female	Total
100	65	16	81
200	118	12	130
300	45	9	54
Total	**228**	**37**	**265**

ACTIVITIES OVER THE PAST YEAR

Apart from the three programmes offered by the Department, the Department is responsible for servicing all the mathematics courses offered to other bachelor degrees at the University. The Department has profited immensely from the University's pragmatic staff development policy. Almost all masters degree holders at the Department have enrolled in PhD programmes in national and international institutions. Last year three of our staff members completed their PhD programmes.

Further, promotion of the study of mathematics especially at the elementary level is one main objective of the Department. In view of this the Department has partnered with the Mathematical Sciences Students Association (MaSSA) to organise mathematics quizzes for Senior High Schools in the Brong-Ahafo Region.

FUTURE PLANS

Plans are underway to start postgraduate programmes in mathematics and statistics. The statistics programme has already been sent to the National Accreditation Board (NAB) for accreditation. The mathematics programmes in under preparation and will be ready soon for its onward submission to the NAB. Further, the Department in partnership with MaSSA plans to embark on outreach programme to visit senior high and junior high schools to promote the study of mathematics in the Brong-Ahafo region.

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
Kaku SagaryNokoe	PhD(British Columbia)	Adjunct Professor	Biometry

Frank Badu Osei (On leave)	PhD(Twente) BSc. (KNUST)	Lecturer	Spatial Statistics
Alex Akwasi Opoku	PhD (Groningen)	Ag. HoD & Lecturer	Mathematical Physics & Probability Theory
Dominic Otoo	Ph.D (KNUST) MSc, BSc (KNUST)	Lecturer	Math. Modeling, Operations Research
Elvis Donkoh	PhD (KNUST)	Lecturer,	Mathematical Modeling of Systems
De-Graft Emmanuel Owusu-Ansah	PhD (KNUST) MSc, BSc (KNUST)	Lecturer,	Mathematical and Statistical Modeling
Johnson De-Graft Ankamah	MPhil (Eindhoven)	Lecturer,	Industrial and Applied Mathematics
*Baaba Abassawah Ghansah	M.Phil, BSc(KNUST)	Lecturer	Mathematical Modeling of diseases
*Sylvia Ankamah	M.Phil (Cape Coast)	Assistant Lecturer	Statistics and Modeling
Wahab Abdul Iddrisu	M.Phil, (KNUST)	Assistant Lecturer	Statistics and Modeling
Kwame Frimpong Piesie	M.Phil (KNUST)	Assistant Lecturer	Pure Mathematics
Isaac Akoto	M.Phil(Ghana)	Assistant Lecturer	Actuarial Science
Richard Kwame Ansah	M.Phil (KNUST)	Assistant Lecturer	Pure Mathematics
Charles Kwofie	M.Phil (Ghana)	Assistant Lecturer	Actuarial Science

*On Study leave/Leave of Absence

PROF KAKU SAGARYNOKOE:

Research Activities/Interests

- Statistical modelling, Biometry

Publication(s)

- Luguterah, A. and **Nokoe, K. S.** (2013) Comparison of the significance of some fixed factors on multilevel child survival, European Scientific Journal Vol. 9 (18): 246-258, June 2013 (http://eujournal.org/index.php/esj
- Luguterah, A. and **Nokoe, K. S.** (2013). Pre-pregnancy Risk Factors for Intrauterine Fetal Mortality in Ghana, American Journal of Public Health Research, Vol. 1 (5) 124-128.
- Alhassan, A., **Nokoe, K.S.** and Kyei Aboagye, K. (2013). Modeling the containment of mycobacterium tuberculosis strain, European Scientific Journal, Vol. 9(36): 443-453
- **Nokoe, K. S.,** Fédes van Rijn, Adewale A Adekunle, Adeolu B. Ayanwale and KefasiNyikahadzoi, (2013). Similarities among FARA-led IAR4D Innovation Platforms, European Scientific Journal, Vol. 9(36): 472-484
- Adekunle, A. A., Fatunbi, O., Ayanwale, A.A., Olarinde, S., Oladunni, O., **Nokoe, K. S.,** Binan, J. N., Kamara, A. Y., Maman, K. N., Dangbegnon, C., and A. Emechebe, (2013). Unlocking the potentials of agricultural research and development in the savanna of West Africa, Forum for Agricultural Research in Africa (FARA) Publ., Accra
- Adeolu B. Ayanwale, Luke O. Olarinde, Olufemi A. Oladunni and **Nokoe, K. S.** (2013). FOUR (4) Reports on Proof of Integrated Agriculture for Research for Development (IAR4D) CONCEPT, SSA-CP FARA December 2012-June 2013 [Restricted Circulation] Forum for Agricultural Research in Africa (FARA) Publ., Accra.
- **Nokoe, K. S.** (2013). Report on Governance, Restructuring and Academic Administration, West End University College, Accra – Ghana, [Restricted Circulation] West End University College, Ngleshi-Amanfro, Accra, May 2013.
- **Nokoe, K. S.,** (2013). IITA-USAID Africa RISING Report on Statistical Training for Female Research Scientists in Ghana, June 1-12 2013,Shai Hills

DR. FRANK BADU OSEI

Research Activities/Interests

- Spatial Statistics, Statistical modelling.

Publication(s)

- **Osei F.B,** Duker A.A, Stein A., (2011) Hierarchical Bayesian modeling of the space-time diffusion patterns of cholera epidemic in Kumasi, Ghana. StatisticaNeerlandica 65(1):84-100.
- **Osei F.B,** Duker A.A, Stein A., (2011) Evaluating Spatial and Space-Time Clustering of Cholera in Ashanti-Region, Ghana in Sivakumar JoghiThatha Gowder (Ed).,Crotaia; 2012. 19-32

DR. ALEX AKWASI OPOKU

Research Activities/Interests

- Probability Theory, Stochastic Processes, Statistical Mechanics:
- Random Polymer models, lattice and mean-field models

Publication(s)

- E. Bolthausen, F. den Hollander and **Opoku A. A.** (2015) A copolymer near a selective interface: variational characterization of the free energy. Annals of Probability, Vol. 43, Number 2, 875-933
- **Opoku A. A.** and Frank Redig (2015) Coupling and Hydrodynamic Limit for the Inclusion Process. Journal of Statistical Physics, Vol. 160, Issue 3, 532-547
- Donkoh E. K., **Opoku A. A,** Davies R. and Buabeng I. (2015),"An SEIR Model to study the Trend of Dog Rabies Without Vaccination. Case Study: Bongo District, Ghana" International Journal of Applied Mathematical, ISSN: 2051-5227,Vol. 30, Issue. 1, Pp. 1358- 1365,
- Donkoh E. K., Amponsah S. K., **Opoku A. A** and Buabeng .I. (2015) "Hexagonal Tessellation Model For Masting GSM Antenna: Case Study of MTN Kumasi East-Ghana". International Journal of Applied Mathematics, Vol. 30, Issue. 1, Pp.1349 – 1357, UK
- Donkoh E. K. and Opoku **A. A.** (2016),"Optimal Geometric Disks Covering using Tessellable Regular Polygons. Journal of Mathematics Research, Vol. 8, pp. 25- 36.
- Donkoh E. K, Amponsah S. K, and **Opoku A. A.** (2015),"Optimal Disks Overlap For Cell Planning in Telecommunication Network Design". International Journal of Mathematical Sciences, Vol. 35, Iss.1.
- Donkoh E. K, Amponsah S. K. and **Opoku A. A.** (2015) "Overlap Dimensions in Cyclic Tessellable Regular Polygons". Research Journal of Mathematics and Statistics, Vol.7, Issue 2,pp. 11 – 16.

Conferences/Workshops/ Seminars

- Mark Kac Seminar, Utrecht, The Netherlands. February 6, 2009
- XVIth International Congress on Mathematical Physics in Prague, Prague, Czech Republic (Poster), 3-8 August, 2009
- Oberseminar Stochastics, Institute of Applied Mathematics, University of Bonn, Bonn, Germany, April 28, 2011:
- Mark Kac Seminar, Utrecht, The Netherlands. October 7, 2011:
- Dynamical Gibbs-non-Gibbs transitions Workshop, Eurandom, Eindhoven, The Netherlands.
- Stochastic Activity Month, Eindhoven, The Netherlands. February 24, 2012:
- School and Workshop on Random Polymers and Related Topics, National University of Singapore, Singapore. 14-25 May, 2012:
- School and Workshop on Random Polymers, Eurandom, Eindhoven, The Netherlands. 8-18 January, 2013:
- Workshop on Probability Theory and Disordered Systems, Nantes, France. May 24, 2013:

Outreach Programmes and Extension Services

- Chairman: Security Committee, Holy Spirit School, Fiapre,
- Reviewer: Mathematical Reviews of American Mathematical Society. September 2009-2016.
- Referee: Electronic Journal of Probability. May 2014 to date.
- Executive Member: UTAG UENR Branch

DR. ELVIS KOBINA DONKOH

Research Activities/Interests

- Mathematical Modelling of Systems
- Telecom Systems and Signals & Systems
- Dynamical &Biological Systems
- Linear, Non-Linear and Network Optimization
- Fluid (Gas, Solids) Dynamics with Analysis
- Partial Diff. Equations ,Fourier Analysis
- Fluid Mechanics with Hydrodynamics Affine,
- Tensor Calculus and Differential Geometry, Geodesy

Publication(s)

- **Donkoh E. K.,** Kabo-bah K. and Asiedu S. (2014),"The Trend of Dog Rabies With Vaccination using SEIR Model. Case Study: Bolgatanga District,

Ghana". International Journal of Applied Mathematical Research, ISSN:2227-4324 Vol. 3(4),pp. 380-389,Berlin-Germany,

- **Donkoh E. K.,** Opoku A. A, Davies R. and Buabeng I. (2015),"An SEIR Model to study the Trend of Dog Rabies Without Vaccination. Case Study: Bongo District, Ghana". International Journal of Applied Mathematical, ISSN: 2051-5227,Vol. 30, Issue. 1, Pp. 1358- 1365
- **Donkoh E. K.,** Amponsah S. K., Opoku A. A and Buabeng .I. (2015) "Hexagonal Tessellation Model For Masting GSM Antenna: Case Study of MTN Kumasi East-Ghana". International Journal of Applied Mathematics, Vol. 30, Issue. 1, Pp.1349 – 1357,
- **Donkoh E. K.,** Amponsah S. K., Ansere A. J and Bonsu A. K. (2015). "Application of Least Overlap Difference for Multiple Size Hexagonal Tessellation in GSM Network Design: Case Study of GLO River State, Nigeria". International Journal of Mathematical Sciences, Vol. 35, Iss.1,UK.
- **Donkoh E. K.** and Opoku A. A. (2016),"Optimal Geometric Disks Covering using Tessellable Regular Polygons. Journal of Mathematics Research, CanadianCenter of Science and Education,Vol. 8,pp. 25- 36 .
- **Donkoh E. K**, Amponsah S. K, and Opoku A. A. (2015),"Optimal Disks Overlap For Cell Planning in Telecommunication Network Design". International Journal of Mathematical Sciences, Vol. 35, Iss.1.
- **Donkoh E. K ,** Amponsah S. K. and Opoku A. A. (2015)"Overlap Dimensions in Cyclic Tessellable Regular Polygons". Research Journal of Mathematics and Statistics, Vol.7, Issue 2,pp. 11 – 16.,

Conferences/Workshops/ Seminars

- Professional Development Course in Assessment for Learning (A' Level, IGCSE). 30th -31st August, 2012
- Regional College on Modelling, Simulation & Optimization, Institute of Mathematical Sciences (IMS), University of Cape Coast, Ghana, 28th April-3rd May, 2014.16th
- 20th Abdus Salam/ Edward Bouchet Regional College on Functional Analysis, Differential Equations & Applications, Institute of Mathematical Sciences (IMS), University of Ghana-Legon, 30th June - 4th July, 2014.
- Training and Model Teaching (IGCSE-Mathematics), Takoradi International School, Takoradi, Western Region. 13- 18 December, 2014, 24-30th Dec. 2015.
- School Organization, Administration, Classroom Management, Staff Development, Model Teaching-Mathematics, St. Peters Cambridge International School, October, 2014, 2015.

EMMANUEL DE-GRAFT JOHNSON OWUSU-ANSAH

Research Activities/Interests

- Uncertainty Quantifications and Risk Assessment
- Mathematical Methods for Modeling
- Statistical Theory
- Computational Statistics and Probability
- Analytics and Big Data
- High Frequency Data Modeling

Publication(s)

- **Owusu-Ansah E.D.J.,** Sampson A., Amponsah S.K., Tine I.H., Abaidoo R.C., Performance, Reliability and Compliance of Waste Stabilization Pond: Effluent Discharge Quality and Environmental Protection Agency Standard in Ghana: Research Journal of Applied Sciences, Engineering and Technology (2015) 10(11) pp: 1293-1302.

Conferences/Workshops/ Seminars

- Oral Presentation symposia, Society for Risk Annual Meeting/Conference, Arlington Virginia U.S.A, December 2015
- Participant/sub group lead Workshop on Statistical Methods for High Frequency Data, University of Copenhagen Denmark, July 2015
- Participant: International Conference and Workshop on Mathematical Foundation of Heavy Tailed Analysis, University of Copenhagen Denmark, June 2015
- Paticipant/Presentation International Conference and School of Mathematical Epidemiology Modeling, Strathmore University, Nairobi, Kenya, Sept. 2014.
- Presentation Workshop for safe water for food project, KNUST, Kumasi-Ghana, August 2014.
- Chief presenter: Seminars for PhD paper presentations under DHI and Environs. DHI Horsholm, AgernAlle 5 DK 2970. DHI GRAS, Denmark, June 2014.
- Participant: Workshop on Academic Writing for Research: Global Denmark; Hauchesvej 14, Frederiksberg C. University of Copenhagen. Denmark, May 2014.
- Participant/Sub Group leader: Workshop on Multi-Level Modelling of Longitudinal Data, Bygning 2, Oster Farimagsgade 5, 1353. Copenhagen K. Univ. of Copenhagen, Denmark, April, 2014
- Participant Minisymposium for Multi-species biofilms, Universitetsparken 15, University of Copenhagen, Denmark April 2014.

SYLVIA ANKAMAH

Research Activities/Interests

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

Conferences, Workshops/ Seminars

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

Outreach Programmes and Extension Services

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

BAABA A. DANQUAH (MRS.)

Research Activities/Interests

- Mathematical Biology - Population Dynamics
- Disease modelling
- Abibliometric analysis of malaria research

Conferences/Workshops/ Seminars

- Participant: 3rd Joint UNISA-UP Workshop on Theoretical and Mathematical Epidemiology. Pretoria, 22-26 February, 2016 58th A
- Participant Annual Congress of the South African Mathematical Society (SAMS). University of Witwatersrand, 4-6 November, 2015.
- Participant: Analysis and Differential Equations with Applications to Natural Sciences. Salt Rock, KwaZulu-Natal, 12-16 July, 2015.
- Workshop on Methods of Teaching and Assessing Students in Ghana. UENR,2nd-6th December 2013. Participant.

- Local Organizing Committee Member :Organization of Women in Science for the developing World – 2nd Africa Regional Conference in Ghana. UENR, 15th-18th October 2013..
- Participant: Africa Rising Training course: Experimental design and data analysis for young female research scientists in Ghana. Shai Hills,Accra, 2nd-12th June 2013.

Outreach Programmes and Extension Services

- Facilitators: Math is Fun Project for Primary and Junior High Schools in Sunyani Municipality, June 2015.
- Patron - National Union of Baptist Student- U.E.N.R Branch, December 2013.
- Board Member- Greener Radio (U.E.N.R Campus FM station), September 2013.

DR. DOMINIC OTOO

Research Activities/Interests

- Mathematical Modelling
- Operations Research

Publication(s)

- **Otoo, D.,** Amponsah S. K., Peprah A. K. and Ampofo S. D. (2015). Modeling the feed mix of poultry production, the case of Adama Musa Farms in Ghana. International Journal of Applied Mathematics, Vol. 4 (2) (2014) pp 404-410
- **Otoo, D.,** Amponsah S. K. and Todoko C. A. K. (2015). Time series Analysis of water consumption in the Hohoe municipality of the Volta region, Ghana. International Journal of Applied Mathematics Vol. 3 (4) (2014) pp 107-118
- Amponsah S. K., **Otoo, D.** and Sebil C. (2016). An improved ant colony Optimisation Algorithm to a real world application in solid waste collection; a case of TafoPankrono Kumasi, Ghana, International Journal of Mathematical Trends and Technology, Vol. 29 (2) pp 96-104
- **Otoo, D.,** Amponsah S. K. and Ankamah J. D. (2016). Enhanced vehicle routing problem with time windows, a real case of solid waste collection in TafoPankrono Kumasi, Ghana. International Journal of Mathematical Trends and TechnologyVol. 29 (2) pp 87-95

Outreach Programmes and Extension Services

- Chairman, Sports Management Committee
- Chairman, University Welfare Management Committee
- Member, Hostel Management Committee

MR. CHARLES KWOFIE

Research Activities/Interests

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

Publication(s)

- Nyarko, E., Owusu-Ansah and C., **Kwofie, C.** (2015), Modelling Commuter Preferences for a Bus. European Scientific Journal, vol. 11, pp. 420-429.

- **Kwofie, C.,** Owusu-Ansah and C., Boadi, C. (2015), Predicting the Probability of Loan- Default; An application Of Binary Logistic Regression. Research Journal of Mathematics and Statistics, vol. 7(4), pp. 46-52.

MR. RICHARD KWAME ANSAH

Research Activities/Interests

- Algebra
- Number theory

Publication(s)

W. Obeng-Denteh, OdumKodua-Nana, S. Owusu Ansah, **Ansah R. K** and Alex Quashie Nyamadu (2012) Modelling Students Affinity for Lecture Attendance Using Differential Equations: The Case of Students of Kwame Nkrumah University of Science and Technology, British Journal of Education, Society and Behavioural Science 2(4): 389-401,

DEPARTMENTS OF COMPUTER SCIENCE AND INFORMATICS

INTRODUCTION

The Four-year Bachelor of Science in Computer Science programme was introduced in 2013/2014 academic year with the aim of fully integrating both the theoretical and practical technologies of computer science to meet the changing demands of the information, communication and technology industry particularly in Ghana and the West Africa sub- region. The programme has been designed in response to a recognized need from the information, communication and technology industry for university graduates who have a detailed knowledge, appreciation and fundamental understanding of the various computers, their production, harnessing, conversion, and environmental concerns associated with the use of IT.

The Department of Computer Science and Informatics is concerned with the theory, design, development and application of computer systems and information processing techniques. The mission of the Department is to educate undergraduate and 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.

ACTIVITIES OVER THE PAST YEAR

- The pioneers of the BSc Computer Science programme are currently in level 300 with the preceding set of students at level 200 and level 100 respectively.
- The Department of Computer Science and Informatics also boasts of relationships with international professional training academies which include:
    - Oracle Academy
    - IBM Academy
- Plans are underway to establish relationship with
    - CISCO Networking Academy
    - Microsoft Academy

- Two members of the Department are currently pursuing their PhD in Peoples Republic of China and the Republic of South Africa respectively.

FUTURE PLANS

The Department in the near future intends to mount the following Post Graduate programmes;

Postgraduate Diploma in Computer Science

Master's Programme

- MSc. Information Technology
- MSc. Applied Computing and Informatics
- MSc. Big Data and Business Analytics

PhD Programme

- Phd. Applied Computing and Informatics

TEACHING STAFF

The Department has one Associate Professor, two Lecturers (both on study leave), and four Assistant Lecturer. Their names and qualifications are given in the table below.

Name	Qualification	Designation	Area of specialization
Prof A.F. Adekoya	M.Sc., PhD (Abeokuta) B.Sc, MBA (OGUN), PGD Education (LASU)	Assoc. Prof/HoD	Artificial Intelligence
B. A. Weyori	MPhil (KNUST) BSc (UDS)	Lecturer	Artificial Intelligence
Augustine Takyi	MEng (HUST, China) BSc(UG,Legon)	Lecturer	Computer Security
Obed Appiah	MPhil (KNUST), BSc. (KNUST)	Assistant Lecturer	Signal Processing
Christopher B.	MSc. (UoM, India),	Assistant	Big Data

Ninfaakang	BSc. (UG, Legon)	Lecturer	
Peter Appiahene	MPhil(KNUST), BSc(UEW)	Assistant Lecturer	Decision Support Systems
D. Adu Gyamfi	MEng (UESTC, China), BSc(UDS)	Assistant Lecturer	Network Security

PROF. A. F. ADEKOYA

Research Activities/Interests:

- Artificial Intelligence,
- Database Systems, Enterprise Modeling
- Business and Socio 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)

- Adeyemi H.O, Adejuyigbe, S. B., Ismail, S. O., **& Adekoya, A. F.** (2012) Modeling Manual Material Lifting Risk Evaluation: A Fuzzy Logic Approach., International Journal Of Applied Science And Engineering Research. Vol. 1. Issue 4/5, 2012.
- Adeyemi H.O, Adejuyigbe, S. B., Ismail, S. O., & **Adekoya, A. F.** (2013). Reducing Low Back Pain in Construction Works; a Fuzzy Logic Approach, International Journal of Ergonomics (IJEG) Volume 3, Issue 1
- Vincent, R., **Adekoya, A. F,** and Omoleh, P. (2013) A Normative Multiagent Trust Framework for Electronic Payment Analysis**.** IJCSI International Journal of Computer Science Issues, Vol. 10, Issue 2, No 3, ISSN (Print): 1694-0814 | ISSN (Online): 1694-0784. Pp 346 – 354.
- Vincent, O. R., Folorunso, O**., Adekoya, A. F,** Ibrahalu, F. T and Jaiyeola, G. I. (2013) Enhancing E-payment Security Using Finite Element Inverse Algorithm. The Journal of Computer Science and Its Applications, Vol. 20, No 1, Pp 15 – 25
- Oluwole Adeyemi, Samuel Adejuyigbe, Olusegun Akanbi, Salami Ismaila & **Adebayo. F. Adekoya** (2013)Manual Lifting Task Methods and Low Back Pain among Construction Workers in the Southwestern Nigeria. Global Journal of Researches in Engineering, Volume 13 Issue v III Version

- Shonubi, A. J., **Adekoya, A. F,** Sodiya, A. S., and Akinwale, A. T. (2013) Ontology of Input Validation Attack Patterns in Web Applications, Informatyka Economiczna (Business Informatics). Wydawnictwo Uniwersytetu Ekonomicznego we Wroclawiu Lodz, Poland. Issue 30 (4). 11 –
- H. O. Adeyemi, S. B. Adejuyigbe, O. G. Akanbi, S.O. Ismaila & **A. F. Adekoya** (2014). Degree of Safe Postures in Manual Lifting Tasks among Some Groups of Construction Workers in Southwestern Nigeria, International Journal of Ergonomics (IJEG), Volume (4): Issue (2)
- E. S. Owoeye, S. B. Adejuyigbe, B.O. Bolaji, **A. F. Adekoya** (2014): Computerised Inventory Management for a Manufacturing Industry: A case Study in Nigeria, African Journal of Science, Technology, Innovation and Development. 12/2014; 6(4)
- Shonubi, A. J., **Adekoya, A. F,** and Sodiya, A. S. (2014). An Ontology-Based Intrusion Patterns Classification System, The Journal Of Computer Science and Its Applications. An International Journal of the Nigeria Computer Society (NCS), Vol. 21, No. 2. ISSN (Print): Pp 32 – 46.
- Oluwole Hezekiah Adeyemi, Samuel B. Adejuyigbe, Olasunkanmi Salami Ismaila, A. F. **Adekoya, A. F.** (2015). Low Back pain Assessment Application For Construction Workers, Journal of Engineering, Design and Technology, Volume: 13 Issue: 3, 2015.
- O.M Adesusi, O.R. Adetunji, **A. F. Adekoya,** S.B. Adejuyigbe and S. O. Ipadeola (2015). A Knowledge Based Expert System for Silicate Glass Plant Maintenance. Journal of Natural Sciences Engineering and Technology. Vol. 14 No. 2.
- E.S. Owoeye, S. B. Adejuyigbe, B. O. Bolaji and **A. F. Adekoya** (2012) Computerized Investory Management for a Manufacturing Industry: Case Study in Nigeria. Proceedings of 5th International Conference on Appropriate Technology, 187-193.
- Owoade, A., **Adekoya, A. F.,** Vincent, O. R. & Shittu, A. M. (2015) A Descriptive Ontological Approach for Enhancing E-Payment Shopping Basket, Proceedings of the 1st International Conference on Applied Information Technology (AIT 2015). Abeokuta, Nigeria. 7th - 9th October, 2015.

BENJAMIN A. WEYORI

Research Activities/ Interests

- Artificial Intelligence
- Digital Image Processing
- Functional Brain Analysis

Publication(s)

- Sheng Wang, Jianfeng Lu, Xingjian Gu, **Weyori, B. A.**, Jing-yu Yang (2016): Unsupervised Discriminant Canonical Correlation Analysis Based On Spectral Clustering, Journal of Neurocomputing, 171: 425-433.
- Peter Nimbe, J.B. Hayfron-Acquah, **Weyori B. A.** (2015). Performance, Security and Statistical Analysis of Nimbe Cipher 1 (NC1), International Knowledge Press, Asian Journal of Mathematics and Computer Research, ISSN No. : 2395-4205 Vol.: 6, Issue: 1, pp. 37-60.
- Peter Nimbe, J.B. Hayfron-Acquah, **B. A. Weyori** (2015). An Improved Symmetric Cipher Encryption for Securing Data, International Knowledge Press, Asian Journal of Mathematics and Computer Research, ISSN No. : 2395-4205 (Print), 2395-4213 (Online), Vol.: 4, Issue: 3, pp. 139-154.
- Peter Nimbe, E. Okyere, **B. A. Weyori** (2015). An Alternative Technique For Finding the Nth Root of Real Numbers, International Knowledge Press, Asian Journal of Mathematics and Computer Research, ISSN No. : 2395-4205 (Print), 2395-4213 (Online), Vol.: 3, Issue: 1, pp. 32-39.
- **Weyori, B. A.,** K. O. Boateng (2013):Dynamic Intelligent Mean Filter for Impulse Noise Suppression in 2D Images, International Journal of Modern Engineering, pp 60-67, Vol. 13, No. 2.
- **Weyori, B. A.,** P. N. Amponsah, P. Yeboah (2012): Modeling a Secured Digital Image Encryption Scheme Using a Three Moduli Set, Global Journal of Computer Science and Technology Inter-discplinary, Volume 12, Issue 10, Version 1.0, pp 7-13.
- K.O. Boateng, **Weyori, B. A.,** D.S. Laar (2012): Improving the Effectiveness of the Median Filter, International Journal of Electrical Communication Engineering, Vol. 5, No. 1, pp. 85-97.
- **Weyori, B. A.** P. N. Amponsah, P. Yeboah (2011), "Design and Development of a Secured Data Coding and Compression Method for 2D Digital Images", International Journal of Computer Applications, Vol. 33, No. 7, pp. 50-58.
- **Weyori, B. A.,** Boateng, K. O. (2013) Implementation of an Adaptive Median filter for Color Image Processing", 28th Biennial Conference, Ghana Science Association, Accra, July 14 - 19 2013.

AUGUSTINE TAKYI

Research Activities/ Interests

- Computer Security

Publication(s)

- Nerissa E.L Anku, D. Adu-Gyamfi, A. Kankam, **Takyi, A.** and Richmond

Amponsah (2015) 'A Model for Photovoltaic Module Optimisation' Journal of Mechanical Engineering and Automation, 5(2): 72-79.

- Patrick Ohemeng Gyaase and **Takyi, A.** (2014) Public financing of broadband internet infrastructure in Ghana, options and challenges, International Journal of Technology Management & Innovation, Volume 3 - Issue 2.

Book Chapter

- Augustine Takyi and Patrick Ohemeng Gyaase. "Enhancing Security of Online Payments: A Conceptual Model for a Robust E-Payment Protocol for E-Commerce." Contemporary Research on E-business Technology and Strategy. Springer Berlin Heidelberg, 2012. 232-239

OBED APPIAH

Research Activities/ Interests

- Signal Processing
- Algorithm Development

Publication(s)

- **Appiah, Obed** (2015) Improved selection sort algorithm, International Journal of Computer Applications, Volume 110-No.5, January 2015
- **Appiah, Obed** (2015) Magnetic bubble sort algorithm, International Journal of Computer Applications, Volume 122-No21, July 2015
- **Appiah, Obed** (2015) Calculation of body mass index using image processing techniques. International Journal of Artificial Intelligence and Mechatronics, Volume 4, Issue 1, ISSN 2320-5121

CHRISTOPHER BOMBEY NINFAAKANG

Research Activities/ Interests

- Big Data
- Computer Security
- Human Computer Interaction

Publication(s)

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

APPIAHENE PETER

Research Activities/ Interests

- Decision Support Systems
- Human Computer Interaction

Publication(s)

- **Appiahene Peter,** Boateng Frank Laud, Floyd-Hockman Anthony, Onworna-Agyeman Anthony Lord and Opoku Michael (2014)" Using Information and Communication Technology (ICT) to Predict Teachers Productivity". International Journal of Innovation and Scientific Research, Vol. 2, No.2, pp. 348-355, June.
- **Appiahene, Peter,** Opoku Michael and Alorwu D. K. Daniel (2014) Usage of Tonaton.Com by Buyers and Sellers: A Survey of Car Dealers in Kumasi Metropolis. International Journal of Computer Applications 96(14):6-10, June 2014.
- **Appiahene Peter,** Opoku Michael, Akweittey Emmanuel, Adoba Emmanuel, and Kwarteng Richard, (2014)" Assessing the Challenges of Teaching and Learning of Mathematics in Second Cycle Institutions in Ghana". International Journal of Innovation and Applied Studies, Vol. 6 No. 3, pp. 362-368,

DANIEL ADU-GYAMFI

Research Activities/ Interests

- Data Security
- Network Security

Publication(s)

- Nerissa E.L Anku, **Adu-Gyamfi, D.,** Kankam, A. Takyi and R. Amponsah

(2015) A Model for Photovoltaic Module Optimisation. Journal of Mechanical Engineering and Automation, Volume 5, Number 2

- **Adu-Gyamfi, D.,** Yong WANG, Fengli ZHANG, Kamenyi Domenic M., Imran MEMON, Gustav YANKSON H. (2014) A Model for Spreading Behavior of Passive Worms in Mobile Social Networks, Journal of Computational Information Systems 10: 7

- **Adu-Gyamfi D.,** Fengli ZHANG, Augustine TAKYI, Nerissa Edem ANKU and Nii Antie Mahmoud ADDY (2015) "A Passive Attack Authentication Scheme for User Privacy-Preservation in LBS: A case in Opportunistic Mobile Networks" 2015 International Conference on Power Electronics and Energy Engineering (PEEE2015), CRC Press Proceedings, EI Compendex.

- Kamenyi Domenic M., Yong Wang, Fengli Zhang, Yankson Gustav, **Adu-Gyamfi D.** and Nkatha Dorothy. Optimizing Placement of Mix Zones to Preserve Users' Privacy for Continuous Query Services in Road Networks, 9th International Conference on Advanced Data Mining and Applications (ADMA 2013). EI/SCI Indexed, Dec. 14-16, 2013.

- **Adu-Gyamfi D.,** Yong Wang, Fengli Zhang, Kamenyi Domenic M., Imran Memon, Yankson H. Gustav. Modeling The Spreading Behavior Of Passive Worms In Mobile Social Networks, 2013 the 6th International Conference on Information Management, Innovation Management and Industrial Engineering (ICIII2013), IEEE Computer Society. EI Compendex, Nov. 23-24, 2013.

DEPARTMENT OF CHEMICAL SCIENCES

The Department of Chemical Sciences was established in 2014/15 academic year with the aim of offering chemical education to students for future career as professional chemist as well as those in the various fields in which a core understanding of the chemical processes is important.

The Department offers a 4-year Bachelor of Science undergraduate degree in Chemistry, with intensive coverage on a curriculum that will enhance the versatility of our graduates in the industrial, medical, forensic, pharmaceutical, and energy related fields with excellent skills in scientific applications for the job market and graduate studies programs.

The Department operates with instrumentation facilities that support research and teaching missions of the University. The teaching staff and students in the Department also benefit from a number of close collaborations between

chemistry, and research centers as well as other Departments in UENR including Renewable Energy and Environmental Engineering, Petroleum Engineering, and Forest Science Departments. The Departments teaching strength and specialization are indicated in the Table below:

Name	Qualification	Designation	Area of Specialization
Owusu –Marfo Emmanuel	D.Eng (Tokyo) MSc (Transkei) BSc(Ife)	Assoc. Prof/HoD	Crystallography
Dr Micheal Lartey	PhD (Massachusetts) MSc(Wittenberg)	Lecturer	Organic Chemistry
Dr Robert Akuamoah	PhD, MSc, BSc (Ghana	Lecturer	Organic Chemistry

PROF EMMANUEL OWUSU-MARFO

Research Activities/ Interests

- Model Systems for Separation Science, Drug Design and Discovery,
- Chemistry, Chemical Crystallography, Liquid Crystals Studies
- Applications, Host-Guest Chemistry, Supramolecular Chemistry

Publication(s)

- **Marfo-Owusu, E.,** Kazuhiro Yabuuchi, Takashi Kato, J. Watkin (2013) Crystal Structure of a Short Alkyl Chain Pyridine-Based Bisurea Compound: The Effects of Alkyl Chain length in a Supramolecule Module., Japan Soc. Anal. Chem. X-ray Struc. Anal. 29, 49-50
- **Marfo-Owusu, , E.,** Amber L. Thompson.Crystal Structure of a 1:1 Non-Proton –Transfer Hydrogen-Bonded Complex of Zwitterionic (2014) Quinaldic Acid with Chloranilic Acid Hydrate Adduct., Japan Soc. Anal. Chem. X-ray Struc. Anal. 30, 55-56
- **Marfo-Owusu, E.,** Amber L. Thompson., (2014) The Crystal structure of Entrapped 8-Hydroxyquinoline Molecules in an Interleaved Hydrogen Bonded zigzag Channel of Sulfamethoxazole Molecules. Japan Soc. Anal. Chem. X-ray Struc. Anal. 30, 50-51
- **Marfo-Owusu, E.,** Amber L.Thompson., (2014)The Crystal Structure of

Benzinidazole Complex with Chloranilic Acid Complex with Chloranilic Acid hydrate Adduct. Japan Soc. Anal. Chem. X-ray Struc. Anal. 30, 47-48

- **Marfo-Owusu, E.,** Amber L. Thompson (2014) The Molecular and Crystal Structure of 3,5-Dimethylpyrazole with Chloranilic Acid Adduct., Japan Soc. Anal. Chem. X-ray Struc. Anal. 30, 45-46
- **Marfo-Owusu, E.,** Amber L. Thompson (2015) The Effects of Molecular Conformation and Chain Length in Complexes of Tetra-n-alkylammonium Halide with Nonplanar Aromatic Molecule. Mol.Cryst.Liq.Cryst., 607, pp. 50-59

Conferences, Workshops and Seminars

- XXIII International Union of Crystallography Congress, Montreal, (2014)
- XXVII European Crystallography Conference held in Warwick, UK (2013)
- XXI International Conference on the Chemistry of the Organic Solid State, Oxford, UK (2013)
- XXVII European Crystallography Conference, Bergen, Norway (2013)
- XXII International Union of Crystallography Congress, Madrid, Spain

Outreach Programmes and Extension Services

- Chairman, Centre of Excellence Committee (2014-present
- Chairman, Procurement Evaluation Board (2014-present)
- Member, University Governing Council

DR. MICHAEL LARTEY

Research Activities and Interests

- Organic Chemistry (small molecules and ionic liquids design, synthesis and characterization)
- Polymer, Material and Supramolecular Chemistry
- Carbon capture and sequestration
- Molecular separation, purification and extraction using polymers
- Molecular delivery using polymeric carriers/vehicles and liposomes
- Bioanalytical chemistry (determination of mycotoxins in food)

Publication(s)

- P. Opare, J. Agyei-Ohemeng, **M. Lartey,** D. Obeng-Ofori, G. Panfili, L. Cinquanta, Enhancing the Productivity of Maize by Resource-Poor Farmers in Ghana Using Effective Technology Dissemination System, 10th AISTEC

Conference, Grains for feeding the world, 2015, pp. 95, ISBN: 978-88-906680-4-3.

- **Michael Lartey,** Julia Meyer-Ilse, John D. Watkins, Elliot Roth, Sage Bowser, Victor Armanda Kusuma, Krishnan Damodaran, Xu Zhou, Maciej Haranczyk, Erik Albenze, David Hopkinson, David Richard Luebke, Jeffrey Kortright, Hunaid Nulwala. Branched isomeric 1,2,3-triazolium-based ionic liquids: New insight into structure-property relationships. Phys. Chem. Chem. Phys., 2015, 17, 29834 – 29843.
- Surendar R. Venna, **Michael Lartey,** Tao Li, Alex Spore, Santosh Kumar, Hunaid B. Nulwala, David R. Luebke, Nathaniel L. Rosi, Erik Albenze. Fabrication of MMMs with improved gas separation properties using externally functionalized MOF particles. J. Mater. Chem. A, 2015, 3, 5014 – 5022.
- John D. Watkins, Elliot A. Roth, **Michael Lartey,** Erik Albenze, Mingjiang Zhong, David Luebke and Hunaid B. Nulwala. Ionic Liquid Regioisomers: Structure Effect on the thermal and physical properties. New J. Chem., 2015, 39, 1563 – 1566.

Conferences, Workshops and Seminars

- Organizer/ Trainer: Workshop on "Mycotoxins in maize" by the Centre for Information and Technology Dissemination (CITED), UENR. 13th May, 2016

Outreach Programmes and Extension Services

- Staff Scientist on SATTIFS project at the CITED

DR ROBERT AKUAMOAH

Research Activities/Interests

- Natural Products
- Organic Synthesis
- Environmental & Pollution Studies

Publication(s)

- Y. Serfor-Armah, A. Chatt, D. Carboo and **R. K. Akuamoah.** (2008) "Simultaneous Cloud Point Extraction of low levels of Cd, Cr and Hg in Seaweed Species prior to Neutron Activation Analysis" Journal of Applied Science and Technology (JAST), Vol. 13, Nos. 1 & 2, 48 – 54
- Y. Serfor-Armah, D. Carboo, **R. K. Akuamoah** and A. Chatt (2006) "Determination of selected elements in red, brown and green seaweed

species for monitoring pollution in the coastal environment of Ghana" Journal of Radioanalytical and Nuclear Chemistry, Vol. 269, No. 3, 711-718

- L. K. N. Okine, **R. K. Akuamoah,** W. S. K. Gbewonyo, K. A. Eli and E. Aidoo (2004) "Antimicrobial activity and chemical constituent profile of neem seed oil on storage: Effects of Vitamin E and Lecithin" Journal of the Ghana Science Association, Vol. 6, Number 2, 15-29
- D. Obeng-Ofori, **R. K. Akuamoah,** I E Aidoo and P B Filson, (2002) "Evaluation of Leaf Extracts of Siam Weed Chromolaena odorata (L.) and Mahogany tree Khaya senegalensis (Desi.) against the Maize Weevil Sitophilus zeamais (Mot.)", Agricultural and Food Science Journal of Ghana, Vol. 1, July, 95-106

Conferences/Workshops/Seminars

- 4th European Conference on Organic Reactivity Newcastle upon Tyne, UK 11-16 July 1993
- Overseas Development Agency (ODA now DFID) UK sponsored EIA Training Workshop for Consultants, Accra, Ghana, 10-21 July 1995
- The Sixth International Chemistry Conference in Africa, Accra, Ghana, 31 July to 4 August 1995
- First National Neem Conference (Organised by the Goethe Institut and the University of Ghana) at Dodowa near Accra, in October, 1998
- First National Agricultural Research System Workshop, Accra, Ghana, 16- 20 November 1998
- 21st Biennial Conference of the Ghana Science Association (GSA) Accra, Ghana 8- 13 August 1999.

Outreach Programmes/Extension Services

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



Dr. Nana Kwasi Diawuo Dean

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 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 bringing the total number of programmes to seven (7). The programme offered by each Department is shown in the table 1 below.

Table 1: Programmes under each Department.

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

Regular Students' Statistics

The School population as at the end of the 2015/2016 academic year stands at 860 for the regular Students. The Departments' student population as at the end of 2015/2016 academic year is as shown in Table 2.

Table 2: Number of Students in each Department

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

Other Programmes:

The Department of Energy and Environmental Engineering has started offering MSc/MPhil and PhD programmes in the 2015/2016 academic year with student numbers standing as: 15 PhD and 21 MSc/MPhil students. The programmes offered at this level are Sustainable Energy Engineering; Environmental Engineering and Management; and Renewable Energy Technologies. Two other Departments, Computer and Electrical and Mechanical and Manufacturing are also offering Top-Up programmes in BSc in Electrical/Electronic Engineering and BSc in Mechanical and Manufacturing with student numbers at 138 and 14 respectively.

Research Activities

Faculty is engaged in a number of research activities either individually or collectively. Each staff in the School is actively conducting research in one or more of the areas listed below.

- Industrial and Domestic Energy end-use
- Industrial Automation:-Data acquisition and control systems (PLCs, WAGO modules, HMIs design)
- Wireless and mobile communication
- Smart Grids
- Standalone Solar System
- Islanded Power Generation
- Microcontroller application in Power Management
- Nanotechnology application in providing renewable clean energy
- Power Electronics and Electric Drives
- Renewable and Clean Energy
- Turbulent boundary layer. Turbulent flow over smooth and rough walls. Flow through ducts, diffuser and nozzles. Flow around bluff bodies.
- Optimization of thermal systems; Energy systems; Renewable energy; Refrigeration and air-conditioning.
- Irrigation and drainage design schemes; Groundwater flow modeling and pollution transport systems, parameter estimation using mathematical models; Groundwater recharge and water quality analysis.
- Biomass gasification; Design of agricultural machine; Reduction of postharvest losses and climate mitigation.
- Solar energy technologies
- Biomass energy technologies
- Energy efficiency
- Environmental sanitation and impact assessment
- Natural products processing and utilization
- Clean development mechanism and climate change mitigation

Research Grants/Collaborations

The School is now in the process of identifying and collaborating with various agencies to solicit for grants for research purposes. So far such activates has only yielded the following:

Royal Society Africa Capacity Building. Phase 1	£ 2, 000
Rehabilitation of degraded forests for sustainable wood fuel production and climate change mitigation in the forest-savanna transition zone of Ghana. ITTO	$ 2, 000

The School is in collaboration with a number of Industries, Companies and Institutions. Some of them are:

1. CSIR Meraka Institute of South Africa.

2. Lakehead University, Canada.
3. Tswane University of Technology, South Africa.
4. Ghana National Fire Service, Forestry Commission and NADMO.
5. University of Applied Forest Sciences, Germany.
6. Naresuan University, Thailand
7. Maejo University, Thailand
8. CSIR-Forestry Research Institute of Ghana
9. Kumasi Centre for Collaborative Research into Tropical Medicine, KNUST
10. Nuguchi Memorial Institute for Medical Research, UG
11. Consortium for Danida Call 2015 (KNUST FFU Working Group)
12. University of Education, Winneba- Mampong, Campus
13. Ghana Cooperative Agricultural Producers and Marketing Association (AGRIC COOP)
14. Mossrich Energy
15. Bui Power Authority
16. Copenhagen University
17. Newmont Ghana Gold Limited
18. Solar Grid
19. DSTC
20. EDIFY
21. GRIDCo

MECHANICAL ENGINEERING DEPARTMENT

The Department runs a 4-year degree programme leading to the award of a Bachelor of Science (BSc.) 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:

- Introduction of Distance Learning for Foundation and a 2-year Top-up programme in Mechanical Engineering.
- Inauguration of Mechanical Engineering Student Association (MESA), UENR on 4th March, 2016
- Visit of MESA, UENR to Kantanka Automobile Assembly Plant at Gomoa Mpota in Central Region of Ghana on 11th March, 2016
- Staff attended ECOWREX II Regional Stakeholders' Meeting held at the E-Classroom of The Energy Center (TEC)-KNUST on 5th April, 2016
- Biochar and Ecotoxicology Workshop Organized on 5th November, 2015 under the Partnership of UENR, Ghana-EMBRAPA and under MKTPlace Project ID 1293.

International Projects

During the year under review, the Department initiated an Agricultural Innovation MKTPlace Project on the Design, Evaluation and Fabrication of Multifeed-Biomass Gasifier stove for smallholder families under the sponsorship of The Brazilian Agricultural Research Institute (EMBRAPA)-Brazil. Additionally, the Department also established collaborations with the following institutions:

- Ghana Regional Appropriate Technology Industrial Service (GRATIS) Foundation, Sunyani
- Mechanical Engineering Department, KNUST
- The Energy Center (TEC)-KNUST
- Advanced Energy and Material Systems Laboratory, University of Canterbury, New Zealand.

Students Statistics

The students' population in the Department is two hundred and seven **(207),** one hundred and ninety three **(193)** males and fourteen **(14)** females. The Table below shows the details of the number of students in the department.

Programme	Males	Females	Total
BSc. Agricultural Eng. (200)	36	3	39
BSc. Agricultural Eng. (100)	15	0	15
BSc. Mechanical Eng. (300)	67	3	70
BSc. Mechanical Eng. (200)	37	3	40
BSc. Mechanical Eng. (100)	38	5	43

Teaching Staff

There are three PhD holders, four Assistant Lecturers one Demonstrator in the Department. Their names and qualifications are given in the table below;

Name	**Qualification**	**Designation**	**Area of Specialization**
Dr. Samuel Gyamfi	PhD (University of Canterbury, New Zealand), MSc(University of Applied Sciences, Aachen, Germany), BSc.(KNUST)	Lecturer/HoD	Electricity demand response assessment and modeling Renewable Energy Systems Design
Dr. Thomas Atta-Darkwa	PhD(KNUST), MSc.(KNUST), BSc(KNUST)	Lecturer	Irrigation and Drainage Design 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)	Assist. Lecturer	Solar PV Systems Energy Planning Solar Air-Conditioning
Mr. Gilbert A. Akolgo	MSc (UG), BSc.(KNUST)	Assist. Lecturer	Thermo-chemical conversion of biomass and co-products Agricultural mechanization
Mr. Eric O. Essandoh	MSc.(KNUST), BSc(KNUST)	Assist. Lecturer	Wind Energy Studies Development of biocompatible Prostheses
Mr. Felix Uba	MSc.(KNUST), BSc.(KNUST)	Assist. Lecturer	Thermal comfort analysis Numerical simulation of particles Energy analysis of solar systems

DR. SAMUEL GYAMFI

Research Activities/Interests

- Electricity demand response assessment and modeling
- Renewable and Sustainable Energy for Developing Countries
- Energy Demand-side Management (DSM)
- Energy Life Cycle Assessment
- Renewable Energy Systems Design

Publication(s)

- Rahman, M., Hettiwatte, S. **Gyamfi, S** (2014) An Intelligent Approach of Achieving Demand Response by Fuzzy Logic based Domestic Load Management, Proceedings of Australasian Universities Power Engineering Conference, AUPEC 2014, Curtin University, Perth, Australia. 28 September – 1 October, 2014
- **Gyamfi, S.,** Modjinou, M., Djordjevic, S. (2014) Improving Electricity Supply Security in Ghana – The Potential of Renewable Energy. Renewable & Sustainable Energy Reviews 43(2015): 1035 – 1045.

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)

- 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.

- Kotei, R., Agyare, W.A., Kyei-Baffour, N., Kena, F.N. and **Atta-Darkwa, T.** (2015). Development of groundwater recharge model for the Sumanpa catchment at Ashanti Mampong in Ghana. Science Research. Vol. 3, No. 6, pp. 289-295.

- Kotei, R., Kyei-Baffour, N., Agyare, W.A., Bukari, J. O., Korankye, O., **Atta-Darkwa, T.** and Amartey, J. N. A. (2015). Evaluation of the performance of the Sataso Irrigation Scheme in Ghana after its inception and after the post-rehabilitation periods. Journal of Agricultural and Biological Science. Vol. 10No. 10, pp 394-406.

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.
- Participant: Embrapa workshop on "Biochar Production and Ecotoxicology" Sponsored by Market Place Agriculture, Brazil and University of Energy and Natural Resources, Sunyani, Ghana. 5th November, 2015.

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.,** Josiah M. N. and Mahama A. A., (2015) Field evaluation of rice losses of the Yanmar DD 1000 thresher. Journal of Ghana Science Association, Vol. 16 No. 1
- Atta-Darkwa T., Kabo-bah A. T., **Akolgo G. A.,** Kotei R. and Amo-Boateng M., (2016) Assessment of groundwater quality for irrigation in the Oda river basin, Ejisu-Besease, Ghana, International Journal of Current Research, Vol. 8, (05)

Conferences/Workshops/Seminars

- Participant: The MKTPlace Forum 2015 for Project Leaders organized by Agricultural Innovation MKTPlace, Brasilia - Brazil, from September 15th to 18th, 2015.

- Resource Person: Biochar and Ecotoxicology Workshop Organized by UENR, Ghana-EMBRAPA and Sponsored by MKTPlace, Sheila Executive Lodge, Sunyani, 5th November, 2015

- Participant: Clean Cooking Forum organized by Global Alliance for Clean Cookstoves Ghana, Alisa Hotel, Accra Ghana, 10th and 13th November, 2015

Outreach Programmes/Extension Services

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

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
- Design and Construction of Machines/Machine Elements

Publication(s)

- **Akolgo G. A.,** Josiah M. N. and Mahama A. A., (2015) Field evaluation of rice losses of the Yanmar DD 1000 thresher. Journal of Ghana Science Association, Vol. 16 No. 1
- **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.
- Adam F.W., **Essandoh E.O.,** Tawiah P.O. (2013), The Suitability of Oxytenanthera Abyssinica for Development of Prostheses in Developing Countries, International Journal of Advanced Research in Engineering and Technology (IJARET), Volume 4 Issue 5 pg. 87-97
- **Essandoh E.O.,** Brew-Hammond A., Adam F.W (2013), Wind Data Collection and Analysis in Kumasi, International Journal of Mechanical and Mechatronics (IJMME – IJENS), Volume 13 No.4

- Adam F.W., Brew-Hammond A., **Essandoh E.O.** (2013), Relationships Between Energy Use And Income Levels For Households in Ghana, European Scientific Journal (ESJ), Volume 9 No.16

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: Validation of Report on Renewable Energy (RE) Policy Review & Gap Analysis of Stakeholder Consultation on Barriers to Renewable Energy Technology-jointly organized by UNDP and Energy Commission of Ghana, Capital View Hotel, Koforidua, 24th and 25th November, 2015

- Team Member: ECOWREX II Regional Stakeholders' Coordination Meeting Organized by TEC-ECREEE and Funded by European Union, KNUST, Kumasi, 5th April, 2016.

Outreach Programmes/Extension Services

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

FELIX UBA
Research Activities/Interest

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

Publication(s)

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

- Sarsah, E. A., & **Uba, F. A.** (November, 2013) Emprical Determination and Analysis of Hourly Solar Heat Gain Factors in Wa, Ghana. Internal Journal of Engineering Research & Technology, 2634-2640, Vol. 2 Issue 11.
- Sunnu, A. K., Sarsah, E. A., & **Uba, F. A.** (November, 2013) The Mechanism of Clogging of Road Vehicle Combustion Air Filter by Road Dust, Internal Journal of Science and Technology , 763-769, Vol. 2 Issue 11.
- **Uba, F. A.,** & Sarsah, E. A. (2013) Cooling Load Temperature Differential Values for Building in Ghana, Internal Journal of Technology & Technology Research, 222-235, Vol. 2, Issue 12.
- **Uba, F. A.,** & Sarsah, E. A. (2013) Optimization of Tilt Angle for Solar Collectors in Wa, Advances in Applied Science Research, 4(4):108-114.
- **Uba, F. A.,** Fiagbe, Y. A., & Sarsah, E. A. (2013) Simplified Procedure for Estimating Air-Conditioning Cooling Load in Ghana, International Journal of Scientific & Technology Research, 38-46, Vol 2, Issue 9.

RENEWABLE ENERGY AND ENVIRONMENTAL ENGINEERING DEPARTMENT

The Department was established in 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 the West Africa sub- region. Additionally, a BSc Programme in Petroleum Engineering was introduced in the 2014/2015 Academic year bringing the total undergraduate programmes in the Department to three.

Student Population

LEVEL	Number of Students			TOTAL
	Renewable Energy Engineering	Environmental Engineering	Petroleum Engineering	
100	25	24	31	80
200	53	43	29	125
300	64	73	-	137
400	69	-	-	69
TOTAL	211	140	60	411

Research Activities

The research activities of the Department fall under the following six main thematic areas:

1. Solar energy technologies
2. Biomass energy technologies
3. Energy efficiency
4. Environmental sanitation and impact assessment
5. Natural products processing and utilization
6. Clean development mechanism and climate change mitigation

Postgraduate Programmes:

The Department has started offering MSc/MPhil and PhD programmes in the 2015/2016 academic year with student numbers standing as: 15 PhD and 21 MSc/MPhil having a total of 36. The programmes offered at this level are Sustainable Energy Engineering; Environmental Engineering and Management; and Renewable Energy Technologies.

Projects/Activities in the Department

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

- Akosombo-Kpong Re-optimization Project
- Running Solar PV installation training.
- Building biogas digesters for institutions (eg. Holy Family Midwifes and Nurses Training College).
- Carrying out consultancy services (eg. Baseline study of riparian communities in the Volta Basin in Ghana).
- 2016 Hydropower international Conference in Sunyani.

- Next Hydropower Conference in 2017 is being organized by the Department and Mechanical Engineering Department, University of Ibadan and will be hosted at Ibadan, University of Ibadan-Nigeria.

The Department of Energy and Environmental Engineering and the Department of Mechanical Engineering of University of Ibadan, and the Institute for Climate protection, Energy and Mobility (IKEM) Germany will jointly organize a Summer School on Energy and the Environment in February 2017. The plan is towards the establishment of an IKEM Institute for Africa to be host at the University of Energy and Natural Resources.

10MW Solar Power Project and Teaching Facility: Discussions are currently being done with Chinese Investors - to secure a PPA from government to implement this project for the department.

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 Nana S. A Derkyi	PhD, MSc, BSc (KNUST)	SeniorLecturer/ Head	Chemical engineering
Dr E. A. Ofosu	PhD, MSc, BSc (KNUST)	Lecturer	Civil Engineering
Dr Samuel Fosu Gyasi	PhD, MSc, BSc (KNUST)	Lecturer	Biological Science
Dr Amos Kabo-bah	PhD(Hohai) MSc, BSc (KNUST	Lecturer	Hydrology
Dr Mark Amo Boateng	PhD(Hohai) MSc, BSc (KNUST	Lecturer	Civil Engineering
Dr Francis Attiogbe	PhD (UG); M.Phil (UG); BSc (UG)	Senior Lecturer	Applied Chemistry, Bioenergy, Waste Water Treatment
Dr Samuel Gyamfi	PhD (New Zealand) BSc (KNUST)	Lecturer	Renewable Energy

*Modjinou Mawufome	MSC (KNUST), BSc (KNUST)	Assistant Lecturer	Renewable Energy
*Felix Diawuo	MSC (KNUST), BSc (KNUST	Assistant Lecturer	Renewable Energy
Justice Sarkodie K	MSc (Aberdeen), BSc (KNUST)	Assistant Lecturer	Petroleum Engineering
Emmanuel Acheaw	MSc (Aberdeen), BSc (KNUST)	Assistant Lecturer	Petroleum Engineering

*Study Leave

DR. NANA SARFO AGYEMANG DERKYI

Research Activities/Interests

- Renewable Energy Technologies and Systems Design
- Gasifiers and biogas digesters for community utilization
- Biomass combustion, pyrolysis and gasification
- Nanocrystal and nanorod synthesis and characterization
- Graphene synthesis and applications in Energy and Water Purification
- Chemical Process and Product Design
- Optimization of chemical processes and Life cycle analysis.
- Chemometric modeling and Rapid analytical methods using near infrared spectroscopy.

Publication(s)

- **Derkyi N.S.A.,** Sekyere, D. and Oduro K.A. (2014). Variations in oil content and biodiesel yield of Jatropha curcas from different agro-ecological zones of Ghana. International Journal of Renewable and Sustainable Energy, 3(4): 76-81. doi: 10.11648/j.ijrse.20140304.11
- **Derkyi N.S.A.,** Sekyere, D. and Coffie, J. (2014). Utilization of Tetrapleura tetraptera Waste for Energy and Climate Change Mitigation. Journal of Energy and Natural Resource Management. Vol. 1 (1): 8-12
- **Derkyi N.S.A.,** Sekyere, D. and Darkwa, N.A. (2014) Effect of Extraction Solvent on Tannin-Formaldehyde Adhesives for Plywood Production. Journal of Energy and Natural Resource Management. Vol. 1 (2): 120-16
- **Derkyi, Nana S. A.;** Sekyere, Daniel; Darkwa, Nicholas A.; and Boakye, Nana B. (2011). Modeling and Optimization of Polyphenol Extraction for Tannin-

Formaldehyde Resin Synthesis. International Journal of Chemical Reactor Engineering (IJCRE) Vol. 9: A99.

- **Derkyi N. S.A,** Adu-Amankwa B, Sekyere D, and Darkwa N. A. (2011). Rapid Prediction of Extractives and Polyphenolic Contents in Pinus caribaea Bark Using Near Infrared Reflectance Spectroscopy. International Journal of Applied Sciences (IJAS), Volume 2 (1): 1 – 11
- **Derkyi N. S.A,** Adu-Amankwa B, Sekyere D, and Darkwa N. A. (2011). Application of Near Infrared Spectroscopy in Chemometric Modeling of Tannin Content and Stiasny Number of Pinus caribaea Bark. Journal of Emerging Trends in Engineering and Applied Sciences (JETEAS) 2 (1): 132-136.
- **Derkyi N. S.A,** Adu-Amankwa B, Sekyere D, and Darkwa N. A. (2011). Optimization of Process Parameters Using Response Surface Methodology for the Extraction of Formaldehyde-Condensable Phenolics from Pine Bark. Journal of Emerging Trends in Engineering and Applied Sciences (JETEAS) 2 (1): 64-69
- **Derkyi Nana S.A.,** Adu-Amankwa Benjamin, Sekyere Daniel and Darkwa Nicholas A. (2011) Optimum Acetone and Ethanol Extraction of Polyphenols from Pinus caribaea Bark: Maximizing Tannin Content Using Response Surface Methodology. Chemical Product and Process Modeling: Vol. 6 : Iss. 1, Article 9.
- **Derkyi, N.S.A.,** Acquaah, S.O, and Owusu-Akyaw, M. (2010). Bioactivity of some natural products against the cowpea storage beetle Callosobruchus maculatus L. International Journal of Biological and Chemical Sciences. Vol. 4 No. 3:616-623.
- **Derkyi N.S.A.** and Derkyi M.A.A. (2014) Developing the Linkage between Forest Products and Community Livelihoods. The Contribution of Forests to Ghana's Economic Development. 1st National Forestry Conference, 16 – 18 September 2014, CSIR-FORIG, Kumasi, Ghana.
- **Derkyi N.S.A.,** Sekyere, D. and Coffie, J. (2013). Prekese Fruit Processing: Waste to Energy Option for Climate Change Mitigation. OWSD Africa Regional Conference, Sunyani, Ghana

Conferences/Workshops/Seminars

- Integrating Forest Biomass into Hydroponics. The Contribution of Forests to Ghana's Economic Development, 1st National Forestry Conference, 16 – 18 September 2014, CSIR-FORIG, Kumasi, Ghana.
- 1st National Forestry Conference, 16 – 18 September 2014, CSIR-FORIG, Kumasi, Ghana.
- OWSD Africa Regional Conference. Sunyani, Ghana
- 1st PACN Congress on Agricultural Productivity. Accra, Ghana, 2011

- West Africa Agricultural Productivity Programme Conference. Accra, Ghana 2011
- 27th Biennial Conference of Ghana Science Association. Kwame Nkrumah University of Science and Technology, Ghana
- Presenter: Workshop on Development of 2nd generation Biofuels at KNUST

Outreach Programmes/Extension Services

- Council Member; University of Energy and Natural Resources (UENR), 2015-Date
- President, University Teachers' Association of Ghana, UENR, 2015-Date
- Executive Committee Member; University of Energy and Natural Resources (UENR) 2014 -Date:
- Board Chairman of GREENA FM, UENR, 2013-Date:
- Appointments and Promotions Committee Member, UENR, 2013-Date:
- University Facilities Committee Member, UENR, 2013-Date:
- School of Engineering Board Member, UENR, 2013-2014:
- Secretary; University Teachers Association of Ghana, UENR Branch 2013-2015:
- Reviewer: International Journal of Renewable Energy Research, Journal of Energy and Natural Resources Management, Environmental Engineering Research Journal, Journal of Pharmacy and Pharmacology Research, Chemistry International Journal, International Journal of Agricultural Policy and Research.

PROF MRS ESI AWUAH

Research Activities/Interests

- Water & Wastewater Treatment
- Water and Sanitation

Publication(s)

- **Awuah, Esi** Samuel Fosu Gyasi, William Nettey, Attiogbe, Francis Henk J. Lubberding , Huub J. Gijzen, (2014), "Atmospheric air pollution associated with macrophyte and algal-based wastewater stabilization ponds in Kumasi, Ghana", JENRM, Vol. I, No. 2, 88-92.
- Gyasi S. F., **Awuah E,** Ofosu E. A., Kotei D and Abbas K M., (2014) Environmental sanitation attitudes in Buruli Ulcer Communities and its potential impacts in the Asanti Akim North District, Ghana. Research Journal of Environmental Science, 8: 78-89.

- Gyasi S.F., **Awuah E.,** Koffour G. A., Sampson D. K., Debrah A Y. (2014) Comparative analysis of environmental arsenic and other heavy metals in 2 Buruli Ulcer endemic districts in the Ashanti Region, Ghana JENRM, Vol. I, No. 1, 56-62, 2014,
- **Awuah E.,** Gyasi S.F., Anipa H. K. and Adjei A, (2014). Microbial Quality of Sachet and bagged Drinking water: A case Study in Kumas, Ghana. Research Journal of Microbiology, 9: 199-207
- Gyasi S.F., **Awuah E.,** Koffour G. A., Sampson D. K., Debrah A Y. (2014) Comparative analysis of environmental arsenic and other heavy metals in 2 Buruli Ulcer endemic districts in the Ashanti Region, Ghana JENRM, Vol. I, No. 1, 56-62, 2014

FELIX AMANKWA DIAWUO

Research Activities/Interests

- Sustainable energy systems, Carbon Capture and Storage Technologies
- Energy & Exergy Optimization/Thermo-economic Analysis on Power Plants
- Renewable Energy Science: Energy Policies, Solar, Wind, Biomass System, Geothermal
- The Baseline Residential Electricity Demand and Energy Efficiency Potential Study of Ghana and Rural electrification and agricultural mechanization through sustainable RE implementation strategy in Ghana
- Energy Economics

Publication(s)

- Boateng, J.A. and Diawuo, F.A. (2015). Design and hydrodynamic loading analysis of production riser for the Arctic. International Journal of Petroleum Engineering, 1(4), 221-244.

Conferences/Workshops/Seminars

- Training course on "Solar Energy Application and Management for Developing Countries" organized by Gansu Natural Energy Research Institute (GNERI)/ UNIDO International Solar Energy Centre (ISEC), Lanzhou-China, May-June, 2015
- Short training on "HOMER software application" organized by The Energy Centre (TEC), KNUST and ECOWAS centre for renewable energy and energy efficiency (ECREEE), Kumasi, August 2014.

- Short training on "Specialized Solar PV design and installation" organized by University of Energy and Natural Resources, UENR and DSTC Training centre, Sunyani, August 2014.

Outreach Programmes/Extension Services

- Team Member: School of Agriculture and Technology Model Farm Project
- Member, Committee on Development of Handbook on Ebola Virus Disease (EVD) Awareness, Prevention and Control
- Member, Planning Committee on Solar PV Training and Energy Management courses organized by Dept. of Renewable Energy, UENR, August-September, 2015

DR. FRANCIS K. ATTIOGBE

Research Activities/Interests

- Water & Wastewater Treatment
- Air Quality & Pollution Control
- Solid and hazardous waste management
- Pulping & Bleaching
- Bioenergy
- Applied Chemistry

Publication(s)

- **Attiogbe, Francis K.** and Tahir Abdul-Razak, (2016) Evaluation of the physicochemical properties of Northern Ghana Sclerocarya birrea seed oil and proximate analysis of the process waste", African. Journal of Food Sci., Vol. 10(4) pp. 48-53. .

- Andrews Nkansah, **Attiogbe, Francis** and Engelbert Kumi, (2015), "Scrap metals' role in circular economy in Ghana, using Sunyani as a case study" Afr. J. Environ. Sci. Technol., 9(11): 793-799. DOI: 10.5897/AJEST2015.2000.

- Esi Awuah, Samuel Fosu Gyasi, William Nettey, **Attiogbe, Francis** Henk J. Lubberding , Huub J. Gijzen, (2014), "Atmospheric air pollution associated with macrophyte and algal-based wastewater stabilization ponds in Kumasi, Ghana", JENRM, Vol. I, No. 2, 88-92.

- **Attiogbe, Francis K.** (2013), "Hydrogen peroxide decomposition in bicarbonate solution catalyzed by cobalt (II)", International Journal of Advanced Research, Volume 1, Issue 7, 411-415.

- **Attiogbe, Francis** (2013), "Comparison of membrane bioreactor technology and conventional activated sludge system for treating bleached kraft mill effluent", Afr. J. Environ. Sci. Technol., 7(5): 292-306. DOI: 10.5897/AJEST2013.1429.

- **Attiogbe Francis K.** and Raymond C. Francis, (2011), "Hydrogen peroxide decomposition in bicarbonate solution catalyzed by ferric citrate", Can. J. Chem., 89: 1289–1296.

- **Attiogbe Francis K** and Raymond C. Francis, (2011), "Hydrogen peroxide decomposition in bicarbonate solution catalyzed by divalent manganese species", Can. J. Chem., 89: 1297–1303.

- **Attiogbe, Francis K** Samar K. Bose, Wei Wang, Alastair McNeillie, and Raymond C. Francis, (2010), "The Peroxymonocarbonate Anions as Bleaching Agents. Part 1. Results with Lignin Model Compounds and Chemical Pulps", BioResources, 5(4), 2208-2220.

- **Attiogbe, Francis K.** Wei Wang, Alastair McNeillie, and Raymond C. Francis, (2010), "The Peroxymonocarbonate Anions as Bleaching Agents. Part 2. Mechanical Pulp Brightening and the Effects of Metal Ions", BioResources, 5(4), 2221-2231.

- **Attiogbe, F. K.;** Glover-Amengor, M.; Nyadziehe, K. T., (2007), "Correlating Biochemical and Chemical Oxygen Demand of Effluents – A Case Study of Selected Industries in Kumasi, Ghana", West African Journal of Applied Ecology , 11, 110-118.

Conferences/Workshops/Seminars

- Participant: The economies of biogas energy in rural Ethiopia, UENR Auditorium, Sunyani, 23rd February, 2016.

- Participant: Water management in Germany, UENR auditorium, Sunyani, 23rd February, 2016.
- Participant: Institutional strengthening programme, organized by the office of the Pro Vice-Chancellor, UENR Auditorium, Sunyani, 3rd December, 2015.

- Participant: Sustaining hydropower energy for economic growth and development in West Africa in Sunyani at Sheila's lodge, 12th – 14th November, 2015.
- Participant: Mid-term dissemination conference organized by cited, UENR, UENR Auditorium, Sunyani, 29th September 2015.

- Participant: Modeling energy characteristics of biomass for rapid quantitative prediction, UENR Auditorium, Sunyani, 22nd April 2015.

- Participant: Application of nanobiotechnologies: challenges and opportunities, UENR Auditorium, Sunyani, 5th March, 2015.

- Participant: Nanotechnology: it's applications in energy sector, challenges and opportunities, UENR Auditorium, Sunyani, 3rd March, 2015.

- Participant: Mining and agriculture in Ghana: a contested terrain, UENR Auditorium, Sunyani, 25th February, 2015.

- Participant: Turning waste into resource – challenges and opportunities for Ghana organized by MESTI in collaboration with GIZ, Fiesta Royale Hotel, Accra, 17th February 2015.

- Participant: Polymers for controlled molecular release, UENR Auditorium, Sunyani, 20th November, 2014.

Outreach Programmes/Extension Services

- Examiner: Chemical/Mining Group of the Ghana Institution of Engineers professional examination held at Newmont Ahafo Mines, Kenyasi, 17th October, 2015.

- Chair: A three member committee to come up with the modalities for students' product design project competition to be organized by the Ghana Institution of Engineers, BRONG AHAFO BRANCH.

- 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.

DR. SAMUEL GYAMFI

Research Activities/Interests

- Electricity demand response assessment and modeling
- Renewable and Sustainable Energy for Developing Countries
- Energy Demand-side Management (DSM)
- Energy Life Cycle Assessment
- Renewable Energy Systems Design

Publication(s)

- Rahman, M., Hettiwatte, **S. Gyamfi, S** (2014) An Intelligent Approach of Achieving Demand Response by Fuzzy Logic based Domestic Load Management, Proceedings of Australasian Universities Power Engineering Conference, AUPEC 2014, Curtin University, Perth, Australia. 28 September – 1 October, 2014
- **Gyamfi, S.,** Modjinou, M., Djordjevic, S. (2014) Improving Electricity Supply Security in Ghana – The Potential of Renewable Energy. Renewable & Sustainable Energy Reviews 43(2015): 1035 – 1045.
- Urmee, T., **Gyamfi, S.** (2014) A Review of Improved Cookstove Technologies and Programs. Renewable and Sustainable Energy Reviews 33 (2014) 625–635
- Houston, C., **Gyamfi, S.,** Whale, J. (2013) Evaluation of Energy Efficiency and Renewable Energy Generation Opportunities for Small Scale Dairy Farms: A Case Study in Prince Edward Island, Canada. Renewable Energy 67 (2014) 20–29
- **Gyamfi, S.,** Krumdieck, S. and Urmee, T. (2013) Residential peak electricity demand response - Highlights of some behavioural issues. Renewable and Sustainable Energy Reviews 25 (2013) 71–77.
- **Gyamfi, S.** and Krumdieck, S. (2012) Scenario Analysis of Residential Demand Response at Network Peak Periods. Electric Power Systems Research 93 (2012) 32–38
- **Gyamfi, S.** and Krumdieck, S. (2011) Price, Environment and Security: Exploring Multi-modal Motivation in Voluntary Residential Peak Demand Response. Energy Policy 39 (2011) 2993–3004.

Conferences/Workshops/Seminars

- Integrating Forest Biomass into Hydroponics. The Contribution of Forests to Ghana's Economic Development, 1st National Forestry Conference, 16 – 18 September 2014, CSIR-FORIG, Kumasi, Ghana.
- World Renewable Energy Congress – Australia 2013. International Conference on Renewable Energy for Sustainable Development and Decarburization. Murdoch University, Western Australia 14 – 18 July 2013
- Signs of Change National Networked E-Conference: Christchurch, New Zealand, 15-16 November 2010.
- 4th international conference on sustainable development, New Zealand Society for Sustainability Engineering and Science Auckland, New Zealand. 20 November - 3 December 2010.
- 3rd International Conference on Renewable Energy and Science. Faculty of Engineering, University of Auckland, New Zealand. 9 – 12 December, 2008.

Outreach Programmes/Extension Services

- Reviewer – The Journal of Electric Power Systems Research, since July, 2013
- Reviewer – The Journal of Renewable and Sustainable Energy Reviews, Since September, 2013
- Examiner of MSc Renewable Energy Thesis. Murdoch University since September, 2011
- External Examiner of the Mtech degree in Mechanical Engineering. University of South Africa since November, 2015.
- Member of School of Engineering Appointment Board, UENR since September, 2014
- Chairman, UENR Energy Group since June, 2015
- Chairman, UENR Transport Committee, Since September 2015

DR SAMUEL FOSU GYASI

Research Activities/Interests

- Water, Sanitation and Health (WASH)
- Environmental Microbiology
- Emerging Infectious Diseases

Publication(s)

- **Gyasi S.F,** E. Awuah, J.A. Larbi, G.A. Kuffuor & O.O. Afriyie (2012) Clinical, haematological and histopathological responses to arsenic toxicity in ICR mice using arsenic levels synonymous to Buruli Ulcer endemic communities in the Amansie West District of Ghana. European Journal of Experimental Biology, 2012, 2 (3):683-689.
- **Gyasi S. F**, E. Awuah, J.A. Larbi, G.A. Kuffuor (2012) Arsenic in water and soil: A possible contributory factor to M. ulcerans Infection in Buruli Ulcer Endemic Communities. Asian Journal of Biological Sciences. scialert.net/abstract/?doi=ajbs.2011.483.497.
- **Gyasi S. F,** E. Awuah & J.A. Larbi (2011) Association of perceived risk factors to the development of Buruli Ulcer in the Amansie West Districts, Asian Journal of Biological Sciences. 4 (6): 483-497.
- **Gyasi S .F,** E. Awuah, J.A. Larbi, Y.A. Debrah & N.Y. Awua-Boateng (2012) Temporal relationships of environmental arsenic and M. ulcerans infections in the Amansie West District of Ghana (Pharmacolgia, UK)/DOI: 10.5567/pharmacologia.2013.320.326
- **Gyasi S. F,** E. Awuah, J.A. Larbi, G.A. Kuffuor & O.O. Afriyie (2012) Susceptibility of arsenic exposed ICR mice to the development of Buruli Ulcer in the Amansie West District of Ghana, Pharmacolgia, DOI: 10.5567/pharmacologia.2013.264
- **Gyasi S. F.,** Awuah E, Ofosu E. A., Kotei D and Abbas K M., (2014) Environmental sanitation attitudes in Buruli Ulcer Communities and its potential impacts in the Asanti Akim North District, Ghana. Research Journal of Environmental Science, 8: 78-89.
- **Gyasi S. F.,** Awuah E., Koffour G. A., Sampson D. K., Debrah A Y. (2014) Comparative analysis of environmental arsenic and other heavy metals in 2 Buruli Ulcer endemic districts in the Ashanti Region, Ghana JENRM, Vol. I, No. 1, 56-62, 2014,
- Awuah E., **Gyasi S. F.,** Anipa H. K. and Adjei A, (2014). Microbial Quality of Sachet and bagged Drinking water: A case Study in Kumas, Ghana. Research Journal of Microbiology, 9: 199-207
- **Gyasi S.F.,** Awuah E., Koffour G. A., Sampson D. K., Debrah A Y. (2014) Comparative analysis of environmental arsenic and other heavy metals in 2 Buruli Ulcer endemic districts in the Ashanti Region, Ghana JENRM, Vol. I, No. 1, 56-62, 2014
- Appiah-Effah E, Nyarko K. B., **Gyasi S. F.,** and E. Awuah (2014). Faecal sludge management in low income areas: a case study of three districts in the Ashanti region of Ghana, Journal of Water, Sanitation and Hygiene for Development | 04.2 | 2014,

- Bosompem M. O., Agyapong E. A., **Gyasi S. F.** and E. Awuah (2014). An Empirical Perspective of Water Quality in Appeadu: A suburb of Kumasi in the Ashanti Region, Ghana. Trends in Applied Sciences Research, 9:144-152
- Bosompem M. O., Agyapong E. A., **Gyasi S. F.** (2014). Elucidating Microbial Pollution Markers of Drinking Water in Appiadu within the Ashanti Region of Ghana International Journal of Current, Research, Vol. 6, Issue, 11, pp.944-9450, November, 2014.
- Awuah E & **Gyasi S. F.,** (2014) Role of Protozoa on Faecal Bacteria Removal in Macrophyte and Algal Waste Stabilization Ponds, Microbiological Journal, 2014, ISSN 2153-0696
- Awuah E, Amankwaah-Kuffour R, **Gyasi S. F.,** Lubberding H. J., & Gijzen H. J., (2014). Characterization and Management of Domestic Wastewater in 2 Suburbs of Kumasi, Ghana. Research Journal of Environmental Science, ISSN 1819-3412
- Awuah E, **Gyasi S. F,** Anipa H..M.K & K. E. Sekyiamah (2014) Assessment of rainwater Harvesting as a Supplement to Domestic Water Supply: Case Study in Kotei-Ghana, International Research Journal of Public and Environmental Health, Vol.1 (6), pp. 126-131, August 2014.
- Awuah E, **Gyasi S. F,** Nettey W, Attiogbe F, Lubberding H. J. & H. J. Gijzen (2014). Atmospheric air pollution associated with macrophyte and algal-based wastewater stabilization ponds in Kumasi, Ghana. JENRM, Vol. No. 2, 88-92, 2014, ISSN: 2026-6189.
- **Gyasi S. F,** Appiah-Effah E and A. Nkansah (2014) Microbial Impacts of Brewery Effluent Discharge on Sissa River: A Case Study of Kaase in Kumasi Ghana, Research Journal of Microbiology.
- Jerry Lawrence Authur**, Samuel Fosu Gyasi,** Amos T. Kabo-Bah and Esi Awuah 2015. Rainfall Variability and its Impact on Reported OPD Cases of Salmonella Typhii in Sunyani, Ghana, Research Journal of Environmental Sciences, 9: 39-47,
- Jacob Kwadwo Amponsah Abebrese, **Samuel Fosu Gyasi,** Margaret Gyapong (2015) Assessing the Reporting System of Maternal Mortality: A CaseStudy of a Health Care Centre in the Asuogyaman District, Ghana, Journal of Biology, Agriculture and Healthcare, Vol.5, No.4, 2015

Conferences/Workshops/Seminars

- Conference on Diagnostics, drug discovery and Development, Welcome Trust, London, May 20 to 21, 2015.
- Conference on Buruli Ulcer Control Programme, Executive Board Room, Geneva, Switzerland, March, 2015.
- Poster Presentation on Clinical, haematological and histopathological responses to arsenic toxicity in ICR mice using levels synonymous to Buruli

Ulcer endemic communities in the Amansie West District of Ghana-Bites2015, ISNTD-London, March 2015,

- Abstract- Arsenic in water and soil: A possible contributory factor to M. ulcerans Infection in Buruli Ulcer Endemic Communities-WHO Headquarters (HQ), Geneva, Switzerland, March, 2013.
- USAID Sponsored African- US Network of Centre of Excellence for Young Scientist by University of Tuskegee, USA-2IE Summer School, Burkina Faso (June, 10-20, 2012).
- Water and Health Conference, University of North Carolina, USA (Abstract has been selected for oral presentation –Scholarship awarded) [October 14-18, 2013, in Chapel Hill, NC]
- Participant: CapWa (Canada) Sponsored Workshop on Research Management and Training, Kwame Nkrumah University of Science & Technology, Kumasi, Ghana (24- 26 July 2012)
- WEDC, UK, University of Copenhagen, Denmark & African Snows KNUST, Sponsored Programme on Research Management-Processes and Activities, Kwame Nkrumah University of Science & Technology, Kumasi, Ghana (21-24 November 2011)[Participant].
- Participant: University of Michigan-Kwame Nkrumah University of Science and Technology, STEM Conference, Kumasi, Ghana (28-31 June 2012)

JUSTICE SARKODIE-KYEREMEH

Research Activities/Interests

- Unconventional Petroleum Systems
- Bottomhole Assembly (BHA) Design
- Hydrate Inhibition
- Drilling mechanics theory and practices
- Advanced well control practices

Conferences/Workshops/Seminars

- SPE Conference, All Nations University College, Koforidua, Ghana. 28 – 29 April, 2016.
  Theme: 'Capacity Building in Ghana's Oil Industry' The role of Tertiary Education
- SPE Well Integrity Workshop, Accra, Ghana. 28 – 29 April, 2015
  Theme: Understanding the Risk of Well Integrity in a Diverse Environment.
- SPE Offshore Europe Conference, Aberdeen. UK 3-6 September, 2013
  Theme: 'Resourcing for Growth' A Practical Introduction to Subsea targets
- SPE ICoTA European Well Intervention Conference, Aberdeen. UK 13 – 15, November, 2012.

MR. EMMANUEL ACHEAW

Research Activities/Interests

- Basin studies and Petroleum Geoscience
- Enhance oil recovery techniques
- Conventional drilling techniques

Conferences/Workshops/Seminars

- Participant, 7th Annual Oil and Gas summit Ghana CWC Group at Accra international Conference centre, 20-21st April, 2016
- Society of Petroleum Engineering (SPE) Conference at All Nations university College,
  Theme; Petroleum production technology, 2015
- All Nations University College academic retreat and seminar
  Theme; Change the World by Professor Ajit, 03-08- 2015
- Society of Petroleum engineering (SPE) Conference at Petroleum Skills Development institute, 2011
  Theme; Extended Reach Drilling Techniques

Outreach Programmes/Extension Services

- Programme Director and Consultant to Wintech Professional Institute to establish the first International Association of Drilling Contractors (IADC) training program in Ghana. The program name-Drilling and Well Service Technology training program, Ghana (DWST)

COMPUTER AND ELECTRICAL & ELECTRONIC ENGINEERING DEPARTMENT

The Department was established in the 2013/2014 academic year to offer a four-year BSc Electrical & Electronic Engineering programme with the aim of producing graduates with firm grounding in Electrical & Electronic Engineering through teaching, practical work, and projects which foster innovation and creativity, supported by excellent ICT and laboratory facilities.

The programme has been designed in response to a recognized need from industry for highly skilled Electrical & Electronic Engineers who have a detailed knowledge, appreciation and fundamental understanding in Communications & Networks, Integrated Circuits & Embedded Systems, Control, Intelligent Systems & Robotics, Signal Processing, Microelectronics Technologies & Devices, Microwave and RF, Power and Energy Systems. The availability of such highly skilled human resource will rapidly enhance Ghana's drive to industrialise the economy. The programme revolves around a core electrical & electronic energy engineering curriculum that provides a broad but balanced framework for power systems and machines,

electronics and communications, automation and control. The four-year duration of the programme makes it possible to include specialist electrical & electronic engineering courses.

During their senior years of study (third and final years), students may choose to specialize in electrical or electronic engineering through their selection of elective modules. Students who specialize in electrical engineering may select elective modules, which concentrate on:

- Electrical Machines
- Power Systems analysis and Protection
- Plant Automation and Control
- Renewable Energy Systems

Others who choose electronic engineering may select elective modules which concentrate on:

- Communications Systems & Networks
- Integrated Circuits & Embedded Systems
- Intelligent Systems & Robotics
- Signal Processing

Name	Qualification	Designation	Area of specialization
Nana Dr Kwasi Diawuo	PhD(Newcastle UK); MSC, BSc (KNUST)	HoD/Snr. Lecturer	Electrical Engineering
Samuel T. Kodua	MPhil (Korea) BSc (KNUST)	Lecturer	Communication system. Nanotechnology
Desmond Okwabi Ampofo	MPhil (KNUST), BSc (KNUST)	Assistant Lecturer	Power System, Networks
Isaac Kofi Otchere	MSc, BSc (KNUST)	Assistant Lecturer	Power Electronics
* Okatakyie Kankam Adu	MSc (London)	Assistant Lecturer	Electrical Engineering

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)

- Paula Aninyie and **Diawuo, K.** (2014) "Evaluation of CSSR with Direct TCH Assignment in Cellular Networks", Journal of Engineering Research and Applications, Vol. 4 Issue 8, pp 87-91.
- K. A. Dotche and **Diawuo, K.** "Study of Transmitted Power on Large Scale Fading Models in Ouagadougou, Burkina Faso" SOP Transactions on Wireless Communications Issn(print): 2373-8618 ISSN (online): 2373-8626 Volume 1, Number 2, July 2014, pp 66-75.
- James Dzisi Gadze, Delali Kwasi Dake and **Diawuo, K.** (2013)"Adaptive Congestion Control Protocol (ACCP) for wireless sensor networks" International Journal of Wireless & Mobile Networks (IJWMN) Vol. 5, No. 5, , pp 129-144.
- John Tengviel and **Diawuo, K.** "Comparing the Impact of Mobile Nodes Arrival Patterns in MANETS Using POISSON and PARETO Models" International Journal of Wireless & Mobile Network (IJWMN), Vo. 5 No. 4, August 2013, pp 135-142.
- E.T. Tchao, **Diawuo, K,** W. K. Ofosu and E. Affum "Analysis of MIMO Systems used in Planning a 4G-WiMAX Network in Ghana", International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 4, No. 7, July 2013
- E. Affum, E.T. Tchao, **Diawuo. K,** and K. Agyekum, "Wideband Parameters Analysis and Validation for Indoor radio Channel at 60/70/80GHz for Gigabit Wireless Communication employing Isotropic, Horn and Omni directional Antenna", (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 4, No. 6, pp 292-297, 2013
- E. T. Tchao, W. K. Ofosu, **Diawuo .K,** E. Affum and Kwame Agyekum "Interference Simulation and Measurements for a Deployed 4G-WiMAX Network In an Urban Sub-Saharan African Environment: International Journal of Computer Applications (0975 - 8887) Volume 71 - No. 14, pp6-10, June 2013
- E. T. Tchao, W. K. Ofosu and **Diawuo K.** "A Performance Case Study of Electronic Governance Implementation in Ghana with WiMAX Technology" International Journal of Computer Applications (0975 - 8887) Volume 71 - No. 14, pp 1-5, June 2013
- **Diawuo, K** and K. A. Dotche and Toby Cumberbatch (2013) "Data Fitting to Hata Okumura Propagation Model Using Least Square Algorithm: Case Study in Ghana". International Journal of Engineering Science, Vol. 2(6), pp 226-230.
- E. T. Tchao, W. K. Ofosu and **Diawuo, K.,** (2013) "Radio Planning and Field Trial Measurement for a Deployed 4G WiMAX Network in an Urban Sub-

Saharan African Environment" Conference Proceedings, IEEE Wireless Telecommunications Symposium (WTS 2013), Phoenix, Arizona, USA. 17-19th

- Prince Yaw Owusu Amoako and **Diawuo, K.,** (2013) "Forecasting Foreign Exchange Rates Using Neural network." International Journal of Societal Applications of computer Science", Vol. 2 Issue 3, ISSN 2319-8443, pp 298-302,
- John Tengviel and **Diawuo., K** (2012) "The Effect of the number of Mobile Nodes on varying speeds of MANETS" International journal of Network Security & Its Applications (IJNSA), Vol. 4, No. 6, , pp 99-109.

- S. Akobre, **Diawuo., K** and A. Gyasi-Agyei(2012) "Weather Effect on Ku Band Digital Satellite Television System." IEEE 4th International Conference on Adaptive Science & technology (ICAST), pp 12-16,
- K. Blitti, K. A. Dotche and **Diawuo K.** "Macro- cell Antenna Down-Tilt to Field Data Study in Ghana" IEEE 4th International Conference on Adaptive Science & technology (ICAST) pp 23-28, August 2012.
- John Tengviel, K. A. Dotche and **Diawuo K.** "The Impact of Mobile Nodes Arrival Patterns in MANET's Using Poisson Models" International Journal of Managing Information Technology (IJMIT),Vol.4, No.3, August 2012 pp 55-71
- K. A. Dotche, **Diawuo, K** and W. K. Ofosu "Effect of Path Loss On Received Signal: Using Accra, Ghana As Case Study, IEEE in Wireless Telecommunications Symposium (WTS 2012), London 2012.
- **Diawuo, K** Adith, B. P. (2011)'Effects of user behavior on GSM air interface Performance", Journal of the Univ. of Science & Technology, Kumasi, Ghana, Vol 31, no. 1, pp 114- 129,

Conferences/Workshops/Seminars

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

MR. SAMUEL TWENEBOAH-KODUAH

Research Activities/Interests

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

Conferences/Workshops/Seminars

- Participant: Control Automaton Processes, Measurement and Testing using LabView, March, 2016
- Participant: Oracle Java Training, University of Ghana. Legon, 22nd February 2016
- Participant: UNDP/GEF seminar on UAV systems for UENR and Ghana, organised by United Nations Development Programme (UNDP), February, 2015
- Participant: Training on UAV systems for Environmental Monitoring at Ghana Atomic Energy Commission, Accra, 2nd March, 2015
- Participant: UAV application for environmental monitoring. Training at Ghana Atomic Energy Commission/Ghana Space Science Institute. March, 2015

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. "Utilization of reactive power resources of distributed generation for voltage collapse prevention in optimal power flow." Solar Energy and Building (ICSoEB), 2015 International Conference on. IEEE, 2015. Doi: 10.1109/ICSoEB.2015.7244941

Conferences/Workshops/Seminars

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

Outreach Programmes / Extension Services

- Voluntary Service: Part of a team of engineers that develop energy conservation strategies for a remote school in Somaliland. (Funded by Zayed

Future Energy Prize, UAE and Engineers Without Borders(EWB) January, 2014 – June, 2015

MR. ISAAC KOFI OTCHERE

Research Activities / 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

Publication(s)

- **Otchere, P.** Kanjiya, V. Khadkikar, (2016) "A Wavelet Inspired 2nd Order LPF based Control Scheme for Shunt Active Power Filter" Power Quality. IEEE Transactions (Under 2nd Review)

Conference/ Workshop/Seminars

- Participant: West Africa Clean Energy Corridor (ACEC-WA) Technical Workshop, organized by IRENA, United Arab Emirates, Abu Dhabi 18 September 2015
- Participant: REmap Africa Regional Workshop – Africa Renewable Energy Roadmap to 2030.organized by IRENA. 8 June 2015. Abu Dhabi, UAE
- Participant: World Future Energy Summit 2015, organized by IRENA, United Arab Emirates, Abu Dhabi. 19-22 January 2015
- Participant: World Future Energy Summit 2015, organized by IRENA, United Arab Emirates, Abu Dhabi. 20-20 January 2015
- Participant: National Instruments Academic Seminar, organized by National Instruments on Tuesday, April 12th, 2016, at lorence Onny Auditorium, Graduate School Block, GTUC Main Campus, Tesano - Accra, Ghana

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



Prof. F. K.E Nunoo Dean

SCHOOL OF NATURAL RESOURCES

Introduction

The School of Natural Resources was one of the first Schools to be established in the 2012/2013 academic year. The School is poised to provide a strong and vibrant leadership to the forest and natural resources industry to meet the increasing demand for housing, recreation, tourism and green spaces. This requires an intimate knowledge of climate, species, and infrastructure, political, social and legal systems. Issues of interest include the increased demand for market and non-market goods and services from forests and related natural resources, land availability for industrial forestry and natural resource conservation, natural resource sustainability, habitat conservation, and ecosystem management.

Areas of academic interest includes forest conservation and restoration of ecology, forest resource management, fisheries and wildlife sciences, urban and community forestry, wood science and technology, fire science and management, land and water resources management. The programmes provides graduates with a working

knowledge of a broad span of natural resources and introduce them to the critical relationships between human activities and the environment.

The philosophy of the School hinges on using a strong partnership approach, prepare future leaders and provide solutions in the conservation and sustainable management of forests and other natural resources.

Departments

The School is made up of the following Departments:

- **Department of Forest Science**
  - Forest Resource Management Option

- **Department of Ecotourism, Recreation and Hospitality**
  - Wildlife and Range Management Option
  - Ecotourism Option
  - Hospitality Option

- **Department of Environmental Management**
  - Land Reclamation and Restoration Option
  - Fire and Disaster Management Option
  - Resource Enterprise and Entrepreneurship

- **Department of Fisheries and Water Resources**
  - Fisheries and Aquaculture Option

- **Department of Languages and General Studies**

STUDENT STATISTICS IN SCHOOL OF NATURAL RESOURCES

Year/Level	Male	Female	Total
100	240	92	332
200	178	65	243
300	89	22	111
400	67	7	74
Total	**574**	**186**	**760**

DEPARTMENT OF FOREST SCIENCE

The Department of Forest Science is one of the Departments of the School of Natural Resources. It runs undergraduate programmes in Social Forestry, Forest Resources Management and Wood Science. It also supports the School in teaching undergraduate courses in General Land surveying, Ecology, Biodiversity Conservation, Rural Sociology and Extension, Natural Resource Inventory, Entrepreneurial skills and Natural Resource Economics.

The Department seeks to train human resource with requisite knowledge and skills in natural resource management and social forestry to improve livelihoods of forest Fringe communities and conservation forest resources. It also trains foresters, to understand the ecology of the nation's forest resources, to help restore our forests and grow indigenous tree species for environmental and economic purposes in a sustainable way. The Department has developed postgraduate programmes in M.Phil Social Forestry and PhD Environmental Governance and is awaiting approval from National Accreditation Board to start the programme..

TOP-UP PROGRAMME

A 2-year Top-Up (Distance Learning) programme in Natural Resources for the working class and holders of Diploma certificates in the stakeholder institutions like Forestry Commission, NGO's and the Agricultural sector, etc. has successfully taken off. There are 117 students on the programme .

NURSERY PROJECT:

The School runs a nursery project which has the potential of generating income internally. The nursery comprises of a number of plant species which are made up of afforestation and ornamental plants. It also serves as a reserve for maintaining plants security for research and practical purposes for students.

TEACHING STAFF

The following constitute the teaching staff of the Department.

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), MSc. &BSc. (KNUST)	Lecturer	Agroforestry; Natural Resource Governance

Mr. Alexander Baffour Afrifa	MSc. & BSc. (KNUST)	Senior Lecturer	Dev't Policy & Planning; Forest Management
Daniel Akoto Sarfo	MSc. & BSc. (KNUST)	Lecturer	Forest Management, Agroforestry
Mr. Lawrence B. Antwi (on contract)	MSc., (U.K.), BSc., Dip (KNUST), EMBA: (GIMPA)	Senior Lecturer	Forest Management
Mrs. Nana Yeboaa Opuni-Frimpong	MSc. (Michigan), B.A. (KNUST)	Assistant Lecturer	Urban Forestry, Law
Mr. Akwasi Sarpong	BSc. & Diploma (KNUST)	Senior Technician	Forest Management; Land Reclamation & Rehabilitation
Mr. Edward Y. Kander	B.ED (UEW)	Asst. Snr. Curator	Horticulture

MR. I. K. ABEBRESE
Research Activities/Interests

- Silviculture, Forest Management
- Ecology and Forest Policy

Publication(s)

- Abugre, S.; Apetogbor,M; **Abebrese I. K.**; Apetogbor, A. K. & Amoako, P. K. (2014).The effect of ***Triplochiton scleroxylon*** aqueous solution extract on initial growth of some vegetable crops in Ghana. JENRM,Vol.1 No 1,93-98
- B. Kyereh, V. K. Agyeman, and **I. K. Abebrese**: (2014) Ecological Characteristics That Enhance ***Broussonetia papyrifera's*** Invasion in a Semideciduous Forest in Ghana. Journal of Ecosystems, Vol 2014, 1- 6.
- **Abebrese, I. K.** and Boateng Kyereh (2005): Regeneration of timber species following selective logging in a moist semi-deciduous forest in Ghana. Ghana Journal of Forestry, Vol. 17 & 18 pp 20-35.
- **Abebrese, I. K.** and Boateng Kyereh: A post - logging assessment of some soil physical properties in a Ghanaian moist semi- deciduous forest .Ghana Journal of Forestry,Vols.19&20, 2006 pp54-62.
- **Abebrese, I. K.;** Nutakor, E & Siaw, D. E. K. A. (2007): Indigenous fruits utilization in semi-arid zones: a baseline survey in a savannah environment in Ghana. Ghana Journal of forestry, Vol21&22, 39-49.

DR. MRS. MERCY AFUA ADUTWUMWAA DERKYI
Research Activities/Interests

- Socio Natural Governing System
- Environmental Governance

Publication(s)

- **Mercy A. A. Derkyi**, Ton Dietz. Forest Offence Types, Trends and Lapses: Case Study of the Nkawie Forest District of Ghana from 2005-2010. Agriculture, Forestry and Fisheries. Vol. 3, No. 4, 2014, pp. 224-232.

- Insaidoo, T.F.G, **Derkyi, M** , Acheampong, E. (2014). Farm Level Tree Planting in Ghana: Potential for Reducing Vulnerability and Mitigating Climate Change. JENRM, Vol., No. 1. 19-28.
- Ros-Tonen, M.A.F., **Derkyi, M**. and Insaidoo, T.F.G. (2014) From co-management to landscape governance: Whither Ghana's modified taungya system? Forests 2014, 5.
- **Mercy Derkyi** , Mirjam A. F. Ros-Tonen , Boateng Kyereh & Ton Dietz , Society & Natural Resources (2014): Fighting Over Forest: Toward a Shared Analysis of Livelihood Conflicts and Conflict Management in Ghana, Society & Natural Resources: An International Journal, DOI: 10.1080/08941920.2013.861550
- **Derkyi, M.,** Ros-Tonen, M.A.F., B. Kyereh and T. Dietz (2013). Emerging forest regimes and livelihoods in the Tano Offin Forest Reserve, Ghana: Implications for social safeguards. Forest Policy and Economics 32: 49-56

- **Derkyi, M.,** Awuah, E., Obeng-Ofori, D., Derkyi, N.S.A and Owusu-Ansah, F (Eds.) (2014) Climate Change and its Impact on Africa: The role of Science and Engineering for Combat. Proceedings of 2nd African OWSD Regional Conference Policy Brief

Books

- **Derkyi, M.A.A.** (2012). Fighting over forest: interactive governance of conflicts over forest and tree resources in Ghana's high forest zone. African Studies Collection; issue: 41, Leiden. ISBN-978-90-5448-114-0

- **Derkyi, M**., Insaidoo, T.F.G., Afriyie, M.A., Baffoe, S.N., Pentsil, S., Derkyi , N.S.A., Nassah, V.F., Gyan, G.O. and Pentsil, M. (2010) Micro-Enterprise Development Skills: A Community Training Manual. Conservation and Development Foundation, Kumasi, Ghana. ISBN: 978-9988-1-4363-3 pp. 1-72.

- **Derkyi, M.,** Insaidoo, T.F.G., Afriyie, M.A., Baffoe, S.N., Pentsil, S., Derkyi, N.S.A., Nassah, V.F., Gyan, G.O. and Pentsil, M. (2010). Livelihood Micro-Enterprises and Advisory Services: A Community Training Manual. Conservation and Development Foundation, Kumasi, Ghana. ISBN: 978-9988-1-4364-0 pp. 1-46.

MR. ALEXANDER BAFFOUR AFRIFA

Research Activities/Interests

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

Publication(s)

- **Afrifa, A.B.** and Adomako, A.A. (2014) Assessing the growth performance of Terminalia superba, Ceiba pentandra, Pycnanthus angolensis, and Heritiera utilis In a mixed stand at the Fure River Forest Reserve, Asian Academic Research Journal of Social Sciences & Humanities, 1(22), 536-546.
- **Afrifa, A.B**. and Essel A. (2014) Integrating Scientific and Indigenous Strategies of preventing Wildfire: A Case Study of Zukpiri and two other Communities in the Nadowli West District of Ghana. Asian Academic Research Journal of Social Sciences & Humanities, 1(21), 201-217
- **Afrifa, A.B.**, AkotoSarfo, D., Ghartey, K.K.F., and Ameludze, N.M., (2013). Assessment of Star Rating Species at Mamiri Forest Reserve in Ghana. Agricultural Science Research Journals, 3(2), 62-66,
- **Afrifa, A.B.** (2013**)** Assessment of decomposition rate of Acacia Mangium litter for rehabilitating degraded mined sites, Agriculture and Biology Journal of North America. 4(3), 280-283.
- **Afrifa, A.B.** (2012). Assessment of Species Adaptation in Fire-prone Environments. Journal of Agriculture and Social Sciences, 8 (3): 103-105
- **Afrifa, A.B**. and A.Y. Boateng (2012) Controlling dieback disease, its effect on growth performance of a six-year Ceiba pentradra stand, Journal of Agriculture and Social Sciences, 8 (3): 106-108
- **Afrifa, A.B**. **(2012)** Soil compaction on skid trails after selective logging in Moist Evergreen Forest of Ghana, Agriculture and Biology Journal of North America, 3(6), 262-264.

Outreach Programmes/Extension Services

- Examinations Officer: School of Natural Resources, 2012-2016

DR. SIMON ABUGRE
Research Activities/Interests

- Agroforestry
- Agricultural Extension

Publication(s)

- **Abugre, S**., Twum-Ampfo, K. and Oti-Boateng, C. (2015). Compatibility of Jatropha curca with maize in a hedgerow intercropping system on ferric acrisols, Agriculture, Forestry, Fisheries 4(3): 109 – 116.
- **Abugre, S**., Apetorgbor, M. M., Abebrese, I. K., Apertorgbor, A. K., Amoako, P. K. (2014). The effect of Triplochiton scleroxylon aqueous extract on initial growth of some vegetable crops in Ghana. JENRM 1(1): 93 – 98.
- Apetorgbor, M. M., Dabo J., Apetorgbor, A. K. and **Abugre, S.** (2013) Response of four agricultural seeds and crops to allelopathic effect of some medicinal plant species in Ghana, Journal of Agricultural Technology 9(7); 1090 – 1925.

Outreach Programmes/Extension Services

- President, University Teachers Association of Ghana, UENR Branch, 2013-2015
- Dean of Students: UENR, 2013-2016

LAWRENCE B. ANTWI

Research Activities/Interests

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

Conferences/Workshops/Seminars

- Participant: Workshop on Teaching and assessment of students, UENR Auditorium, 2nd--6th December, 2013
- Participant: Alternate Conflict Resolution Program, Catholic University College of Ghana, St John's University School of Law, US: The Hugh Carey Center for Dispute Resolution & Fordham University, Center for Social Justice and Dispute Resolution US, : August 1- August 5, 2011 by

MR. DANIEL AKOTO SARFO
Research Activities/Interests

- Forest Management

- Ecological Dynamics of Bamboo
- Agroforestry in Ghana; an exploratory study
- Innovative and Multifunctional Production of Bamboo Biomass- INBAR project).

Publication(s)

- **Akoto, S. D**.; Asare, A. and Gyabaa, G. (2015). Natural Regeneration diversity and composition of native tree species under Mono-culture, Mixed culture plantation and Natural Forest, International Research Journal of Natural Sciences, Vol. 3, No. 2, pp. 24-38.
- Isaac, M. E., L. C. N. Anglaaere, **Akoto, D. S.,** and E., Dawoe (2014). Migrant farmers as information brokers: agroecosystem management in the transition zone of Ghana, Ecology and Society 19(2): 56
-
- Afrifa, A. B., **Akoto-Sarfo, D.,** Ghartey, K.K. F., and M., Nelson (2013). Assessment of Star rating species at Mamiri Forest Reserve in Ghana. Agriculture Science Research Journal Vol.3 (2), pp62-66.

Outreach Programmes/Extension Services

- Co-ordinator: Post Diploma Programme in Natural Resources
- Training Co-ordinator, School of Natural Resources
- Member, Ghana Institute of Foresters

MRS YEBOAA OPUNI-FRIMPONG

Research Activities/Interests

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

Publication(s)

- **Opuni-Frimpong N.Y.** and Opuni-Frimpong, E. (2014) Urbanization of Ghana; effects on urban forests and peri-urban community livelihoods, Proceedings of IUFRO 2014 Conference, Utah
- **Opuni-Frimpong, N.Y** and Opuni-Frimpong, E (2012). Nauclea Diderrichi (De Wild & T. Durand) Merr. In Lemmens, R.H.M.J., Louppe, D., and Oteng-Amoako, A.A. (Editors) Plant Resources of Tropical Africa 7(2). Timbers 2. PROTA Foundation, Wageningen, Netherlends/Backhuys

Conferences/Workshops/Seminars

- Participant: Midwest urban tree care forum, March 31-April 3, 2005: Chicago

- Participant: 18th North American Forest Biology Workshop held at MTU, Michigan, July 12-15, 2004
- Participant: 36th Air Pollution Workshop held at Rhinelander, April 26-29, 2004.

Outreach Programmes/Extension Services

- Member -International Society of Arboriculture

DEPARTMENT OF FISHERIES AND WATER RESOURCES

INTRODUCTION

The Department of Fisheries and Water Resources focuses on the development of fish production from both capture and culture fisheries. The programme focuses on promoting aquaculture to reduce the over dependence on the ever dwindling capture fisheries and developing solution on sustainable fishery management. The programme in the Department prepares students to acquire in-depth knowledge and skills for culture, exploitation, monitoring and sustainable management of the fishery resources for the benefit of the country. In addition, the programme equips students with sound scientific and technological basis for fisheries policies and management strategies to be integrated into national goals.

The Department in its quest to make the courses as practicable as possible has signed a Memorandum of Understanding with PROFAG Company Limited (Sunyani) and Ainoo-Ansah Farms (Okyereko-Winneba) to help train students in aquaculture. The Department has established a fish farm with eight earthen ponds. Two ponds have currently been stocked with tilapia which is being grown to table size. One pond is also stocked to produce fingerlings. The Farm will also be used to run short courses in fish farming for interested persons. The Department in the course of the year received a donation of One Hundred and Twelve (112) titles of books from Prof. Daniel Pauly of University of British Columbia, Canada.

The Department has also signed a short term technical contract with University of Cape Coast/USAID to produce teaching materials for fisheries management training. The contract is worth US$12,000 for six months. The Department in the near future intends to mount postgraduate programmes in MSc. Fisheries Management and MSc. Aquaculture. It also plans to run short term practical courses in aquaculture for fish farm operators and all interested persons.

TEACHING STAFF

There is one Associate Professor, two Lecturers, one Assistant Lecturer and one Principal Technician in the Department. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of Specialisation
Prof. F. K. E. Nunoo	Ph.D(Ghana); M.Phil. & MSc. (Newcastle, UK); BSc. Zoology with Botany (Ghana); PGD (Bremen) Certificate in Fish Otolith Microstructure analysis (UK).	Assoc. Prof /HoD	Fisheries Science Marine Science and Coastal Management;
Dr. Berchie Asiedu	PhD., (Ghana) MSc. (Ghent) BSc. (Ghana)	Lecturer	Fisheries Science Aquaculture
Mr. George Intsiful	MPhil. (Ghana) BSc., Dip (Cape Coast)	Lecturer	Zoology Biology
Mr. Amos Asase	M.Phil., BSc. (Ghana)	Assistant Lecturer	Fisheries Science), Oceanography
Mr. Eric Justice Darko	BSc. (UPSA) HND (K'UA Polytechnic)	Principal Technician	Statistics

PROF. F. K. E. NUNOO

Research Activities/Interests

- An Assessment of the Fish, Fisheries And Ecology of the Tano River

- Impacts of Ocean Acidification on Diversity of Fish Species Landed by Semi-Industrial, Artisanal and Culture Fisheries, and Livelihoods in West Africa.
- Ocean Climate variability & its impact on fisheries in the Gulf of Guinea,

Publication(s)

- **Nunoo, F. K. E.** and D. Y. M. Azumah (2015) Selectivity studies on beach seine deployed in nearshore waters near Accra, Ghana, International Journal of Fisheries and Aquaculture 7(7): 111-126.

- **Nunoo, F. K. E, B**. Asiedu, Jessica Olauson, & G. Intsiful (2015). Achieving sustainable fisheries management in the marine artisanl fisheries of Ghana,

West Africa, Journal of Environment and Natural Resources Management 2(1): 15-23.

- Alhassan, E. H., P. K. Ofori-Danson, and **F. K. E. Nunoo** (2015b) Physico-chemical characteristics of the Bui Dam area of the Black Volta, Ghana, Journal of Aquatic Sciences 30(1B): 119-130.

- Alhassan, E. H., P. K. Ofori-Danson, and **F. K. E. Nunoo** (2015a). Fish abundance and diversity during the Pre- and Post-Impoundment periods of the Black Volta at Bui, Ghana. Journal of Applied Sciences Research 11(5): 42-49.

- Lo, Pei-Chun, S. Liu, N. Chao, **F. K. E. Nunoo,** H. Mok, and W. Chen (2015). A new multi-gene dataset reveals a tropical New World origin and Early Miocene diversification of croakers (Perciformes: Sciaenidae), Molecular Phylogenetics and Evolution 88: 132-143.

- **Nunoo, F.K.E**., Asiedu, B., Amador, K., Belhabib, D., and Pauly, D. (2015). Reconstruction of marine fisheries catches for Ghana, 1950-2010. Fisheries Centre Working Paper Series, #2015-10, University of British Columbia, Vancouver, 16 pp.

- **Nunoo, F. K. E,** B. Asiedu, K. Amador, Dyhia Belhabib, Vicky Lam, Rashid Sumaila & Daniel Pauly (2014). Marine Fisheries Catches in Ghana: Historic Reconstruction for 1950 to 2010 Current Economic Impacts. ***Reviews in Fisheries Science and Aquaculture* 22**(4): 274-283.

- **Nunoo, F. K. E.** and B. Asiedu (2014). Livelihoods of beach seine fishers in Ghana, West Africa. In: Coleen Roscoe (ed.). Chapter 18 pp. 313-336. Ghana: Social, Economic and Political Issues. Nova Science Publishers, USA. ISBN 978-1-63321-108-7.
- **Nunoo, F.K.E**., Asiedu, B., Amador, K., Belhabib, D., and Pauly, D. (2014). Reconstruction of marine fisheries catches for Ghana, 1950-2010. Fisheries Centre Working Paper Series, #2014-13, University of British Columbia, Vancouver, 26p.
- **Nunoo, F. K. E**, E. K. Asamoah and Y. B. Osei-Asare (2014). Economics of Aquaculture Production: A Case Study of Pond and Pen Culture in Southern Ghana, Aquaculture Research 45: 675-688.
- Asiedu, B. and **Nunoo, F. K. E.** (2015). Declining fish stocks in the Gulf of Guinea: socioeconomic impacts in Ofori-Danson, P.K., Nyarko, E., Appeaning Addo, K., Atsu, D., Botwe, O.B, and Asamoah, K.E (Eds). Assessment and Impacts of Developmental Activities on the Marine and the Fisheries

Resources of the Gulf of Guinea, University of Ghana Departmental Reader by Discipline Initiative, Digibooks Gh. Ltd. 20 pp.

- **Nunoo, F. K. E**, Asiedu, B., Amador, K.., Belhabib, D., Lam, V., Sumaila, U. R. and Pauly, D. (2014). Marine Fisheries Catches in Ghana: Historic Reconstruction for 1950 to 2010 and Current Economic Impacts. Reviews in Fisheries Science and Aquaculture. 22:4, 274-283, DOI: 10.1080/23308249.2014.962687.
- **Nunoo, F. K. E** and Asiedu, B. (2014). Livelihoods of beach seine fishers in Ghana, West Africa. In C. Roscoe (Editor), Ghana: Social, Economic and Political Issues. Nova Science Publishers Inc, New York. ISBN 978-1-63321-108-7, ISBN 978-1-63321-109-4 (eBook). p 313-336, 70pp.
- Asiedu, B**., Nunoo, F. K. E**., Ofori-Danson, P. K., Sarpong, D. B, and Sumaila U. R. (2013). Poverty Measurements in Small-scale Fisheries of Ghana: A Step towards Poverty Eradication, Current Research Journal of Social Sciences, 5(3): 75-90.
- Asiedu, B. and **Nunoo, F. K. E.** (2013). Alternative Livelihoods: A Tool for Sustainable Fisheries Management in Ghana. International Journal of Fisheries and Aquatic Sciences, 2(2): 21-28.
- **Nunoo, F. K. E** and Asiedu, B. (2013). An Investigation of Fish Catch data and its Implications for Management of Small-scale Fisheries of Ghana**.** International Journal of Fisheries and Aquatic Sciences, 2(3): 46-57.

Conferences/Workshops/Seminars

- Second Research Co-ordination Meeting on Ocean Acidification and the Economic Impact on Fisheries and Coastal Society, International Atomic Energy Agency, Monaco from 20-21 October 2014.
- 3rd International Marine Conservation Congress, 14-18th August 2014, Glasgow, Scotland.
- Too Big To Ignore (TBTI) Global Partnership for Small-scale Fisheries Research. Economic viability of Small-scale Fisheries in Africa, 23rd to 25th April, 2014. Bagamoyo, Tanzania.
- Ghana Geospatial Forum, 25-26thFebruary, 2014. Accra, Ghana.

Outreach Programmes/Extension Services

- Consultant, Fisheries Commission & West Africa Regional Fisheries Programme
- Environmental education for Basic & Senior High Schools

DR. BERCHIE ASIEDU

Research Activities/Interests

- Fisheries, aquaculture, fisheries management, fisheries & aquaculture economics, aquaculture & environment,
- Aquaculture development & policy, fisheries socio-economics, fish processing & quality control,
- Value chain analysis, fish trade, poverty & livelihood analyses, climate change

Publication(s)

- **Asiedu B.,** Failler P. and Yolaine, B. (2015). Enhancing aquaculture development: mapping the Tilapia aquaculture Value Chain in Ghana, Reviews in Aquaculture. 7: 1-9.
- **Asiedu, B**., Failler, P. and Beyens, Y. (2015) The performance of tuna processing fishery sector to sustainable fish trade and food security in Ghana. Journal of Energy and Natural Resource Management, Vol. 2, No. 1, 8-14.
- Nunoo, F.K.E, **Asiedu, B**., Olauson, J. and Intsiful, G. (2015). Achieving sustainable fisheries management: A critical look at traditional fisheries management in the marine artisanal fisheries of Ghana, West Africa. The Journal of Energy and Natural Resource Management, Vol. 2, No. 1, 15-23.
- **Asiedu, B.** and Nunoo, F. K. E**.** (2015) Declining fish stocks in the Gulf of Guinea: socioeconomic impacts in Ofori-Danson, P.K., Nyarko, E., Appeaning Addo, K., Atsu, D., Botwe, O.B, and Asamoah, K.E (Eds). Assessment and Impacts of Developmental Activities on the Marine and the Fisheries Resources of the Gulf of Guinea, University of Ghana Departmental Reader by Discipline Initiative, Digibooks Gh. Ltd. 20 pp.
- Nunoo, F. K. E, **Asiedu, B**., Amador, K., Belhabib, D., Lam, V., Sumaila, U. R. and Pauly, D. (2014) Marine Fisheries Catches in Ghana: Historic Reconstruction for 1950 to 2010 and Current Economic Impacts**.** Reviews in Fisheries Science and Aquaculture, 22:4, 274-283,
- Nunoo, F. K. E and **Asiedu, B**. (2014). Livelihoods of beach seine fishers in Ghana, West Africa. In C. Roscoe (Editor) Ghana: Social, Economic and Political Issues. Nova Science Publishers Inc, New York. ISBN 978-1-63321-108-7, ISBN 978-1-63321-109-4 (eBook). p 313-336, 70pp.
- Nunoo, F. K. E., **Asiedu, B.,** Amador, K., Belhabib, D. and Pauly, D. (2014). Reconstruction of marine fisheries catches for Ghana, 1950-2010. Fisheries Centre, The University of British Columbia Working Paper Number 2014-13. 24 pp.

- **Asiedu, B.,** Nunoo, F. K. E., Ofori-Danson, P. K., Sarpong, D. B, and Sumaila U. R. (2013). Poverty Measurements in Small-scale Fisheries of Ghana: A Step towards Poverty Eradication, Current Research Journal of Social Sciences, 5(3): 75-90.
- **Asiedu, B**. and Nunoo, F. K. E (2013). Alternative Livelihoods: A Tool for Sustainable Fisheries Management in Ghana. International Journal of Fisheries and Aquatic Sciences, 2(2): 21-28.
- Nunoo, F. K. E and **Asiedu, B**. (2013) An Investigation of Fish Catch data and its Implications for Management of Small-scale Fisheries of Ghana**.** International Journal of Fisheries and Aquatic Sciences, 2(3): 46-57.

Conferences/Workshops/Seminars

- 3rd International Marine Conservation Congress, 14-18th August 2014. Glasgow, Scotland.
- 1st University of Energy and Natural Resources (UENR) Faculty Research Retreat, 6th-8th of August, 2014. Sunyani, Ghana.
- Marginalization and Vulnerability in Small-scale Fisheries, 6th Annual Faculty of Social Sciences Colloquium, University of Ghana, Legon, 21st-22nd March 2013.

Outreach Programmes/Extension Services

- Post Doctoral Fellow, Circle programme, University of Ibadan

GEORGE INTSIFUL

Research Activities/Interests

- Aquaculture, Fishery Science, Freshwater Ecology,
- Coastline Ecology, Aquatic Macrophytes and phytoremediation

Publication(s)

- Nunoo, F.K.E, Asiedu, B., Olauson, J. and **Intsiful, G.** (2015) Achieving sustainable fisheries management: A critical look at traditional fisheries management in the marine artisanal fisheries of Ghana, West Africa. Journal of Energy and Natural Resource Management, Vol. 2, No. 1, 15-23.

Conferences/Workshops/Seminars

- The 28th Biennial Conference of Ghana Science Association at the University of Ghana, Legon. 14 – 19 July, 2013

- 1st Research Retreat of The University of Energy and Natural Resources, Sunyani

MR. AMOS ASASE

Research Activities/Interests

- Aquaculture as a business, cage and pond culture practices, nutrition and feeding in aquaculture.
- Fisheries science and management, biodiversity and conservation of fish.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INTRODUCTION

The Department of Environmental Management is under the School of Natural Resources. The Department mission is to promote through teaching, research and outreach programmes knowledge relating to sustainable management of the environment to address critical issues in the areas of land reclamation and restoration, fire and Disaster management.

ACTIVITIES OVER THE PAST YEAR

The Department in collaboration with Department of Forest Science has started a Top-Up degree programme in Natural Resources with an option in land reclamation and restoration, using the distance learning model. There is one Senior Lecturer, three Lecturers, six Assistant Lecturers and one Technician in the Department. Their names and qualifications are given in the Table below.

Name	Qualification	Designation	Area of specialisation
Dr. Kwame T. Ampofo	PhD, MSc.(Dundee) Pg Dip BSc.(KNUST)	Senior Lecturer	Agroforestry Resource Management; Forestry;
Dr. Fred Owusu Ansah	PhD, (SUNY) MPhil., (UG) BSc. (UG)	Lecturer	Environmental Resource Mgt.; Biological Sciences
Mr. Paul K. Nsiah	MSc. BSc. (KNUST)	Lecturer	Environmental Resource Mgt.; Natural Resource

			Mgt.
Mr. Reginald Djimatey	MBA Finance , BA (UCC)	Assistant Lecturer	Economics
Dr. David Anaafo	PhD Australia, M.Sc. TU-Dortmund/KNUST B.Sc.	Lecturer	Regional Development, Planning and Management
Mr. Daniel Berko		Assistant Lecturer	Auditing, Taxation
Mr. Paul Hammond	MBA, B.ED. (UCC) ICA	Assistant Lecturer	Financial Accounting
Mr. Benjamin O. Carlis-Paittoo		Assistant Lecturer	Fire science
Mr. Thomas Agyei	M.Sc. (Finland) B.Ed (UEW) Certificate 'A'	Assistant Lecturer	Environmental Biology
Mr. Alex Amerh Agbeshie	M.Phil (KNUST) B.Sc (UDS)	Assistant Lecturer	Soil Science Agronomy option
Mr. Austin Asare	BSc. (KNUST)	Senior Technician	Forest Management

DR. KWAME T. AMPOFO

Research Activities/Interests

- Agroforestry practices, Land reclamation
- Resources management

Publication(s)

- Abugre, S., **Twum-Ampfo, K**. and Oti-Boateng, C. (2015) Compatibility of Jatropha curca with maize in a hedgerow intercropping system on ferric acrisols. Agriculture, Forestry, Fisheries 4(3): 109 – 116.

Outreach Programmes/Extension Services

- Chairman, Security Management Committeel

DR. FRED OWUSU ANSAH

Research Activities/Interests

- Management, risk assessment (including communicating risks as a social process)
- Policy analysis in relation to mineral resources, agriculture, environment, water/ wetland resources, solid waste, energy and climate change.

Publication(s)

- **Owusu-Ansah, F**. and Smardon, R.C. (2015). Mining and Agriculture in Ghana: A Contested Terrain. Int. J. Environment and Sustainable Development, Vol. 14, No. 4, 371-397
- Derkyi, M., Awuah, E., Obeng-Ofori, D., Derkyi, S. A., and **Owusu-Ansah, F**. (2014). Climate Change and its Impact in Africa: the Role of Science and Engineering for Combat, 2nd Africa Regional Conference Technical Proceedings, OWSD/UENR: Sunyani, Ghana. 942p

Outreach Programmes/Extension Services

- Member, Circle Implementation Committee, University of Energy and Natural Resources (UENR), Sunyani. September, 2015:
- Technical Editor, Journal of Energy and Natural Resource Management (JENRM), University of Energy and Natural Resources (UENR), Sunyani. August, 2015:
- Member, Committee to Investigate Examination Malpractices, University of Energy and Natural Resources (UENR), Sunyani. May 2015:
- Member, Editorial and Advisory Board, ***Current World Environment*** (An International Research Journal of Environmental Science)
- Member, SDF/COVET Fire and Disaster Program Implementation Committee, University of Energy and Natural Resources (UENR), Sunyani. February, 2015**:**
- Chief Invigilator, University of Energy and Natural Resources (UENR), November 2014
- Member, Research and Conference Committee, UENR, August 2014
- Reviewer, Sage Open Publications, USA. May, 2014:
- Chief Invigilator, University of Energy and Natural Resources (UENR), May, 2014
- Consultant, B.Sc. Environmental Science Program**,** Curriculum Development Project, University of Energy and Natural Resources, Sunyani, Ghana, October, 2014:
- Ag. Coordinator, Industrial Attachment and Placement Programme, School of Natural Resources, University of Energy and Natural Resources (UENR) October, 2014 - 2015:

- Chair, Distance Learning Curriculum Development Committee, School of Natural Resources, University of Energy and Natural Resources (UENR), Sunyani. March, 2014:
- Member, School Board, School of Natural Resources, University of Energy and Natural Resources (UENR), Sunyani.
- Reviewer, Journal of Energy and Natural Resource Management
- Member, Research and Retreat Conference Committee, University of Energy and Natural Resources (UENR), December 2013
- Member, UENR Cafeteria Management Committee, University of Energy and Natural Resources (UENR), September, 2013-2016

DR. DAVID ANAAFO

Research Activities/Interests

- Urban Planning and City Governance; Disaster Management and Post Disaster Recovery; Pro-poor Land Policy and Natural Resources Management; and Environmental Management
- The Rhetoric of Local Governance in Ghana: A Recentralised Decentralisation in Practice; and Urban poverty in Ghana: Is urban planning culpable?

Publication(s)

- **Anaafo, D**., & Inkoom, D. K. B. (2015). Land Governance and Decentralised Physical Planning in mid-Sized Cities in Ghana: a Case Study of the Nkoranza South Municipality. Urban Forum (pp. 1-19). Springer Netherlands.
- **Anaafo, D.** (2015). Land reforms and land rights change: A case study of land stressed groups in the Nkoranza South Municipality, Ghana. Land Use Policy, 42, 538-546.
- **Anaafo, D.** (2014). Sen's capability approach: An analytical tool to poverty analysis in land reform environments. Land and Rural Studies, 2(1), 1-19.
- **Anaafo, D.** (2013). Systems approach to pro-poor land reforms: a concept paper. Land Use Policy, 35(42), 421-426

MR. ALEX AMERH AGBESHIE

Research Activities/Interests

- Quantifying the effect of soil pollution on the functioning of soil, plant and water systems.
- Nutrient cycling on reclaimed lands for long term soil sustainability and environmental protection.

- Nitrogen dynamics of agricultural, forest and reclaimed soils.

MR. THOMAS AGYEI

Research Activities/Interests

- Quantifying the effect of soil pollution on the functioning of soil, plant and water systems.
- Climate change effect on plant insect interactions
- Effects of climate change on biodiversity, land degradation and biodiversity conservation

DEPARTMENT OF ECOTOURISM, RECREATION AND HOSPITALITY

INTRODUCTION

The Department of Ecotourism, Recreation and Hospitality offers two degree programmes in Ecotourism and Hospitality Management. Both programmes aim at producing graduates capable of working either as employees or as entrepreneurs in the tourism sector that has over the last two decades moved from the sidelines to the centre stage of Ghana's economic policy.

ACTIVITIES OVER THE PAST YEAR

Over the past year, the Department has been engaged in the preparation and publication of a monograph on 'Tourism Development in Brong Ahafo Region'. Each lecturer was engaged in an aspect of the topic and the manuscript is currently at the proof-reading/editing stage. In the near future, the Department intends to widen the scope of its courses in order to offer opportunities for students to major in other areas of the Tourism industry.

TEACHING STAFF

The Department currently has one Senior Lecturer, four Lecturers and two Assistant Lecturers. Their names and qualifications are given in the table below.

Name	Qualifications	Designation	Areas of Specialisation
Oheneba Akyeampong	Ph. D (Stockholm) MSSc. (Stockholm), P-G Dip in Soc. Sc.	Senior Lecturer	Accommodation Operations, Event Management, Lodging

	(Stockholm), BA(UG)		Operations
Yaw Boakye Agyeman	Ph.D. (Waterloo), MSc. (Wageningen), BSc. (KNUST)	Lecturer	Leisure and Recreation, Nature Conservation, Forest Management
Daniella D. Sedegah	Ph.D. (UG), MPhil. (UG), BA. (UDS)	Lecturer	Community Participation, Marginalised Groups
Richard Obuor	MPhil. (KNUST), BSc. (KNUST)	Lecturer	Range Management
James Agyei Ohemeng	M. Phil (KNUST), P-G Dip (Mweka), BSc., Dip Ed (UCC)	Lecturer	Wildlife and Range Management
Olivia Naa Ayorkor Tetteh	MSc. (KNUST), BSc. (KNUST), HND (Accra Polytechnic), Dip Ed. (UEW)	Assistant Lecturer	Quality Assurance, Molecular Genetics, Food Hygiene, Product design, Nutrition,
Ricky Yao Nutsugbodo	MPhil, BSc (Cape Coast)	Assistant Lecturer; Dept. Exams Officer	Community participation, Tourism transport, Service quality;

OHENEBA AKYEAMPONG

Research Activities

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

Publication(s)

- **Akyeampong, O.** (2016) Event tourism in Brong Ahafo Region (Book chapter) In Akyeampong, O. (Editor) Tourism Development in Brong Ahafo: Supply and Demand Dynamics (Forthcoming)

- **Akyeampong, O.** & Yankholmes, A. (2015) .Profiling masquerade festival attendees in Ghana (Forthcoming, in the Journal of Events Management)
- Sampson, W-G & **Akyeampong, O.** (2014) Work-related Stress in Hotels: An Analysis of the Causes and Effects among Frontline Hotel Employees in the Kumasi Metropolis, Ghana, dx.doi.org/10.4172/2167-0269.1000127
- Agyeiwaah, E., **Akyeampong, O.** & Amenumey, E. (2014) International tourists' motivations to choose homestay: Do their socio-demographics have any influence? Tourism and Hospitality Research, vol. 13(1), pp.18-28.
- Mensah, C., **Akyeampong, O.** & Antwi, B. (2013) Residents' Perception of Impacts of Amansuri Conservation and Integrated Development Project in Jomoro District, Western Region, Ghana. Journal of Sustainable Development, vol. 6 (5), pp.73-84

Conferences/Workshops/Seminars

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

Outreach Programmes/Extension Services

- Reviewer: Annals of Tourism Research; Journal of Tourism Management; Journal of Sustainable Development
- Chair: Brong Ahafo Regional Tourism Awards Night, Glamossay Hotel, Sunyani, November 6, 2015
- Member: National Jury for 2014 National Tourism Awards, organized by Ghana Tourism Authority (December 20014)
- Chair: National Accreditation Board Inspection Panel: B. Tech (Hospitality Management) and HND (Hotel, Catering and Institutional Management) programmes of the Department of Hospitality and Tourism Management, Ho Polytechnic, Ho, Ghana, August 27, 2014
- Chair: National Accreditation Board Inspection Panel: B. Tech (Hospitality Management) and B. Tech (Tourism Management) programmes, respectively of the Department of Hospitality and Department of Tourism, Takoradi Polytechnic, Takoradi, Ghana, 23rd January 2014
- Project Coordinator: Enhancing Hospitality and Tourism Education in Ghana (DelPHE Project 794 by University of Cape Coast and University of Surrey, funded by UK's DfID/British Council) August 2010-March 2013

YAW BOAKYE AGYEMAN

Research Activities

- Ecotourism Development in Brong Ahafo Region

Publication(s)

- **Agyeman, B. Y.** & Obour, R. (2016) Ecotourism Development in Brong Ahafo Region: Prospects and Constraints in Akyeampong**,** O. (Editor) Tourism Development in Brong Ahafo: Supply and Demand Dynamics (Forthcoming)

DANIELLA DELALI SEDEGAH

Research Activities

- Situational assessment of excluded/marginalised groups in the Upper West region
- Community Participation in Ecotourism in Brong Ahafo

Publication(s)

- Tuffour, M., **Sedegah, D. D**. & Ohene, N. A. (2013) Is it Appreciation with Caution? Attitude towards GM Foods. Asian Journal of Agric and Food Sciences. Vol. 01, issue 4

- Tuffou,r M. and **Sedegah, D. D.** (2013) What holds us back: constraints among broiler Producers in Ghana, Scientific Journal of Animal Science, 2(10) 264-272 (ISSN 2322-1704).

- **Sedegah, D. D.** and Tuffour. M. (2014). Demand Responsive Approach (DRA): A Neo-liberal Approach to Water Delivery and Management in Rural Ghana. The International Journal of Humanities and Social Studies (ISSN 2321-9203).

RICHARD OBOUR

Research Activities/Interests

- Wildlife Management
- Conservation and range management
- Researching into African elephant (Loxodonta Africana) as a flagship species in tourism in Mole National Park

Publication(s)

- **Obour, R.**, Oppong, S. K. & Abebrese, I. K. (2015). "Forage Palatability of Broussonetia papyrifera an Invasive Species in Ghana: Relative Preference and Palatability". Journal of Energy and Natural Resources Management (JENRM), Vol. 2.

- Agyeman, B. Y. & **Obour, R.** (2016) Ecotourism Development in Brong Ahafo Region: Prospects and Constraints (Book chapter) In Akyeampong, O. (Editor) Tourism Development in Brong Ahafo: Supply and Demand Dynamics (Forthcoming)

JAMES AGYEI-OHEMENG

Research Activities

- Ecology of Fruit Bats on UENR campus.
- Ecotourism development in National Parks in Ghana.
- Traditional Conservation Strategies in Brong Ahafo.

Publication(s)

- **Agyei-Ohemeng, J**, Danquah, E. (2015), "Impact of Eidolon helvum on roost trees on UENR campus", JENRM, Vol. (2)
- **Agyei-Ohemeng, J**., Opare, P., Lartey, M., Obeng-Ofori, D., Panfili, G. and Cinquanta, L. (2015), "Enhancing the Productivity of Maize by Resource-Poor Farmers in Ghana Using Effective Technology Dissemination System". 10th AISTEC Conference Proceedings, Milan, Italy. Grains for feeding the world, pg 95.

- **Agyei-Ohemeng, J**. (2016) Transportation and Tourism in Brong Ahafo Region (Book chapter) In Akyeampong, O. (Editor) Tourism Development in Brong Ahafo: Supply and Demand Dynamics (Forthcoming)

Conferences/Workshops/Seminars

- Participant: FORM Ghana conference on New Forest for Africa, Kempiski Hotel, Accra, 16th-18th March 2016.

Outreach Programmes/Extension Services

- Investigator: "Strengthening Innovations and Technology Dissemination for Sustainable Development in Cereals, Cocoa and Coffee Value Chains in Western and Eastern Africa" (SATTIFS) in Ghana, Uganda and Ethiopia simultaneously

OLIVIA N. A. TETTEH

Research Activities/Interest

- Hospitality Services delivery in Brong Ahafo Region.

- Product design using nutritious and health-promoting agricultural produce such as Moringa oleifera

Publication(s)

- **Tetteh, O. N. A**., Golly, M. K. & Sarkodie, N. A. (2013). Development of Spice from Turkey Berry (Solanum torvum). Institute of Hospitality, Ghana, 4th National Conference.
- Sarkodie, N. A.; Bempong, E. K.; **Tetteh, O. N. A**.; Saaka, A. C.; Moses, G. K. (2014). Assessing the Level of Hygienic Practices among Street Food Vendors in Sunyani Township, Pakistan Journal of Nutrition; Vol. 13 Issue 10, p610
- Sarkodie, N. A., Commey V., **Tetteh, O. N. A**., Constance Asana Saaka, and Moses Golley (2014) Assessing Consumption Pattern and Dietary Practices of Pregnant Women in Sunyani Township. International Journal of Innovative and Applied Research, ISSN 2348 – 0319, Volume 2, Issue (5): 30 – 38.

Conferences/Workshops/Seminars

- Participant: CIRCLE Proposal Writing Workshop, The African Academy of Sciences, Nairobi, Kenya 15th -16th February, 2016
- Participant/Speaker: Organisation of Women in Science for the Developing World Summit, OWSD-Brong Ahafo Regional Chapter, 11th of November, 2015, University of Energy and Natural Resources, Sunyani, Ghana

Outreach Programmes/Extension Services

- Resource Person: Empowering Students of Serwa kesse Senior High School to Become Positive Climate Change Agents through Symposium and Debate.

RICKY YAO NUTSUGBODO

Research Activities/ Interest

- Tourism transport studies
- Community participation and ecotourism development
- Hospitality service quality delivery

Publications

- Dauda, S., Adjei-Mensah, C., & **Nutsugbodo, R. Y**. (2014) Urban poverty in Northern Ghana: Tracing the livelihood strategies of Women in the shea butter industry. Journal of Human and Social Science Research, 3(1), 15-25.
- **Nutsugbodo, R. Y.** (2013) Tourists' perception of the quality of public transportation services in the Accra Metropolis: A Servqual Approach. African Journal of Hospitality, Tourism and Leisure, 2(4), 1-8.

- Akyeampong, O., & **Nutsugbodo, R. Y**. (2016) Adoption of Information and Communication Technologies by hotels in the Brong Ahafo Region in Akyeampong, O. (Editor) Tourism Development in Brong Ahafo: Supply and Demand Dynamics (Forthcoming)

Conferences/Workshops/Seminars

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

DEPARTMENT OF LANGUAGES AND GENERAL STUDIES

The Department was established in 2012 as a Unit to service other Departments in general university courses such as Communication Skills, African Studies, Science and Technology among others. However, in 2013, in pursuit of UENR's vision to become a world class institution for generating, advancing and applying knowledge in energy and natural resources sciences and to help resolve the energy challenges of Ghana and West Africa, 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 Unit was elevated to a Departmental Status with the following Sections by the University council:

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

Currently, French courses are compulsory for all students from level 100 to 300, while students learn General Studies and Analytical Reading and Critical Thinking for two semesters. 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.

UENR has become an accredited centre of la Chambre de Commerce et d'Industrie de Paris, Île-de-France. The Department has started teaching and conducting FLE

(French for general communication) as well as Diploma in Professional French Examinations to the general public. Thus, throughout the whole of Ghana, this feat for an accreditation to conduct Diploma in Professional French Studies with CCIP de Paris, places UENR second to the Alliance Française de Kumasi.

In the course of the year, UENR signed an MoU with the Ecole nationale des Ingénieurs de Metz (ENIM), a French University in France, for the training of engineers at the advance level. This has successfully yielded fantastic results. Two engineering students from UENR, who are to pursue a Master's degree, will enjoy free accommodation, an industrial training and a monthly stipend of 500 + Euros in exchange for two ENIM's Mechanical Engineering undergraduate students for a year. This was facilitated by the French Embassy in Accra.

UENR's French Public Teaching programme, which aims at bringing French to your doorstep, started Greena French Radio teaching too as from mid-February 2016. The following are the staff of the Department.

Name	Qualification	Designation	Area of Specialisation
Mrs. Magdalene Mensah	M.A, BA(KNUST)	Lecturer	Comparative Literature
Rev. Dr. Phyllis Bernice	Ph. D (Dominion) M.Ed (Clarion) B.Ed (Winneba)	Lecturer	Science & Technology, Gender Studies
Mr. Richard Baffour Okyere	MPhil, BA (KNUST)	Assistant Lecturer	French Literature
Mr. Max Oratio Amuzu	Diplome in French Language (FLE).	Assistant Lecturer	Translation, Functional French
Charity Odumale Roberts	MPhil, B.Ed(Winneba)	Lecturer	Psychology, Special Education
Gertrude Y.Grumah	Msc (Reading) BA (Ghana)	Adjunct Lecturer	Communication Skills

EARTH OBSERVATION RESEARCH AND INNOVATION 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 our 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 a 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 level 0 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 every 15mins 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.

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 High Schools to various institutions and universities across the globe and within Ghana.

Consultancies

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. Proposals are being worked out with these organisations to support the data with the services provided. Unsolicited proposals have been sent out to several

organisations in Ghana and within the sub-region. These proposals are to leverage the wild fire outbreak monitoring services at the Centre for the benefit of other organisations.

Currently, the Centre has been invited by the Minister of Food and Agriculture to deliberate on working proposal between the Ministry and the Centre to support and protect lands and crops from destruction from wild fires. Others include working with the Monitoring of Environment and Security for Africa – MESA of the University of Ghana towards the improved fishing at the coast regions of Ghana.

Also, unsolicited proposals on Weather Forecasting and Flood Management in Ghana have been worked on and submitted to potential sponsors.

FUTURE PROJECTS

CARBON MONITORING TOWER AND COMICS-2 GROUND STATION

COSMIC-2/FORMOSAT Ground Station

Plans are also far advanced for the installation of a carbon monitoring tower at the Centre and also the COMIC-2/FORMOSAT ground station. The former is to help with climate change studies and the latter, is to support with the improvement of numerical weather forecasting for the West Africa Region.

Carbon Monitoring Tower

The Carbon Monitoring Tower is currently being supported by the Global Change Research Institute of the Czech Republic and the COSMIC-2 Ground station by the NOAA and Taiwanese Government. These projects 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.

GMES-Africa 2017

The Centre is working towards joining the Global Monitoring of Environment and Security Africa – GMES-Africa. This project is expected to kick start from 2017. The Centre is to provide consultancies to this international consortium.

International Conference on Computational Fluid Dynamics at UENR 2017

The Centre is currently preparing to organise the first ever conference on Computational Fluid Dynamics for West Africa to be held at the University. Proposals are currently being written and would be submitted to management for approval.

MSc and PhD Programmes 2017

The Centre is currently working on developing appropriate MSc and PhD Programmes. These programmes are to make use of the existing infrastructure and services currently deployed.



Prof. F. K.E Nunoo Ag. Dean

SCHOOL OF GRADUATE STUDIES

The University Council approved the establishment of the School of Graduate Studies at its first meeting. The UniversityAct 830 subsections 2(1) f, g, h, and i requires that UENR undertakes research in areas within its mandate of providing sound higher education and research skills, disseminating research results through publications in journals, books and other outlets, and providing extension and consultancy services to impact positively on the society. The School consequently began operation in 2014.

The global market for energy is growing dramatically and high usage of energy within the mandate areas due to either direct or spill-over effects from university research could mitigate global climate change effects. To access funding from some key funding agencies and donors, the existence of a functional Graduate School is crucial.

Consequently, programmes offered by the School will cater for the yearning and aspirations of prospective students from the catchments spanning the Brong-Ahafo, Ashanti, Northern and other regions of the country as well as absorb other technicians in the field who will from time to time want to upgrade their academic

and professional qualifications. The proximity of the university to industries and major towns creates a genuine need for graduate courses in Energy and Natural Resources.

The Graduate School places emphasis on interdisciplinary teaching and research, incorporates sufficient flexibility for its students to have diverse course options, allows for internationalisation and intercultural learning are consistent with our diverse natural resources and mandate of UENR. With several schools in the applied sciences, UENR, by its location, shall make higher post-graduate education readily accessible to a large body of personnel that must have further qualification in view of the elevation of several institutions in the mandate area to tertiary status.

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. The Vision of the Graduate School is to be an internationally recognized centre for advanced studies in natural resource conservation and efficient energy conservation and use.

STUDENTS STATISTICS AND POPULATION

The School has a population of thirty six (36) students, five (5) females and thirty one (31) males for 2015/2016 academic year. Out of thirty six Students, twenty one (21) are MSc students and fifteen (15) are PhD students.

PROGRAMMES RUNNING

The following programmes are currently running in the School. The Department of Energy and Environmental Engineering started with the following programmes:

- MSc/PhD Sustainable Energy Management
- MSc/PhD Environmental Engineering Management

NEW PROGRAMMES 2016/ 2017

The School intends to introduce the following programme in the 2016/2017 academic year, pending the approval of the National Accreditation Board.

- MPhil Social Forestry and Environmental Governance.

UNIVERSITY LIBRARY

INTRODUCTION

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, organise and disseminate relevant, quality, timely and appropriate information in both print and electronic formats to enhance teaching, research and learning in the university. Therefore, the strength of libraries depends on their links to academic faculties and the strength of research and teaching depend on the quality of their libraries.

ACQUISITION

The University of Energy and Natural Resources Library has a total collection of four thousand, six hundred and seventy (4,670) volumes of books and two hundred and fifty-two Journals in the areas of Energy, Mathematics, Forestry and Natural Resources. The books are on Engineering, Natural Resources Management, Physics, Chemistry, Computer Sciences, Mathematics, Forestry, Business Management, Hospitality Management and Entrepreneurship. New Arrival as of 16th May, 2016 stood at 307 Volumes books, purchased by the University.

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 2016

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

ALL MEMBERS (11 Databases)

- 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

FREE E-RESOURCES

EIFL E-RESOURCES	▪ Bione ▪ Edward Elgar ▪ IMF ▪ JSTOR ▪ Oxford University Press Collections ▪ OECD
INASP (International Network for the Availability of Scientific Publication)	▪ American Institute of Physics Journals ▪ American Physical Society ▪ ASA ▪ British Institute of Radiology Journals ▪ Cochrane Library ▪ Geological Library ▪ Geological Society ▪ HST ▪ Liebert Online ▪ Nature Publishing ▪ Palgrave Macmillan ▪ Policy Journals ▪ Royal Society Journals Online ▪ Royal Society of Chemistry ▪ University of California Press

	▪ University of Chicago ▪ World bank elibrary
RESEARCH FOR LIFE	▪ AGORA ▪ ARDI ▪ HINARI ▪ OARE

DONORS

During the period under review, the following institutions and individuals made donations to the Library.

NAME/INSTITUTIONS	SUBJECT AREA /TITTLE	QUANTITY	YEAR
VC	ENGINEERING MATHS AND SOCIAL SCIENCE	54	2014
MR. EMMANUEL OBENG	MATHEMATICS, IT AND CHEMISTRY	66	2014
UNIVERSITY OF AMSTERDAM	GENEARAL AREAS	23	2014
DR. OPOKU	BUSINESS INFORMATION SYSTEM; TECHNOLOGY DEV'T AND MANAGEMENT FOR E-BUSINESS	1	2014
DR. OPOKU	MIS CASES; DECISION MAKING WITH APPLICATION SOFTWARE	1	2014
DR. KABOBAH	GEO5; GLOBAL ENVIRONMENT OUTLOOK FOR THE FUTURE WE WANT	1	2014
DEPT. OF FISHERIES AND AQUACULTURE	FISHERIES AND AQUACULTURE	21	2015
ENERGY COMMOSSION	ENERGY- MY VISION: FLAGBEARER ON ENERGY IN GHANA	200	2015
ENERGY COMMISSION	ENERGY CRISIS IN GHANA DROUGHT TECHNOLOGY OR POLICY	100	2015
DR MERCY A.A DERKYI	FIGHTING OVER FOREST:INTERACTIVE GOVERNANCE OF CONFLICTS OVER AND TREE RESOURCES IN GHANA	1	2015
DR NANA DERKYI	ENERGY CRISIS IN GHANA	2	2015
OHENEBA ACHEAMPONG	TOURISM AND HOSPITALITY MANAGEMENT	6	2015
DR ERIC FOSU	BIOCHARCULTURE: BIOCHAR FOR ENVIRONMENT AND DEVELOPMENT	2	2015
VC	QUALITY MANUAL: SENIOR MEMBERS HANDBOOK	3	2015
VC	MANAGEMENT & LEADERSHIP:	1	2015

	CASE STUDIES IN TRAINING IN HIGHER EDUCATION IN AFRICA		
ISAAC OFOSUHENE	PHOTO GUIDE FOR THE FOREST TREES OF GHANA	10	2016
	STD/HIV: PREVENTION ACTION: LET'S PROTECT EACH OTHER	1	2016
VC	FRENCH	6	2016
PROF. NOKOE	INTERNATIONAL SEOUL 2014	1	2016
PROF NOKOE	BIOMETRICS:JOURNAL OF THE INTERNATIONAL BIOMETRIC SOCIETY	5	2014
PROF NOKOE	COMPUTATIONAL STATISTIC & DATA ANALYSIS	5	2014
UENR (G.B.T)	JOURNAL OF MATERIAL SCIENCE	1	2014
UNIVERSITY OF AMSTERDAM	GENERAL AREAS	199	2014
NEUROSCIENCE	BRIDGING THE SYNAPSE BETWEEN IMMUNOLOGY AND NEUROSCIENCE	2	2015
VC	GHANA NATIONAL PETROLEUM CORPERATION(GNPC)	1	2015
VC	CIVILIAN ADMINISTRATORS AND DEMOCRACY (CIDA)	1	2016
VC	EUROPEAN ASSOCIATION OF DEVELOPMENT RESEARCH AND TRAINING INSTITUTE (EADI)	1	2016

CONFERENCES, TRAINING AND WORKSHOPS ATTENDED BY LIBRARY STAFF

- E-Resource Librarians Training, Accra on the 19th of May, 2016;
- 1st National Library and Information week, Sunyani on the 7th -11th October, 2013;
- Introduction to Electronic Resources Management Workshop Accra on the 27th -29th November, 2013;
- Ethical Use of Information in Academic work and Running an Academic Institution Library, Accra, on the 23rd -24th July, 2015;
- Consortium of Academic and Research Libraries in Ghana (CARLIGH) Workshop, Accra, on the 29th October, 2013;
- 1st CARLIGH International Conference, Accra on the 14th of July, 2014.

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.