



**Kwame Nkrumah University of
Science and Technology**

VICE-CHANCELLOR'S REPORT

54th Congregation
September, 2020

Contents

| | |
|---|-------------|
| <i>PRINCIPAL OFFICERS OF THE UNIVERSITY</i> | <i>vi</i> |
| <i>ADMINISTRATION OF THE UNIVERSITY</i> | <i>vii</i> |
| <i>PROVOSTS OF COLLEGES</i> | <i>viii</i> |
| COLLEGE OF AGRICULTURE AND NATURAL RESOURCES..... | 2 |
| COLLEGE OF ART AND BUILT ENVIRONMENT | 7 |
| COLLEGE OF ENGINEERING | 16 |
| COLLEGE OF HEALTH SCIENCES | 22 |
| COLLEGE OF HUMANITIES AND SOCIAL SCIENCES..... | 35 |
| COLLEGE OF SCIENCE..... | 43 |
| INSTITUTE OF DISTANCE LEARNING..... | 48 |
| INTERNATIONAL PROGRAMMES OFFICE | 50 |
| OFFICE OF GRANTS AND RESEARCH | 55 |
| OFFICE OF THE DEAN OF STUDENTS..... | 64 |
| SCHOOL OF GRADUATE STUDIES..... | 71 |
| SPORTS DIRECTORATE | 74 |
| UNIVERSITY LIBRARY | 76 |



Professor (Mrs.) Rita Akosua Dickson

Vice-Chancellor

PRINCIPAL OFFICERS OF THE UNIVERSITY

CHANCELLOR

Otumfuo Osei Tutu II, Asantehene

CHAIRMAN OF COUNCIL

Ambassador Nana Effah-Apenteng

VICE-CHANCELLOR

Professor (Mrs.) Rita Akosua Dickson

OTHER OFFICERS

PRO VICE-CHANCELLOR (ACTING)

Professor Mark Adom-Asamoah

REGISTRAR

Mr. Andrews Kwasi Boateng

ADMINISTRATION OF THE UNIVERSITY

VICE-CHANCELLOR

Professor (Mrs.) Rita Akosua Dickson

PRO VICE-CHANCELLOR (ACTING)

Professor Mark Adom-Asamoah

REGISTRAR

Mr. Andrews Kwasi Boateng

FINANCE OFFICER

Mr. Yaw Nimo-Baffour

LIBRARIAN

Dr. Samuel Kotei Nikoi

DIRECTOR OF WORKS & PHYSICAL DEVELOPMENT

Dr. Arc. Jimmy Nkrumah

INTERNAL AUDITOR

Mr. Daniel Bart-Plange

DIRECTOR, UNIVERSITY HEALTH SERVICES

Dr. Osei Kwaku Wusu-Ansah

PROVOSTS OF COLLEGES

AGRICULTURE AND NATURAL RESOURCES

Professor Ben K. B. Banful

ART AND BUILT ENVIRONMENT

Professor John T. Bugri

ENGINEERING

Professor Mark Adom-Asamoah

HEALTH SCIENCES

Professor Christian Agyare

HUMANITIES AND SOCIAL SCIENCES

Professor Charles O. Marfo

SCIENCE

Professor Leonard K. Amekudzi

DIRECTOR, INSTITUTE OF DISTANCE LEARNING

Professor Kwame Osei Boateng



COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

The College of Agriculture and Natural Resources's core mandate is to promote agricultural production, rural development and management of renewable natural resources across Ghana and globally through teaching, research, and outreach. In this process, the College engages in managing people while training high calibre manpower with the requisite entrepreneurial skills necessary for public and private enterprise development within the confines of its mandate.

FACULTIES AND RESEARCH CENTRES

The College comprises two Faculties and three Research Centres. These are the Faculty of Agriculture (FoA) and the Faculty of Renewable Natural Resources (FRNR). The research centres are Bureau of Integrated Rural Development (BIRD), KNUST Dairy/Beef Cattle Research Station, and Agricultural Research Station, Anwomaso.

The two Faculties together, consist of ten Departments and are as follows:

Faculty of Agriculture

- Department of Agricultural Economics, Agribusiness and Extension
- Department of Animal Science
- Department of Crop and Soil Sciences
- Department of Horticulture

Faculty of Renewable Natural Resources

- Department of Agroforestry
- Department of Fisheries and Watershed Management
- Department of Forest Resources Technology
- Department of Silviculture and Forest Management
- Department of Wildlife and Range Management
- Department of Wood Science and Technology

ACADEMIC PROGRAMMES

Academic programmes in the College are hosted by the ten Departments within the two Faculties. The Research centres provide research, teaching and outreach. Both faculties run composite and non-composite BSc programmes. In the composite programmes students have the opportunity to specialize in options at the third and fourth years of their study. The non-composite programmes are those that students pursue from the first year to the final year. Listed here are the programmes and the options offered by the Faculties.

Undergraduate Programmes in Faculty of Agriculture:

BSc. Agriculture

Options:

- Animal Science,
- Horticulture,
- Agricultural Economics
- Agricultural Extension & Rural Sociology
- Agricultural Mechanisation
- Crop Science
- Soil Science

BSc. Agricultural Biotechnology
BSc. Landscape Design and Management
BSc. Agri-Business Management

Undergraduate Programmes in Faculty of Renewable Natural Resources:

BSc. Natural Resources Management

Options:

- Agroforestry
- Fisheries & Watershed Management
- Silviculture & Forest Management
- Wildlife & Range Management
- Wood Science & Technology

BSc. (Aquaculture and Water Resources Management)

BSc Forest Resources Technology

Options:

- Social Forestry
- Land Reclamation & Rehabilitation
- Ecotourism & Forest Recreation
- Wood Processing & Marketing

The Department of Wood Science and Technology will mount a BSc programme in Packaging Technology in the 2020/2021 Academic Year following the approval of the Academic Board.

Postgraduate programmes

All the faculties in the College offer postgraduate programmes as follows:

- 1-year MSc. programmes by research only,
- 2-year MPhil programmes composed of taught courses and supervised research, and
- 4-year PhD programmes with prescribed taught courses in year one.

COLLEGE ADMINISTRATION

The Administrative Head of the College is the Provost who is responsible for the overall administration, academic development and financial management of the College. The Faculties are headed by Deans who have oversight responsibilities on the academic and research activities of the departments in their Faculty. The Provost is supported by a College Registrar, a College Finance Officer, a Librarian, and a Principal Administrative Secretary. The Secretariat and Provost office is currently located on the Third Floor of the New Classroom Block.

The College Board, regulates all matters relating to the organization of education, teaching, research and study of the courses run in the departments of the College. The Chairman of the Board is the Provost and his Coordinates teaching, research, income generation, students' welfare and all other matters, which have been extensively reported by the Faculties, Academic Departments and Research Units.

The College Administration is made up of the following personnel:

Provost.....Prof. Prof Ben Kwaku Branoh Banful PhD

College RegistrarOwusu-Ansah Debrah, Esq

College Finance Officer.....Mr. Johnson Owusu

College LibrarianMr Kwabena Ofori Asiamah

STAFF AND STUDENT STATISTICS

The total of all students in the College in the year under review stands at 5,436.

The total registered undergraduate students at the CANR were 5,193 and distributed as follows:

Faculty of Agriculture.....3,198

Faculty of Renewable Natural Resources.....1,995

The number of postgraduate students in the College243

In 2019/2020 academic year, the total number of staff on payroll at the College is 271 and this is made up of 131 Senior Members, 78 Senior Staff and 69 Junior Staff.

RESEARCH COLLABORATIONS

The CANR continues to support collaborations that its faculties, departments and centres have signed with various institutions in and outside the confines of the University. The College is coordinating KNUST Fruit Processing Company Limited at Mantukwa in the Bono Region. This initiative is a ripple effect of the outcomes of the APERL project which was executed by the Department of Agroforestry in collaboration with CIDA and the University of Guelph, Canada. Details of research collaborations and grants are found in the Faculty and Departmental reports.

Research frontiers

The CANR is known for its innovation and skill in research and prolific scientific publications, and grant winning proposals. At least 20 major research grants were in the College system during the 2019/2020 academic year. Details of the research are captured in the reports of the Departments in the College.

The various Departments in the Faculty of Renewable Natural Resources are making considerable efforts for additional research grants. The Department of Silviculture and Forest Management continues to pursue an aggressive collaborative research with UK Space Agency and to establish a Ghanaian Remote Sensing site for atmospheric carbon columns towards developing a Pan-African carbon network. The project seeks to establish a sustainable ground-based carbon remote sensing site at KNUST which will produce high quality CO₂ and CH₄ columns. It also seeks to develop new local measurement and modelling capabilities associated with atmospheric CO₂ and CH₄.

The College in partnership with ENI-Ghana has rolled out an agribusiness entrepreneurship Project dubbed OKUAFO PA which aims at training the youth in agribusiness along the Agricultural Value Chains for Youth enterprise development and job creation in Ghana. Presently hundreds of youth with secondary and tertiary education have been provided with knowledge and skills to enable them start their own businesses as well as have the capacity to employ others. This initiative is a collaboration between the Governments of Ghana and Italy. The Prof Banful is the Coordinator for the Project.

The Faculty of Agriculture continues to benefit from various grants which includes the Royal Society-DFID programme grant of £1,132,162.00 for capacity building in Soil Science in collaboration

with Imperial College London, INERA-Burkina Faso and FUNAAB-Nigeria. The Faculty also has a research grant of (£18,640 from The Royal Society SABMiller Exchange Programme in Soil Science in collaboration with Imperial College London and University of Aberdeen, Scotland. The AGRA project is gradually winding up after providing so much support to graduate students at the Masters and PhD levels.

The Animal Science Department of the Faculty of Agriculture continues to blaze the trail through expansion and intensification of poultry and meat production and injecting more capital into its production. Apart from selling products at the farm gate, there is a dedicated shop at the Commercial area on campus where meat, eggs and sausages can be purchased under very hygienic conditions.

BIRD continued to lead the University in the implementation of a 5-year USAID Funded partnership Project – the Analytical Support Services and Evaluations for Sustainable Systems in West Africa (ASSESS-WA). The project which commenced in April 2014 and was scheduled to end in March 2019 has been given a No Cost Extension for another two years. ASSESS is responsible for evaluation of programs in the US Government's West Africa Regional Economic Growth (REG) portfolio in Agriculture, Environment, Trade and Energy. ASSESS-West Africa is managed by the United States Department of Agriculture (USDA), two Land Grant Universities in United States of America (University of Rhode Island, URI, and Delaware State University, DSU) and Kwame Nkrumah University of Science and Technology, (KNUST), Kumasi. Prof. Paul Sarfo-Mensah is the Principal Investor of the Project on KNUST Campus with counterparts at URI and DSU. The Bureau is also coordinating the Education for Sustainable Development in Africa (ESDA) programme. ESDA was initiated by the United Nations University (UNU), Tokyo to assist African Universities to develop programmes to address sustainable development issues in Africa, Sustainable Integrated Rural Development in Africa (SIRDA) and the New Generation Researchers' (NGR) programme

In the year under review, faculty members in the College published 116 journal articles besides conference papers, book chapters and technical reports.



COLLEGE OF ART AND BUILT ENVIRONMENT

COLLEGE OF ART AND BUILT ENVIRONMENT

INTRODUCTION

The College of Art and Built Environment emerged in 2014, following the restructuring of the system of the University. The College's vision is to become a centre of excellence for Art Built and Environment Education in Africa. Its mission is to advance knowledge in Art, Design and Built Environment through creation of an environment for undertaking relevant research, quality teaching, entrepreneurship training and community engagement to improve the quality life. The College is structured in a three-tier system under the leadership of a Provost.

FACULTIES, DEPARTMENTS AND PROGRAMMES

The College of Art and Built Environment currently comprises three Faculties, nine (9) Teaching Departments and one (1) Research Centre as follows:

Faculty of Art

- Department of Communication Design
- Department of Industrial Art
- Department of Painting and Sculpture
- Department of Publishing Studies

Faculty of Built Environment

- Department of Architecture
- Department of Construction Technology and Management
- Department of Planning
- Department of Land Economy
- Centre for Settlement Studies

Faculty of Educational Studies

- Department of Educational Innovations in Science and Technology
- Department of Teacher Education

PROGRAMMES OFFERED

Departments in the College offer both undergraduate and postgraduate programmes in several academic disciplines which are presented as follows:

| Department | Undergraduate Programme | Postgraduate Programme |
|--|--|--|
| Communication Design | BA Communication Design | MComm. Design MPhil Comm. Design |
| Industrial Art | BSc. Ceramics Design and Technology BSc. Metalsmithing and Jewellery Technology BSc. Fashion Design BSc. Textile Design and Technology BA. Integrated Rural Art and Industry | MFA Ceramics MFA Metals MFA Textiles MPhil Integrated Art and Industry MPhil Fashion Design Technology MPhil Textile Design Technology PhD Fashion Design Technology PhD Textiles Design Technology |
| Painting and Sculpture | BFA. Painting BFA. Sculpture | MFA Painting MFA Painting and Sculpture MFA Sculpture PhD Painting PhD Sculpture PhD Painting and Sculpture |
| Publishing Studies | B.A. Publishing Studies | M.A. Publishing Studies |
| Architecture | BSc. Architecture | M. Arch. MSc. in Architectural Studies MPhil. Architectural Studies PhD Architecture |
| Construction Technology and Management | BSc Construction Technology Management (CTM) BSc. Quantity Surveying and Construction Economics (QSCE) | MPhil. Building Technology PhD Building Technology MSc. Construction Management MPhil. Construction Management PhD Construction Management MSc. Procurement Management MPhil. Procurement Management PhD Procurement Management MSc. Project Management MPhil. Project Management PhD Project Management |
| Land Economy | BSc Land Economy BSc Real Estate | MSc Facilities Management MSc Land Governance and Policy PhD Land Management |

| Department | Undergraduate Programme | Postgraduate Programme |
|---|---|---|
| Planning | BSc. Development Planning BSc. Human Settlement Planning | MSc Development Planning and Management MPhil Development Planning and Management MSc. Development Policy and Planning MPhil Development Policy and Planning MSc. Planning MPhil Planning MSc. Development Studies MPhil Development Studies MPhil Urban Management Studies MSc. Transportation Planning MSc. Planning, Monitoring and Evaluation MPhil Planning, Monitoring and Evaluation PhD. Planning PhD. Development Studies |
| Educational Innovations in Science and Technology | | M.Ed General Education MSc Educational Innovation and Leadership Science MPhil Educational Innovation and Leadership Science MSc Creative Art Therapy MPhil Creative Art Therapy MA Art Education MPhil Art Education PhD Art Education MA Africa Art and Culture MPhil Africa Art and Culture PhD Africa Art and Culture |
| Teacher Education | BEd Junior High School Specialism | MPhil Science Education PhD Science Education MPhil Information Communication Technology Education PhD Information Communication Technology Education MPhil Mathematics Education PhD Mathematics Education MPhil Language Education PhD Language Education MPhil Educational Planning and Administration PhD Educational Planning and Administration Ed.D. Educational Planning and Administration |

ADMINISTRATION OF THE COLLEGE

The College is administered by the following Officers:

ProvostProfessor John Tiah Bugri
Ag. College RegistrarMs. Josephine K. Djampim
Ag. College Finance OfficerMrs. Catherine Acquah
Ag. College LibrarianMr David Vincent Kweku Arkoful

FACULTY OF ART

The Faculty is administered by the following Officers:

DeanProfessor Charles Frimpong
Faculty RegistrarMs. Susana Asamoah

FACULTY OF BUILT ENVIRONMENT

The Faculty is administered by the following Officers:

DeanProf. S. Amos-Abanyie
Faculty RegistrarMs. Senita Osei Badu

FACULTY OF EDUCATIONAL STUDIES

The Faculty is administered by the following Officers:

DeanDr. Winston Abroampa
Faculty RegistrarDr. Paul Kwadwo Addo

STAFF AND STUDENT STATISTICS

The College has a student population of seven thousand, one hundred and twenty-eight (7128) with one hundred and ninety (190) teaching and research staff and three hundred and fourteen (314) support staff. This number includes staff on contract.

ACTIVITIES

During 2019/2020 Academic Year, the College undertook a number of activities which are detailed below:

INTRODUCTION OF NEW PROGRAMMES

- i. The Department of Communication Design is in the final stage of introducing a Doctor of Philosophy in Visual Communication Design programme. The Department is also ready to roll out a Certificate Diploma for adult learners in the Creative Media Industry for the Northern sector of Ghana as an all-inclusive approach to design education.
- ii. At the Department of Land Economy, new programmes to be introduced the 2021/2022 academic year are:
 - MSc Real Estate
 - PhD in Land Management and Governance

An MBA programme in Real Estate Finance and Investment has also been developed in partnership with the Department of Finance and Accounting, KNUST Business School and is currently receiving stakeholder inputs.

The Department has also initiated steps to develop a new undergraduate programme in Facilities Management.

- iii. The Centre for Settlement Studies in collaboration with the Department of Civil Engineering has develop an MPhil/PhD programme in Disaster and Prevention Management which is receiving attention at the Planning and Resources Committee of the KNUST. This programme should have started in 2019/2020 academic year but is currently being delayed because administrative challenges encountered in the extraordinary era of Covid-19 pandemic.
- iv. The Department of Architecture is in the process of introducing the following programmes of study:
 - Master in Landscape Architecture (MLA). This is in response to the need for qualified experts in landscape design in the country
 - BSc. & MSc. Interior Design
 - MSc. in Building Performance
 - BSc. Architectural Technology

These initiatives are designed to provide options at the intake level at year one, and to feed the professional programmes at the graduate level. The Department has also received approval to run its MSc. and MPhil programmes aside the regular stream, on week-end basis to make it easier for interested personnel to enrol and progress in their fields.

INFRASTRUCTURAL DEVELOPMENT/VEHICLE

Work of the College's nine-storey building is progressing steadily. It is hoped that when completed, it will provide enough space for teaching and offices for staff.

WORKSHOP/PUBLIC LECTURE

- The Centre for Settlement Studies in collaboration with NELGA organized the DAAD Scholarship Holders Workshop (New Year School) from 24th February – 28th February, 2020 at the Postgraduate Block, CABE—KNUST, Ghana.
- The Faculty of Educational Studies organized a two-day workshop for Administrative Professionals of Colleges of Education affiliated to KNUST on the theme, "Managing Colleges of Education in the 21st Century: The role of Administrative Professionals". November 7-8, 2019.
- In line with the Department of Land Economy's goal to provide thought leadership on matters relating to land management in Africa and in the spirit of KNUST-TUM collaborations, a proposal was sent in October 2019 for a grant from the TUM Global Incentive Fund to organize a workshop on the use of block chain technology for land registration. Fortunately, the application was successful with a grant of 14,950 Euros. However, the workshop which was planned to take place in April 2020 had to be suspended because of the COVID-19 pandemic.
- In addition, Prof. Michael Poku-Boansi, Head of the Department of Planning, together with partners from Technical University of Munich led by Prof Drewes and Dr. Daphne Keilmann-Gondhalekar initiated the process of organising a workshop on urban Water-Energy-Food (WEF) Nexus Approach embedded into urban planning processes from a grant of Euros 15,000 sourced from the TUM Global Incentive Fund. Seven staff members of the Department were to take part in the week's programme. However, due to COVID-19 pandemic, the workshop date was moved from April 2020 to November 2020.

GRANTS AND AWARDS

- The Department of Industrial Art obtained a KNUST Research Fund (KRef) of GH¢29,850.00 to develop “Prolonged cycle life of locally produced crucible for fire assaying in Ghana: Commercial production.
- The Department of Land Economy received a grant of 11,423.48 Euros from DAAD to develop the curriculum for a new PhD programme in Land Management and Governance which is expected to be mounted at the start of the 2021/2022 academic year.
- The Faculty of Educational Studies secured 7,750 euros worth of training package from Transforming Teacher Education and Learning (T-TEL) to build the capacity of 31 faculty members in College of Art and Built Environment on “Online Design, Teaching and Learning Course” offered by Amsterdam University of Applied Sciences, Netherlands. April 14-24, 2020.

VISITS

- Students and lecturers from the Kolding School of Design in Denmark visited the Department of Painting and Sculpture on two different occasions, one in October in the first semester and the second in February in the second semester. They spent three weeks at the Department with each visit, teaming up with students from the Department on research projects.
- In March 2019, a group of students from the Hamburg University of Fine Arts led by the renowned artist and lecturer Sam Durant visited the Department of Painting and Sculpture for a week, engaging in joint seminar presentations with the Department's graduate students.
- The Dean of Contemporary Arts of the Ramapo College of New Jersey, Dr Peter Campbell also visited the Department of Painting and Sculpture in March 2019, consulting with faculty on the proposed introduction of Film, Drama and Music programmes.
- Niels Staats (Project Manager, Stedelijk Museum Amsterdam) visited the Department of Painting and Sculpture in April 2019 and gave a talk at blaxTARLINES.
- Dominique Heyse-More (Senior Curator) and Francine Hayfron (Educational and Volunteer Programs) at the Whitworth Gallery (UK) also visited the Department of Painting and Sculpture in March 2019 and gave a talk at blaxTARLINES.

COLLABORATIONS

- The Faculty of Built Environment has established collaboration with the International Finance Corporation (IFC) to improve the capacity of Built Environmental experts in green building design and analysis. As part of the Green Building Market Transformation Program, the IFC intends to provide a training session in Excellence in Design for Greater Efficiency (EDGE).
- The Department of Land Economy continues to be in close relationship with its partners in industry including Broll Ghana, TDC Development Company, First National Bank, Republic Bank, Ghana Ports and Harbors Authority, Tema Oil Refinery, Volta River Authority, Social Security and National Insurance Trust, Office of the Administrator of Stool Lands and the Lands Commission. These institutions continue to support the Department by way of industrial training for its students.
- The Department of Construction Technology and Management has embarked on several research and project collaborations, amongst which are Domod Roof Limited, Accra and the Deakin University, Australia.

- The Department of Planning continues to collaborate within the SPRING Network of Universities made of the Technical University of Dortmund in Germany, the University of the Philippines, Ardhi University in Tanzania, and the Universidad Austral de Chile in Valdivia, Chile. This flagship collaboration programme continues to grow since its inception in 1985. Staff and student exchanges continued in the Academic Year. Under the auspices of the Programme, two Ghanaian students were awarded German Academic Exchange (DAAD) scholarships to begin their first year of studies at the Technical University of Dortmund, Germany. Also, through its focal person – Dr Ronald Adamtey, the Department has established collaboration with the Water Research Institute of the CSIR, the Geological Survey of Denmark and Greenland, Aarhus University, Central Queensland University, Food Research Institute of CSIR, Ghana Meteorological Agency and the Hydrological Services Department to research into Building Climate-resilience into basin water management using the Densu and Pra River Basins as case studies. The project is for a period of 5 years with an estimated budget of DKK 11,998,167.00.
- The Department of Industrial Art has renewed its collaboration with the Pennsylvania State University, USA and The Oslo and Akershus University College of Applied Sciences in Norway. Other MOUs signed are with JAK studios of Denmark and The National Institute of Design, India. The Department still collaborates with Aid to Artisans Ghana and Accents and Art in the area of industrial internship for our students. This brings in experts, from industry, to make presentations on topical issues based on their experiences.

EXHIBITIONS

Curated exhibitions are stated below:

- Akoi-Jackson, B. (2019) Curated the maiden exhibition “Galle Winston Kofi Dawson: In Pursuit of Something Beautiful, Perhaps...” at the newly established Savannah Centre for Contemporary Art in Tamale. SCCA Tamale is the brainchild of world-renowned Ghanaian artist Ibrahim Mahama. The exhibition runs from March to August 2019.
- S. A. Sosu, C. S. Kpodo, R. Glover, (2020). Imaging: The “Constructor” of Modern, Post – Modern and Contemporary life, JAAC Journal of African Arts and Culture, University of Education, Winneba. Jaac.journal@gmail.com (accepted for publication).
- E, Adu Boahen, R. Glover, K.A. Boateng, (2020). Plagiarism in Higher Academic Institutions, a Blight on Intellectual Integrity: An Interventionist Approach, JAAC Journal of African Arts and Culture, University of Education, Winneba. Jaac.journal@gmail.com (accepted for publication).

PUBLICATIONS

Staff of the College produced 236 refereed journal articles, eighteen (18) conference papers, one (1) textbook and three (3) book chapters.

SERVICE TO THE COMMUNITY

- The Department of Industrial Art was tasked by the University to produce five thousand (5000) nose masks as part of efforts to curb the global pandemic.
- The Department of Painting and Sculpture blaxTARLINES, the Department’s Project Space and Contemporary Art incubator helped artist Ibrahim Mahama set up the Savannah Center for Contemporary Art (SCCA) in Tamale. SCCA debuted with a retrospective exhibition on the Ghanaian modernist artist Galle Winston Kofi Dawson. The exhibition

was curated by Bernard Akoi-Jackson. Dawson's work was first introduced as part of the intergenerational exhibition "Orderly Disorderly" by blaxTARLINES.

- The Department of Painting and Sculpture collaborated with Ghanaian international artist Godfried Donkor on an internship project which trains young artists in techniques of painting and professional studio practice.
- Dr. Bernard Akoi-Jackson and a team of students (Skei(N)Mura), designed and executed the following murals:
 1. "KNUST: The Myth, the Lore, the Legend" at the main Administration building.
 2. "Of Affinity and Kinship" at the Trevallion Building, Department of Architecture College of Art and Built Environment, KNUST.
 3. "A Healthy Splash" at the newly built GUSS Sports Complex, KNUST, as part of commissions commemorating 20 years of the Asantehene, Otumfour Osei Tutu II's ascension to the Golden Stool.
 4. **"DenkyemKye"** at the Manhyia Palace
- Book Reading Clubs established in selected Basic Schools by the Department of Publishing Studies are still being nurtured, monitored and mentored under the able supervision of Mrs. Monica Aba Brew-Hammond and Mrs. Irene Esi Nimo Nunoo. These reading clubs serve as the Department's out – reach programme to the community. Performance appraisal indicated improvement in reading among club members.
- Mr. Ralph Nyado – Addo engineered and won a 3.8-million-euro project from the German government through BMZ & DAAD and the University of Leipzig, Germany. The 5-year (2020-2024) project is known as "African Centre for Career Enhancement & Skills Support" (ACCESS). This is intended to enhance and encourage the growth of employability and skills development in Ghanaian Universities.
- The Department of Land Economy completed a valuation exercise commissioned in 2018, and submitted a comprehensive report on all the University's landed properties and their respective market values to the University Council.
- Staff of the Department of Land Economy continue to serve in different capacities both within the University and externally. In particular, faculty members have served as Reviewers for both local and international journals, External Examiners and Assessors, members on Boards of state and professional organizations etc. Examples are as follows:
- The Department of Architecture carried out a socio-cultural field study of peri-urban environments of Juabeng in the Ejisu Juaben Municipal Assembly in August 2019. A rural survey was also carried on at Essienimpong in the Ejisu Juaben Municipal Assembly in March 2020 with the same objectives. Analysis and proposals of these studies, even though academic in nature, were presented to district assemblies to guide them in their developmental efforts.
- As part of the Department of Architecture's contribution to fight the global Covid-19 pandemic, a market for all design in collaboration with key stakeholders is on-going. The outcome of this design effort should contribute to the issues arising out of the pandemic.
- The Department of Architecture in collaboration with the Otumfo Foundation and the Asokwa Municipal Assembly have completed the design of Children's Parks to be in the City of Kumasi. We are hopeful to see the realisation of these projects to uplift the image of the city.
- Members of staff of the Department of Architecture continue to serve in various capacities on professional bodies, boards of institutions and schools, among others.



COLLEGE OF ENGINEERING

COLLEGE OF ENGINEERING

INTRODUCTION

The College, in line with the vision of the University, seeks to become an internationally acknowledged Centre of Excellence in engineering education with special focus on national, industrial development. The College, organized under a three-tier system is under the leadership of the Provost who provides, among other things, leadership in the College to achieve this vision.

FACULTIES, DEPARTMENTS AND PROGRAMMES

The College of Engineering comprises three Faculties, with eleven (11) Teaching Departments and five (5) Research Centres as listed below.

The Faculties are:

Civil and Geo-Engineering;
Electrical and Computer Engineering; and
Mechanical and Chemical Engineering

The eleven teaching Departments in the College:

- Department of Agricultural Engineering
- Department of Chemical Engineering,
- Department of Computer Engineering
- Department of Materials Engineering
- Department of Electrical and Electronics Engineering
- Department of Mechanical Engineering
- Department of Petroleum Engineering
- Department of Civil Engineering
- Department of Geological Engineering
- Department of Telecommunications Engineering
- Department of Geomatic Engineering

Research Centres

- Technology Consultancy Centre (TCC)
- The Brew-Hammond Energy Center (TBHEC)
- West African Science Service Centre On Climate Change and Adapted Land-Use (WASCAL – CCLU)
- Regional Water & Environmental Sanitation Centre, Kumasi (RWESCK)
- Transport Research and Education Centre Kumasi (TRECK)
- KNUST Engineering Education Project (KEEP)

PROGRAMMES

Faculty of Civil and Geo-Engineering

| Departments | Undergraduate Programmes |
|--------------------------------------|--------------------------------|
| Department of Civil Engineering | BSc. in Civil Engineering |
| Department of Geological Engineering | BSc. in Geological Engineering |
| Department of Geomatic Engineering | BSc. in Geomatic Engineering |
| Department of Petroleum Engineering | BSc. in Petroleum Engineering |

Faculty of Electrical and Computer Engineering

| Departments | Undergraduate Programmes |
|---|--|
| Department of Computer Engineering | BSc. in Computer Engineering BSc. in Biomedical Engineering |
| Department of Electrical/Electronic Engineering | BSc. in Electrical & Electronics Engineering |
| Department of Telecommunication Engineering | BSc. in Telecommunication Engineering |

Faculty of Mechanical and Chemical Engineering

| Departments | Undergraduate Programmes |
|---|--|
| Department of Agricultural and Biosystems Engineering | BSc. in Agricultural Engineering |
| Department of Chemical Engineering | BSc. in Chemical Engineering BSc. in Petrochemical Engineering |
| Department of Materials Engineering | BSc. in Materials Engineering BSc. in Metallurgical Engineering |
| Department of Mechanical Engineering | BSc. in Mechanical Engineering BSc. in Aerospace Engineering BSc. in Marine Engineering BSc. in Industrial Engineering BSc. Automobile Engineering |

POSTGRADUATE PROGRAMMES

All the Departments in the College run Postgraduate programmes.

MANAGEMENT OF THE COLLEGE

The College is managed by the following:

Provost Professor Mark Adom-Asamoah

Registrar of the College Mr. Richard Appiah-Nkyi, Esq.

College Accountant Mr. Owusu Acheampong

College Librarian Mrs. Akua A. Badu Sampene

Senior Assistant Registrar Mr. Maxwell Agyemang-Yeboah

Senior Assistant Registrar..... Mr. Kweku Appiah-Badu

The work in the College is also supported by other competent staff in various areas.

STUDENT NUMBERS

The College registered a total number of seven thousand, three hundred and eighty-seven (7,387) undergraduate students and six hundred and forty-four (644) postgraduate students during the 2019/2020 Academic Year.

KEY COLLEGE LEVEL ACTIVITIES

College Awards Day

As part of activities for the 2019/20 Academic Year, the College of Engineering organized the 7th Students and Industrial Partners Awards ceremony on 3th March, 2020.

The aim of the Awards was in recognition of remarkable academic achievements of students and also acknowledge the contribution and support of the College's industrial partners, by way of collaborating with the College, in improving the skills of the students. The following categories of Award were conferred on deserving students: Excellent Student Award, Best Student Award and Most Improved Student Award. There were also Special Students Awards instituted by individuals and corporate bodies for students who satisfied certain criteria. Among the College's numerous industrial partners acknowledged, the following were given Awards: VODAFONE, ABP CONSULT, ASSOCIATED CONSULTANTS, GNPC-TEHNIP, SPARKS SM GHANA LTD, MERICOM SOLUTIONS, GhIE, HUAWEI, MTN and others.

Career Fair and Open Day – 2020

The College organized a three-day Career Fair and Open Day from 3rd – 5th March, 2019, and the participants were students of the College and Senior High Schools. The Fair provided a platform for firms to introduce themselves and interact with students and for students to discover opportunities available to them. Open Day is to introduce programmes at the College of Engineering to Senior High School students. Some of the schools that participated in the Open Day were: KNUST Senior High School, Juaben Senior High School, St. Monica's Senior High School and Osei Kyeretwie Senior High School. The companies that participated in the event of this year included: GNPC, HUAWEI TECHNOLOGIES GHANA LIMITED, NATIONAL COMMUNICATIONS AUTHORITY, WILMAR, GN ELECTRONICS, GNPC-TECHNIP, VODAFONE GHANA, MTN GHANA. Companies took turns to address students on their operations, career opportunities and duties and responsibilities of employees. Students were interviewed by some

of the participating Companies and some were selected to, first, serve their National Service with them for the possibility of employment after the National Service.

Cygnus Engineering Camp

An annual one-week camp for Senior High School students aimed at giving them an early introduction to the principles of engineering while teaching them soft skills they will need to succeed in any competitive environment. 40 continuing students and Teaching Assistants we selected and trained for a period of two weeks on electronics, web development, science experiments and team building.

COLLABORATION

The College of Engineering in collaboration with Ulsan National Institute of Science and Technology (UNIST) organized an annual ICT exchange program on KNUST campus, to collaborate on projects whiles sharing aspects of culture. The 2019 program focused on two major projects; Drones for Agriculture and Waste Sorter.

COLLEGE OF ENGINEERING INNOVATION CENTRE

The KNUST-CoE Innovation Centre is a product and concept incubator primarily focused on bridging the gap between the theory studied and practice by creating a module that takes advantage of the University environment and collaboration with industry partners. The Centre believes this can be done by using modules designed; which are a perfect blend of research, problem-solving, and product development using modern trends and an agile approach. Having a membership of 738 KNUST students, the Innovation Centre seeks to impact all these individuals in one way or another during their study in KNUST.

Capacity Building Activities – CoE Innovation Centre

The Centre primarily focused on more resources on its core mandate; knowledge and skill acquisition. To increase participation and impact in the college, the Centre offers training programs, seminars and workshops for students and faculty on topics and disciplines based on modern trends and industry demand. For the year 2019, the KNUST-CoE Innovation Centre trained over 700 second cycle and tertiary students.

In February 2020, the KNUST-CoE Innovation Centre started three training sessions. They were on the Internet of Things, Unmanned Aerial Vehicles, and MatLab Software for Engineers.

The Innovation Centre partnered with the Ghana Engineering Students Association (GESA) to organize skills training program.

Projects undertaken at KNUST-CoE Innovation Centre

The Piezo-generator converts pressure from footfalls on tiles and floor mats into electrical energy to light up bulbs and low load appliances such as radios and mobile phones in rural communities which do not have access to electricity.

AgriVision, a device that is aimed at solving a problem in the agricultural sector. The problem to be solved is the inability of farmers to regularly go around to check the status of the farm due to the large size of their farms, as a result, they lose a lot of money and crops to pest and unhealthy plants. It utilizes a drone in an IoT network to enhance farming practices by monitoring crop yield, pest infestation and soil parameters such as soil moisture, pH and temperature.

iWheel is an intelligent wheelchair that monitors the user's vitals such as temperature and pulse rate in real-time and transmits the data to a web application viewed and monitored by a physician

or caretaker. In addition to its features, the iWheel web app provides real-time location and a live video feed from the wheelchair.

Sorting eggs being a major challenge amongst local farmers in Ghana results in post-production losses. It is difficult to sort out good and bad eggs by just looking at them; this tends to take longer periods to achieve desirable results. The Egg Collector uses image processing to sort out eggs according to structure, shape and form. It is designed to assist poultry farmers to sort eggs faster and more accurately on their farms.

Inform is a Car Breakdown Alert System that uses a web-based platform to alert nearby vehicles within one km radius of a broken-down vehicle on the road and helps drivers to navigate safely on our roads to prevent accidents and save lives. The device when triggered takes the coordinates at that particular time, compares with coordinates of other vehicles to see if they fall within a particular radius, and then displays those coordinates on a map to alert road users.

The waste sorter machine is built and designed to sort solid waste into various components. The waste sorter sorts waste into plastics, paper and metal components.

The Solar-powered smart traffic light project involves a traffic light system which implements techniques to reduce overall wait time while minimizing collision rates. The smart lights are designed to check road usage over time and adapt accordingly. Unlike normal traffic lights which are just time operated and highly inefficient, these lights process data and quickly communicate with each other to optimize the traffic status of each lane. Also, they are solar powered, saving energy costs.

The vibration Sieve project is aimed at addressing the challenges involved in the sieving of cassava dough for garri processing on medium and large scales. The Vibro sieve is aimed to replace the manual hand sieving with a mechanical machine that employs the concept of vibration. The operation of the machine is divided into three (3) main areas the feeding section, sieving and discharge.



COLLEGE OF HEALTH SCIENCES

COLLEGE OF HEALTH SCIENCES

INTRODUCTION

The College of Health Sciences comprises the Faculty of Pharmacy and Pharmaceutical Sciences, School of Medicine and Dentistry, Faculty of Allied Health Sciences, School of Veterinary Medicine, School of Public Health, and the Kumasi Centre for Collaborative Research in Tropical Medicine. The College has 39 Academic Departments.

The College registered a total of 4,813 students for the 2019/2020 Academic year with a staff strength of 330. During the year under review, the College vigorously pursued its mandate of training the specialized and graduate manpower for the health sector in Ghana and Africa, through teaching, research and service to the community.

Through an Affiliation agreement with the Ministry of Health, the College supports the Training of Nurses, Midwives and other Paramedics at the Diploma Level by over 70 Health Training Institutions in the Country.

COLLEGE ADMINISTRATION

Provost..... Prof. Christian Agyare
Ag. College Registrar Mr Simon Yaw Boribah
College Accountant..... Mr Felix Obeng Boateng
College Librarian..... Mr Victor K. Teye
College Internal Auditor..... Mr Benjamin A. Arhin
College Counsellor Ms. Joan Joseline Hackman

ACTIVITIES

Training

The College's major activities as outlined above are in the training of health cadres for the country and some parts of the West Africa Sub-Region. Details are outlined in Reports from the Schools/Faculties in the College. The Research Unit of the College, the Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) has been involved in the COVID-19 testing and setting up of COVID-9 testing laboratories in the middle and northern sectors. The Centre trained more than 200 doctors and nurses in safe COVID-19 sample collection and transport.

Research

To Support Teaching and Learning there had been a lot of Research activities in the College; KCCR played a leading role in Health Research in the Country. In doing so, it worked closely with the Ashanti Regional Directorate of Health Service and the Public Health Directorate of the Ghana Health Service. KCCR led in the detection and surveillance of Filariasis, Salmonella, Meningitis, TB, Buruli ulcer and Skin NTDs, Virology zoonosis, Emerging Infectious Diseases and outbreaks, Hep B and HIV and other diseases of public health concern. It has also been in the forefront in the handling of COVID-19 testing in the country. For instance, it has been the center in charge of testing COVID-19 suspected cases in middle and Northern zones of the country. So far it has tested over 99,000 samples out of which 14,000 and above were positive.

Donations

The College donated 50 boxes of Hand Sanitizers and 500 Sample Collection Kits to hospitals.

Collaboration

The University of Bonn has expanded its cooperation with KNUST to include exchange of undergraduate and graduates, establishment of an Erasmus Programme among many others. A Memorandum of Understanding was signed on 28th November 2019 to that effect.

Visibility

Significantly KCCR and for that matter, KNUST has gained profound visibility in the health delivery in the country. The contribution of the Centre has been mentioned in all the speeches made by President Nana Addo Dankwa Akufo-Addo on the COVID-19 control strategy in the country.

Grants

The College has received a lot of Research Grants, predominantly through School of Medicine and Dentistry, School of Public Health and Faculty of Allied Health Sciences. The Total amount involved was US\$4,288,868.55.

We present below reports on the various School/Faculties and the Research Centre

FACULTY OF PHARMACY AND PHARMACEUTICAL SCIENCES

The Faculty of Pharmacy and Pharmaceutical Sciences is made up of six departments, namely,

- Department of Pharmacognosy
- Department of Pharmaceutical Chemistry
- Department of Pharmacology
- Department of Pharmaceutics
- Department of Pharmacy Practice
- Department of Herbal Medicine

PROGRAMMES OFFERED

Programmes offered were:

- 6-years doctor of Pharmacy,
- 4-years Bachelor of Science in Herbal Medicine and
- a 2-year Doctor of Pharmacy Top-up for practicing pharmacists.

The various departments offered a range of postgraduate programs leading to MPhil and PhD in the various disciplines of Pharmacy

ACTIVITIES

Teaching and Learning

The Faculty applied for and received a five years accreditation for the Doctor of Pharmacy Programme from the National Accreditation Board.

The University employed three practicing pharmacist as lecturers in the Department of Pharmacy Practice stationed at KATH. In addition, adjunct Lecturers numbering thirty (30) were made part-time lecturers. The department of Herbal medicine had four assistant lectures added to their staff. The Department of Pharmacology also had three part-time lecturers.

Lecturers in the Faculty were able to engage students in online teaching during the COVID-19 pandemic. The sixth year students were made to write their end of year exams on campus.

The 4th White Coat Ceremony for 223 Doctor of Pharmacy students was held in the year under review. The students were taken through a gowning process in which they were assisted to put on their branded labelled white coats by Senior Members, Preceptors and Parents. The speaker for the occasion was Mrs Mimi Darko, CEO of the Food and Drugs Authority.

Infrastructure

The contract for the refurbishment of selected laboratories was awarded during the year under review. The contractor is currently on site putting finishing touches to the project. Defects in the newly built 4-storey lecture theatre complex have not been addressed. Project estimates have been submitted to the Development Office. The defects will worsen if they are not resolved before the commencement of next academic year.

Appointments and Promotions

During the period under review, three staff of the Faculty were promoted to Full Professor Status, four to the status of Associate Professor and 3 to the status of Senior Lecturer. Also two persons from the Faculty, Prof Mrs Rita Akosua Dickson and Prof Christian Agyare were appointed Vice-Chancellor of the University and Provost of the College of Health Sciences respectively. We would like to reiterate here that Prof. Mrs. Rita Akosua Dickson is the first female Vice-Chancellor of the University. The Faculty is very excited and proud of these achievements and do congratulate our colleagues. We do look forward to more promotions in the years ahead.

Service to the Nation, Community and University

In the year under review the Faculty of Pharmacy and Pharmaceutical Sciences achieved outstanding successes in the areas of service to the Nation, the Community and the University thus making a tremendous mark. The Faculty together with KCCR was in the news for the critical interventions made to help combat the COVID-19 pandemic.

Staff of the Faculty served on many statutory and non-statutory committees of the University. Senior members continued to play mentorship roles while representing the university on the Academic Boards of a number of public and private universities in Ghana. We continue to provide leadership roles at various levels including the West Africa Postgraduate College of Pharmacists (WAPCP) and Ghana College of Pharmacists. Other senior members of staff continued to serve as members of the Pharmacy Council, Pharmaceutical Society of Ghana, Traditional Medicine Practice Council, Food and Drugs Authority and Female lecturers in the Faculty have also been actively involved in the programmes of the Lady Pharmacists Association of Ghana (LAPAG), the female wing of the Pharmaceutical Society of Ghana, which has been at the forefront of championing and finding solutions to public health issues in Ghana.

A Memorandum of understanding was signed with the School of Pharmacy, University of Eastern Finland, Kuopio, Finland, Florida A & M University (FAMU) USA, Rhode Island College of Pharmacy, USA and St. Joseph College of Pharmacy, USA. Plans to send twenty students to FAMU, Florida was put on hold due to the COVID-19 pandemic. Prof Ohene Kwame Buabeng, Head of Department Pharmacy Practice and Obed Amponsah, a postgraduate student visited University of Eastern Finland on an exchange programme.

The Faculty received accreditation to undertake online CPD during the year under review. This came handy as the COVID – 19 pandemic prevented face to face meetings.

The production unit of the Faculty made the University proud by rising to the occasion when the country was in dire need of personal protective equipment's (PPE). Products like Hand sanitizers, bleach and other disinfecting and cleaning agents were highly patronized by clients all over the country. This brought in a much needed revenue which puts the unit on a better footing for expansion.

SCHOOL OF MEDICINE AND DENTISTRY

INTRODUCTION

The School of Medicine and Dentistry (SMD) was created following a merger of the School of Medical Sciences and the Dental School in 2018.

PROGRAMMES

The School offers four (4) undergraduate programmes; BSc Human Biology that leads one to pursue the MBChB (Bachelor of Medicine, Bachelor of Surgery), BDS (Bachelor of Dental Surgery) and BSc Physician Assistantship. Taught courses are also offered to undergraduate students pursuing some programmes in the Faculty of Allied Health Sciences, Faculty of Pharmacy and Pharmaceutical Sciences and the College of Science.

The school also offers MSc/MPhil and PhD postgraduate programmes and also provides courses at the postgraduate level to the School of Public Health.

Furthermore, the School is involved in the training of postgraduate doctors for the professional membership and fellowship programmes offered by the Ghana College of Physicians and Surgeons and the West African Postgraduate Medical College.

HUMAN RESOURCE DEVELOPMENT

The total number of Senior Academic members stands at one hundred and one which includes six Professors, eighteen Associate Professors, thirty-four Senior Lecturers, thirty-seven Lecturers and six Assistant Lecturers. In addition, the school has engaged seventy-one Adjunct Lecturers.

These academic members of staff are supported by thirty technicians and twenty-five administrative staff. Most of the clinical staff offer specialist services to the Ghana Health Service/ Ministry of Health Institutions.

All categories of staff have been given the opportunity to improve on their teaching and research skills through participation in seminars, workshops and online platforms provided by the University.

Staff were encouraged and guided in their preparations toward the submission of applications for promotion. Promotion of staff members therefore, saw an upward growth in the year under review. Promotions so far include; three full Professors, nine Associate Professors, ten Senior Lecturers and two Lecturers.

Student-to-Teacher Ratio (STR) in the School has improved with the appointment of young energetic staff members with specialties and sub-specialties in various disciplines in Medicine and Dentistry.

TEACHING AND LEARNING FACILITIES

The School operates in several locations within the Kumasi Metropolis and its environs. The pre-clinical training site is located on KNUST campus. The clinical training programme takes place outside of the University at several locations in the Metropolis. Komfo Anokye Teaching

Hospital serves as the focal point where majority of the training occurs. However, the School uses External Teaching Sites to support the training of clinical students.

The School has also initiated memoranda of understanding with non-Governmental and Private Health Facilities for use of their facilities to support student teaching and learning. The AngloGold Ashanti (AGA) Limited Hospital and Bryant Medical Centre (BMC) in the Obuasi Municipality are potential sites that will come on board to receive students for training. Memoranda of Understanding (MoU) with these hospitals are being prepared.

INFRASTRUCTURE DEVELOPMENT

Lecture Hall and Classrooms

Support from the GETFUND and Internally Generated Funds have been used to build two three-storey classroom/lecture theatre complexes which are almost completed at Boadi site. These two blocks of classroom and lecture theatres will ease the congestion in the pre-clinical years and allow increase in intake of more students. The School has also refurbished its teaching laboratories and expanded classroom spaces for undergraduate and postgraduate teaching at the current location of the school.

Electricity Supply

To ensure continuous supply of electricity in the School, power inverter systems have been installed in the Dissection Hall, Multipurpose Laboratory, Preparation and Tutorial Laboratory, the ICT Centre and Lecture rooms. In addition, the SMD and the College of Engineering have entered into a joint arrangement to purchase a multi-purpose generator to provide uninterrupted electricity supply to the school.

RESEARCH SUPPORT SYSTEMS

SMD Research Electronic Data Capture System (REDCAP)

Research Electronic Data Capture System called REDCAP is now available in the School. The REDCAP is a mature, secure web application for building and managing online surveys and databases. With REDCAP research teams can create and design projects using:

- 1) the online method from web browser using the Online Designer and/or
- 2) the offline method by constructing a 'data dictionary' template file in Microsoft Excel, which can later be uploaded onto REDCAP. The platform is ready for use and can be accessed on rcsms.knust.edu.gh

SMD received the Sickle Pan-African Research Consortium (SPARCO) grant that is supporting the school in establishing the REDCAP platform in the school.

Currently, funded research collaborations are limited to few departments in the School of Medicine and Dentistry. MPhil and PhD projects are ongoing and students are receiving the required supervision and technical support from the school. These student projects are either self-funded or have limited funding.

FACULTY OF ALLIED HEALTH SCIENCES

There are three (3) departments in the Faculty and these are, the Department of Nursing, Department of Medical Diagnostics and Department of Physiotherapy and Sports Science.

PROGRAMMES

The faculty runs three (3) post graduate programmes, seven undergraduate programmes and three diploma programmes and has established various collaborative linkages with a number of internationally acclaimed institutions of learning and research, United Nations agencies, local universities and University Colleges, Ministry of Health and health-related NGOs.

The various Nursing and Midwifery programmes run by the faculty are:

- Master of Philosophy Nursing
- Master of Science in clinical Nursing
- BSc. General Nursing (Regular and Sandwich)
- BSc. Midwifery (Regular and Sandwich)
- BSc. Emergency Nursing
- BSc. General Nursing (VCs Centres of Excellence programme)
- BSc. Midwifery (VCs Centres of Excellence programme)
- Diploma in Midwifery
- Diploma in General Nursing
- Diploma in Community Health Nursing

Programmes offered by the Department of Medical Diagnostics are:

- BSc. Medical Laboratory Technology
- BSc. Medical Imaging
- MPhil. Haematology while the Department of Physiotherapy and Sports Science offers
- BSc Sports and Exercise Science (3rd Year and Final Years only)
- BSc Physiotherapy and Sports Science

INTRODUCTION OF NEW PROGRAMMES

Proposals have been submitted by the Department of Medical Diagnostics to the Planning and Resource Committee to enable them run the under listed programmes:

1. PhD. Haematology
2. MPhil. / PhD. Medical Imaging
3. MPhil. /PhD. Biomedical Sciences

ACTIVITIES

The Department of Nursing received two Fulbright Scholars within the academic year and also commenced the Vice-Chancellor's Centres of Excellence Programme in three accredited centres – Holy Family NMTC Berekum, Kumasi NMTC and Bolgatanga MTC.

The Department of Medical Diagnostics on its part has exchange Programmes with the University of Westminster, United Kingdom and the University of UTAH, United States of America for Human Capacity Development

PUBLICATIONS

During the year under review, academic staff in the faculty published several articles in peer reviewed journals.

SCHOOL OF PUBLIC HEALTH

INTRODUCTION

KNUST School of Public Health seeks to be the most competitive centre of excellence for the training of public health personnel in Africa and beyond. The multi-sector research portfolio of the School is directed towards reproductive health, malaria, child health, maternal health, environmental health, health systems, health management and policy and communicable and non-communicable diseases. Its translational research has led to various health policies in Ghana. The School is also involved in sickle cell, diabetes and child survival studies.

DEPARTMENTS AND PROGRAMMES

The School has six (6) Departments and these are:

- Department of Epidemiology and Biostatistics
- Department of Global and International Health.
- Department of Health Policy, Management and Economics
- Department of Health Promotion and Disability Studies
- Department of Occupational and Environmental Health Safety and
- Department of Population, Family and Reproductive Health

The School runs thirteen (13) programmes including PhD, MPhil, MSc, MPH and one undergraduate programme in Disability and Rehabilitation Studies. Some departments also run short courses for individuals and institutions who require them.

In addition to contributing to the production of medical doctors and other health professionals at the undergraduate level, the School has produced public health graduates who serve in key areas of health and development in local and internal organizations.

LINKAGE/COLLABORATIVE PROGRAMMES

The School has established various linkage/collaborative programmes with internationally acclaimed institutions of repute, United Nations agencies, local Universities/University Colleges and health-related NGOs.

COMMUNITY SERVICE

As part of the drive to enhance the image of the Kwame Nkrumah University of Science and Technology in communities within Kumasi, departments in the school undertook several community services among which is the management of COVID-19 pandemic in the country.

PUBLICATIONS

Academic staff in the school undertook a number of research activities which culminated in research publications details of which can be found in the University's Quality Assurance Bulletin for the year under review.

Further details on the School can be obtained from its Dean's Office.

SCHOOL OF VETERINARY MEDICINE

INTRODUCTION

The School of Veterinary Medicine (SVM) in the College of Health Sciences focus on delivering high quality veterinary education using the “One Health Concept” approach, the first of its kind in the West African sub-region.

ACADEMIC PROGRAMME OFFERED

Doctor of Veterinary Medicine (DVM)

STAFF AND STUDENTS’ POPULATION

The School has an academic staff strength of twelve permanent and nine part-time members. These are assisted by one Senior Assistant Registrar and other support staff.

Presently with a student population of one hundred and eighty-three (183) students as compared to less than one hundred and forty (140) in previous years which include international students from Burkina Faso, Nigeria, Sierra Leone, Tanzania and Uganda.

ACTIVITIES

1. Workshop on manuscript writing in a poor resource setting was done in the school to prepare the young faculty on the rudiments of manuscript writing and publishing in reputable journals.
2. Linkage with the Christian Veterinary Mission, USA was sustained with appointment of Drs George Wood and Andy Quacopome as visiting scholars to strengthen the department of clinical studies. Dr. Dan Paulsen, a Professor of Veterinary pathology from Louisiana State University, USA will be with the school in the 2021/22 session.
3. Sustaining linkage with Tuskegee University, USA, with donation of over 591 Veterinary books and slides. Prof David McKenzie, a large animal clinician has applied for Fulbright scholarship to be with the school in 2021/22 session.
4. Establishment of Histopathology and immunohistochemistry Laboratory
This facility is positioned for research and sound diagnosis of endemic and emerging animal diseases.
5. Equipping and operationalization of Pet lodge for companion animals, the first of its kind by any public university in Ghana.
6. Workshop on vaccination, antibiotic use and biosecurity for farmers in Nsuta was done in partnership with the Sekyere Central district assembly.
7. Public Private partnership with CowTribe (Value chain company for veterinary drugs and vaccine) for the establishment of Veterinary pharmacy with the Veterinary school for supply of drugs and vaccines for farmers and the establishment of serology unit which will be the hub for ELISA, vaccine testing and seromonitoring.

SERVICE TO THE COMMUNITY

1. KNUST School of Veterinary Medicine is known for research in infectious diseases affecting livestock and poultry which include ongoing field research on microbeaded Newcastle disease vaccine and intranasal PPR vaccine using locally available plant gums as delivery agents, this is first of its kind in the area of dose sparing.
2. The school also had a workshop for over 60 farmers on vaccination, antibiotic use and biosecurity in Nsuta in partnership with the Sekyere Central district assembly.

The community in Sekyere district in response to the adoption as the school's research hub, decided to donate twelve (12) acres of land for research and rural posting. This large expanse of land is to accommodate the proposed centre for training youth and women in novel vaccination strategies and health care of animals.

PUBLICATIONS

Seventy-two (72) papers were published in reputable journals.

KUMASI CENTRE FOR COLLABORATIVE RESEARCH (KCCR)

INTRODUCTION

KCCR is the Research arm of the College of Health Sciences. It is a Centre of Excellence for Research, Training and Multidisciplinary Collaboration with Local and International partners. It provides state-of-the-art infrastructure and technologies for basic and applied biomedical research. Its mandate is to host and address scientific topics of national interest and of regional and global importance.

STAFF AND STUDENTS

The staff comprise thirty (30) core staff and one hundred and forty-nine (149) Research Staff. In the 2019/20 academic year there were seventeen (17) PhD candidates and eighteen (18) MPhil candidates carrying out their research at the Centre.

ACTIVITIES

Research and Publications

Figure 1 depicts the current KCCR research portfolio comprising sixty-three (63) active projects. Nine of them represent donations directed at the COVID-19 response.

With respect to project size and funding Filariasis research ranks first (31%) followed by Malaria (25%), Bacteriology topics (8%; Antimicrobial Resistance, Salmonella, Meningitis, & TB), Buruli ulcer and Skin NTDs (8%), Virology (10%; zoonosis, Emerging Infectious Diseases and outbreaks, Hep B and HIV), Global health (2%) and Research Networking (9%) (Fig. 1).

The trend in the number of research projects carried out at KCCR has been increased Fig. 2

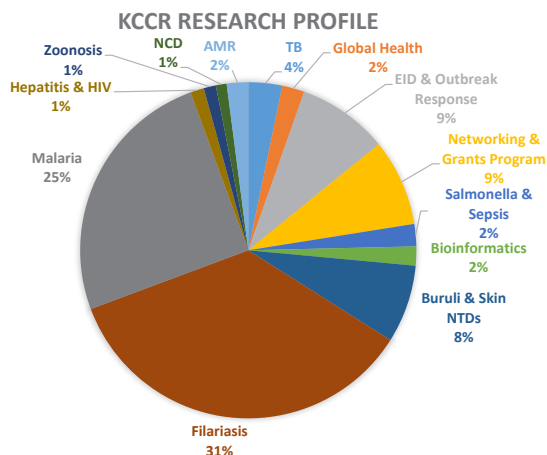


Figure 1: KCCR Research portfolio for 2020 (updated April 2020)

TOTAL NUMBER OF KCCR RESEARCH PROJECTS 2014-2019

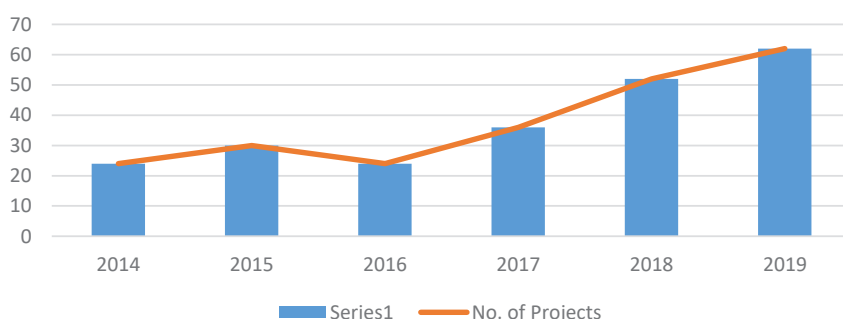


Figure 2: Trend in Research Projects at KCCR

KCCR made significant progress in the year 2019/2020. There was an increase in number of publications. The publication list is attached. This is in sync with the increase in the number and volume of research activities.

COLLABORATIONS

KCCR has established collaborations with at least 65 institutions locally and internationally. There are 48 collaborating partners associated with the running research projects.

After 20 years of research collaboration with KCCR, the University of Bonn has expanded its cooperation with KNUST to include exchange of undergraduate and graduates, establishment of an Erasmus Programme among many others. A Memorandum of Understanding was signed on 28th November 2019 by Prof Kwasi Obiri Danso, then Vice Chancellor, KNUST and Prof Dr. Dr. H.C. Michael Hoch, Rector, University of Bonn Germany.

TRAINING

More than 200 doctors and nurses have been trained in safe COVID-19 sample collection and transport and 500 sample collection kits have been distributed to the hospitals. Drs. Tabea Binger, Augustina Sylverken and Michael Owusu have been involved in the training coordinated by the Ashanti Regional Health administration.

VISIBILITY

KCCR and KNUST has had profound visibility following this COVID-19 outbreak. KCCR has been mentioned in all the speeches made by His Excellency Nana Addo Dankwa Akufo-Addo on the COVID-19 control strategy. KCCR has had media presence on JoyNews, GTV, TV3, UTV, HealthNET TV and in the news print such as Daily Graphic.

SERVICE TO THE COMMUNITY

Covid-19 Diagnostic Confirmation

Significantly during the period, KCCR initiated testing of COVID-19 as early as January 2020 four weeks before the first suspected case was recorded in Kumasi, Ghana. KCCR received donated reagents from Prof Christian Drosten through the PANDORA Project to allow initial testing of

408 samples and then later 480 Altona tests from Bernard Nocht Institute of Tropical Medicine (BNITM).

Since March 2020, KCCR has been recognized by the Ghanaian Ministry of Health as official COVID-19 testing facility and provides testing to people living in the middle and the northern belt of Ghana.

Test samples are brought to KCCR by teams assigned by the Ghana Health service. In collaboration with the Ghana Health Service, Zipline has instituted drone delivery of samples at KCCR. We have received drone delivered samples from the Sekyere Central district. Currently 99,588 tests have been completed with 14,681 positive COVID-19 tests as of 31st August, 2020.

A breakdown is provided below:

| CATEGORY | TOTAL NO. OF SAMPLES PROCESSED |
|----------------|--------------------------------|
| Samples Tested | 99,588 |
| Positive Tests | 14,681 |

| REGION | POSITIVE COVID19 RESULTS |
|---------------|--------------------------|
| North East | 2 |
| Upper East | 24 |
| Upper West | 1 |
| Northern | 25 |
| Western North | 623 |
| Western | 687 |
| Central | 429 |
| Ashanti | 11165 |
| Bono East | 782 |
| Bono | 431 |
| Savanna | 0 |
| Ahafo | 495 |
| EASTERN | 17 |
| TOTAL | 14681 |

KCCR has also offered testing to students of SHS and KNUST including foreign students that needed to travel.

INFRASTRUCTURE

During the period KCCR

- Constructed a new Entomology Laboratory Building which is an extension to the initial laboratory.
- Constructed a satellite Antimicrobial Research Laboratories for research at the Assin Fosu Hospital
- Installed a New ABB Voltage regulator valued at €70,000 and donated by the Benhard Nocht Institute Tropical Medicine (BNITM) to provide voltage instability at KCCR got installed in January 2020. It is robust enough to protect very sensitive equipment in the laboratories.

PUBLICATIONS

In the period under review, fifty-three (53) research papers were published in reputable peer reviewed journals.



COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

INTRODUCTION

The College of Humanities and Social Sciences is the largest College at KNUST in terms of student numbers. It is made up of three faculties, and a Research Centre, as indicated in the table below:

| S/NO | FACULTIES/CENTRE |
|------|--|
| i | Social Sciences |
| ii | Law |
| iii | School of Business |
| iv | Centre for Cultural and African Studies (CeCASt) |

COLLEGE ADMINISTRATION

The College administration is headed by a Provost assisted by a team of administrators and academic staff. The College Registrar is the head of the administrative staff; the College Accountant heads the Finance and Accounts staff whilst the College Librarian is in charge of library services for students, staff and other stakeholders of the College. The faculties are headed by Deans, the departments by Heads and the Centre by a Director.

The office of the Provost is responsible for the coordination of teaching, research, staff and students' welfare and other activities reported by the faculties and departments. The College administration comprises the following personnel:

Provost..... Prof. Charles O. Marfo

College Registrar..... Mr. E.T. Otioku

Ag. College Accountant Mr. James Gambrah

Ag. College Librarian Mr. Michael Sekyi Boateng

College Procurement Officer..... Mr. Richard Kyei

FACULTY OF SOCIAL SCIENCES

Overview

The Faculty of Social Sciences consists of seven teaching departments, namely, Economics; English; Geography and Rural Development; History and Political Studies; Language and Communication Sciences; Sociology and Social Work; and Religious Studies. The Faculty aspires to contribute to the realization of the University's mission by creating a congenial environment in which scholarly innovation, intellectual excellence and world class social minds are developed to meet national and global challenges. Beyond this, the Faculty continues to assert its responsibilities in the face of growing competition and increasingly complex needs of government, industry and society.

In line with their responsibilities, academic staff of the Faculty participated actively in collaborative research programmes at the national and international levels. They continued to carry out their individual research and also participated in national and international conferences thus promoting the image of the University.

ACADEMIC PROGRAMMES

All Departments under the faculty offer programmes at both the undergraduate and post graduate levels; with the Departments of Geography and Rural Development, History and Political Studies and Sociology and Social Work running two undergraduate degree programmes. Again Departments like Sociology and Social Work, History and Political Studies and Economics offer some programmes under the distance learning mode.

SERVICE COURSES

Some departments in the Faculty continue to offer service courses to other departments among which are: Publishing Studies, Computer Science, Engineering, Optometry and Visual Science, Integrated Rural Art and Industry, Public Health, Institute of Renewable Natural Resources, KNUST School of Business, Faculty of Law etc.

STAFF DEVELOPMENT

Some academic senior members of staff from the faculty were promoted from one various ranks to other higher ranks while others also acquired their terminal degrees.

RESEARCH ACTIVITIES

Apart from conference papers and book chapters, over one hundred and thirty papers were published in refereed journals by senior members (Academic) in the faculty during the period under consideration.

COLLABORATIONS

Departments in the faculty continue to collaborate with a number of institutions (internationally and locally) to build their capacities as well as that of staff.

SERVICE TO THE COMMUNITY

Departments and members of staff continued to offer various services to their communities and the nation at large.

FACULTY OF LAW

PROGRAMMES

The Faculty of Law for the year under review ran an undergraduate and post-graduate law programmes leading to the award of the following degrees:

- Bachelor of Laws (LL.B.)
- Master of Laws (LLM), and
- Doctor of Philosophy in Law (PhD)

The Faculty also admitted three candidates as its first batch of students to commence the Doctor of Philosophy in Law (PhD) programme. The PhD in Law is primarily designed to support staff development and contribute to the production of domestically trained legal academics and practitioners

The Faculty is set to introduce specialized LLM programmes including Law and Development, Health Care Law and Ethics, Law Science and Technology, Natural Resources Law, Real Estate and Construction Law, and Legal Practice and Adjudication. The specialized LLM. programmes will contribute to the training of lawyers who will formulate and undertake policy analysis properly informed by law. They will also be able to apply the law to enhance scientific and technological progress without sacrificing essential societal values.

STUDENTS ENROLMENT

In the year under review, students' enrolment for the Bachelor of Laws (LLB.); Regular and Part-time, Master of Laws (LLM) and Doctor of Philosophy in Law (PhD) programmes stood at 859 (excluding LL.B. final year students).

| | |
|----------------------|-----|
| LLB (Regular)..... | 394 |
| LLB (Part-time)..... | 408 |
| LLM..... | 54 |
| PhD | 3 |
| Total | 859 |

FROM THE STUDENTS' DESK

During the year under review, alumni of the Faculty made the Faculty and the University proud by winning three awards at the October 2019 Call of new lawyers to the Ghana Bar.

The awards were:

- The John Mensah-Sarbah Memorial award for the best all round performance was picked by Ms Kezia Owusu Ansah
- The Best student in Family Law and Practice award, picked by: Ms Kezia Owusu Ansah
- The best Student in Criminal Procedure award, picked by Ms Afia Poku

RESEARCH AND PUBLICATIONS

Lecturers in the Faculty engaged in research leading to publications in the form of journal articles, books, book chapters, and conference proceedings. Their break down are as follows:

| | |
|--------------------------------|----|
| Refereed journal articles..... | 19 |
| Refereed books..... | 3 |
| Book chapters | 2 |
| Conference papers | 6 |

COMMUNITY SERVICE

Lecturers and staff of the Faculty undertook various kinds of community service during the 2019/2020 academic year. Notable, among them was the appointment of the Dean of the Faculty, Professor Lydia A. Nkansah as Chairperson of a three – Member Committee of Inquiry to investigate the operations of Asante Kotoko Sporting Club. This appointment was based on the directions of Asantehene, Otumfuo Osei Tutu II

KNUST SCHOOL OF BUSINESS (KSB)

INTRODUCTION

The KNUST School of Business (KSB) runs undergraduate and postgraduate degrees in business administration and management in all its specialisations to meet the needs of prospective students. The School has four (4) academic departments, namely, the Department of Marketing and Corporate Strategy; the Department of Accounting and Finance; the Department of Human Resource and Organisational Development, and the Department of Supply Chain and Information Systems.

ACADEMIC PROGRAMMES

At the undergraduate level, the School offers BSc. Business Administration with options in

- Accounting
- Banking and Finance
- Business Information Technology
- Management
- Marketing
- International Business Management
- Human Resources Management
- Logistics and Supply Chain and a BSc in Hospitality and Tourism Management

Post-graduate

- PhD Business and Management with options in
- Accounting
- Finance
- Human Resources Management
- Organisational Development
- Logistics and Supply Chain Management
- Procurement and Supply Chain Management
- PhD in Entrepreneurship and Small Business Management; Strategic Management and Consulting; Marketing and International Business and PhD Organisational Leadership

Master of Business Administration with options in:

- Accounting
- Finance
- Human Resources Management
- Management & Organisational Development
- Logistics and Supply Chain Management
- Management Information Systems
- Marketing
- International Business
- Strategic Management and Consulting and
- Entrepreneurship and Small Business Management

Master of Philosophy with options in:

- Accounting
- Finance
- Logistics and Supply Chain Management
- Procurement and Supply Chain Management
- Entrepreneurship and Small Business Management; Strategic Management and Consulting; Marketing and International Business
- Business and Management (HRM)
- Business Administration (HRM)
- Business Administration (Management & Organisational Development) and
- Management & HR Strategy

Master of Science with options in:

- Accounting and Finance
- Finance

- Management & HR Strategy
- Corporate Governance and Leadership Strategy
- Logistics and Supply Chain Management
- Procurement and Supply Chain Management
- Strategic Marketing

And

- DBA Business and Management (Accounting)
- DBA Business and Management (Finance)

AWARDS & STAFF DEVELOPMENT PROGRAMME

Three (3) academic staff of the Department of Accounting and Finance were promoted during the year under review:

- One was promoted from Senior Lecturer to Associate Professor, one from Lecturer to Senior Lecturer and another from Assistant Lecturer to Lecturer.
- Dr. (Mrs) Felicity Asiedu-Appiah of the Department of Human Resource and Organisational Development won the “2019 Stella Nkomo Best Paper Award”. This award is given each year to the best paper published in the Africa Journal of Management to a scholar located on the continent of Africa. Her paper was titled “Awareness and usage of work-life balance policies, cognitive engagement and perceived organizational support: A multi-level analysis”.

ACTIVITIES OF THE YEAR

Some of the activities carried out in the year under review included:

- As part of its community engagement, the Department of Accounting and Finance held a workshop on Data Analysis for its MPhil/PhD students from 13th to 15th September, 2019. The programme was facilitated by Dr. Ngozi Adeleye from Covenant University, Nigeria.
- The Department of Human Resource and Organisational Development completed the consolidation and merging of all hospitality and tourism programmes offered in KNUST to be hosted by the Department of Human Resource & Organisational Development. This included the BSc Hospitality and Tourism Management and B.A. Culture and Tourism Programmes from this Department and the Department of Geography and Rural Development, respectively. The integrated programme is envisaged to admit students in the 2021/22 academic year.
- The Department of Marketing and Corporate Strategy, in collaboration with other higher education institutions in Africa and the University of Groningen (EU technical Partner), submitted an application for mobility funding in INTRA-AFRICA ACADEMIC MOBILITY SCHEME, 2020, a joint initiative of the African Union and the European Union. The project is titled “Capacity Enhancement of Innovation and Entrepreneurship in Higher Education Institutions: Bridging the Gap between Academia and Industry” and aims at utilizing the mobility scheme in building the capacity on innovation and entrepreneurship among participating universities to: 1. Produce employable graduates. 2. Improve the quality of higher education. 3. Strengthen the modernization and internationalisation of African higher education institutions, and 4. Promote the development of an African higher education and research space.

- The Department of Supply Chain and Information Systems, in collaboration with the Dean, Prof. Nathaniel Boso and Prof. R. C. Abaidoo won a USAID grant of fifteen Million United States dollars (\$15,000,000.00) with the Arizona State University, seven Million, five hundred thousand United States dollars (\$7,500,000.00) was for the KNUST.

COLLABORATION AND INSTITUTIONAL LINKAGES

The Department of Accounting and Finance has been part of the list of beneficiary Departments on the Arizona State University (ASU), the MasterCard Foundation Programme 3+1+1 International Accelerated Degree Program (IADP), which offers undergraduate students the opportunity to complete their programme at ASU and subsequently pursue a one-year Master's programme. During the year, three (3) students from the Department benefited from the programme.

The Department continues to be one of the partners of the Institute of Chartered Accountants, Ghana (ICAG). The Department has reviewed the existing Memorandum of Understanding between the Institute and KNUST which offers some exemptions to Accounting graduates of the Department who enroll on the ICAG programme.

The Department is also at the final stage of approving an MoU with CIMA for certification of graduates of the department.

The Department of Human Resource and Organisational Development continues to benefit from the Arizona State University/KNUST building stronger university programme. This year, seven (7) students from the Department pursuing BSc. Business Administration – Human Resource Management Option – were awarded scholarships on the programme and they will start during the next academic year.

The Department is also at the final stage of securing an MoU with the IHRMP (a professional certification body in Ghana) for professional certification of our graduates upon completion of their study.

The Department Marketing and Corporate Strategy has been collaborating with a number of organizations including the Mzumbe University, the Nelson Mandela African Institute of Science and Technology (NM-AIST), Tanzania, The Midlands State University (MSU), CEFAM, Wuhan University of Technology, China, HR Focus, the Desert Lion International Ltd, the NBSSI and the GIZ.

PUBLICATIONS DURING THE YEAR UNDER REVIEW

Academic staff of the School published forty (40) articles in peer-reviewed journals and presented seven (7) conference papers.

The School of Business continues to improve on its performance in the execution of its mandate in fulfilment of the vision of the University.

CENTRE FOR CULTURAL AND AFRICAN STUDIES (CeCAST)

The primary mandate of the Centre for Cultural and African Studies (CeCAST), the research wing of the College of Humanities and Social Sciences (CoHSS) continues to focus on inquiries and exploration into African Studies.

The Centre is uniquely positioned in a Science and Technology University, and therefore seeks to create a synthesis between the Performing Arts and African cultural practices as well as in scientific and technological findings and inventions to meet contemporary societal needs. To

promote these objectives further, Dr George M. Bob-Milliar has been appointed the Director of the Centre effective 2019/2020 academic year.

The Centre undertakes research and provides elective courses for students under the African Studies programme.

STAFFING

The Centre has the following senior members on its staff for the year under review:

Seven (7) Adjunct Research Fellows, three (3) Part-time Research Fellows and one Resident Scholar

TEACHING

In the 2019/2020 academic year the Centre mounted the African Studies programme with ten (10) courses in the first semester and ten (10) courses in the second semester.

RESEARCH WORK/SEMINAR PRESENTATIONS:

The Centre held two seminars.

- 10th October 2019: Dr. Kofi Takyi Asante, a Research Fellow based at the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana delivered a seminar entitled, 'Politically Useful Deaths': Towards a Theory of Patriotism and the State.'
- 29th January 2020: Mr David Damatar, currently a doctoral student at the Area Studies (Africa) at the School of Global and Area Studies (OSGA), University of Oxford gave a seminar on the topic, 'Gender and Work in Asante Gold Mining Communities Under Socio-Political Change, 1950-1972.

The seminars attracted about 150 people who were both lecturers and students.

SERVICES TO DEPARTMENTS AND INSTITUTIONS

Some senior members continued to render services to other departments in the College, that is, the Department of Geography and Rural Development (Culture and Tourism section) and the Department of Integrated Rural Art and Industry during the academic year under review. The staff also organized tutorials for private groups and individuals of the University community in some areas of the performance arts – drumming, dancing and traditional cloth wearing on request.

OTHER SERVICES

At the National level, Prof. Kofi Osei Akuoko, an adjunct Research Fellow served as the Chairman for the Governing Board of the National Service Scheme.

COLLABORATIONS AND COORDINATING ACTIVITIES

The Centre continues to collaborate with institutions such as Kumasi Metropolitan Brass Bands, Association of Ashanti Choral Groups, Springverve Drama Group, Agya Koo Nimo and Adadaem, Akan Film Producers Association and Centre for National Culture Folkloric Group

RESEARCH/PUBLICATIONS

Individual senior members and other staff at the Centre continue to engage in research activities and programmes in relation to their areas of specialty in African Studies and Performing Arts – music, dance, drama and other allied areas. Twenty-nine (29) Peer reviewed journal articles, four (4) Book Chapters and twelve (12) conference presentations were derived out of these research activities.



COLLEGE OF SCIENCE

COLLEGE OF SCIENCE

INTRODUCTION

The College of Science is the third largest College in the University, with an overall student population of 8,694, comprising 8,241 undergraduates students and 256 postgraduate students with a staff strength of 304. The College, in pursuance of its slogan “Premier and preferred College of Science”, makes every effort to maintain high standards through team work, dedication, to duty, discipline and excellence. These efforts always lead to the provision of quality training, research, and extension services in the basic and applied sciences, towards national, industrial and economic development. The College continues to pursue this mandate in earnest, with the goal of becoming an established centre of excellence for the advancement of scientific knowledge in Ghana and beyond. Hence, the College has consistently collaborated with scientists within Ghana and other parts of the world.

STRUCTURE OF COLLEGE

The College is headed by a Provost who is assisted in the day to day administration and management by Registrars, Senior Administrative support staff, Deans and Heads of Department.

The College has two (2) faculties with ten (10) departments which are structured as follows:

Faculty of Biosciences

- Department of Biochemistry and Biotechnology
- Department of Food Science and Technology
- Department of Optometry and Visual Science
- Department of Theoretical and Applied Biology; and
- Department of Environmental Science

Faculty of Physical and Computational Sciences

- Department of Chemistry
- Department of Computer Science
- Department of Mathematics
- Department of Physics; and
- Department of Statistics and Actuarial Science

COLLEGE ADMINISTRATION

Prof. Leonard K. Amekudzi..... Provost

Mr. Festus Nyame Senior Assistant Registrar

Mrs. Ruby Owusu-Ansah College Accountant

Mr. Richard Bruce Lamptey Ag. College Librarian

Mrs. Mavis Osei Boateng Assistant Registrar

STAFF RECRUITMENT AND PROMOTIONS

During the period under review, 31 new lecturers were recruited to the College. Nineteen (19) Senior Members were promoted: Twelve (12) Senior Lecturers were promoted to Associate Professors, three (3) Lecturers to Senior Lecturers and One (1) Assistant Lecturer was upgraded to Lecturer and One (1) Junior Assistant Registrar was upgraded to Assistant Registrar. Nine (9) senior staff were also promoted. 3 staff in the Junior Staff category were also promoted.

Staff Recruitment..... 31

Promotions

Snr. Lecturer – Associate Professor..... 12

Lecturer –Senior Lecturer 3

Assistant Lecturer – Lecturer..... 1

Junior Assistant Registrar – Assistant Registrar..... 1

Senior Staff 9

Junior Staff 3

ACTIVITIES IN 2019/2020 ACADEMIC YEAR

The period under review witnessed some significant developments at the College, Faculties and Departmental levels. Highlights of which are provided below:

i. Setting up of Computer laboratories

One major aspect of training of students has to do with equipping students in all fields of study with the requisite computing skills. In that regard, the College is establishing two (2) computer laboratories. On completion, the College will be equipped with modern computer laboratories with a total of 216 desktop computer spaces as well as 216 personal laptop user spaces available to students.

ii. Donation of Satellite Dish by Globally Challenged Research Fund

The Globally Challenged Research Fund– African Science for Weather Information and Forecasting Techniques (GCRF African-SWIFT) Project, as part of the core mandate and objectives to improve on Nowcasting and Weather Forecast in Sub-Saharan Africa, donated an NWCSAF satellite dish and 3 data receivers/processors worth £ 12, 000 to the College for the Meteorology and Climate Science Programme. The satellite dish, which has been successfully installed by the Electronic Research Unit of the Physics Department is being used to monitor approaching storms in the sub region. This has proved generally helpful in monitoring of recent storm cases linked with floods in several parts of the country. The satellite facility also plays a crucial role in the research works of two SWIFT project-funded PhD students, who use NWCSAF data to assess various extreme rainfall case studies in the country. Besides, the facility will be used to improve Atmospheric Fieldwork and Nowcasting Courses for undergraduates and postgraduates students of the Meteorology and Climate Science Programme.

iii. Cocoa Challenge

The Cocoa Processing Company Limited (CPC) in collaboration with the Department of Food Science and Technology, KNUST held the second edition of the “Coco Challenge” competition on the 11th October 2019. The Cocoa Challenge aims at challenging students to go beyond theory and come out with innovative, commercially viable, marketable and sustainable shelf stable cocoa-based products for the market that has the capacity of enhancing diversification and utilization of Cocoa in Ghana. This student-centered competition is an initiative of Professors William Otoo Ellis and Ibok Oduro. The Competition was held at the Ibis Tek Board room, College of Science. This year’s

competition saw eight (8) groups battling it out for the most innovative product or package idea.

iv. Food Festival

The College of Science in collaboration with the College of Humanities and Social Sciences, SRC and GRASAG organized the KNUST FOOD FESTIVAL 2020 on Friday 14th February, 2020 from 10am to 5pm. The theme was “Promoting our food and culture for sustainable development”. The Festival was aimed at celebrating our country’s diverse Food Heritage and Culture and also to showcase new food products. It also served as a platform to educate the public on the basic science behind food preparation, good nutrition and food safety. The festival was also aimed at sensitizing both industry players and consumers about eating lifestyle and pragmatic steps to enhancing good nutrition among others. There was an exhibition of all kinds of food products for free tasting and purchase.

In attendance were stakeholders from various institutions including academia, hospitality industry, government representatives, students and the general public. Various Prizes were given to Participants and Winners The activities on the day included:

- Presentations and Open Forums
- Food Fair and Cooking Competition
- Maggi Education/Activation
- Exhibition and Cultural Performance

v. Seminars

a. IPO Seminar – ParisTech, France

A delegation from ParisTech, France, visited KNUST through arrangements with the International Programme Office (IPO-KNUST). Hosted by College of Science (CoS), a seminar was organized at the Allotey Auditorium-CoS on 21st January, 2020. The Seminar was chaired by Prof. F.K.N. Arthur and also present was Kevin Lemesle, Head of Campus France-KNUST.

The ParisTech Team presented to the staff and postgraduate students/national service persons from College of Science, Engineering, Agriculture and Natural Resources on opportunities for collaboration in academia and research.

b. College of Science Seminar

Due to the COVID-19 challenge, the College of Science organized seminar presentations via zoom and facilitated by the “Seminar and Conferences Committee” from 30th June to 1st July, 2020. The aim was to give staff and PhD students the opportunity to present their progress reports on their research. In all, seven (7) Staff PhD Researchers updated the College on their research. The Provost gave a presentation on both days. He elaborated on the present and future opportunities in the College and how to take advantage of opportunities during the Pandemic. Again he gave participants tips on how to write proposals for grants and publishing in credible journals.

The first ever Seminar via zoom was successful. In attendance were over 100 participants made up of both Staff and Postgraduate (MPhil/PhD) Students. The seminar will be replicated every other month beginning from October, 2020 to ensure that all Staff and Postgraduate students within the College get the opportunity to present their work to enhance multidisciplinary research in the College.

vi. Virtual Classroom Training

A three (3) member Committee was set to help facilitate the online teaching. The Committee scheduled online training sessions for each Department. This helped in assisting Lecturers who were having challenges with the V-Classroom. Staff in the various Departments actively participated in the training.

Besides, the College has procured a zoom license to support eLearning. This has helped to augment the existing virtual platforms of the University used for teaching and learning. It has also helped with several College meetings in the wake of the global pandemic. In addition, the College has successfully designed and fabricated Stand-alone Examination Timer system to help in teaching and learning.

vii. Deanship Elections

The College organized Deanship and Vice-Deanship Elections on 13th and 19th May, 2020 respectively for the two faculties.

The election was conducted online. An app was created by the College IT Office. Links for voting was sent to Staff through their KNUST mails with a unique code which allowed them to vote once. The exercise was successful.

PUBLICATIONS IN THE YEAR UNDER REVIEW

Four hundred and fifteen (415) papers were published by staff in the College. The breakdown is as follows:

| DEPARTMENT | NUMBER OF PUBLICATIONS |
|----------------------------------|------------------------|
| Physics | 71 |
| Chemistry | 56 |
| Statistics and Actuarial Science | 31 |
| Department of Mathematics | 22 |
| Department of Computer Science | 35 |
| Environmental Science | 13 |
| Optometry | 24 |
| Food Science and Technology | 22 |
| Biochemistry and Biotechnology | 55 |
| Theoretical and Applied Biology | 87 |
| TOTAL | 415 |

SERVICE TO THE COMMUNITY

i. Maintenance of Traffic Light.

All the Traffic lights on the KNUST campus are still being maintained by the Department of Physics. The idea to develop solar powered traffic lights on KNUST campus started in the 2011/2012 academic year and the first prototype was installed at the intersection close to the Department of Agricultural Engineering, (Agric Junction) in 2013. Over the

past years the Department has enhanced its traffic light design and now has included pedestrian cross lights.

ii. Community Engagement

Community Engagement and Education Committees of the Department of Mathematics in collaboration with the Ghana Mathematics Society, Ashanti Region, organised programmes at the Kumasi Wesley Girls Senior High School. Mathematics quizzes were also organized for four (4) Junior High Schools around KNUST. Prizes were awarded in the form of certificates and T-Shirts from the Department.

COLLEGE OF SCIENCE OFFICE OF GRANTS AND RESEARCH

The College has facilitated a capacity building opportunity for the staff of the office of Grants and research at the Galilee Institute of Management in Israel. More capacity and expertise has been gained in project management and facilitation. The Office has increased its visibility through engagement of staff at the College of Science Quality Assurance Workshop. Currently, more proposals are being routed through the office which is the standardised world best practice and hope for it to become the norm.

It is gratifying to note that Fifteen (15) calls from different funding agencies have been routed through the Office of Grants and Research and they have been responded to. Four (4) new projects have been won. Two WASCAL projects in Green House Emission and Flood Monitoring are among the new grants that have been won worth 300,000 Euros. In addition, a FLAIR grant worth 284,000 Euros have been won by Prof. Philip Antwi-Agyei. Currently the College houses over twenty multi grants totalling millions of dollars and we have good prospects to win more.

CONCLUSION

Covid-19 is a huge stressor shaking up our psyche, triggering our fears and uncertainties. No matter how severe the impact/challenges, there are still opportunities that could be looked at to make the best out of it. As a College we continue to explore avenues for better adaptation to the pandemic by using our strength to expand our collaborations, and match towards our ultimate goal as Center of Excellence in Science and Technology in West Africa and beyond. The College appreciates every effort put in by its hardworking staff and hopes that the ensuing year will be a better one.

INSTITUTE OF DISTANCE LEARNING

INTRODUCTION

The Institute of Distance Learning (IDL), exists to provide a viable complement to the traditional face-to-face mode of university education. The Institute provides this alternative in a flexible distance learning mode through its state-of-the-art e-learning, virtual classroom platforms and periodic face-to-face sessions that provides students the needed flexibility in their studies. In view of the level of flexibility, majority of its students are professionals and practitioners seeking executive, management, promotional or transitional opportunities in their places of work.

Over the 2019/2020 academic year, the Institute continued in its efforts to expand access to quality science, technology and relevant education at both the graduate and undergraduate levels of our educational system. The next sections present a short report on the activities of the Institute for the 2019/2020 academic year.

STAFFING

The Institute is administratively managed by:

DirectorProfessor K. O. Boateng

Deputy DirectorProf. Ahmed Agyapong

Acting RegistrarMr. Christopher Addo

AccountantMr. Charles Nsiah

Internal AuditorMr. Jonathan T. Abaitey

Assistant RegistrarMr. Abraham Adusei

In addition to the above, there are a number of Zonal Co-ordinators, senior and junior staff, (both permanent and casual staff) as well as national service persons who assist with the day-to-day operations of the Institute.

STUDENT POPULATION

The Institute in the 2019/2020 academic year had a total student population of 10,858 (7,122 males and 3,736 females). This was made up of 6,844 undergraduate and diploma students and 4,014 postgraduate students across the various programmes on offer on the Institute's platform. This is a slight improvement over last academic year's student population.

ACADEMIC PROGRAMMES

By the structure of the Institute, programmes on offer on the Institute's platform are the usual programmes offered in the various Departments of the University.

The Institute currently runs forty-five (45) Masters programmes, fifteen (15) undergraduate programmes and six (6) diploma programmes. Details of these can be obtained from the Institute's Offices.

The Institute in collaboration with the Department of Nursing, KNUST continued to organise the access course in Elective Mathematics, Physics, Chemistry, Biology, Core Mathematics and English Language for health professionals who want to further their education but have some deficiencies in some of the subjects above. This was carried out in all our Regional Centres.

LEARNING CENTRES

The Institute has learning centres across the country where face-to-face sessions and examinations are conducted. In the year under review, the following Centres were operated by the Institute:

| SN | CENTRE | LOCATION |
|----|------------|---|
| 1 | Kumasi | KNUST Campus, Casely Hayford/Exams Building, (2 nd Floor) |
| 2 | Accra | <ul style="list-style-type: none">• KNUST Accra City Campus, Kwabenya;• School of Nuclear and Allied Sciences (GAEC), Atomic;• CSIR (Near Airport);• Radford University College – East Legon; and• K-AISWAM – Adjiringano |
| 3 | Sunyani | Catholic Pastoral, Social and Training Centre (Techiman Road) |
| 4 | Takoradi | Kansaworodo Campus |
| 5 | Ho | Ho Technical University |
| 6 | Koforidua | Ghana Highways Authority Training School (Suhum Road) |
| 7 | Tamale | Tamale Technical University |
| 8 | Tema | ECG Training School (Community 10) |
| 9 | Bolgatanga | Bolgatanga Senior High School (Big BOSS) |

These Centres are grouped into four zones and manned by Zonal Co-ordinators, assisted by Centre Co-ordinators.

In the second semester of the academic year, the Institute had to resort entirely to its virtual classroom (V-Class) for all teaching and learning activities because of the COVID-19 Pandemic.

ACTIVITIES

The Institute nonetheless, continued to make great strides in pursuing its vision and mission. In this respect, the Institute on 16th July, 2020 commissioned the second phase of the Moree facility. The facility which is located at the beautiful coastal line of Moree in the Central Region will be used to run short courses in various disciplines.

The Tamale Centre facility which is still under construction is about 95% completed. It is hoped that, the facility will be used in the next academic year. In addition, the Institute has commenced works on the Phase II of its Accra Campus project at Adenta. This is to provide additional space for the ever-increasing population in the Greater Accra Region.

CONCLUSION

The past academic year has been very challenging with the advent of the COVID-19 Pandemic and its consequential restrictions. Nonetheless, the Institute was able to execute its mandate. The Institute is, thus, poised to expand its frontiers in the next academic year and invites all persons interested in its programmes on offer and services to visit : <https://idl.knust.edu.gh..>

INTERNATIONAL PROGRAMMES OFFICE

INTRODUCTION

In fulfilling the University's mission to provide an environment for teaching, research and entrepreneurship training in science and technology for the industrial and socio-economic development of Ghana, Africa and other nations, The International Programmes Office (IPO) continues to engage its stakeholders (Colleges, Faculties and Departments) to facilitate the signing of several academic and research agreements and co-operations with universities and institutions from the Americas, Europe, Asia and Africa as well as secure scholarships and study abroad opportunities for staff/students to strengthen already existing partnerships.

Although, the COVID – 19 pandemic had not allowed the Unit to do much during the period under review, yet some few strides were chalked as follows:

STAFFING:

The office is made up of the:

Dean.....Senior Member
Senior Assistant Registrar.....Senior Member
Administrative Assistant.....Senior Staff
Driver.....Senior Staff (retired)
National Service Personnel.....Three (3)

AGREEMENT AND MEMORANDUM OF UNDERSTANDING (3) SIGNED:

During the year under review, KNUST and a number of universities in Asia, Europe, Northern and Southern America and Africa signed academic collaboration/agreements as well as Memoranda of Understandings.

These Universities/institutions and organizations are as follows:

- Ecole Nationale Supérieure des Mines-Teclecom Liulle Douai
- Czech Technical University
- University of Kentucky
- The Johns Hopkins University Centre for Health Equity
- The University of Kansas Medical Centre, Kansas City, with KNUST Medical School
- The University of Utah, Division of Medical Laboratory Science
- University of Texas – Rio Grande Valley
- Association Saint-Yves/ Université Catholique de L'ouest (UCO)
- Egypt-Japan University of Science and Technology
- University of Lome
- Contracta Construction UK Limited
- Global Entrepreneurship Monitor (GEM)
- Data Link Institute
- Barclays Bank Ghana Limited (now Absa)
- Ghana Premium Passport Application Centre
- The WISTEM Group
- The Multimedia Group Limited

- Nestle Ghana Limited
- Veterinary Services Directorate

Partner institutions, some of which are listed below continued to actively interact with the University:

- Technical University of Munich
- Frankfurt University of Applied Sciences,
- University of Bremen
- Ramapo College of New Jersey
- South Dakota State University
- Friends University
- Lingnan University
- University of Kwazulu-Natal
- University of Ibadan
- University of Sierra Leone
- Ulsan National Institute of Science and Technology (UNIST)
- Wuhan University of Technology
- University of Guelph
- Kings College, London
- University of Rosario of Columbia through Embassy of Colombia, Accra Ghana
- Mastercard Foundation
- Hebei Tianshan Biotechnology Co. Ltd.
- The French Embassy in Ghana
- ACE Consult Limited
- Bank of America Merrill Lynch
- The Ghana Health Service
- African Research Academies for Women
- Ministry of Food and Agriculture
- Ghana Angel Investor Network
- Ghana Meteorological Agency/Aarhus University.

These institutions support the University in various ways, including giving financial assistance to students for project works and research collaborations, academic exchanges as well as scholarships for faculty, staff and student of the University.

INTERNATIONAL STAFF AND STUDENT EXCHANGES IN THE 2019/2020 ACADEMIC YEAR

Due to the COVID – 19 pandemic only a hand full of staff/students were received in the University for a semester/year study during the academic year. Other arrangements made in respect of some exchange programmes for both international staff and students had to be cancelled. Below are the highlights:

| No | Name | Coordinating Partners | Period |
|----|----------------------------------|--|--|
| 1 | Prof Elaine Patterson | Ramapo College of New Jersey | 2019/2020 Academic Year |
| 2 | Professor Maisha Amen | Ramapo College of New Jersey | 2019/2020 Academic Year |
| 3 | Miss Zoe Meade | University of East Anglia | Both Semesters 2019/2020 Academic Year |
| 4 | Miss Fundira Koshesai Mucharevei | University of East Anglia | 1 st Semester 2019/2020 Academic Year |
| 5 | Miss Julia Brook | University of Applied Sciences, Darmstadt | Both Semesters of 2019/2020 |
| 6 | Mr. Daniel Martain | Isa Lille, France | 1 st Semester |
| 7 | Mr. Stefan Konadu | City University of Applied Sciences, Bremen, Germany | 1 st semester, 2019/20 |
| 8 | Mr. Antoine Barre | Isa Lille, France | 1 st Semester, 2019/20 |
| 9 | M Thibault Panier | ESTP Paris France | 1 st Semester, 2019/20 |
| 10 | Mr. Remy Getti | ESTP Paris France | 1 st Semester, 2019/20 |
| 11 | Miss Melinda Fourn-Houngbe | France | 1 st Semester, 2019/20 |
| 12 | Mr. Emosive Miracle | Queen Elizabeth Commonwealth Scholar | 4 Semesters |
| 13 | Mr. Gideon Onuh | " | 4 Semesters |
| 14 | Miss Sharon Engonwie | " | 4 Semesters |
| 15 | Mr. Hilary Kibelae Harawo | " | 4 Semesters |

KNUST STAFF AND STUDENTS EXCHANGES IN THE 2019/20 ACADEMIC YEAR

The under-mentioned students of the University were able to travel for their exchange programmes before the outbreak of COVID-19 Pandemic.

| No | Name | Coordinating Partners | Period |
|----|--|--|---|
| 1. | Mr. David Avoryie | CEFAM, France | 2 nd Semester 2019/20 Academic Year |
| 2. | Five (5) students of KNUST | Ulsan National Institute of Science and Technology (UNIST) | 1 st Semester 2019/20 Academic Year |
| 3. | Six (6) students and Two (2) Faculty Members from the Faculty of Art | HFBK University of Fine Arts | 1 st Semester, 2019/20 Academic Year |
| 4. | Four (4) students of the Faculty of Art | Kolding School of Design | 1 st Semester, 2019/20 Academic Year |
| 5. | Two (2) students of Medical School | Soroka University Medical Centre, Israel | 2 nd Semester, 2019/20 |
| 6. | Miss Miriam Enyonam Dunyah | Wuhan University of Technology | 1 st Semester, 2019/20 |
| 7. | Four (4) students of KNUST | Frankfurt University of Applied Sciences | 1 st Semester, 2019/20 |
| 8. | Five (5) students of Faculty of Agriculture | Isa Lille, France | 1 st Semester, 2019/20 |

SCHOLARSHIPS OFFERED WITH RESPECT TO SIGNED MEMORANDUM OF UNDERSTANDINGS/ ACADEMIC AGREEMENTS

In line with the implementation of the Memorandum of Understandings and Academic collaborations signed with partner institutions in Europe, North America, Asia and Africa; KNUST staff and students were offered the following Scholarships/Grant during the 2019/2020 academic year.

- Erasmus+ – Technical University of Munich (TUM)
The partnership of KNUST and the Technical University of Munich continues to grow. Able 1 shows grants/scholarships awarded.

Table 1:

| No | Name | Value | Coordinating Partners | Period |
|----|---|----------------|--------------------------------|---------------------------------|
| 1 | Erasmus +/DAAD grants/ scholarships | US\$ 11,240.00 | Technical University of Munich | 2019/20 Academic Year |
| 2. | College of Science and College of Engineering | US\$ 6,908.46 | Nestle Ghana Limited | 2019/20 to 21/22 Academic Years |

- Queen Elizabeth Commonwealth Scholarships
- The Korea Government Scholarships
- TWAS – ENEA Post-Doctoral Fellowship

INSTITUTIONAL AND ORGANIZATIONAL VISITS TO KNUST

There were few visits to seek opportunities for collaborations between KNUST and their Institution. Some were also to strengthen existing collaborations.

Table: 4

| NO. | COLLABORATING UNIVERSITY/ORGANISATION | COUNTRY |
|-----|--|-------------|
| 1. | Technical University of Munich | Germany |
| 2. | Association of Veterinary | Accra |
| 4. | Gambian Technical Training Institute, GTTI | Gambia |
| 5. | Rutgers University | USA |
| 6. | Ramapo College, New Jersey | USA |
| 7. | University of Eastern Finland, Kuopio | Finland |
| 8. | INP_HB of Coe D'ivore | Ivory Coast |

SUMMARY OF ACTIVITIES FOR 2019/2020 ACADEMIC YEAR

The major activities undertaken by the office during the year under review included:

- Establishing of Memorandum of Understanding/Academic Cooperation with international institutions in collaboration with the Provosts of Colleges and Deans of Faculties.
- Regular update of the database on the University's collaborators or partners in respect of international academic programmes.
- Handling agreements involving the University and its collaborators or partners in respect of external academic programmes in conjunction with the Registrar's Office.
- Hosting of the Commonwealth Scholarship beneficiaries from commonwealth countries to KNUST every year.
- Soliciting contact numbers and email addresses of Teaching Assistants from the departments for possible scholarships for Master's Degree programmes.
- Facilitating visa extensions, resident and work permits for foreign and KNUST students and visiting scholars.
- Facilitating the preparation and renewal of Ghanaian passport for members of the University Community.

CONCLUSION

In spite of the challenges, the International Programmes office is vigorously pursuing its mandate of fostering collaborations with institutions with similar focus both nationally and internationally.

OFFICE OF GRANTS AND RESEARCH

INTRODUCTION

Kwame Nkrumah University of Science and Technology (KNUST) drives all of its research and scholarly activities to make a difference in the nation, the subcontinent and the world at large. This is achieved through discovery of new knowledge and the translation into outcomes, positive impact within a framework that educates, develops and empowers the next generation.

The Office of Grants and Research (OGR) serves as KNUST's official liaison between the University and funding agencies/donors. OGR helps staff work through their proposals and contract management processes. The Office provides Research management support and Grant administration to staff engaged in research projects, administers the University's Research Fund, promotes dissemination of the University's research findings and undertakes capacity building activities relating to research and grantsmanship.

STAFF

The staff of OGR comprise the following:

DirectorProfessor Robert Clement Abaidoo

Assistant RegistrarMrs. Amanda Owusu-Asare

AccountantMr. Emmanuel Ebo Ocran

Senior Administrative Assistant.....Mr. Edward Abeku Ampah

ACTIVITIES OF THE OFFICE

Management of KNUST Research Fund (KReF)

The KNUST Research Fund (KReF) which is seated and managed at OGR, is to stimulate research and build capacity of staff and departments within the University in grant proposal writing for accessing both internal and external grants. It also seeks to encourage interdisciplinary research that promotes collaboration among disciplines within the University and external partners for the socio-economic development of Ghana and beyond. The KReF's main focus is to support applied, problem solving and interdisciplinary research. Since its establishment in 2015, KRef has been instrumental in promoting collaborative research, which is a departure from traditional silos.

In the fiscal year 2019/2020, research funding for the 5th KReF Call, increased from Five Hundred Thousand Ghana Cedis (GHC 500,000.00) to Seven Hundred Thousand Ghana Cedis (GHC 700,000.00).

Out of a total of Forty-Six (46) applications received from Six Colleges and the University Hospital for the reporting year, thirty (30) applications received funding amounting to six Hundred and Eighty-Seven Thousand, Eight Hundred and Three Ghana Cedis, Fifty-Nine Pesewas (GHC 687,803.59). Details of proposals received/selected and funds administered are in the Table 1, 2 and 3.

Table 1: Fifth KReF Application Breakdown by Colleges

| Source of Application | Number of Proposals Received |
|--|------------------------------|
| College of Art and Built Environment | 3 |
| College of Agriculture and Natural Resources | 7 |
| College of Health Sciences | 13 |
| College of Humanities and Social Sciences | 5 |
| College of Engineering | 6 |
| College of Science | 11 |
| University Hospital | 1 |
| Total | 46 |

Table 2: Fifth KReF Awardees and their approved budgets per College

| College | Grant type | KReF Applicant(s) | Department | Title | Amount (GHS) |
|--|---------------|---------------------------|---|--|--------------|
| COLLEGE OF AGRICULTURE AND NATURAL RESOURCES | Seed | Dr. Andrews Opoku | Department of Crop and Soil Sciences | Building resilience of soils for climate change adaptation: soil moisture conservation (BRS) | 10,000.00 |
| | | Dr Kwasi Adu Obirikorang | Department of Fisheries and Watershed Mgt | Developing a breeding protocol for the African bony-tongue (Heterotis niloticus) for commercial culture in Ghana | 10,000.00 |
| | | Seed sub-total | | | |
| | Multi | Dr. Eli Gaveh | Department of Horticulture | Sustainable Ceramic Hive for Beekeeping in West Africa | 30,000.00 |
| | | Dr. Jacob Alhassan Hamidu | Department of Animal Science | Assessing the impact of housing systems, arrival time and thermal manipulation of broiler chicks on broiler economy of production and wellbeing | 30,000.00 |
| | | Dr. James S. Kaba | Department of Agroforestry | Improving drought tolerance, growth and survival rate of cocoa (Theobroma cacao L) seedlings with potassium fertilizer and arbuscular mycorrhizae fungi (AMF). | 29,500.00 |
| | | Multi sub-total | | | |
| | College total | | | | 109,500 |

| College | Grant type | KReF Applicant(s) | Department | Title | Amount (GHS) |
|--------------------------------------|---------------|------------------------------|---|--|--------------|
| COLLEGE OF ART AND BUILT ENVIRONMENT | Multi | Prof. Divine Ahadzie | Centre for Settlements Studies | Measuring capacities for resilience in three flood prone communities in Kumasi, Ghana. – Sepe Buokrom, Atonsu and Krofuom CPC | 26,000.00 |
| | | Dr. Lemuel Gbologah | Department of Industrial Art (ceramics) | Prolonged cycling life of locally produced crucible for fire assaying in Ghana: Commercial production | 29,850.90 |
| | | Multi sub-total | | | 55850.90 |
| | College total | | | | 55850.90 |
| COLLEGE OF ENGINEERING | Seed | Dr. Anthony Andrews | Department of Materials Engineering | Thermogalvanic Bricks as Alternative Source of Energy (TBASE). | 10,000.00 |
| | | Seed sub-total | | | |
| | Multi | Dr. Emmanuel Kwesi Arthur | Department of Materials Engineering | Spatial Patterns and Removal of Hazardous Cyanide in Soils and Groundwater in a Cassava Processing Area: The Case of Adaklu-Anyigbe District of Ghana. | 30,000.00 |
| | | Prof. Sampson Oduro-Kwarteng | Department of Civil Engineering | Development of a rotary drum dryer for converting food waste into poultry feed | 30,000.00 |
| | | Multi sub-total | | | |
| | College total | | | | 70,000.00 |

| College | Grant type | KReF Applicant(s) | Department | Title | Amount (GHS) |
|----------------------------|------------|-----------------------------------|-------------------------------------|--|--------------|
| COLLEGE OF HEALTH SCIENCES | seed | Dr. Alex Owusu-Ofori | Department of Clinical Microbiology | Nasopharyngeal carriage of Streptococcus pneumoniae among sickle cell disease patients who attend the sickle cell clinic of the Komfo Anokye Teaching Hospital in Kumasi Ghana | 10,000.00 |
| | | Dr. (Mrs.) Linda Ahenkorah Fondjo | Department of Molecular Medicine | Prevalence, Risk factors and Pathophysiology of Postpartum Preeclampsia: Implications for improved postpartum management. | 10,000.00 |
| | | Dr. Linda Batsa Debrah | Department of Clinical Microbiology | Field evaluation of a diagnostic tool for the elimination of lymphatic filariasis | 10,000.00 |
| | | Dr. (Mrs.) Brenda Abena Ampah | University Hospital, KNUST | Patterns of Health Service Utilization at KNUST Students Clinic | 10,000.00 |
| | | Seed sub-total | | | 40,000.00 |
| | Multi | Dr. Yaw Duah Boakye | Department of Pharmaceutics | Investigation of the Anti-Cataract Property of extracts and purified molecules from Aspilia Africana Flowers, Ageratum Conyzoides leaves and Alstonei Boonei bark. | 29,800.00 |
| | | Dr. Priscilla Kolibea Mante | Department of Pharmacology | Pattern of expression of miRNAs as drug-sensitivity biomarkers in Ghanaian drug-resistant epilepsy patients | 29,987.69 |
| | | Dr. (Mrs.) Evelyn Asante-Kwatia | Department of Pharmacology | Investigation of Ghanaian Medicinal Plants as Potential sources of Anti-schistosomal Agents. | 29,920.00 |
| | | Dr. (Mrs.) Phyllis Tawiah | Department of Medicine | Controlling your Hypertension – the U-HYPE study. | 29,400.00 |

| College | Grant type | KReF Applicant(s) | Department | Title | Amount (GHS) |
|---|---------------|----------------------------------|---|---|--------------|
| | | Dr. Isaac Ayensu | Department of Pharmaceutical Chemistry | Morphological and phytochemical characterisation of Cannabis Species from Ghana and the link between their metal content and main psychoactive metabolites with geographic location | 30,000.00 |
| | | Multi sub-total | | | |
| | College total | | | | 189,107.69 |
| COLLEGE OF HUMANITIES AND SOCIAL SCIENCES | seed | Dr. Eric Henry Yeboah | Department of Sociology and Social Work | Pre-Tertiary Sexuality of Fresh University Students: a baseline study of First Year Students of KNUST. | 9855.00 |
| | | Dr. David Forkuor | Department of Geography and Rural Development | Vulnerable Groups and Access to Urban Social Amenities and Services. | 9640.00 |
| | | Dr. Elizabeth Nana Mbrah Koomson | Department of Sociology and Social Work | A Decade of Oil Production in Cape Three Points in the Western Region of Ghana: Community Expectations and Realities. | 10,000.00 |
| | | Seed sub-total | | | 29,495.00 |
| | Multi | Gift Dumedah | Geography and Rural Development | myTrotroMate: An integrated local location data for efficient transportation in Kumasi. | 29,800.00 |
| | | Multi sub-total | | | |
| | College total | | | | 59,295.00 |

| College | Grant type | KReF Applicant(s) | Department | Title | Amount (GHS) |
|--------------------|---------------|---|---|--|--------------|
| COLLEGE OF SCIENCE | Multi | Dr. Edmund Ilimoan Yamba | Department of Physics | Re-aparameterization of a Weather-Driven Dynamic Malaria Model for Seasonal Malaria Forecast and Control in Ghana | 30,000.00 |
| | | Prof. William Otoo Ellis | Department of Food Science and Technology | In-vivo Glycemic Response of HQCF and Wheat Composite Bread. | 24,050.00 |
| | | Dr. Nathaniel Owusu Boadi | Department of Chemistry | Imidazole Derivatives as Potential Anti-Biofilm Agents and Inhibitors of Quorum Sensing | 30,000.00 |
| | | Dr. Leonard Delali K. De-Souza | Department of Food Science and Technology | Design of a pilot plant to produce Pectin extract from okra and potential application in Chocolate production. | 30,000.00 |
| | | Dr. Eric Selorm Agorku | Department of Chemistry | Fabrication of graft biopolymer-based nanocomposite superadsorbents: adsorption and kinetic studies | 30,000.00 |
| | | Dr. (Mrs.) Augustina Angelina Sylverken | Department of Theoretical and Applied Biology | The burden of respiratory pathogens among motor tricycle operators in Kumasi Metropolis, Ghana | 30,000.00 |
| | | Dr. Kwadwo Owusu Akuffo | Department of Optometry and Visual Science | Assessing the impact of omega-3 fatty acids and eggs intake on children brain development by measuring family food | 30,000.00 |
| | | Multi sub-total | | | |
| | College total | | | | 204,050.00 |
| Grand Total | | | | 687,803.59 | |

RESEARCH OUTPUT OF SOME KREF SUPPORTED RESEARCH

3rd KReF Call Supported Project – Details of this can be found in the University's Quality Assurance Bulletin for the year under review.

SPONSORED PROJECTS 2019/2020

Sponsored projects are funded by sponsors or external organizations based upon the technical expertise of the Principal Investigators (PIs) in submitting outcome-driven proposals. When the Award is accepted, the PI assumes responsibility for conducting the technical work and administering the project funds in accordance with the University and sponsor requirements. Whilst the PI is responsible and accountable for performance of the sponsored project, the University through the Office of Grants and Research, provides infrastructure to support the investigator in promoting a research culture that adheres to the highest standard of research ethics. The year under review, some research activities within the University received sponsorship from external partners with details in the table below.

Table 3: Approved Sponsored Projects 2019/2020

| Project Title | Funding Agency | KNUST Principal Investigator | Amount |
|---|---|---|-----------------|
| Centre for Applied Research and Innovation in Supply Chain-Africa (Carisca) | USAID | Prof. Nathaniel Boso | \$ 7.5 Million |
| The origins of Alzheimer disease in individuals of African ancestry. | National Institute of Health (NIH) | Prof. Fred Stephen Sarfo | \$ 563,142 |
| Molecular Genetic Etiology of Craniosynostosis Among Ghanaians (MOGECAG) | National Institute of Health (NIH) | Dr. Lord Jephthah Joojo Gowans | \$ 225,471 |
| Severe Malaria Africa – A Consortium for Research and Trial Consortium (SMAART) | Wellcome Trust | Prof. Daniel Ansong | £ 278,572.00 |
| Household energy use practices and potential interventions for sustainable consumption in Makhanda-Grahamstown, South Africa and Kumasi | Leading Integrated Research for Africa Agenda 2030 in Africa (LIRA 2030 Africa) | Dr. Akosua Baah Kwarteng Amaka-Otchere | € 30,253.00 |
| ACE Regional Transport Research Centre, Kumasi | World Bank | Prof. Yaw Adubofour Tuffour and Prof. Charles Adams | \$ 8.96 million |
| KNUST-CDC Drowning Research | Centre for Disease Control Foundation – CDC | Prof. Peter Donkor | \$ 591,180.00 |
| Improving initial management of the injured at Ghanaian District and Regional hospitals with trauma intake form | National Institute of Health (NIH) Fogarty International Centre | Prof. Adam Gyedu | \$ 296,935.00 |

INVITATIONS

The Office participate in a number of events within and outside KNUST. Key among them are listed as follows:

1. Fourth Research Awards and Grants (RAG) Ceremony – 3rd Sept. 2019 at University of Cape Coast
2. KNUST Intellectual Property Meeting – 19th Sept. 2019 at KNUST
3. Royal Academy of Engineering HEP – SSA Project Meeting – 1st October, 2019
4. KNUST Engineering Education Project, Maiden Sectoral Advisory Board Meeting – 8th Nov. 2019 at Associated Consultants LTD, Accra
5. THBEC in Collaboration with WiSTEM – Gender Mainstreaming Conference – 6th & 7th Nov. 2019 at KNUST
6. Stakeholder Consultation meeting on KNUST Travel Policy – 28th January, 2020 at KNUST
7. Visit of ACE World Bank Experts (Mission) to Regional TRECK – 3rd to 6th Feb. 2020
8. AREF Excell Researcher and Leadership Development Programme Workshop – 12th Feb. 2020 at KCCR
9. Workshop on Intellectual Disability, Health and Technology – 28th Feb. 2020 at KNUST
10. ACU Developing the Next Generation of Researchers Workshop 2020 – 20th March, 2020 at KNUST
11. Inauguration of Advisory Boards and Progress Review – 8th to 10th July, 2020 at KNUST and NODA Hotel.

GUIDELINES, POLICIES AND SOP'S

In line with OGR's effort to enhance research work at the University, guidelines, policies and standard operating procedures (SOP's) are being developed. Thirteen (13) policies have so far been approved. These are:

1. Indirect Cost Rate Policy (2019)
2. A Principal Investigator's Handbook for Grants and Research (2019)
3. Guidelines and Procedures on Concept Note and Proposal Development (2019)
4. Proposal and Grant Award Acceptance and Registration Policy (2019)
5. Policy and Procedures for Research Project Close-Out (2019)
6. Conflict of Interest Policy (2019)
7. Overseas Travel Policy and Procedures (2019)
8. Scientific Misconduct Policy (2019)
9. Sexual Harassment Policy (2019)
10. Recruitment Policy (2020)
11. Anti-Fraud Policy (2020)
12. Risk Management Policy (2020)
13. Safeguarding-Policy (2020)

INFORMATION SHARING SERIES

With the approval of various policies developed by the Office of Grants and Research (OGR), two (2) Information Sharing Series on Research Related Policies of the University were organized to offer orientation to staff on same. The events were held at the KNUST Graduate School Conference Hall. Find details in table 4:

Table 4: Details of Information Sharing Series

| No. | Topics | Target Group | Date |
|-----|--|--|------------------------------|
| 1. | <ol style="list-style-type: none"> 1. Indirect Cost Rate 2. Efforts and Compensation Policy 3. Migration of Sponsored Projects/Grants onto ReMIS and GAMS | Principal Investigators (PIs), Project Coordinators Administrators, Account Staff and all interested in Sponsored Research | 19 th March, 2020 |
| 2. | <ol style="list-style-type: none"> 1. Guidelines and Procedures on Concept Note and Proposal Development 2. Proposal and Grant Award Acceptance and Registration Policy 3. Policy and Procedures for Research Project Close-Out | Principal Investigators (PIs), Project Coordinators Administrators, Account Staff and all interested in Sponsored Research | 26 th March, 2020 |

Migration of Sponsored Projects/Grants onto ReMIS and GAMS

A directive from the Vice-Chancellor through the Director of the Office of Grants and Research was issued for staff with Sponsored Projects/Grants to migrate same onto the Research Management Information System (ReMIS) and Grant Accounting Management System (GAMS). Fifty-One (51) projects have so far been migrated onto the systems by Principal Investigators.

OFFICE EXPANSION

As part of efforts to serve the University community better, seminar rooms were created at OGR's central office and furnished with furniture and the state-of-the-art equipment. The Seminar rooms are to help with the capacity development drive of OGR.

In addition, the expansion has provided space for the Intellectual Property Unit, KNUST (IPUK). This newly created Unit seeks to ensure that staff and students of the University are granted the right of protection for their inventions and creations.

OFFICE OF THE DEAN OF STUDENTS

INTRODUCTION

Since its establishment, the Office has developed progressively under the leadership of five (5) Deans who have headed the outfit to date. It's a central place where students and staff seek advice and action on issues affecting students; and almost everything concerning students is referred to the Office; hence "a one-stop-shop" for all students' issues. Thus, the Office is in regular consultation with the Vice Chancellor's Office, the Registrar's Offices, the Finance Office, all the Academic units, the Health Directorate, the Security Services (Internal and the Police), the Protestant and Catholic Chaplaincies as well as the Halls of Residence and the recognized Private Hostels.

Additionally, the Office provides a platform for regular interaction between Students' leadership and a host of other student organizations on one hand, and the University on the other. The Office with assistance from the Finance Office has financial supervision and management of expenditure of the Students' Representative Council (SRC), local National Union of Ghana Students (NUGS), International Students' Association (ISA), and Graduate Students' Association of Ghana (GRASAG)-KNUST.

STAFF STRENGTH

The current staff strength at the Office of the Dean of Students including the residential and non-residential facilities under the Office's administrative and financial management (Otumfuo Osei-Tutu II Hostel, Graduate Students' Hostel, Wilkado Hostel, Shaba Hostel, Ulzen Block, L.I. Andoh, Obesse-Jecty Block, and Focus FM) is fifty-one (51). These are supported by twenty-four (24) national service persons.

Administratively, the office is managed by:

Dean Prof. Wilson Agyei Agyare

Vice Dean Dr. Otchere Addai-Mensah

Senior Assistant Registrar..... Mrs. Oluwakemi Abisola Titiloye

Assistant Accountant Stephen Osei-Bobie

Others are:

Student Affairs and Financial Services

Assistant Registrar Mrs. Theodora Oduro

ORGANISATION

The Office is internally organized into several sections but also provides office spaces for a number of independent units that have close working relationship with the Office. These are listed below:

Sections

- i. Central Office
- ii. Student Affairs and Financial Services
- iii. Student Leadership Affairs (SRC, LOCAL NUGS, ISA & GRASAG)
- iv. Student Housing and Residence Life
- v. Student Conduct and Discipline

Independent Units working closely with the Office

- i. KNUST Counselling Centre
- ii. MasterCard Foundation Program
- iii. Protestant and Catholic Chaplaincies and Islamic Affairs
- iv. Ghana Immigration Service

CENTRAL OFFICE ACTIVITIES – 2019/2020 ACADEMIC YEAR

- a) Biometric verification of all students at the beginning of each semester; the spinoff of which is a biometric voting process of student elections which credibility is well accepted.
- b) Training of student leaders on capacity building, to equip them with the necessary knowledge and skills in performing their roles as representatives of students in the University.
- c) Organized a capacity building programme for Hall Assistants, Security Personnel, and Private Hostel Managers to enhance their skills in administration and management of students in the halls of residence and recognized private hostels.
- d) In the year under review, biometric student elections at the Department, Faculty, College, and Halls of Residence were successfully conducted. The SRC and GRASSAG elections were put on hold due to the COVID – 19 Pandemic.
- e) Successful handing over by the 2019/2020 SRC Executives and Inauguration of a five (5) member Interim Student Representative Council (ISRC) to manage the affairs of the Students Representative Council (SRC) pending the elections of new Executives.
- f) Application for bed space at the Otumfuo Osei-Tutu II and Wilkado Hostels have been put on-line with the assistance of the UITS for easy management and transparency.

The Office working with the Security Services and the KNUST Police is helping to improve campus safety by the introduction of Students Car sticker IDs which are issued only when the driver produces valid vehicle documents and a valid drivers' license. Clamps have been bought to immobilize cars without stickers, those drivers involved in reckless driving or wrongful parking.

Relationship with Outside Bodies

The Office continues to be the first point of call for external agencies and persons wishing to interphase with students. The Office has either directly received such organizations and individuals who come or are referred to the office by the Vice-Chancellor and other units of the University.

Disability Support Service Unit

The Office continues to play an advocacy role for students with disability and has a staff with such a challenge working in the MasterCard Foundation unit as the liaison for the on-going work in the office. In the year under review, the significant activities with students with disability included the following;

- a. Applications for bursary for members of the students with Disability Association who did not have it yet.
- b. Five (5) out of the seven (7) students who applied for the GNPC Scholarship were considered during the 2019/2020 academic year
- c. An election of new executives for the Association.

International Students Affairs

The numbers of International Student population require that sufficient attention be given to their general conduct and welfare which can ultimately impact academic output. In the reporting year, 2019/2020, the Vice Dean of Student, who has oversight responsibility for the affairs of International Students, as done in the past years organized a special day of orientation for International Students.

Students Leadership Affairs (SRC, NUGS and GRASAG)

The Office liaises between the SRC and the University Administration, gives direction, and offer advice to the Students' Leadership whenever necessary through the SRC and Graduate Students Association of Ghana (GRASAG)-KNUST.

In the year under review, the Office of the Dean of Students in collaboration with the SRC Women Commissioner and support from the University Management established a food bank at the SRC Hostel to support the needy students.

The Office coordinated and provided logistical support for this year's Biometric Elections at the Departments, Faculties, Colleges, and the Halls of Residence that passed off peacefully. Due to the COVID-19 Pandemic and closure of the University, the SRC Election was put on hold. The SRC Parliamentary Council in collaboration with the 2019/2020 Executives constituted an Interim Students Representative Council (ISRC) to represent the students and conduct the SRC Elections.

Students Housing and Residential Life

This Unit of the Dean of Students Office is responsible for coordinating activities of non-residential students' accommodation issues by dialoguing with hostel owners. The unit is also responsible for the management of the three Non-residential Students Facilities.

In order to keep the three Non-Residential Students' Facilities functional, major carpentry, electrical, and plumbing works were carried out. The unit continued to work with private hostel owners to ensure the safety and welfare of non-residential students of the University. This was achieved through a series of meetings held with hostel operators and physical inspection of these hostels. The Office has put in place a Non-Residential students' desk to keep track of all non-residential students.

The Office, through its Housing Unit, in conjunction with the Ghana Tourism Authority, Ghana National Fire Service, Ghana Police Service, the Security Services Unit of KNUST, and the Students Representative Council, undertook a four-day inspection exercise on hostel facilities within and outside KNUST from 18th – 21st February, 2020. The goal was to ensure students' safety and maintain some general and acceptable accommodation standards.

Out of the 129 hostels inspected, 102 of them met the standards and were subsequently approved by the Dean of Students to be recommended to students. The Office with support from Management facilitated the fumigation of 129 recognized private hostels and some homtels on gratis during the COVID-19 Lockdown.

Students Conduct and Discipline

The Office came out with a new Students' Guide and Code of Conduct. Students who breached the University's Regulations were investigated and the appropriate measures taken against them. Unfortunately, despite the relevant orientation and counselling, some students remained susceptible to a number of offences that did not augur well for communal co-existence.

In the year under review, the Office of the Dean of Students on the directives of the Vice-Chancellor constituted a number of Committees to investigate issues of misconduct (by students) reported to the office and the University's Security Services. The Committees have since submitted their reports on cases investigated and sanctions have been meted out to those who were found culpable. Twenty-six (26) students were rusticated from the University for various cases of misconduct

Student Affairs/Students Financial Services

Activities of the Office

Students Affairs Activities

The Office worked together with the Senior Assistant Registrar, Dean of Students in the planning and executing of Orientation and Matriculation for postgraduate and undergraduate fresh students.

The office also liaised with the Ghana Immigration Office to facilitate the processing of residence permits for International Students to regularize their stay in the country.

The office in partnership with the Protestant Chaplaincy and support from the University Management established a food and clothing bank to support the needy students.

The office issued 1,123 Introductory Letters and 431 Attestation letters to students seeking to travel outside the country during the second-semester break and also for those seeking internship opportunities both inside and outside of the country.

During the year under review, a total of 18 students passed away. The Office as usual liaised with the families of the deceased students to ensure they were giving befitting burials.

“Ketewa Biara Nsua” (KBN) Bursary

The Office with the support of representatives from the Colleges, the Counselling Centre and the Student Representative Council (SRC) successfully selected 2,279 students who benefited from the “Ketewa Biara Nsua” (KBN) Bursary for the 2019/20 Academic Year.

KNUST Bursary

The University from its IGF disbursed an amount of One Hundred and sixty-eight thousand five hundred Ghana Cedis (GH¢318,000) to 600 needy students. Very needy students were given Seven Hundred Cedis (GH¢700.00) each while the others were given Five Hundred Ghana Cedis (GH¢500.00) each.

Summary of Scholarship awarded by stakeholders are summarized as follows:

REPORT ON SCHOLARSHIP AND BURSARY'S FOR 2019/2020 ACADEMIC YEAR

| Names | No. of Std. (Fresh & Continuing) | Amount (GH¢) |
|--|----------------------------------|---------------------------|
| Fondazione Education Scholarship | 49 | 320,268.43 (€52,961.23) |
| Educational Pathways International Scholarship | 43 | 280,742.56 (\$ 52,530.00) |
| GNPC Bursary | 1,101 | 6,687,500.00 |
| Barclays Bank Scholarship | 12 | 72,266.44 |
| Test for Ghana Scholarship | 37 | 60,100.00 |
| Standard Chartered Bank Scholarship | 7 | 18,000.00 |
| Kingdom Books and Stationery Scholarship | 50 | 25,000.00 |
| Lebanese Community Scholarship | 12 | 24,000.00 |
| Timothy Ansah Foundation Scholarship | 4 | 4,000.00 |
| S.T Nankani Scholarship | Pending | Pending |
| KBN Bursary | 2,279 | 1,009,100.00 |
| KNUST Bursary | 600 | 318,000.00 |
| Total | 4,194 | 8,818,977.43 |

OTHER SCHOLARSHIPS

| Name | Number of Students | Amount (GHS) |
|---|--------------------|------------------|
| Afigya Kwabre North District Assembly (Gov. of Gh.) | 11 | 24,441.14 |
| Abura-Asebu-Kwamankese District Assembly | 4 | 7,647.54 |
| Bolgatanga East District Assembly | 4 | 5,740.00 |
| Gel Banana Farm Fairtrade | 1 | 3,000.00 |
| | 20 | 40,828.68 |

SUMMARY ON EXTERNAL WORK STUDY 2019/2020 ACADEMIC YEAR (Long vacation)

| Name of Organization | No. of Students Posted to Various Corporation |
|-----------------------|---|
| Barclays Bank | 16 |
| Ghana Commercial Bank | 11 |
| GT Bank | 10 |
| Stanbic Bank | 5 |
| Calbank | 3 |
| Ecobank | 3 |
| Fidelity Bank | 2 |
| Sankies Restaurant | 2 |
| | 52 |

Students Loans by Brighter Investment

Brighter Investment is an organization that supports students' with loans. The support includes full payment of tuition fees, hostel fees, and monthly stipends. During the year under review, Brighter Investment supported 81 Students.

Internal Work and Study

Students are posted to the various Halls and other units on campus to work and earn some wages whiles studying. During the year under review, 27 students were posted to work at various facilities.

External Work and Study

The Office applied to institutions to solicit for internship placement for students to work and earn wages during the long vacation holidays. Eleven banks responded favorably. A total of 52 students were posted to various banks for internship.

Protestant & Catholic Chaplaincies

The Protestant Chaplaincy together with the Catholic Chaplaincy collaborates with the office to respond to the spiritual needs of the students. To register any new Christian body, the protestant Chaplaincy assists the office in the screening process. The KNUST Mission 2020 programme was successfully held from 17th – 23rd February, 2020.

Islamic Student Bodies

There are two recognized Islamic Student Bodies – Ghana Muslim Students Association and the Ahmaddiya Muslim Students Association. Their activities are monitored through recognized senior members who advocate on their behalf.

Ghana Immigration Service

The Ghana Immigration Service continues to smoothly facilitate the processing of residence permits for International Students. This work is carried out in collaboration with the Student Affairs section of the Dean of Students.

CONCLUSION

The Office continues to provide the needed support to students and other stakeholders.

SCHOOL OF GRADUATE STUDIES

In furtherance to its objectives, the School collaborates with the Departments, Faculties and Colleges to develop graduate programmes which are relevant to the promotion of economic, social, scientific and technological advancement of Ghana. It is noteworthy that, in doing this, material and human resources are mobilised to ensure maximum utilisation of available potential through courses and programmes organised and coordinated by the School of Graduate Studies.

ADMINISTRATION

The following are the senior administrative staff of the School:

Dean Prof. Nicholas Kyei-Baffour

Vice-Dean..... Prof. Kwabena Ofori-Kwakye

School Secretary..... Mr. Kwame Yeboah jr.

School Accountant Mr. Mike Osei-Wusu

Assistant School Secretary..... Mr. Charles Owusu-Antwi

GRADUATE STUDENT POPULATION

The current Graduate Students population stands at seven thousand, eight hundred and eighty-seven (7,887). The statistics of the student-population for the 2019/2020 academic year are as follows:

| POSTGRADUATE STUDENTS' STATISTICS FOR 2019/2020 ACADEMIC YEAR | | | |
|---|--------------|--------------|--------------|
| | MALES | FEMALES | TOTAL |
| GHANAIAN | 5,259 | 2,517 | 7,776 |
| INTERNATIONAL | 67 | 44 | 111 |
| TOTAL | 5,326 | 2,561 | 7,887 |

ACTIVITIES

The School of Graduate Studies, as a coordinator of all Graduate programmes run by the Departments in the University, performs the following duties among others:

- Liaises with the Central Administration, Colleges, Faculties, Institutes and Departments on general issues regarding Graduate Studies.
- Advertises, administers and processes applications for prospective applicants.
- Assists various Departments in the organisation of interviews for applicants seeking admission into various programmes.
- Issues admission letters and register students.
- Organises seminars for students and members of staff on Graduate Studies.
- Receives and approves thesis synopsis, examination results and proposals for new programmes.
- Assists in the screening and appointment of External and Internal Examiners for Departments.
- Organises and conducts oral examinations for final year graduate students.

Automation of Some Activities

i. Transcripts

As way of improving services at the School, the preparation of Students' Transcripts has been automated to speed up delivery time.

ii. Submission and Assessment of Theses

The pilot of the Thesis Management System took place in October, 2019. The System ensures that active students can log on to it and deposit documents for assessment. The supervisors approve the thesis to enable the Head of Department assign recommended examiners. The School of Graduate Studies then allocates the submitted draft documents by students to examiners for assessment, who in turn submit assessed reports/theses back onto the system. When all reports/theses are ready, the School of Graduate Studies is notified and the thesis processor is enabled to find appropriate date for the oral examination to take place. In furtherance of making stakeholders knowledgeable of the System, a workshop was organised in June, 2020 for all Heads of Department and Graduate Programme Co-ordinators to train them in the use of the System.

International Affiliations

The establishment of links with international institutions for postgraduate studies by the School of Graduate Studies is paramount in its activities. This has over the years manifested in the mounting of joint programmes of research and study through exchange of Staff and Students. Among them are, the Master of Science Programme (MSc.) in Development Planning and Management, run jointly with University of Dortmund, Germany; Master of Science programme in Geo-information Services and Natural Resources Management also jointly run with the I.C.T. of Netherlands under the auspices of the World Bank; Master of Science and Doctor of Philosophy in Water Supply and Environmental Engineering in collaboration with UNESCO and IHE Delft; Master of Science and Doctor of Philosophy in Agriculture under the sponsorship of AGRA and Building Stronger Universities (BSU), a consortium of Danish Universities.

Graduate Degrees Awarded

The School of Graduate Studies facilitates the award of the following degrees:

- Post Graduate Certificate
- Post Graduate Diploma
- Master of Science
- Master of Arts
- Master of Philosophy
- Master of Business Administration
- Master of Education
- Master of Laws
- Doctor of Philosophy
- Doctor of Education

New Programmes

The year under review saw the introduction of the following new programmes by various Departments and the Institute of Distance Learning through the School of Graduate Studies. These are:

- MPhil Educational Planning and Administration
- EdD Educational Planning and Administration

- PhD Educational Planning and Administration
- MPhil Language Education
- PhD Language Education
- MPhil Science Education
- PhD Science Education
- MPhil Mathematics Education
- PhD Mathematics Education
- MPhil ICT Education
- PhD ICT Education
- MPhil/PhD Ceramic Technology
- Master of Landscape Architecture
- MSc Real Estate
- PhD Visual Communication Design

CONCLUSION

The School of Graduate Studies remains committed to addressing the needs of Graduate Students and has set sights on the expansion of Graduate Studies in the University through effective collaboration with the Departments. The success in achieving this, is to encourage the mounting of demand driven graduate programmes in fulfilment of national needs.

SPORTS DIRECTORATE

The Sports Directorate is the organization that over-see the sporting, recreational as well as the well-being of the students and staff of the university. The year under review saw the Directorate organizing the following sporting activities:

Fresh Men and Women Games: The first activity organized in the year under review was the Freshers' games. These games were organized purposely to usher our new students into our various sporting events. It also serves as a basis of identifying the various new sporting talents that were admitted into the various Colleges to enable the College Representatives build up their teams for subsequent competitions.

Inter-Collegiate Games: The academic year under review Inter-Collegiate games was very well patronized by all the Colleges. The following disciplines were competed for by the Colleges.

They are;

- | | |
|----------------------|-------------------|
| i). Athletics | vii). Football |
| ii). Badminton | viii). Hockey |
| iii). Basketball | ix). Netball |
| iv) Beach Volleyball | x) Table Tennis |
| v). Chess | xi) Tennis and |
| vi) Debate | xii). Volleyball. |

Cross Country Competition was organized on Opened Championship basis. The overall winner for these competitions was the College of Humanities and Social Sciences (CoHSS).

The participation of the Colleges helped the Sports Directorate to select teams for the various disciplines.

Inter-University Cross Country Competition: This competition was held in Sunyani and was hosted by the University of Energy and Natural Resources (UENR). All the nine Public Universities participated in this event. KNUST's male and female teams placed 4th in both categories of the event.

Pan Africa Universities Debate Championship (PAUDC): KNUST was the host of this competition. In all, 40 universities from 14 countries all across Africa participated in this continental competition. At the end of it, KNUST was adjudged the overall Champion for the competition. This made KNUST the only university on the continent to win the Championship Trophy for the second consecutive time since the inception of the Pan African University Debate Championship.

World University Debate Championship: The KNUST Debate Team took part in the World University Debate Championship which was hosted by Assumption University in Bangkok, Thailand. The team was able to reach the quarter final stages of the competition which was a very great achievement for a university from Africa.

Ghana University Sports Association (GUSA) Games: This is the national competition for all public universities in the country. The 26th Edition of these games was hosted by the University of Ghana. The males' team of KNUST were 4th and the females 5th on the overall Medal Table. This was a remarkable improvement over the previous GUSA performance and with KNUST

hosting the next GUSA games in 2022, it is hoped there will be a tremendous improvement in the team's performances.

INFRASTRUCTURE DEVELOPMENT

The Sports Directorate had the following infrastructure developed in the year under review.

- The Staff Club Tennis Courts was renovated and fitted with flood lights.
- The Hale and Hearty Gymnasium was re-roofed and renovated and the squash floor refurbished.
- The offices of the Sports Directorate were renovated and furnished with new furniture and office equipment.

Sports Equipment

The Directorate, through the help of the University's Management was able to purchase an Electronic Timer machine for the university. KNUST is the only university in Ghana to own such electronic device and the directorate is very grateful to Management for this foresight.

In addition to this, the university acquired new world class High jump and Pole Vault landing forms, new set of Hurdle flights and new set of Basketball hydraulic poles. It is the Directorate's hope that all these will have a positive impact on sports achievement in the coming years.

UNIVERSITY LIBRARY

INTRODUCTION

The University Library is the knowledge hub of the University. It plays a vital role in the academic life of the University by providing knowledge and learning services through collaboration with faculty, in the areas of teaching, learning, research and entrepreneurial training. Driven by its mandate of providing an effective learning environment, and committed to its vision of advancing knowledge in science and technology, the KNUST Library System, consisting of the main Prempeh II Library and six College libraries, made valuable contributions to University work for the year under review. This report highlights services and other learning support activities provided by the library, as well as challenges that have hampered effective delivery of library services.

ACTIVITIES IN THE YEAR

Collection Development and Management

During the period under review, 7075 volumes of books were processed and added to the stock. These were 1,586 volumes for Prempeh II Library, 689 volumes for KNUST Basic School Libraries, and 4800 volumes for the various colleges. The library purchased 2,270 volumes of assorted books. These comprised 1,581 multidisciplinary books for the Prempeh II Library and 689 assorted children's books for the Basic School libraries. The total book stock of the entire library system stands at 233,434 volumes. The breakdown of the book holdings of the individual libraries are as follows:

| | |
|--|----------------|
| Prempeh II Library | 147,636 |
| Basic Schools' Libraries..... | 9,561 |
| College of Agriculture and Natural Resources | 12,607 |
| College of Art and Built Environment | 14,320 |
| College of Humanities and Social and Social Sciences | 20,579 |
| College of Engineering | 7,039 |
| College of Health Sciences | 11,137 |
| College of Science | 10,555 |
| Total | 233,434 |

The Library also procured 535 E-Books on various subjects, accessible anytime anywhere.

Donations

- Professor El Anatsui, a globally distinguished artist and an alumnus of KNUST donated assorted textbooks worth one hundred thousand dollars (\$100,000.00) to the College of Art and Built Environment. Professor Edwin Bodjawah of the Department of Painting and Sculpture, presented the donation to the Vice Chancellor and the University Librarian on behalf of Professor El Anatsui.
- Dr Kwame Bawuah-Edusei, alumnus of the College of Health Sciences, donated three copies of his autobiography "Thrived despite the odds" to the SMS Library
- Dr. Edward A. Botchway of the Department of Architecture donated a book he jointly authored to the College Library

- The CANR Library received two copies of Ghana Journal of Animal Science, Volume 10 No. 1; a copy of Principal Investigator's Handbook for Grants and Research; and five copies of Quality Assurance Bulletin Volume 17, 2020.

Journal Subscription and Usage

The Library maintained its collaboration with the Consortium of Academic and Research Libraries in Ghana (CARLIGH) and the International Network for the Availability of Scientific Publications (INASP) to facilitate access to over 40,000 electronic journals from about 50 academic databases. This digital access comprised more than 100 million full text documents, bibliographic information, abstracts and book reviews. The Library also provided access to the following Elsevier products; Science Direct, Scopus and SciVal, to enhance research activities in KNUST.

Institutional Repository (IR)

This service showcases the intellectual output of KNUST from both faculty and postgraduate students, increasing the University's visibility to a global audience. Over 1232 documents were added to the repository for the year under review, bringing the total collections to 12,531. The following communities define the documents found in the repository:

- Thesis/Dissertations
- Conference proceedings
- Journal of Science and Technology (JUST)
- Research Articles
- Speeches
- KCCR

Figure 1 below provides a breakdown of the various communities.

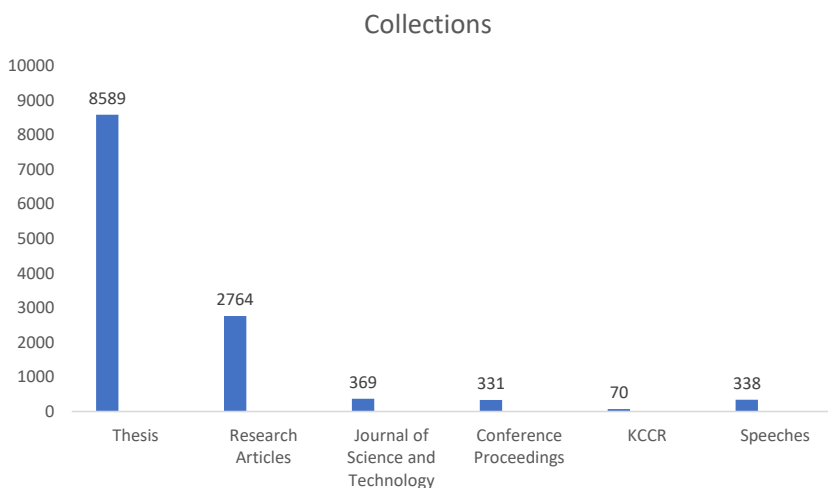


Fig. 1: Collections in the IR.

Overall, the library recorded 7,460 visitors to the Institutional Repository, with average daily visits of about 60. Records from Google Analytics further shows that, during the year under review, the KNUSTSpace recorded 76,928 views and 45,834 new users. Figure 2 shows monthly visits to the Institutional Repository.

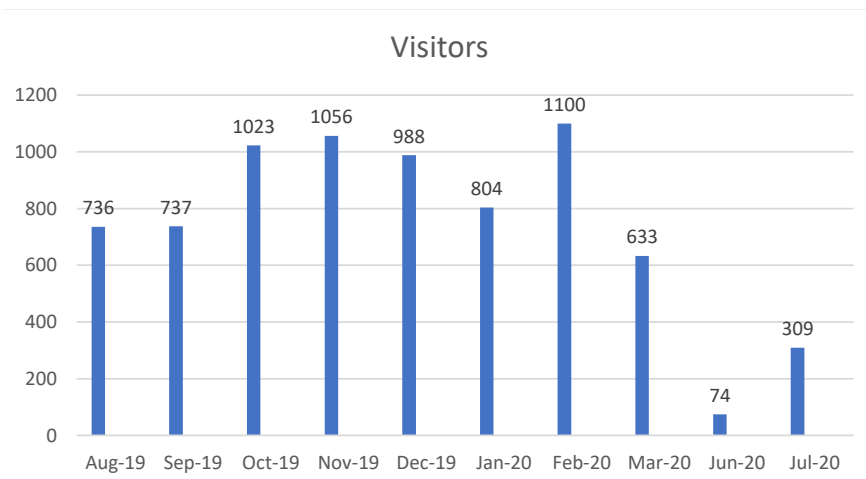


Fig. 2: Visitors

Turnitin (Plagiarism Checker)

For the year under review, Turnitin had a cumulative total of 2,373 instructors, as active users of the plagiarism detection software, generating 66,819 originality reports. Figures 3, 4 and 5 below shows the monthly distribution of active instructor usage, monthly originality reports, as well as the distribution of Turnitin similarity index for all originality reports for the period under review.

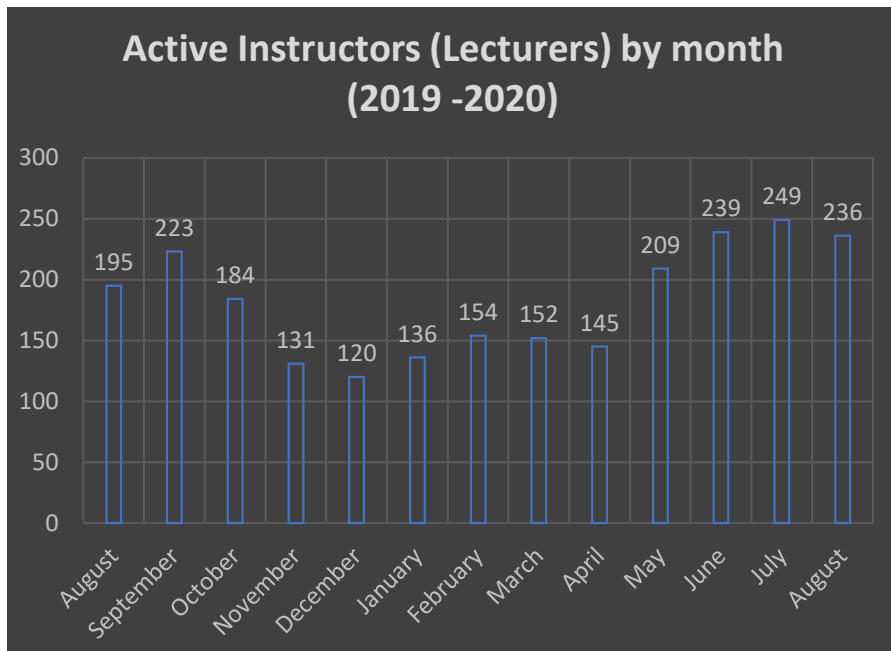


Fig. 3: Active Instructors

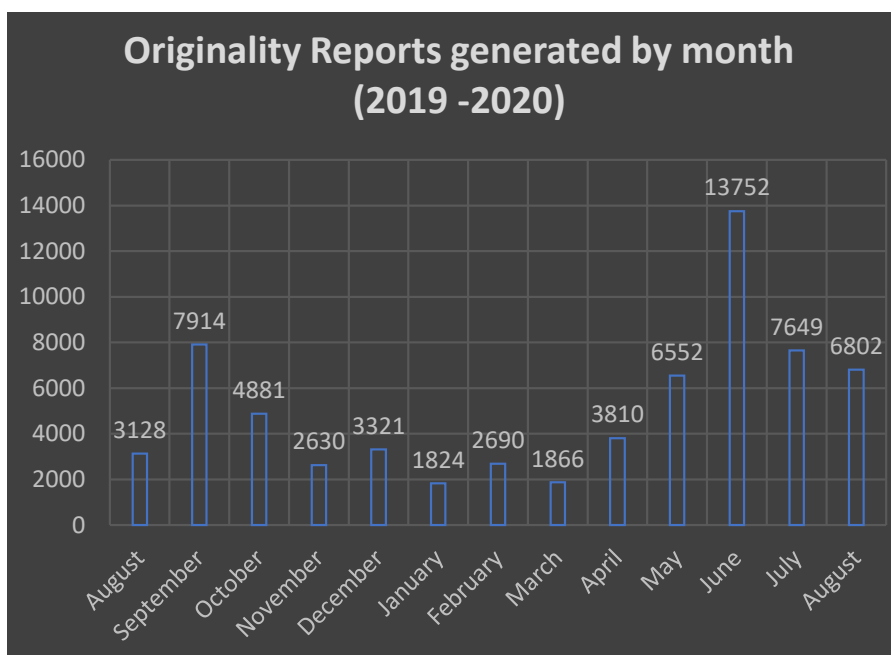


Fig. 4: Originality report per month

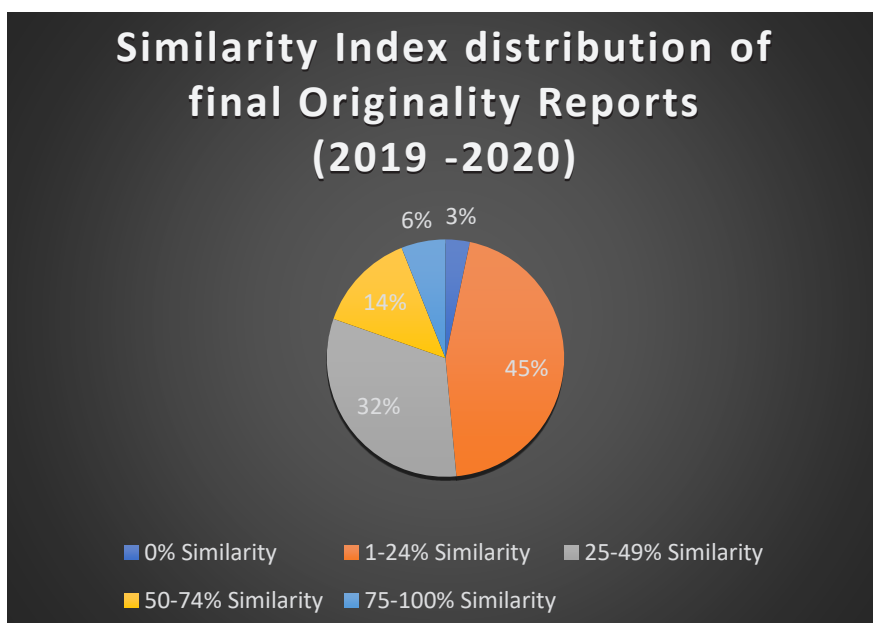


Fig. 5: Distribution of Turnitin Similarity Index

Information Retrieval and Document Delivery

The library searched and downloaded scholarly articles on request from users, numbering over one hundred and twelve (112).

Training Services

The Prempeh II Library trained in total, three hundred and six (306) postgraduate and undergraduate students on e-resources, use of Mendeley citation and reference management and Turnitin from the following departments:

- a. Department of Sociology and Social Work
- b. Department of Architecture
- c. Department of English
- d. Department of Agroforestry

Also, on one-on-one basis, the library trained thirty faculty members on how to use Turnitin.

Over 1,200 students and lecturers from eight departments in the College of Science also benefited from a series of training on:

- Use of Reference management software (Mendeley)
- Referencing and citation
- Access to KNUST Institutional Repository (KNUSTSpace) and the Electronic Thesis and Dissertation (ETDs) platforms
- Online Information sharing using Google products (Forms, Docs and Alerts)
- Scholarly Information Retrieval (Peer-reviewed papers)

Faculty members from the underlisted departments in the College of Health Sciences also benefited from training/research seminar programmes at the specified venues:

- Department of Pharmaceutical Chemistry – 24th January 2020 at Dean’s Conference Room (FPPS)
 - Department of Pharmacy Practice – 11th February, 2020 at LETAP Pharmaceutical ICT Centre, FPPS
 - Department of Pharmaceutics – 27th February, 2020 at the Dean’s Conference Room (FPPS)
 - School of Public Health – 28th February, 2020 at the SMS Library Computer Laboratory
- Librarians and the research community of the university had the opportunity to participate in the following workshops and conferences during the year under review:

- Webinar on ORCID co-hosted by EIFL and CARLIGH on “What ORCID offers librarians and researchers”, 3 September 2020
- AfLIA webinar series based on three topics – 1. What is Open Science? 2. Institutional and National Repositories in Africa and possibilities of centralized data repositories in Africa 3. Research Data Management: Practices and present challenges, 25 August 2020-1 September 2020
- LIBSENSE virtual workshop on “Reskilling the future librarian in an African HLI context” on 19 August, 2020. This was part of AfricaConnect3, to establish a framework to guide the development of Open Access Repositories (OARs) and Open Access Journals (OAJs)
- LIBSENSE virtual workshop on Open Access, Open Science policies, repositories & communities of practice in Africa – 03 June 2020
- ScienceDirect, Scopus, Mendeley and Researcher Academy Training. Wed, 26 Feb 2020 12:00:00 Africa/Accra. IDL Conference Centre (Poolside), KNUST, Kumasi, Ghana
- Discovering research trends with SciVal, Wed, 26 Feb 2020 – Africa/Accra. IDL Conference Centre (Poolside), KNUST, Kumasi, Ghana.

ICT SERVICES

The Library, successfully deployed new computers/workstations to various learning spaces within the library. There was also an, expansion of the Institutional Repository of KNUST to capture all research output of the university and a second repository to archive and disseminate undergraduate scholarly works in all college libraries. Furthermore, the USA Alumni chapter of KNUST, led by Dr Yao Ababio, donated 20 computers, one server and one network switch to the KNUST Library.

OTHER RELEVANT SERVICES

During the period under review, the Library engaged in a number of activities aimed at achieving its strategic goals. Some of the related achievements include:

- Procurement of suitable furniture to support various learning styles of library users
- The College of Health Sciences Library negotiated free access to many exciting video presentations from *HSTalks-Biomedical & Life Sciences Collection*. Staff of KNUST can now access, watch or just listen to seminars from respected researchers and lecturers from around the world.
- The College of Science Library sent out over 50 lists of journals with waived Article Processing Charges (APCs) to faculty members to help with promotion of knowledge
- The College of Science Library with support from the Provost office has created more conducive and functional learning spaces (200 Seater learning environment) for students and faculty use in the college.

- As part of measures to reduce loss of books, CCTV cameras and book detection gates solution are being deployed in KNUST Libraries.
- The Prempeh II Library continued to offer its flagship 24-hour service coordinated and organized by the Student Support Services Department.

KEY ISSUES

- The Library needs to procure more up-to-date collections, both print and electronic, for the growing population of full time students as well as distant learners.
- Learning friendly reading tables/chairs, are needed in most libraries across KNUST.
- Information Literacy and academic skills training remain unintegrated into the curriculum in KNUST
- A modern Library (The Knowledge Mall) is needed in the teaching area of the University, as well as Hall Libraries closer to accommodation facilities
- Improved Virtual Library services, ICT and learning tools are needed across the KNUST Library system
- Library services targeted at Persons with Disability needs urgent attention
- There is the need for improved Library Services for KNUST Basic Schools
- More needs to be done in the area of Research Support services, including Research Data Management

CONCLUSION

The library supported teaching, learning and research by providing relevant and quality learning resources as well as instructing patrons in effective use of these resources. The library directed its efforts towards laying the foundation for research support services in the university and this will continue in the next academic year. Generally, the library thrives on the ability to facilitate access to accurate, relevant and timely resources for its numerous patrons across the university and beyond. There is therefore the need to adequately resource the library to enable it play its support role effectively.