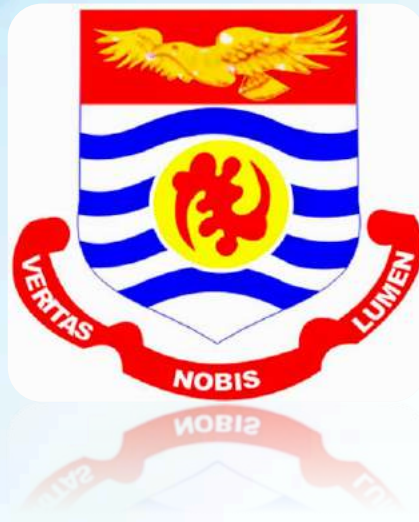


UNIVERSITY OF CAPE COAST



**EDUCATION AND ENVIRONMENT FOR SUSTAINABLE DEVELOPMENT
RESEARCH AGENDA
(2018-2022)**

JULY 2018

UNIVERSITY OF CAPE COAST



**RESEARCH AGENDA
(2018-2022)**

Education and Environment for Sustainable Development

JULY, 2018

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	iii
LIST OF ACRONYMS	v
INTRODUCTION	1
MEMBERSHIP OF THE COMMITTEE.....	1
TERMS OF REFERENCE.....	1
MEETINGS HELD	1
MODUS OPERANDI.....	2
Processes of Defining the Research Agenda	2
Timelines.....	2
Co-opted Members.....	3
CHALLENGES IN DEFINING THE RESEARCH AGENDA	3
IMPLEMENTATION, MONITORING AND EVALUATION OF THE RESEARCH AGENDA	4
CONCLUSION	4
RECOMMENDATIONS.....	4
RESEARCH AGENDA FOR THE UNIVERSITY OF CAPE COAST	6
Context.....	6
Operationalizing the Research Agenda.....	7
COLLEGE OF AGRICULTURE AND NATURAL SCIENCES	8
Description of the College	8
Research Partnerships	8
Research Focus	8
School of Physical Sciences.....	9
School of Biological Sciences.....	9
School of Agriculture.....	10
Relationship of CANS' Research Agenda with the SDGs	11
School of Physical Sciences.....	11
Description	11
School Research Thematic Areas.....	11
School of Biological Sciences	12
Description	12
Research Partnerships and Collaborations	12
School Research Thematic Areas.....	13
Relationship of School's Research Agenda with the SDGs	16
School of Agriculture.....	16
Description	16
Research Partnerships and Collaborations	16
School Thematic Research Areas.....	17
Relationship of School's Research Agenda with the SDGs	18
COLLEGE OF DISTANCE EDUCATION.....	19
Description of the College	19
Research Partnerships	19

Research Focus	19
Relationship of CoDE’s Research Agenda with the SDGs	20
COLLEGE OF EDUCATION STUDIES	21
Description of the College	21
Research Focus	21
Relationship of CES’ Research Agenda with the SDGs.....	21
Faculty of Educational Foundations	21
Description	21
Faculty Thematic Research Areas.....	22
Relationship of School’s Research Agenda with the SDGs	24
Description	24
Faculty Research Thematic Areas.....	24
Faculty of Science and Technology Education.....	26
Description	26
School Research Thematic Areas	26
School of Educational Development and Outreach	27
Description	27
School Research Thematic Areas	27
COLLEGE OF HEALTH AND ALLIED SCIENCES.....	30
Description of the College	30
Research Partnership.....	30
Research Focus	30
Relationship of CoHAS’ Research Agenda with the SDGs	30
School of Medical Sciences	31
Description	31
Research Partnerships and Collaborations	31
School Research Thematic Areas	32
School of Allied Health Sciences	35
Description	35
Research Partnerships and Collaborations	35
School Research Thematic Areas	35
Relationship of School’s Research Agenda with the SDGs	36
School of Nursing and Midwifery	36
Description	36
Research Partnership and Collaborations	37
School Research Thematic Areas	37
Relationship of School’s Research Agenda with the SDGs	38
COLLEGE OF HUMANITIES AND LEGAL STUDIES.....	39
Description of the College	39
Research Focus	39
Faculty of Arts	39
Description	39
Research Partnerships and Collaborations	39
Research Areas.....	40
Relationship of Faculty’s Research Agenda with the SDGs.....	42

Faculty of Law	43
Description	43
Partnerships and Collaborations	43
Faculty Research Thematic Areas.....	43
Relationship of Faculty’s Research Agenda with the SDGs.....	44
Faculty of Social Sciences	44
Description	44
Research Partnerships and Collaborations	45
Faculty Research Thematic Areas.....	45
Relationship of Faculty’s Research Agenda with the SDGs.....	46
School of Business	46
Description	46
School Research Thematic Areas	46

LIST OF ACRONYMS

CANS	College of Agriculture and Natural Sciences
CES	College of Education Studies
CHLS	College of Humanities and Legal Studies
CoDE	College of Distance Education
CoHAS	College of Health and Allied Sciences
DRIC	Director of Research, Innovation and Consultancy
GHS	Ghana Health Service
ICT	Information and Communication Technology
IEPA	Institute for Educational Planning and Administration
MOH	Ministry of Health
NACP	National HIV/AIDS Control Programme
SDGs	Sustainable Development Goals
UCC	University of Cape Coast
USAID	United State Agency for International Development
WHO	World Health Organisation

RESEARCH AGENDA (2018-2022)

Education and Environment for Sustainable Development

INTRODUCTION

Cognisant of the importance and impact of research agenda on an institution, the Directorate of Research, Innovation and Consultancy (DRIC) under the auspices of the Office of the Vice Chancellor of UCC, per a letter dated 15th January, 2018, referenced DRIC/V/1/V.1/91, constituted an *Ad hoc* Committee to develop a Research Agenda for the period 2018-2022, as the maiden one expired at the end of December 2017.

MEMBERSHIP OF THE COMMITTEE

The Deputy Director of DRIC, Prof. Frederick Ato Armah, was appointed as Chairperson/Convener and also representative of the College of Agriculture and Natural Sciences (CANS).

Other members of the *Ad hoc* Committee included:

- Prof. Emmanuel Kofi Gyimah - College of Distance Education (CoDE)
- Prof. (Mrs.) Christine Adu-Yeboah - College of Education Studies (CES)
- Prof. Joseph Benjamin A. Afful - College of Humanities and Legal Studies (CHLS)
- Dr. (Mrs.) Dorcas Obiri-Yeboah - College of Health and Allied Sciences (CoHAS)
- Mr. Nasir Yaqub Entsie - Asst. Registrar, Pro-Vice Chancellor's Office - *Secretary*

TERMS OF REFERENCE

The Committee was required to:

1. Document publications (books, journal articles, book chapters, position statements and policy briefs) that emanated from the 2012 – 2017 Research Agenda;
2. Document the broad focus of current research in the Faculties/Schools; and
3. Develop an agenda for research for the University for the period 2018-2022.

MEETINGS HELD

The Committee held six (6) meetings as follows:

- 30th January, 2018
- 6th February, 2018
- 7th February, 2018
- 28th February, 2018
- 14th March, 2018
- 2nd May, 2018

MODUS OPERANDI

The Committee sets out to do its work by soliciting inputs from Colleges, Faculties/Schools, Departments and Senior Members in the University to enable it prepare the new Research Agenda (**Research Agenda 2018 - 2022**).

Processes of Defining the Research Agenda

The Committee adopted the following processes to facilitate the discharge of their terms of reference:

- Meeting with Deans and Provosts to introduce the Committee and its activities, share proposed processes of defining the research agenda, and solicit inputs that would help to define the research themes at the various Departments, Schools/Faculties and Colleges
- Co-opting other members at the Faculty/School level to assist the Committee in the solicitation of inputs, synthesis of research areas of faculty members within the department, and development of departmental or sub-themes for defining the University's Research Agenda
- Involving Heads of Department in the acquisition of information from colleagues for the University's Research Agenda. It was anticipated that this will ensure ownership, and by extension, effective implementation
- Relying on actual interaction with faculty members instead of using curriculum vitae of colleagues and research compilations in the Vice Chancellor's Annual Report
- Adopting bottom-up approach to define the research agenda, having in mind the world development agenda to enhance the University's chances of winning international research grants
- Regularly updating Provosts and Deans on the Committee's activities through the College Representatives
- Sending a letter through the College Representatives to request their members to submit their list of publications (books, journal articles, book chapters, position statements and policy briefs), research areas and research grants
- Sharing of draft composite report with College and Faculty/School representatives for comments and inputs

Timelines

The Committee agreed on the following timelines:

- Communication of names of Faculty/School representatives to DRIC - As early as possible
- Meeting with Provosts and Deans - 6th and 7th February, 2018
- Communication on the focal persons from Provosts and Deans to their respective staff/Request from College Representatives for research areas - 1 week (6th and 7th February, 2018)
- Receipt of first set of compilation - 14th February, 2018
- Reminder on release of information - 16th February, 2018

- College and Faculty/School level synthesis of research areas - 19th to 23rd February, 2018
- Meeting to discuss the various College and Faculty/School research themes - 27th and/or 28th February, 2018 at the School of Business Guesthouse Conference Room, UCC

Co-opted Members

The following members were co-opted to assist the Committee's work:

- Prof. Samuel K. Annim - Director, DRIC - Ex-Officio Member
- Mrs. Millicent A. Aning-Agyei - Asst. Research Fellow, DRIC - Co-opted Member

The co-opted members at the Faculty/School level to assist the Committee are as follows:

- Prof. De-Valera N. Y. M. Botchway - CHLS - Faculty of Arts
- Prof. Daniel Agyapong - CHLS - School of Business
- Dr. Andreas Yalley - CHLS - School of Business
- Dr. Simon Mariwah - CHLS - Faculty of Social Sciences
- Dr. Kwadwo A. Tuffour - CHLS - Faculty of Law
- Dr. Adedza K. Amegah - CoHAS - School of Health Allied Sciences
- Dr. Samuel Kyei - CoHAS - School of Health Allied Sciences
- Dr. Evelyn Anane-Sarpong - CoHAS - School of Medical Sciences
- Dr. Andrews A. Druye - CoHAS - School of Nursing and Midwifery
- Dr. Kenneth Adu-Gyamfi - CES - Faculty of Sci. and Technology Education
- Dr. Thomas Hormenu - CES - Faculty of Sci. and Technology Education
- Mr. Isaac Attah Kwenin - CES - Faculty of Humanities and Soc. Sci. Educ.
- Dr. Alfred Ampah-Mensah - CES - School of Educational Dev. and Outreach
- Dr. Mumuni Thompson - CES - Faculty of Educational Foundation
- Dr. Martin Bosompem - CANS - School of Agriculture
- Dr. Emmanuel Acheampong - CANS - School of Biological Sciences
- Dr. John Bentum - CANS - School of Physical Sciences
- Dr. Ing. Samuel Tulashie - CANS - School of Physical Sciences

CHALLENGES IN DEFINING THE RESEARCH AGENDA

The Committee faced the following challenges in their mandate to define the University's research agenda:

- Difficulty in obtaining data/information from faculty members for the research agenda, as some were unwilling to release the requested information
- The performance of some of the representatives at the Faculty/School level was below expectation
- Based on feedback from the previous process of defining the Research Agenda, both bottom-up and top-down approaches were adopted. However, there were some disagreements regarding how this should be operationalized.

IMPLEMENTATION, MONITORING AND EVALUATION OF THE RESEARCH AGENDA

To get all stakeholders, including faculty members informed and interested in the University's new research agenda, it is proposed that the research agenda (2018-2022) should be circulated to all staff of UCC through email; launched; uploaded on the UCC website; printed for circulation; kept at the Documentation and Information Section for information archiving; and circulated through sensitisation workshops. Applications or requests for the UCC conference grants will be highly favoured, if the research aligns with the University's Research Agenda.

The implementation, monitoring and evaluation of the research agenda will take up some resources in terms of finance and time. It is expected that UCC will bear the cost of the monitoring and evaluation of the research agenda. The cost will include the printing of hard copies of the research agenda and logistics for evaluation. The implementation, monitoring and evaluation of the research agenda will, however, be undertaken by DRIC and duty bearers. It is again proposed that the University officially mandates its Heads of Department to monitor the activities of faculty members and their respective Departments in line with the Research Agenda and report to their respective Deans and Provosts for subsequent reporting to DRIC.

Indicators for monitoring the research agenda include, but are not limited to, signed Memoranda of Understanding, seminars, conferences, publications, research and grant applications, and research collaborations related to the research agenda.

CONCLUSION

Undoubtedly, research is essential for the achievement of local, national and international goals for development. Universities have a major stake in this endeavour. UCC has formulated this research agenda to give expression to its commitment to undertaking cutting-edge research that is responsive to national and supranational development goals. It is anticipated that this will situate UCC as a university that delivers on its mandate of research excellence and societal relevance. With effective implementation, the UCC research agenda for the period 2018-2022 will not only contribute to both national and global agenda, but also to the University's visibility and relevance.

RECOMMENDATIONS

The following recommendations are made for the University's consideration in defining its future research agenda:

- The *Ad hoc* Committee to develop subsequent Research Agenda for the University should be constituted at least three (3) months before the expiration of the existing one to enable the new one to take effect as soon as the existing one expires

- Evaluation of yet-to-expire Research Agenda should be conducted before a new Agenda is set to monitor its implementation and impact
- Monitoring and evaluation of the implementation of the Research Agenda should be done by all Deans annually and reported to the Vice Chancellor through DRIC. This is necessary to track progress and address lapses as they evolve
- In nominating representatives for the Faculty/School level, Deans should consult Provosts to ensure harmony in the process

Members of the Committee are grateful to the University Management for the confidence reposed in them and the privilege to serve the University.

Prof. Frederick Ato Armah	Convener/Chairperson
Prof. Joseph Benjamin A. Afful	Member
Prof. Emmanuel Kofi Gyimah	Member
Prof. (Mrs.) Christine Adu-Yeboah	Member
Dr. (Mrs.) Dorcas Obiri-Yeboah	Member
Mr. Nasir Yaqub Entsie	Secretary

RESEARCH AGENDA FOR THE UNIVERSITY OF CAPE COAST

Context

Universities, through their extensive research capabilities and activities, have a critical role in providing the necessary knowledge, evidence-base, solutions and innovations. This suggests that universities occupy a unique position within society. Lately, universities are increasingly re-thinking their role in the twenty-first century and looking to be equally more responsive to societal needs and to become agents of change towards solving global challenges. With a broad emphasis on the creation and dissemination of knowledge, universities have long been powerful drivers of global, national and local innovation, economic development, and societal wellbeing. UCC intends to embrace this mandate by defining a research agenda which resonates with national and supranational objectives. The UCC Research Agenda traces the outline of research activities and interests in departments, schools, and colleges across the University. It is a blueprint of how our research work fits seamlessly with the broader vision of UCC and national development trajectory. The UCC Research Agenda also underscores the need for interdisciplinary collaboration within and with our external partners in our collective bid to comprehensively address the Sustainable Development Goals (SDGs).

The SDGs cover a wide range of complex social, economic, and environmental challenges that are evident, especially in sub-Saharan Africa. Addressing them will require transformations in how our societies and economies function and how we interact with our planet. In this context, education, research, innovation and leadership will be essential in helping us address these challenges. UCC and allied institutions, with an extensive mandate around the creation and dissemination of knowledge and a unique position within society, have critical roles to play in the achievement of the SDGs. The benefits that will accrue to UCC in engaging with the SDGs are myriad. It will help UCC to demonstrate its impact and relevance to society, capture demand for SDG-related education, build new partnerships, access new funding streams, and define UCC as a university that is responsible and globally aware.

It is obvious that faculty in various departments within UCC are addressing different goals and targets under the SDGs. For this reason, analysis of inter-linkages between SDGs and our research agenda can be relevant and useful to UCC in a number of ways. First, it is an important area of research where UCC can provide significant support to policy makers trying to identify the best policy pathways for achieving the SDGs. Second, it can help UCC identify key connections across disciplines and initiate impactful interdisciplinary research projects that investigate topics from many perspectives. Next, it provides impetus for UCC to position sustainability as a central concept in most of the key competencies of education we deliver – including systems thinking, anticipatory competencies, and integrated problem-solving. Furthermore, it can assist UCC to identify potential trade-offs and co-benefits of implementing particular SDGs within our operations, which can help prioritise actions with the most positive benefits. In addition to the foregoing, analysis of inter-linkages between our Research Agenda and the SDGs can help UCC to identify and amplify the broader/downstream co-benefits of major university projects – including research and

operational projects – as well as assessing and mitigating potential negative impacts. Finally, it can assist UCC to bridge different areas of the university – particularly research, teaching and operations – for example, through the ‘living labs’ and ‘social labs’ concepts.

For the next five years (2018-2022), UCC adopts the following theme to guide its research endeavours: *Education and Environment for Sustainable Development*.

Operationalizing the Research Agenda

The Research Agenda – Education and Environment for Sustainable Development – though succinct, is encompassing from an interpretational perspective. Each of the three key issues, namely Education, Environment and Sustainable Development, is operationalized in a manner that offers a wide scoping opportunity for faculty in UCC to engage in research that has transdisciplinary (transcends intradisciplinarity to achieve convergence on knowledge frameworks) orientation.

From a broader perspective, *Education* is operationalized to mean: the extent and variability in the levels of information that is available and being used to achieve an outcome; body of knowledge acquired over time; process of receiving or giving systematic instruction; utilisation and quality. In this research agenda, the term *Environment* in the overall research theme is used in the broadest sense – physical, cultural, biological, social, economic and political, suggesting that these dimensions are intrinsically and inextricably linked. Environment is also conceptualized in an encompassing manner to mean: the systems, conditions, institutions, structures (context) within which survival takes place; and the effect of nature on human activity. Sustainable Development, in the context of UCC’s Research Agenda, places priority on the tenets of the following development frameworks: Ghana’s 2017 Seven-Year National Development Plan, themed “The Agenda for Jobs: Creating Prosperity and Equal Opportunity for All”; the 2014 Africa Agenda 2063, dubbed “The Africa We Want”; and the United Nation’s globally agreed upon SDGs, formally named as “Transforming our World: the 2030 Agenda for Sustainable Development”. Further to these national, regional and global development goals, targets and indicators, UCC’s 2018-2022 research engagement relating to *Education* and *Environment*, as operationalized, will be amenable to all other issues that affect the wellbeing of the current generation and do not compromise the abilities and capabilities of future generations to meet their own needs.

This report presents the specific research themes of all Colleges, Faculties/Schools and Departments based on the university-wide Research Agenda. The specific research themes provide direction on how UCC, through research, will contribute to the achievement of national, regional and international development goals.

COLLEGE OF AGRICULTURE AND NATURAL SCIENCES

Description of the College

The College of Agriculture and Natural Sciences (CANS) is one of the five Colleges of UCC. It was established on August 1, 2014 and comprises three Schools, namely the School of Agriculture, School of Biological Sciences, and School of Physical Sciences.

Research Partnerships

The research partners of the College are as follows:

International

1. Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)
2. United State Agency for International Development (USAID)
3. Sasakawa Africa
4. United States Department of Agriculture (USDA)
5. Department of Food Science and Nutrition, Makerere University, Uganda
6. West African Agricultural Productivity Programme
7. University of Rhode Island
8. University of Dublin
9. Birdlife International
10. University of Copenhagen
11. University of Nairobi, Kenya
12. University of Dar es Salaam
13. Norwegian Institute of Bioeconomy, Norway
14. British West for Ornithology, UK
15. Lund Institute of Technology, Sweden
16. Mid Infrared Technology for Health and Environment (Mirth), Princeton University

National

17. Ministry of Food and Agriculture (MOFA)
18. Ministry of Fisheries and Aquaculture Development (MoFaD)
19. Ghana Atomic Energy Commission (GAEC)
20. National Bee Keeping Association of Ghana
21. Council for Scientific and Industrial Research (CSIR)
22. Animal Care and Use in Research, Education Testing (ACURET)

Research Focus

The College research theme is *Climate Change, Food Security, Nanotechnology and Environmental Research for Sustainable Development*. Specifically, the College is interested in the following research areas under its Schools:

School of Physical Sciences

- Application of different surface modification schemes to study the adsorption characteristics and the surface properties of these nanoadsorbents
- Applications of nanotechnology to remediation of pollutants such as chlorinated organic compounds, heavy metals and other inorganics from both produced water and other industrial wastewater effluents
- Applying Nanotubes in local building materials to improve their tensile and elastic strength
- Development of Soft Computing Techniques such as Swarm Intelligence, Genetic Algorithms and Cellular Automata
- Environmental Analysis and Remediation
- Environmental Risk Impact Assessment and Monitoring
- Fullerene Nanotechnology and Molecular Machines
- Homogenisation Theory
- Laser in the areas of Agriculture, Biological Systems and Environmental Issues and Communication
- Lasers and Optics in General and their Applications in Industry, Biology, Agriculture and Environmental Science
- Mathematical Modelling
- Nanocomputers – Computing Devices at Atomic Scaleting Devices in the Atomic Scale
- New Antimicrobial Agents from Natural Products
- Organic Synthesis using Natural Products
- Statistical Modelling
- Statistics
- Synthesis and Characterisation of the Physical and Chemical Properties of nanoadsorbents
- Theoretical Study of Nanostructures such as Super Lattice Carbon Nanotissuises, Grapheme Superlattice, Quantum Wires and Quantum Dots and Applying them to solve Local Problem
- Ultrasound Image Registration for Breast Cancer Diagnosis
- Water Treatment
- Web 2.0 Technologies and Applications in Teaching, Learning and Training Activities

School of Biological Sciences

- Aquaculture
- Benthic Ecology
- Biochemical Pharmacology and Toxicology of Natural Products
- Biochemical Studies on Natural Cocoa Powder
- Climate Change and Fisheries Management
- Conservation
- Conservation of Stingless Bees
- Crop Drought Tolerance

- Diversity of Amphibians in the Kakum National Park
- Ecology of Butterflies and Snail Production as well as Taxonomy
- Environmental Impact Assessment
- Fisheries Science
- Forest Ecology
- Fungal Biodiversity
- Genetic Diversity of Cultivars
- Insect Pollinators
- Lagoon and Estuarine Studies
- Management and Utilisation of Wildlife
- Mangrove Ecology
- Microbial Studies on Water Bodies and Biosphere Reserves
- Mining Issues
- Nutritional Qualities of Fermented Cereals and Legumes
- Plant Science
- Pollution and Solid Waste Management
- Population Ecology of Cereal Stem Boring Pests
- Risk Assessment of Heavy Metals
- Seashore Ecology
- Soil Ecology

School of Agriculture

- Animal Health and Diseases Control Practices in Ghana
- Biochar Production and Applications for Soil Fertility Management
- Climate Change and Crop Production
- Climate Change and Crops
- Climate Change and Food Security
- Crop Growth Models in Simulation Studies
- Deficit Irrigation Studies
- Developing Management Strategies for Existing Pests/Diseases
- Drying of Tropical Fruits in Ghana and Biomass Conversion for Energy and Nutrient Recovery
- Effect of Unconventional Feed Ingredients on Carcass Characteristics of Livestock
- Efficiency and Agricultural Markets
- Gender and Youth Issues in Entrepreneurship Extension Innovations and Community Development Strategies
- Green House Gas Emissions and Climate Mitigation
- Greenhouse Gas Emissions and Climate Mitigation Strategies
- Integrated Soil Fertility Management Approaches
- Management of Valley Bottom Soils
- Marketing of Guinea Fowl in Ghana
- Non-Governmental Organisation Development
- Preventing Pest/Diseases Outbreaks

- Re-vegetation of Degraded Mined Soils
- Remediation of Contaminated Soils
- Soil Health Related Issues
- Soil Nutrient Cycling Monitoring
- Soil Variability Assessment Using Geostatistical tools
- Use of Naturally-Available Ingredients in place of Inorganic Additives in Meat Products
- Use of Non-Meat Fat to Improve Beef Products
- Value Chain Development
- Water Management in Irrigation and Valley Bottom Schemes
- Water Table Control for Crop Production

Relationship of CANS' Research Agenda with the SDGs

Most of the research areas of the CANS are in line with the SDGs with several of the goals being translated into national legislation and policies during implementation.

The SDGs are action – oriented goals, global in nature and universally applicable which take into account national realities, capacities and levels of development in respect of all disciplines. As a result, the goals relating to the Natural Sciences are localised in their implementation from various research perspectives.

School of Physical Sciences

Description

The School of Physical Sciences, which was carved out of the then Faculty of Science in the 2006/2007 academic year, has tried for the past years to improve in terms of helping staff and students to increase their research output and capacity building. The School consists of six (6) academic departments with 15 undergraduate and four (4) postgraduate programmes of study. The academic departments are the Department of Chemistry, Department of Physics, Department of Mathematics, Department of Statistics, Department of Laboratory Technology, and Department of Computer Science and Information Technology. There are also four (4) specialised units which are Glassblowing Unit, Electronics Unit, Science Workshop, and Laser and Fibre Optic Centre (LAFOC) as a research unit. The broad theme of the School of Physical Sciences is *Nanotechnology for Sustainable Development*.

School Research Thematic Areas

1. *Environmental Pollution and Remediation*
 - a. Assessment and Management of Electrical and Electronic Waste
 - b. Environmental and Human Health Risk Assessment
 - c. Nanotechnology for environmental and natural resource management
 - d. Produced Water Treatment (Petroleum Extraction)
 - e. Water, Sanitation and Hygiene (WASH)
 - f. Xenobiotics in environmental media and biota

2. *Modelling and Systems Analysis*
 - a. Climate and atmospheric modelling
 - b. Computational Chemistry and Natural product development
 - c. Infectious and Chronic Disease Modelling
 - d. Multivariate Statistical Analysis and Modelling
3. *Biochemicals of Commercial Value*
 - a. Natural Product Synthesis and Modification
 - b. Renewable Energy
 - c. Vegetable Oils
4. *Food Security, Safety and Nutrition*
 - a. Food nutrient evaluation
 - b. Food Safety and Hygiene
 - c. Physical Methods for Crop and Animal Disease Control and Management
5. *Science, Technology, Engineering and Mathematics (STEM) Education*
 - a. Information and Communication Technology (ICT) Education
 - b. Pedagogy in Science and Mathematics Education

School of Biological Sciences

Description

The School of Biological Sciences (SBS) is one of the three Schools under CANS of UCC. The School is unique and offers programmes reflecting the integration of many disciplines from organismal biology to structural, cellular and molecular biology. The School operates with the conviction that understanding organisms at the level of organ systems remains relevant to scientists in the 21st Century. Such an approach is harmonised with research by academic staff at the smallest scale in structural biology to illuminate the molecular processes taking place in cells. The School also provides education and training necessary to identify threatened plants and animal species; evaluate ecosystems and ecological processes and develop appropriate measures to mitigate effects of particular threats to the environment, biogeochemical cycles, biodiversity and human life.

Research Partnerships and Collaborations

The School has forged extensive teaching and research partnerships with both local and international organisations. The partners of the School include the following:

International

1. Governing Body of the International Treaty on plant Genetic Resources for Food and Agriculture (ITPGRFA)
2. University of Rhode Island
3. United States Agency for International Development (USAID)
4. University of Cordoba, Spain
5. University of Lincoln, United Kingdom
6. Liverpool School of Tropical Medicine, United Kingdom
7. Gujarat Forensic Sciences, India

8. Norwegian University of Science and Technology
9. Copenhagen Business Academy
10. A.P. Leventis Ornithological Research Institute (APLORI) of the University of Jos, Nigeria

National

11. Skills Development Fund (SDF) of the Council for Technical and Vocational Education and Training (COTVET)
12. Ghana Police Service
13. Zeal Environmental Technologies, Ghana Ltd.

School Research Thematic Areas

The broad theme of the School of Biological Sciences is ***Harnessing the Potential of the Life Sciences for Sustainable Development***. There are five broad thematic research areas of the School of Biological Sciences:

1. *Food Security, Nutrition and Bioresource Technology*
 - a. Harnessing and application of microbial genetics to control food poisoning and for food processing (yoghurt, mushroom, cereal)
 - b. Improved crop varieties (disease and drought resistance)
 - c. Pest control (fruit fly)
2. *Diseases and Phytopotentials*
 - a. Herbal candidates (analgesic, antipyretic, anti-diuretic)
 - b. Vectors, parasites and anti-parasitic agents for infectious diseases; non-communicable diseases.
3. *Biodiversity Interactions and Conservation*
 - a. Alternative livelihoods (Non-Timber Forest Products, bio-entrepreneurship, ecotourism)
 - b. Ecological interactions
 - c. Ecosystem services (pollination)
4. *Environment and Health*
 - a. Environmental factors on the distribution and abundance of mosquitoes;
 - b. Environmental pollution and remediation
 - c. Genetic mapping of insecticide resistance mosquitoes
 - d. Insecticide and antimicrobial resistance
5. *Climate Change: Natural and Human Dimensions*
 - a. Climate modelling, Adaptation and Mitigation
 - b. Ecosystem governance and livelihoods
 - c. Fisheries governance and coastal management

These five broad research themes will be operationalized across the six departments in the School of Biological Sciences. In particular, the sensitivity of key biological organisms to climate-induced factors and anthropogenic forces will be quantified; innovative predictive management tools and strategies to resolve ecosystem response to both uncontrolled (e.g. climate) and difficult to control factors (e.g. soil erosion, pollution), and resource extraction (e.g. fisheries, mining) will be developed. The themes will also be implemented through the

development of appropriate technologies and innovative strategies for the utilisation of biological resources and the transfer of knowledge to the communities that are intrinsically linked to the university.

Department of Molecular Biology and Biotechnology

The main themes of research output in the Department are related to: Crop drought tolerance, fungal biodiversity, genetic diversity of cultivars, microbial studies on water bodies and biosphere reserves.

Department of Environmental Science

The Research thematic areas of the Department are the following: Climate change, soil ecology, plant science, forest ecology, mining issues, systems analysis and environmental impact assessment. Others include risk assessment of heavy metals and human health, studies on pollution (air, water, and soil) and solid waste management.

Department of Conservation Biology and Entomology

The Research thematic areas of the Department are the following: Conservation; management and utilisation of wildlife; conservation of stingless bees, insect pollinators; diversity of amphibians in the Kakum National Park; ecology of butterflies and snail production as well as taxonomy and population ecology of cereal stem boring pests.

Department of Fisheries and Aquatic Sciences

The Research activities in this Department cover seven (7) thematic areas:

1. Analysis of value chains of fish trade
2. Aquaculture development
3. Biodiversity and health of coastal ecosystems
4. Data management for fisheries development
5. Fisheries stock assessment and management
6. Integrated coastal zone governance and management
7. Shellfish of commercial value

Department of Biochemistry

Research in this Department has focused on bioprospecting for novel enzymes and bioactive compounds from plants, toxicology, metabolic disorders, biochemical pharmacology, studies on autoimmune diseases and the development of food ingredients.

Department of Forensic Sciences

Research activities of the Department emphasise on improving national security and justice delivery. Specific research interests include the use of DNA evidence in the adjudication of criminal cases, documentation of novel psychoactive substances and illegal fishing methods used to catch and preserve fish.

In order to ensure the full implementation of the overall research agenda for the School of Biological Sciences, the six departments have developed sub-themes out of the broad research agenda outlined as follows:

Department of Molecular Biology and Biotechnology

1. Exploitation of fungal biodiversity, traditional knowledge and diversity for sustainable development
2. Exploitation of genetic diversity among cereals (millet, sorghum and maize) for development of elite high-yielding cultivars adapted to the savannah agro-ecological zones of the three northern regions in Ghana
3. Facilitation of crop development and propagation using plant micro-propagation and biotechnology techniques
4. Identification, selection and breeding of cowpea for drought tolerance and *Striga* resistance

Department of Environmental Science

1. Impact of oil and gas exploration and exploitation of biodiversity
2. Impacts of climate change on natural ecosystems and livelihoods
3. Integrated assessment of biogeochemical cycles in the anthropocene
4. Restoration, remediation and enhancement of ecosystems

Department of Conservation Biology and Entomology

1. Biodiversity conservation
2. Physiology, ecology and management of insects of socio-economic importance
3. Pollination services on selected crops
4. Wildlife management, conservation and utilisation

Department of Fisheries and Aquatic Sciences

1. Aquaculture for food security in the context of climate change
2. Climate change and sustainable fisheries production
3. Climate change vulnerability assessment and coastal adaptation planning
4. Oil and gas exploitation and biodiversity threats assessment
5. Wetlands management and biodiversity conservation

Department of Biochemistry

1. Biochemical pharmacology and toxicology of natural products
2. Biochemical studies on natural cocoa powder
3. Nutritional qualities of fermented cereals and legumes

Department of Forensic Sciences

1. Analytical detection of new biomarkers of doping agents
2. Genome-based diagnostics for mapping, monitoring and management of insecticide resistance in major African malaria vectors
3. Landscape genetics in the control of *Anopheles gambiae*

4. Presumptive testing and chiral profiling of novel illicit drugs for inclusion in the forensic analysis toolkit
5. Use of DNA evidence in the adjudication of criminal cases in Ghana

Relationship of School's Research Agenda with the SDGs

The five research themes are consistent with the strategic plan of UCC, medium to long-term goals at the national level and the United Nations SDGs. Food Security, Nutrition and Bio-resource Technology is directly linked to ten of the Sustainable Development Goals, namely SDGs 1, 2, 3, 6, 7, 9, 12, 13, 14 and 15. Diseases and Phytopotentials are closely related to SDGs 1, 3, 4, 6, 10, 11, 13, 14 and 15. Biodiversity Interactions and Conservation are inextricably connected to 1, 2, 3, 7, 9, 12, 13, 14 and 15. The research theme on Environment and Health is linked to almost all the SDGs, namely SDGs 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16 and 17. The Human and Natural Dimensions of Climate Change strongly align with SDGs 1, 2, 3, 6, 7, 11, 12, 13, 14, 15 and 16.

School of Agriculture

Description

The School of Agriculture was set up in 1975 with the initial responsibility of training graduates to teach agriculture in the educational system of the country at the pre-university level. The School has, since its inception, undisputedly identified itself with this primary role. In addition to this role, the School is playing several roles and has made modest achievements in all sectors. The School functions in its teaching, research and extension activities through five departments and three specialised units. The Departments are: Agricultural Economics and Extension, Agricultural Engineering, Animal Science, Crop Science, and Soil Science. The specialised supporting units are the Teaching and Research Farm, Technology Village and Meat Processing Unit.

Research Partnerships and Collaborations

International

1. University of Agriculture, Krakow
2. National Agricultural Research and Innovation Centre (NAIK)
3. SZENT ISTVAN University (SZIU), Hungary
4. Free University of Bozen-Bolzano, Italy

National

5. Ministry of Food and Agriculture
6. Training Colleges (Kwadaso, Ohawu in the Volta Region and Pong, Tamale)
7. Centre for Scientific and Industrial Research (Crop Research Institute, Soil Research Institute, Plant Genetic Resource Research Institute and Food Research Institute)
8. Major Courage Quashigah Foundation

School Thematic Research Areas

The broad theme of the School of Agriculture is ***Climate Change, Food Security and Sustainable Agricultural Development***. The research areas of the five (5) departments in the School of Agriculture are:

Department of Agricultural Engineering

The research area of the Department is solutions to food security and climate change through Water and soil engineering, Agro-processing, farm structure and design.

Department of Crop Science

The Department focuses on climate change and crop production for sustainable development.

Department of Agricultural Economics and Extension

The Department is currently pursuing research agenda in the area of agricultural economics, agribusiness, agricultural extension and Non-Governmental Organisations and other Non-profits organisations studies and management.

Department of Animal Science

The research areas are Livestock development and improvement for food security, as well as the use of non-conventional feedstuff in livestock, Local livestock conservation and improvement, meat science and Ethno veterinary medicine and livestock disease control and prevention.

Department of Soil Science

The areas of research are managing soil resources for sustainable crop production and the environment sustainability

The following are research focus of the five Departments in the School for the next five years (2018-2022):

Department of Agricultural Economics and Extension

1. Agricultural markets, risk and price analysis
2. Agricultural value chains and agribusiness innovation development
3. Education and training of stakeholders (AEAs, Farmers, Researchers) on sustainable agricultural programmes for agricultural development
4. Effect of climate change variables on agricultural productivity and efficiency analysis
5. Information and communication for agricultural and community development
6. Non-profit management for sustainable partnerships for development

Department of Agricultural Engineering

1. Climate change and water availability
2. Water table control as a climate change mitigation strategy
3. Water conservation through deficit irrigation
4. Agro-processing under a changing climate
5. Animal housing designs

6. Design of appropriate storage structure
7. Utilisation of farm waste

Department of Soil Science

1. Integrated soil fertility management
2. Mitigation of greenhouse emissions from fertilised soils
3. Organic agriculture issues
4. Remediation of contaminated soils and Re-vegetation of degraded mined soils
5. Soil quality and soil health
6. Soil variability and heterogeneity assessment

Department of Crop Science

1. Climate change and crops and pest and disease outbreaks/resurgence
2. Develop and Identify crop varieties capable of increasing carbon sequestration and determine best way of cropping to reduce CO₂ concentration in the atmosphere
3. Develop varieties of crop tolerant to variable weather conditions
4. Forecast crop production and pest/disease outbreaks for the next 30 years as influenced by climate change
5. Tracer studies on climate, crop production and pest/disease outbreak patterns

Department of Animal Science

1. Animal health needs assessment and improvement
2. Animal products and food safety standards
3. Animal welfare practices in Ghana
4. Climate change and feed availability for animal production in Ghana
5. Livestock development and improvement for increased food security
6. Small ruminant housing and feed supplementation

Relationship of School's Research Agenda with the SDGs

Presently, the School has adopted a five-year research theme – ***Climate Change, Food Security and Sustainable Agricultural Development*** – to guide individual and departmental research efforts. The research Agenda of the school is linked with the SDGs numbers 1, 2, 13, and 15. However, the research agenda of the school is directly linked to the **SDG 2** ('End hunger, achieve food security and improved nutrition and promote sustainable agriculture combined efforts') and **SDG 15** (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). It is hoped that the research to be conducted by research teams in the School will aid in the development of measures to curb the negative impact of climate change on agriculture and, therefore, food security.

COLLEGE OF DISTANCE EDUCATION

Description of the College

The College of Distance Education (CoDE) is one of the five colleges in UCC. Currently, it is composed of three (3) departments, namely the Department of Education, Department of Business Studies, and Department of Mathematics and Science. The College has the mandate to train personnel to augment the staff of the Ghana Education Service as well as those of the business and the private sectors of the economy. The College has a student population of about 45,000 spread across the length and breadth of the country, which affords enormous research opportunities for the College. The College has study centres in all the 10 regions of the country. In 2017, the College received a grant of GH¢28,650.00 from DRIC to carry out a study on *Factors Influencing Students' Choice of Programme of Study at College of Distance Education, University of Cape Coast: Curriculum Implications*.

Research Partnerships

The College maintains the following research partnerships:

International

1. European Union (EU)
2. United Kingdom Department for International Development (DFID)
3. Japan International Cooperation Agency (JICA)
4. Global Fund for Children (GFC)
5. Rural and Community Science Centre (RCSC)

National

6. Ghana Education Service
7. Ministry of Education
8. Association of Ghana Industries
9. Other financial and private organisations and entities

Research Focus

The overarching theme of the College is ***Quality Distance Learning for National Development***. The College hopes to vigorously pursue studies that aim at improving access to tertiary education through distance learning. The specific themes can be found in the various departments.

Department of Education

The research theme for the Department is ***Quality Teacher Training for National Development***. Potential areas of research are indicated below:

1. Improving teacher professional development through distance learning
2. Differentiation of curriculum for distance students with special educational needs
3. Study Habits of Distance Learners
4. Human resource development in distance education

5. Use of appropriate instructional strategies in distance learning
6. Factors affecting students' academic performance in distance education
7. Leadership role in distance education
8. Support services for distance learners

Department of Business Studies

The research theme for the Department is ***Strengthening Capacity for Sustainable Enterprise Development***.

Research in the department will focus on the following areas:

1. Enterprise development: The role of informal workers' organisation
2. Assessing the effect of financial education on risk preference and investment behaviour of individual investors
3. An assessment of positioning strategies in business-to-business firms in an emerging economy
4. Tax compliance by small and medium enterprises under the tax-stamp system: A model for boosting taxation in Ghana
5. Developing human capital through distance education: A systematic review

Department of Mathematics and Science

The research theme for the Department is ***Maths, Science and Technology Education for National Development***.

Areas of focus include the following:

1. Instructional technologies in the delivery of mathematics and science programmes by distance
2. Use of computer applications in the teaching-learning activities of science and mathematics
3. Quality issues in the study of mathematics and science by distance mode
4. Application of ICT tools in the teaching and learning of mathematics and science by distance mode

Relationship of CoDE's Research Agenda with the SDGs

In order to achieve SDG 4, the College provides accessible, affordable and equitable quality education in order to ensure inclusive and equitable education and promote lifelong learning opportunities for all.

COLLEGE OF EDUCATION STUDIES

Description of the College

The College of Education Studies (CES) is one of the five Colleges in UCC. After restructuring the Faculty of Education into a two-tier college system for two years ending July, 2016, there was the need for a further restructuring into a three-tier system and this took off on 1st August, 2016. The restructuring has allowed large departments to be broken down into smaller departments, units and centres and those running similar programmes have been put together to form three (3) faculties and one school, namely Faculty of Educational Foundations, Faculty of Humanities and Social Sciences Education, Faculty of Science and Technology Education and School of Educational Development and Outreach. The objective was to improve management, share expertise, use resources efficiently and run academic programmes effectively to meet the rising need for personnel in the education sector in Ghana.

The College plays a leading role in the training of high calibre personnel for Ghanaian educational and research institutions. It adopts a range of theoretical, methodological and inter-disciplinary approaches to the provision of high quality programmes of education, training and consultancy for its key constituents locally, nationally and internationally with the aim of enhancing policy and practice in education.

Research Focus

The research themes of Faculties/School/Departments and academic senior members are summarised in this section, focusing mainly on the initial preparation and continuing professional development of educational practitioners towards accessible, equitable and quality education. The broad research theme for the College is *Improving Teaching and Learning Outcomes for Sustainable Development*.

Relationship of CES' Research Agenda with the SDGs

The academic programmes and research activities of the College attempt to address gender equality (SDG 5); aim at enhancing the quality of education (SDG 4) to result in decent work and economic growth (SDG 8) as well as poverty alleviation (SDG 1). The SDGs 3 is also addressed through the programmes and activities in the field of health, physical education and recreation.

Faculty of Educational Foundations

Description

Over several decades, institutions of higher learning have made substantial strides in an attempt to use evidence-informed insights to promote quality education delivery at the tertiary level. This is significant because one of the development plans of the Government of Ghana that can be gleaned from policy documents such as the Ghana Poverty Reduction

Strategy GPRS (1 and 2) and Ghana Shared Growth Development Agenda (GSGDA) is to expand access and quality education. By extension, this requires the expansion of existing teacher education institutions, the construction of new ones as well as the provision of requisite resources to educate the teeming masses of young people who have the passion to become teachers at the first or second cycle levels of education in Ghana. Moreover, given the significant role teacher education, counselling services and insights psychology provide in all spheres of human endeavour, policy decisions that are largely informed by sound and relevant evidence from research findings tend to promote quality teacher education and social harmony.

In light of this, the Faculty of Educational Foundations was created under the auspices of the College of Education Studies to focus on quality teacher preparation for critical segments of the educational sector and provision of cutting edge counselling, psychological and special needs services for people from all walks of life. In response to the changing trends in the educational landscape within the Ghanaian socio-cultural contexts and across the globe, the Faculty continues to restructure its academic programmes to meet the changing needs and dictates of society. The Faculty has three academic departments (Basic Education, Education and Psychology, and Guidance and Counselling) and two specialised centres, namely the Centre for Child Development, Research and Referral, and the Counselling Centre.

Faculty Thematic Research Areas

A review of faculty members' research works in the last five years reveals that they conducted several studies in their various areas of specialisation and as well cooperated with colleagues from other institutions. Across-department analysis of themes revealed commonalities and differences regarding the research focus of members.

The major themes closely linked to these studies are as follows:

1. Challenges in counselling (death and dying)
2. Community education
3. Counselling services in education
4. Distance education
5. Early childhood curriculum
6. Early childhood pedagogy
7. Emotional intelligence
8. Inclusive education
9. Job stress
10. Language in education policy
11. Mainstreaming disaster reduction
12. Mathematics education
13. Professional practices and counselling
14. Psycho-neurotic disorders
15. Quality assurance
16. Science education
17. Special needs education

18. Teacher preparation for inclusive education
19. Teacher retention in special education
20. Technology education
21. Workplace violence

Department of Education and Psychology

As a proactive and learner-centred department, it continuously reviews its programmes to better serve its numerous stakeholders and to provide improved and better services for children with special needs.

The future research of the Department will focus on the following:

- Basic Education
- Clinical Health Psychology
- Early Childhood Education
- Psychology

Department of Guidance and Counselling

The major research focus of the department is to use research-based evidence to inform teacher preparation, implementation and practices of counselling services that would better serve the individual needs of stakeholders.

The thematic areas of research undertaken by academic staff in the department over the last five years revolved around: counselling services in education, quality assurance, job stress, mainstreaming, disaster risk reduction, workplace violence, challenges of counselling (death and dying), psycho-neurotic disorders and professional practices and counselling.

Future research of the Department will continue to focus on professional practices, counselling services in education, challenges of counselling and quality assurance.

Department of Basic Education

The department's research thrust is to use research findings to inform teacher preparation by taking into account emerging theoretical underpinnings that currently frame early childhood curriculum and other levels of basic education for effective curriculum design and planning which would in turn, inform quality basic education delivery in Ghana. The department has forged a collaborative partnership with the University of South Florida and Auburn University, USA.

Research themes are as follows: Inclusive education, special education, distance education, early childhood curriculum, early childhood pedagogy, emotional intelligence, community education and language in education policy.

The future research agenda of the Department focuses on five thematic areas, inclusive education, early childhood curriculum, early childhood pedagogy, community education and language in education policy.

Relationship of School's Research Agenda with the SDGs

The implementation of quality teacher education programmes, counselling services and insights into issues pertaining to psychology should largely be informed by sound research findings which are in sync with the requirements of donor agencies. Decision-making processes, which are largely informed by research findings, have proven to be the driver of development in all facets of life. The Faculty of Educational Foundations has a major role to play regarding the use research-based evidence to inform policy decisions. It carries out research in areas that will enhance the quality of education (SDG 4) which will result in decent work and economic growth (SDG 8) as well as poverty alleviation (SDG 1).

Faculty of Humanities and Social Sciences Education

Description

The Faculty of Humanities and Social Sciences Education is mainly responsible for the training of high calibre professional teaching and administrative staff for the Ghana Education Service, as well as other sectors of the Ghanaian economy. The academic programmes of the Faculty are constantly undergoing transformation and re-structuring in order to respond to the ever-changing needs and demands of the Ghanaian society.

The Faculty consists of two major departments: Department of Business and Social Sciences Education, and the Department of Arts Education. Owing to the diversity of disciplines in the Faculty, there are varieties in the research work the faculty members engage in, although in some cases the research areas are related. For the Department of Business and Social Sciences Education, the main research theme is: *Improving Curriculum Reform and Implementation*. Whilst the main research theme of the Department of Arts Education is *Improving Curriculum Implementation*, that of the Faculty of Humanities and Social Sciences Education is *Improving Curriculum Reform and Implementation*.

Faculty Research Thematic Areas

The following are the main research themes that the academic staff of the Faculty have engaged in:

1. Assessment practices in education,
2. Curriculum reform, practice and implementation,
3. Improvement of students' academic performance,
4. Instructional practices,
5. Quality of basic education, and
6. Student-teacher preparation and field experience.

Department of Arts Education

The Department of Arts Education is mandated to train teachers in the Liberal Arts subjects. These include: English Language, French Language, History, Religion, Ghanaian Language as well as Music and Dance. The Department also conducts research to support teaching and learning in the Liberal Arts. The thematic areas of research papers produced by the academic staff of the Department are: curriculum implementation, students' academic performance, quality/management and improvement of basic education, gender/girl-child education and performance, implementation of religious and moral education, instructional and assessment practices of Christian religious education, vocational and technical education in Ghana, leadership style and school climate, curriculum practice, history teacher, teacher education/student-teachers' preparation and field experience, as well as examination malpractice.

The Department will continue to promote knowledge in its essential teacher training programmes by focusing on the following areas in research:

1. Curriculum and Instruction
2. English Language Education
3. French Language Education
4. History Education
5. Religious Education

The Department also plans to embark on a research that *traces the performance of the products of the Department of Arts Education on the field.*

Department of Business and Social Sciences Education

The Department of Business and Social Sciences Education provides leadership in the areas of Accounting, Management, Economics and Social Sciences Education through teaching, research and curriculum development. It has, as part of its major goals, the mandate of providing high quality education professionals at both the undergraduate and postgraduate levels in the aforementioned subject areas.

Periodically, the Department undertakes research in the following areas:

1. Accounting Education
2. Curriculum Studies and Teaching
3. Economics Education
4. Management Education

The academic staff of the Department have undertaken research in the following themes: teaching, learning and assessment in geography education, teaching practice/student-teachers' performance in field experience, assessment of economics trainee-teachers' effectiveness, ICT curriculum implementation, head teachers' management style and teacher motivation, as well as curriculum reform. The future research area of the Department will focus on: *Fidelity approach to the implementation of the Senior High School curriculum; and Tracing the performance of the products of the Department of Arts Education on the field.*

Faculty of Science and Technology Education

Description

The Faculty of Science and Technology Education has the mandate of preparing professional teachers in the areas of Science, Mathematics, Health Sciences, Physical Education, Vocational and Technical Education, and Information and Communication Technology. The Faculty envisions to be recognised as the best in Ghana for the training of professional teachers in these areas. Through effective combination of theoretical and practical orientations, with contemporary technology, it produces professionals whose content background is rich and deep and are proficient in teaching, research and practice in their areas of specialisation.

The Faculty consists of four (4) academic departments: namely Departments of Science Education, Mathematics and Information, Communication and Technology Education, Vocational and Technical Education, and Health, Physical Education and Recreation.

School Research Thematic Areas

The research areas of the academic senior members of the Faculty are outlined in accordance with their respective Departments as follows:

Department of Vocational and Technical Education

Broad themes of the research area of the Department are: Improving teaching and Learning of Vocational and Technical Education at all levels of Education; and Making Vocational and Technical Education accessible and attractive to the Ghanaian Child.

The sub areas of research focus are: Challenges of Vocational and Technical Education in Ghana; Family life education, teaching home economics; Teaching management in living at SHS; Teacher preparation in in home economics; Nutrition education; and Fashion designs, garment selection, and seam production.

Department of Health, Physical Education and Recreation

Owing to the diversity of specialty of academic staff in the department, research papers produced in the years under review were specifically focused on: Alignment of Physical Education Teacher Education and Physical Education Curricular of First cycle, Second Cycle and Colleges of Education; Challenges of Physical Education Teacher Education in the era of multiple Modes of Delivery of Teacher Education; Responsiveness of Physical Education Programmes in meeting the Changing Needs of the Society; and Physical Activity and Healthy Lifestyles as precursors of Wellbeing.

The sub areas of research focused on: teacher preparation and development in Physical Education; motivation and discipline in sports; physical activity among students; sports and aggression; assessment in physical education; physical fitness education; sexual harassment in sports; adolescents' health promotion; and school health and nutrition.

Future research of the Department will address issues in:

Physical Education Teacher Education in the era of multiple Modes of Delivery of Teacher Education; Responsiveness of Physical Education Programmes in meeting the Changing Needs of the Society; and Physical Activity and Healthy Lifestyles as precursors of Well being.

Department of Science Education

The DSE has four broad foci of research, namely: Access, Equity, and Quality of Teaching and Learning of Science at the Pre-Tertiary Level; Improving Teaching and Learning of Science at all Levels of Education through Reflective Teaching Practice; Knowledge, Perception and Use of Contraceptives among Teenage Girls; Nurses and Midwives Perception of the Effectiveness of Training at the Nurses and Midwifery Training Colleges.

The Department will continue to research its sub-themes relating to Teaching and Learning of Science and Public Health Science; Integrating Curriculum studies in Science and Public Health Science; Conceptual Change in Scientific Concepts; and Design and Development of Instructional Strategies.

Department of Mathematics and ICT Education

The Department of Mathematics and ICT Education has two broad foci of research areas as: Students' Perception in Pursuing Mathematics at University Level; Students' Perception in Pursuing ICT at University Level; and Tracer Studies on Graduates of Mathematics and ICT.

The sub-areas of the research focus will be: Teaching and Learning of Mathematics and ICT; Curriculum studies in Mathematics and ICT; Design and Development of Instructional Strategies; Teachers' Knowledge for Teaching Mathematics; and Integrating ICT into Teaching and Learning of Mathematics.

School of Educational Development and Outreach

Description

The School of Educational Development and Outreach is the face of the College of Education Studies of the University of Cape Coast outside the University Campus. The School is made up of the Institute of Education, the Institute for Educational Planning and Administration, the Centre for Educational Research, Evaluation and Development, the Centre for Teacher Professional Development and the Centre for Teaching Support. The School is involved in university teaching, outreach programmes in educational planning, leadership, management, administration, teacher education and educational research and evaluation.

School Research Thematic Areas

The broad research focus of the School derives from the research foci of its faculty. These range from educational leadership, management and administration at all levels of education in the country and beyond to educational policy planning and development, pre-service and in-service teacher education, including internship, access, equity and quality education and

complementary basic education.

Institute of Education

The following are the main themes of publications of academics in the Institute of Education:

- Assessment in schools
- Curriculum implementation and instruction
- Didactics in French as a foreign language
- English language/literature education
- Entrepreneurial education
- Higher education
- Leadership/Administration in schools
- Pre-service teacher education, including conventional/residential and alternatives; preparing teachers for inclusive education
- Quality assurance in teacher training
- Science education
- Sociolinguistics and discourse analysis in French
- Teaching primary mathematics
- Technical and vocational education
- Written and oral communication in French

The future research areas for the Institute will be: *Self-esteem of Ghanaian basic school teachers; The current state of teacher education in Ghana; and the differential performance of public and private school students on the Basic Education Certificate Examination (BECE)*

The Institute for Educational Planning and Administration (IEPA)

Researches conducted and published by academics of the Institute for Educational Planning and Administration include:

- Access and quality in pre-tertiary education
- Built environments in the Ghanaian context of basic education
- Curriculum design and implementation: instructional technology/Activity Based Learning
- Curriculum design in polytechnic education
- Educational policy and strategic management
- Educational resource and school improvement planning; efficiency in educational planning
- Educational/school finance and financial management in education
- Educational/School Leadership (administration/management) at the pre-tertiary and tertiary levels
- Higher education: quality assurance, student affairs
- Innovations in education
- International and comparative education

- International service learning
- Language policy for basic education
- School-community relations
- Student internship
- Teacher education/Tertiary teacher development
- Youth Issues, particularly 'NEET' (not in education, employment or training)

The future research areas for the Institute will be: *Placement and utilisation of IEPA graduates in sectors of the Ghanaian economy; Improving leadership and management of basic schools in Komenda-Edina-Eguafo-Abrem (KEEA); and Multi-case study to examine how school administrators adopt instructional leadership*

Centre for Educational Research, Evaluation and Development (CERED)

Academics in the Centre for Educational Research, Evaluation and Development published around the following themes:

- Assessment
- Basic education: quality, access and complementary basic education/out of school/out of reach children
- Community-based school management
- Distance education
- Economics education
- Educational Technology
- Language in education policy
- Science Education
- Teacher education: teaching practice/internship in teacher education

The future research areas for the Centre will be: *Challenges and issues in teacher education; Language, literacy and learning; and Teacher management and quality issues in education.*

COLLEGE OF HEALTH AND ALLIED SCIENCES

Description of the College

The College of Health and Allied Sciences (CoHAS) consists of three schools, namely School of Medical Sciences, School of Nursing and Midwifery and School of Allied Health Sciences. The College aims at producing health professionals who will offer comprehensive care to their communities in line with international standards. In order to achieve this, the schools in the College use innovative teaching and learning methodologies.

The College provides quality interdisciplinary health professional education premised on strong research orientation that makes it a centre of excellence.

Research Partnership

In executing the objective of the College, CoHAS collaborates with many local and international institutions, research centres and industry.

Research Focus

Faculty members of CoHAS adopt the theme *Health, Education and Environment: Addressing Issues and Challenges for Sustainable Development*. Specifically, research conducted by our faculty highlights priority areas such as infectious diseases (e.g. malaria, Tuberculosis, HIV and AIDs, neglected tropical diseases, sexually transmitted diseases), non-communicable diseases, injury, health system, drug development, ocular health and vision science studies. Other areas such as diatherapy and diagnostics are being developed by the faculty.

The College focuses on the following specific research areas:

1. Communicable and non-communicable disease dynamics and control
2. Biochemical and molecular changes in disease processes
3. Maternal, neonatal and child health and nutrition
4. Diatherapy and diagnostics
5. Oncology and innovative surgical techniques
6. Ocular health and vision science
7. Mental health determinants and interventions in African communities
8. Discovery and development of molecules and compounds for disease therapy
9. Electronic records management and cloud computing security
10. Environmental health determinants and interventions

Relationship of CoHAS' Research Agenda with the SDGs

The research themes of the College are directed towards the global objective of promoting health, as enshrined in the 17 SDGs of 2015. Specifically, the Goal 3 “ensure healthy lives and promote wellbeing for all at all ages” and also contribute to the other goals directly or

indirectly. It also supports Ghana's long-term strategic goal of building an equitable, healthy and prosperous nation.

School of Medical Sciences

Description

The School of Medical Sciences currently has seventeen (17) departments running a Bachelor of Medicine and Bachelor of Surgery (MB.ChB.) undergraduate programme and one (1) department running a Master of Philosophy (M.Phil.) programme in Immunity and Infection. The School's clinical faculty also provide postgraduate training for the Ghana and West African Postgraduate Medical Colleges in the clinical postgraduate specialties.

Our academic activities span the various basic and clinical science disciplines necessary to train competent medical doctors of high academic and professional repute. The School has adopted innovative student-centred teaching methodologies that mimic the real world of work situation in delivering its curriculum. These innovative teaching approaches are strongly driven by equally innovative research by faculty members in both the clinical and basic science areas, through partnerships with various governmental and non-governmental bodies at local, national and international levels. To this end, the research focus of faculty cut across communicable and non-communicable diseases of national and international relevance, psychological and mental health, health informatics, bioethics and public health ethics. These themes address a number of the United Nation's SDGs and are in line with the overall objective of the Ghana Government to improve the health of Ghanaians for national development.

The School's Community-Based Experience and Service Programme (COBES), which focuses on rural communities, ensures that our medical students participate, throughout the duration of their training, in the creation of awareness about the importance of good health, good sanitation practices, healthy lifestyles and access to quality health care services, as envisaged in SDGs 3 and 6.

Research Partnerships and Collaborations

The research partnerships and collaborations of the School are as follows:

International

1. United Nations Fund for Population Studies (UNFPA)
2. Geneva Foundation for Medical Education and Research (GFMER)
3. World Health Organisation (WHO)
4. Cerba/La Bio Gene Research Centre, Burkina Faso

National

1. Ministry of Health, Ghana
2. International Society of Gynaecological Pathologists
3. Ghana National AIDS/STI Control Programme

School Research Thematic Areas

The research thematic areas of the various departments under the School are as follows:

Department of Anatomy and Cell Biology

As a core part of the School's Biomedical Sciences Group, the Department primarily focuses on teaching Human Anatomy to young medical students. Members' current research interests include the anatomic basis of sport injuries; bone ossification; inflammation, oxidative stress, and nervous system function; malaria and liver ultrastructure; and non-coding of RNAs (microRNA, circularRNA).

Department of Microbiology and Immunology

The Department of Microbiology and Immunology is made up of members with varied expertise. The research themes of the members focus on microorganisms of clinical and public health relevance, immunology of viral infectious diseases and parasitic infections, Malaria immunogenetics and Public health genomics. These fit well into the SDG 3, Target 3.3; "by 2030, end the epidemic of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water borne diseases and other communicable diseases". Research in the Departments links very well with national, international partners and agencies, including other research laboratories, USAID, WHO, Ministry of Health (MOH), Ghana AIDS commission (GAC), National HIV/AIDS Control Programme (NACP).

Department of Obstetrics and Gynaecology

The Department of Obstetrics and Gynaecology focuses research on thematic areas which will contribute towards the realisation of SDGs 3, targets 3.1-4 and also goal 5 target 5.6 (all these look at maternal and child/adolescent health issues). Thus the research themes in the Department include emergency obstetric care, gynaecological cancer prevention and management, prevention of mother to child transmission of HIV, assisted reproduction and quality improvement strategies to reduce maternal and newborn deaths and family planning. Current and potential partners include MOH, NACP, WHO, USAID and Marie Stopes international Ghana.

Department of Chemical Pathology

Considered a key part of the Laboratory Sciences Group, the Department focuses on the investigation of biochemical and molecular changes that occur as part of disease processes. Its current research focus is on neoplastic breast lesions in black African women; diabetes and cardiovascular disease risk assessment, prevention and mechanism; Prostate Cancer and Hepatology-Hepatitis markers.

Department of Paediatrics and Child Health

The Department of Paediatrics and Child Health collaborates effectively with the Department of Obstetrics and Gynaecology and others in the College. Research themes focus on contributing to the SDGs 2.2, 3.2-3 and 5.6 which focuses on neonatal/child and adolescent health and nutrition. The Departmental research themes include preterm survival in developing countries, sickle cell disease and other haemoglobinopathies in infants, social

determinants of health in children and cost effective community based health systems to reduce child mortality. Current and potential partners include MOH, NACP, WHO, USAID, Global organisation for maternal and child health (Go-MCH), Save the children and Bill and Melinda Gates Foundation's maternal, newborn and child health programme.

Department of Community Medicine

As the sole unit of the SMS Community-Based Sciences category, the Department focuses on contemporary public health issues, leadership, research, and resourcing to improve the health of entire communities. Current research interests include sexual and reproductive health and rights; contraceptive use postpartum; determinants of clinical health outcomes; maternal and child nutrition; bio- and public health ethics; and non-communicable diseases.

Department of Pathology

The Department of Pathology is made up of dynamic clinicians and researchers whose research activities cut across the SDGs 2 and 3. Working with other local and external collaborators, the Departmental research themes focus on gynecological and breast pathology (including oncology), common cancers in Ghana and general autopsy pathology. Potential partners include MOH, WHO, USAID, International pathology societies such as USCAP, IAP, International Society of gynecological pathologists and pharmaceutical companies

Department of Pharmacology

The Pharmacology Department has research themes which include antioxidants and free radicals in health and disease, cellular injury/protection mechanisms, medicinal plant research and drug discovery, neuropharmacology, hepatic, cardiovascular, reproductive, and dermatological pharmacology. These themes aim at contributing to the SDGs 2, 3, and 12 and thus potential and current partners are MOH, NACP, WHO, Foods and Drugs authority.

Department of Haematology

This department was set up as a distinct functional unit of the broader Laboratory Sciences Track of medical training. The main themes of current research by faculty are related to Sickle Cell Disease, Vitamin B12 Deficiency Anaemia, Plasma Cell Myeloma, and Leukaemia.

Department of Physiology

The Department of Physiology collaborates with all other Departments in the College offering a wide research opportunity while the main research themes in the Department focus on environmental toxins and brain development, physical activity and sedentary behaviour, and exercise physiology. These themes support specific targets of SDGs 2 and 3. Potential partners include other research laboratories both local and external, Foods and Drugs authority, WHO, USAID.

Department of Internal Medicine and Therapeutics

The Department primarily delivers the internal medicine content of medical training. It engages in basic, clinical, and community-based research that focus on themes, including

Diabetes Mellitus and cardiovascular risk; renal disease, gastroenterology and hepatology research including fatty liver disease, hepatocellular Carcinoma and Hepatitis C in diabetics. Additional research is intended to look at cerebrovascular disease and cardiac arrhythmias.

Department of Psychological Medicine and Mental Health

The Department of Psychological Medicine and Mental Health conducts research in collaboration with other Departments in the College. The Department aims to contribute to SDGs 3, 4 and 5 by conducting research under the themes; African cultural values, forgiveness, behaviour modification, cognitive rehabilitation, physical and chronic disease coping. Current and potential partners include MOH, NACP, WHO, USAID and foreign faculty partners.

Department of Medical Biochemistry

The Department delivers key aspects of the medical and molecular biochemistry content of training and research. Research areas of interest are in Breast Cancer, Diabetes and drug toxicology. Specific areas include establishing a national breast cancer registry and elucidating molecular biomarkers in breast cancer tumours, role of Malaria in pathogenesis and insulin resistance in type 2 diabetics and complications associated with drug toxicity.

Department of Surgery

The Department of surgery is made up the various sub-disciplines in surgery including general, orthopedic, plastic, Ear, Nose and Throat and uro-surgery. Thus research themes are very diverse and aims at SDG 3 mainly. Departmental research themes are breast oncology and soft tissue tumours, thyroid pathologies, trauma and trauma systems in Ghana, hearing loss and innovative surgical techniques in resource constrained environments. MOH, GHS, WHO, and other international organisations and societies.

Department of Medical Education and IT

The Department focuses on teaching, research, seminar organisation, and providing institutional IT support to students and faculty of the College. Current research interests of the academic faculty centre on electronic health records and cloud computing security as well as health information management.

Department of Medical Imaging

As a core functional part of the SMS Medical Sciences Group, the Department focuses on teaching, research, and services in diagnostic medical imaging. Its research focus is currently directed at Clinical Radiology, determination of normal and abnormal values for various measurements of the body organs using various radiological modalities for Ghanaians and black Africans, determination of the appropriateness of biometric parameters and formulas for pregnant Ghanaian and black women, non-accidental injuries and trauma in children (child abuse), as well as Forensic Radiology and diagnosis of “Battered Child Syndrome”.

School of Allied Health Sciences

Description

The School of Allied Health Sciences was established in May 2015 to provide allied health education of the highest standards and value in Ghana and the West Africa sub-region. The School has the mandate to produce allied health practitioners and researchers who are motivated to maintain excellence in all aspects of health care delivery. The School has a vision of becoming a global School of excellence whose members blend technology, professionalism and service to positively advance health, driven by bold leadership in ethics, education, research, community and professional development. The School currently has eight academic Departments namely: Department of Medical Laboratory Sciences, Department of Optometry and Vision Science, Department of Biomedical Sciences, Department of Physician Assistant Studies, Department of Imaging Technology and Sonography, Department of Health Information Management, Department of Clinical Nutrition and Dietetics, Department of Sport and Exercise Sciences. These Departments have unique curricula that meet the developmental needs of a changing world.

The eight Departments have research groupings that are vigorously pursuing the research agenda of the School to meet the University's international visibility agenda. The overall research focus of the School is in the areas of pharmacology and drug discovery, laboratory medicine, molecular biology and genomics, epidemiology and public health, clinical and applied nutrition, clinical biochemistry of chronic diseases and their co-morbidities, ocular pharmacology and therapeutics, environmental and occupational optometry, sport science and medicine, and designing of systems for health data collection and management.

Research Partnerships and Collaborations

The School has both national and international research partnerships. Few of them are:

International

1. Shanghai University of Sport, China

National

2. Centre for Scientific Research into Plant Medicine, Mampong, Eastern Region
3. Ghana Standards Authority, Accra
4. Food and Drugs Authority
5. Lancaster University

School Research Thematic Areas

Department of Biomedical Sciences

The research focus of this department is in the area of pharmacology and molecular biology, and epidemiology and public health.

The Department specifically looks at:

1. Natural product drug discovery for inflammatory, malaria and CNS disorders
2. Toxicology and efficacy of herbal products
3. Epidemiology and public health of infectious diseases

4. Environmental pollutants and disease relationship
5. Immunology of infectious and non-infectious diseases
6. Molecular epidemiology of microbial drug resistance

Department of Clinical Nutrition and Dietetics

The research focus of this department is in the area of clinical and applied nutrition, and public health

Department of Medical Laboratory Sciences

The research focus of this department is in the area of clinical biochemistry, pharmacology and public health

Department of Physician Assistant Studies

The academic staff of the Department of Physician Assistant Studies focus mainly on clinical biochemistry of chronic diseases such as stroke and clinical outcomes of chronic disease.

Department of Optometry and Vision Science

The thematic areas of research of academic staff in the Department of Optometry and Vision Science include: Ocular health and vision sciences

1. Ocular pharmacology and therapeutics
2. Binocular vision and visual perception
3. Environmental and occupational optometry
4. Low vision and visual rehabilitation
5. Clinical optometry

Department of Health Information Management

The research domain of the Department of Health Information Management includes Health Informatics, Information Science and Epidemiology of Infectious Diseases

Department of Medical Imaging and Sonography Technology

Academic staff in this Department are into imaging science as their main research theme.

Relationship of School's Research Agenda with the SDGs

The School's Research Agenda is related to SDG 3, that is the application of scientific basis of health and disease by having an in-depth understanding of etiology of illness and assess the impact of disease and prevention to promote good health and wellbeing. It also relates with SDGs 4, 5, 6 and 12.

School of Nursing and Midwifery

Description

The School of Nursing and Midwifery is part of the College of Health and Allied Sciences of the University of Cape Coast. The School currently has four departments which are Adult

Health, Mental Health, Public Health, and Maternal and Child Health of which the first two are functional. The School currently runs undergraduate and masters programmes in nursing.

The aim of the School is to produce competent nurses capable of utilising nursing science and other relevant body of knowledge to meet complex health problems at individual and population levels, locally and internationally.

Research Partnership and Collaborations

Our key research partners and collaborators include the following:

International

1. Auburn University, USA
2. Grand Valley State University, USA
3. Limerick University, Ireland
4. NACP
5. WHO
6. USAID

National

7. Nursing and Midwifery Council of Ghana
8. Ministry of Health
9. Ghana Health Service
10. Mental Health Authority of Ghana
11. Health Training Institutions

School Research Thematic Areas

Our research agenda is influenced by contemporary nursing focus, patient and client needs, and national health service concerns. The priority research areas that will guide the development of departmental and individual faculty members' research agenda for the period 2018 - 2022 are as follows:

1. Hospital acquired infections and HIV/AIDS management
2. Clinical and community management for chronic conditions and disabilities
3. Women health, maternal and child health
5. Promoting quality nursing and midwifery education

Department of Mental Health

The research theme of the Department of Mental Health focuses on learning disabilities (community and institutional) as well as substance use disorders. These research agenda contribute to SDG 3 and 12. The main collaborators are the Mental Health Authority of Ghana, Ghana Health Service and the Mental Health Nursing Training institutions.

Department of Public Health

The research agenda for the Department of Public Health falls into three main areas including supporting people living with long-term conditions, cervical cancer screening and maternal and child health promotion. Major research themes are self-management support for chronic conditions, cervical cancer screening for HIV/AIDS patients, preconception health care

promotion and quality nursing education through preceptorship/mentorship. These research agenda contribute to MDGs 3, 4, 6 and 13. The collaborators include Auburn University, USA, Grand Valley State University USA, and the Ghana Health Service.

Department of Maternal and Child Health

The maternal and child health department have their research agenda focusing on midwifery education and practices, pregnancy care; and disability issues among children. Key research themes are midwives and relationship building among pregnant women, anaemia in pregnancy, and developmental disabilities among children. These research themes are targeted at meeting SDG 2, 3 and 5. The main collaborators are University of Limerick, Ireland, MOH, NACP, WHO, USAID and GHS.

Department of Adult Health

The Department of Adult Health has its research agenda mainly focusing on chronic illness and hospital acquired infections. The research themes include chronic disease and quality of life, patients' rights and emergencies; and hospital acquired infections. These research themes address SDGs 3 and 13. Key collaborators are MOH, University of Limerick, Ireland.

Relationship of School's Research Agenda with the SDGs

Our research agenda mainly aligns with SDG 3 which focuses on promoting good health and wellbeing. Our research agenda also significantly impacts on SDGs 4, 5, 6, 12 and 13.

COLLEGE OF HUMANITIES AND LEGAL STUDIES

Description of the College

The College of Humanities and Legal Studies (CHLS) is a three-tier college which hosts three faculties and a school. These are the Faculty of Social Sciences, Faculty of Arts, Faculty of Law, and School of Business. The College was instituted on 1st August, 2014. It is home to the Institute of Oil and Gas Studies, School for Development Studies, School of Economics and the Centre for Gender Research, Advocacy and Documentation. It is the largest College in the regular stream of the University in terms of student population and faculty numbers and it runs all the general university-wide courses for all students. These are Communicative Skills (Level 100), Critical Thinking and Practical Reasoning (Level 200) and Entrepreneurship (Level 300). The College also hosts the Confucius Institute and partners Alliance Francais for the teaching and learning of Chinese and French, respectively.

Research Focus

The College of Humanities and Legal Studies research theme *Securing the Environment for Sustainable Development* is expected to drive the research efforts of all the faculties and school in the college.

Faculty of Arts

Description

The Faculty of Arts is one of the oldest faculties of the University, having started as a department in 1962. One of the most forward looking and vibrant faculties, the Faculty has in recent times seen an increase in the number of departments, centre, institute, and units in response to market demands and changing trends in higher education and pedagogical practice. The Faculty organises its teaching, research, and community engagement around three major knowledge domains: the languages and communication, heritage and liberal arts, and the creative and performing arts.

Research Partnerships and Collaborations

In the last few years, the Faculty of Arts, through such departments as Religion and Human Values, Communication Studies, English, Classics and Philosophy, Ghanaian Languages and Linguistics, and History, have forged partnerships with various institutions and organisations in the areas of students' exchange and faculty visits. These are provided below:

- Birmingham University, UK
- Universidad Pontificia Bolivariana, Colombia
- Uppsala University, Sweden
- University of Ibadan, Nigeria
- University of Ghana.
- The Leibniz University of Hannover
- University of Groningen, Netherlands
- University of Ilorin, Nigeria
- Bucknell University, USA

- Village du Benin, Togo
- University of Hildesheim, Germany
- University of Maiduguri, Nigeria
- Kent State University, USA
- Norwegian University of Science and Technology, Norway
- Coastal Carolina University, USA
- Mississippi State University, USA

Research Areas

The following is a summary of the research agenda of Departments in the Faculty of Arts:

Centre for African and International Studies (CAIS)

The research agenda emanates from the CAIS's interest in protecting, preserving and advancing African tangible and intangible heritage and promoting understanding about pertinent historical and contemporary international issues.

Thus, the two areas of CAIS's research agenda are

- Ethnographic studies on traditions, Indigenous Knowledge Systems, resources, literary arts, governance, development issues and cultures of contemporary communities especially those with UCC's catchment area and the Central Region;
- Protection of artefacts and insignia of cultural and historical value.

They are intended to offer information to be documented in a series under the broad title *State and Society* to serve as an authoritative primary document among the holdings in the CAIS Documentation Centre.

Confucius Institute

The research interests of the Institute are:

- Teaching innovation and methodology in Chinese education;
- Cross-cultural communication and relationships between Chinese and Ghanaians;
- Confucius Institutes and international education; and
- Chinese language proficiency and service quality among Chinese tourists in Ghana

Department of Classics and Philosophy

The Department's focuses on the following research themes:

- Logic and Critical Thinking in students' academic writing;
- African Philosophy;
- Political thought;
- Graeco-Roman social and military history;
- Greek and Roman satire; and
- Epistemology

Department of Communication Studies

The following are the thematic areas of the Department;

- Rhetoric and public deliberation;
- Challenges of autonomy and funding in journalistic practice in Ghana;
- Achieving effective community social responsibility in Ghana; and
- Improving academic writing of undergraduate students.

Department of English

The Department seeks to promote the following as the nucleus of its research plan:

- Genre and Academic Writing, Literary Stylistics, and New Englishes;
- Corpus Linguistics, Discourse and Rhetoric, and Gender Studies; and
- Post-Colonial Literature, Ghanaian and Oral Literature and Popular Culture.

Department of French

The areas of interests are:

- Challenges (linguistic and extra linguistic factors) facing students of French;
- Comparative studies of narratology and literary stylistics in African and French literature; and
- Translation Studies.

Department of Ghanaian Languages and Linguistics

The Department's areas of research include the following:

- Documentation of traditional songs among the Ewe, Ga, and Akan;
- Linguistic diversity and multilingualism in Ghana; and
- Use of mother tongue in Ghana: A tool for national development and social cohesion.

Department of History

The three main congregated areas of research are:

- Documenting the history of place names;
- Mining for knowledge in intercultural historical studies and new methods, through historical, digital, intercultural competencies; and
- Exploring the nexus of Africa and contemporary world historical events like the First and Second World War.

Department of Music and Dance

The Department's agenda has three main areas:

- Music/Dance in Everyday life and therapy;
- Music and Dance Education, Creativity and Health/Wellbeing; and
- Music/Dance and Alcohol.

Department of Religion and Human Values

The Department's broad research agenda is Religion and Human Security in Africa. The sub-themes include:

- Religion and poverty;
- Religion and biodiversity conservation;
- Religion and politics;
- Religion and gender; and
- Religion and human rights.

Department of Theatre and Film Studies

The Department has merged the individual research objectives of its academic staff to produce a collective overarching research agenda titled “Performance for Life” The two thematic areas are:

- Art and Performance as an alternative communication model, framework and strategy for national development; and
- Art and Performance as visual culture and pedagogy for sustainable legal and health development.

Information Literacy Unit

The Unit seeks to promote research in three key areas:

- Libraries and sources of information;
- Organisation of knowledge; and
- Internet and e-resources.

These thematic areas will guide and engender interrelated research trajectories which accommodate emerging issues that are related directly or indirectly to the *SDGs Agenda 2030* and the *Africa We Want 2063* vision.

Writing Unit

The areas of interest are as follows:

- Challenges in student and professional writing;
- Role of writing units in higher education;
- Discoursal errors in postgraduate thesis writing; and
- Rhetoric and Academic Communication

Relationship of Faculty’s Research Agenda with the SDGs

The Faculty’s research agenda has relationship with the following SDGs: 4, 15, and 16. SDG 4 focuses on ensuring inclusive and equitable quality education and promoting life-long opportunities for all while, SDG 15 deals with protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably managing forest, combating desertification, and halting and reversing land degradation and halting biodiversity loss. SDG 16 focuses on the promotion of peaceful and inclusive society. Equitable quality education and the promotion of lifelong opportunities as well as sustainable terrestrial ecosystems are of great importance in our modern world where ICT has permeated every aspect of our lives and security is needed for the full attainment of the potential of all persons. These SDGs are to guide individual and departmental research efforts.

Faculty of Law

Description

The Faculty of Law is one of the Faculties under the College of Humanities and Legal Studies, which plays a crucial role in training students for the LLB degree in Law, after which students then sit for the entry examinations to the Ghana School of Law for the professional qualification. The Faculty of law was accredited in April, 2013 and has academic programmes that cut across a wide range of subject areas such as Sports Law, Medical Law, Investment Law, Labour Law and local Government Law, Transport and Environmental law which makes the Faculty in the University of Cape Coast unique in the country and in West Africa. The various legal programmes which are run in the faculty are tailor-made to suit both the Public Service, as captured under Article 190 of the 1992 Republican Constitution, and the Private Sector.

There are two departments in the Faculty: Legal Clinic and the Research Department. On one hand, the Legal Clinic equips students with practical and hands-on experience in the field of the legal profession before they complete the LLB programme. On the other hand, the Research Department provides the research base of the programmes run at the Faculty. In collaboration with the other department, it sets the research thrust and theme for the Faculty. It also sets the research agenda for the Faculty. With the Faculty of Law preparing to run LLM programmes in the areas of Human Rights Advocacy and Litigation, Environmental law, Administrative law, Tax law, International law, Constitutional and Labour Law, the Research Department will provide focus to the research and dissertations that will be written by students and provide the requisite calibre of tutors as supervisors.

Partnerships and Collaborations

Students undergoing mandatory internships at the Law courts, House of Chiefs, the Commission on Human Rights and Administrative Justice (CHRAJ), the Attorney-General's Department and other Public Services to engage with practitioners in the field of the law.

Faculty Research Thematic Areas

The diversity of the legal programmes undertaken at the Faculty reflects in the numerous research themes undertaken at various conferences organised in the last five years of its existence. Since its inception, the faculty has been organising the annual Jurists Confab which draws participants from all sections of society and brings to focus the link between academia and Practitioners in the field of law. It is also in tandem with the objective of the College of Humanities and Legal Studies of promoting interdisciplinary activities, including research and outreach.

Various themes since 2014 include the following:

1. The Role of the Faculty, BAR and the Bench in Ghana's Democratic Dispensation under the 4th Republic
2. Effective Justice Delivery: The role of the Faculty, Bench and the BAR
3. Configuring the law for Contemporary Ghana

4. Law, Governance and Development
5. The Urgent need to win the Fight against Corruption to ensure Ghana's Sustainable Development – The Role of the Law

These conferences have attracted legal professionals from the academia, Bench, and Bar. These also fall within the strategic thrust of the faculty to establish a synergy between academia and legal Practitioners.

At a time of increasing promulgation of several laws to boost economic development and to stem the abuse of the public purse by Public Officials and the quest by society to ensure accountability by Public Officials, the Research Agenda Committee for the Faculty of Law selected the following research themes:

1. The Law as a tool for Socio-economic Development
2. The Role of the law in addressing Financial malfeasance in the Public Sector

The quality of the law is reflected in its effectiveness. Again, the law has to address socio-economic ills such as corruption, sanitation as a result of urbanisation, food safety, environmental degradation (*Galamsey*) and ills such as robbery and human trafficking associated with development. This is where the Role of the law as a tool for social engineering plays a vital role in addressing these ills.

Relationship of Faculty's Research Agenda with the SDGs

The two research areas of the Faculty of Law feed into the College of Humanities and Legal Studies theme of “Law, Security and Sustainable Economic Development” and are also in line with the University-wide Research theme of “Health, Education, Technology, Environment and Security for Sustainable Development”. At all levels, these themes have a direct linkage to the SDGs by the United Nations, of ensuring healthy lives and promoting well-being for all at all ages and ensuring inclusive and equitable quality education and promoting life-long learning opportunities for all.

Faculty of Social Sciences

Description

The Faculty of Social Sciences is one of the eleven (11) Faculties/Schools in the University. The Faculty has five (5) departments, two (2) institutes, and two (2) centres and a unit namely: Department of Economics, Department of Geography and Regional Planning, Department of Hospitality and Tourism Management, Department of Population and Health, Department of Sociology and Anthropology, Institute for Development Studies (IDS), Institute for Oil and Gas Studies and the Centre for Gender Research Advocacy and Documentation (CEGRAD), Centre for Development Archiving Management, Advocacy and Analysis (C-DAMAA) and the Microfinance Unit.

The Faculty promotes teaching, research, and outreach through the application of issues related to social sciences for national development. The Faculty currently has a staff strength

of 99 comprising 5 Professors, 13 Associate Professors, 34 Senior Lecturers/Research Fellows, 36 Lecturers/Research Fellows and 11 Assistant Lecturers.

Research Partnerships and Collaborations

The Departments, Centre and Institute in the Faculty of Social Science are engaged in various international partnerships that give expression to our joint commitment to the attainment of the SDGs.

International

1. The Institute for Development Studies (IDS) and Trent University, Canada are currently researching on development in Ghana in particular and Africa, as a whole
2. The Department of Geography and Regional Planning is in a multi-stakeholder collaboration with Hildeshiem University, Germany, Maidugri University, Nigeria and UNESCO/DAAD
3. The Department of Geography and Regional Planning has also partnered with Bradford University, UK on Human Resource Development for Public Sector Reform
4. The Department of Economics and the African Economic Research Consortium (AERC) are jointly training students in Economics at various levels of the academic ladder
5. Adolescent Reproductive Health education is the emphasis of the collaboration between the Department of Population and Health and Guttmacher Institute, Germany
6. This Department of Population and Health has also partnered with Marie Stopes International to mutually research on Sexual and Reproductive Health
7. The Department of Hospitality and Tourism management and the University of Girona, Spain, are currently training PhD students in Tourism under the aegis of the higher education exchange programme

National

8. The Department of Hospitality and Tourism Management in cooperation with the Cape Coast Heritage Foundation (CCHF) and the Komenda-Edina-Eguafo-Abirim (KEEA) Municipality is developing novel Tourism Products

Faculty Research Thematic Areas

The research areas of the Faculty are as follows:

1. Conflict, peace and development
2. Development planning and management
3. Energy and Sustainable Development
4. Finance, Poverty and Sustainable Development
5. Hospitality service operations and management
6. Hydrology and Coastal systems management
7. Migration, refugees and development
8. Population, environment and development
9. Sexual and reproductive health
10. Tourist behaviour, experiences and impacts
11. Trade, Fiscal Policy and Sustainable Economic Growth

Relationship of Faculty's Research Agenda with the SDGs

The Faculty of Social Science focuses on almost a dozen research areas that are of particular relevance to the SDGs and associated targets. For instance, Sexual and Reproductive Health is directly linked to Goal 3.7, whereas Population, Environment and Development is intrinsically related to Goals 2.4; 2.5; 11.3; 11.7b. Similarly, Migration, Refugees and Development relate to Goals 10c; 8.8; 10.7 and Conflict, Peace and Development has direct bearing on Goals 4.7; 16.1., 16.2; 16.10a. Energy and Sustainable Development align seamlessly with Goals 7.1; 7.2; 7.3; 14.1; 14.7c, whereas Tourist Behaviour, Experiences and Impacts fit in entirely with Goal 8.6 and 8.9. Hospitality Service Operations and Management connect well with Goals 3, 5, 8, and 10. Trade, Fiscal Policy and Sustainable Economic Growth relate to Goals 8.10a; 10.7a; 17.10; 17.11; 17.12. Finance, Poverty and Sustainable Development are inextricably linked with all the targets under Goal 8. Development Planning and Management is closely related to Goal 11.3; 11.7a, whereas Hydrology and Coastal Systems Management aligns with Goals 14.1; 14.2; 14.5.

School of Business

Description

The School of Business is one of the faculties/schools in the University of Cape Coast. It was carved out of the Department of Business Studies which was established in the 1975/76 academic year to run two unique undergraduate programmes: Bachelor of Commerce and Bachelor of Arts in Secretaryship. In the 1998/1999 academic year, the B.A. Secretaryship programme was phased out and replaced with a Bachelor of Management Studies programme in response to the changing needs of industry and commerce.

In 2003, it became necessary to further develop the Department into a School out of the Faculty of Social Sciences capable of offering a wide range of programmes in Business Studies. The number of departments was furthermore increased to six in response to changing societal needs. These are the Departments of Accounting, Finance, Management, Human Resource Management, Marketing and Supply Chain Management, and the Centre for Entrepreneurship and Small Enterprise Development (CESED). Through these Departments, the School delivers its demand driven business programmes.

The School now offers Bachelor of Commerce with options in Accounting, Finance, Management, Human Resources, Marketing as well as Procurement and Supply Chain Management. It also has MBA/MCom programme with options in Accounting, Finance, Management, Human Resources, Marketing, Entrepreneurship and Small Enterprise Development. There are also MSc programmes in Project Management, Procurement and Supply Chain Management, Public Policy and Health Services Management. The School has a PhD in Business Administration programme.

School Research Thematic Areas

The School focuses on emerging business and management research, emphasising emerging management policies and practices, entrepreneurship and innovations, the environment and

sustainability. This business but interdisciplinary research areas are selected in line with the SDGs that seek to end poverty, protect the planet and ensure prosperity for all.

The SDG 5 emphasises on women empowerment and decent work life for all. This has necessitated research in emerging management policies and practices, focusing among other things on work family conflict, gender and diversity at work, flexible work schedules, financial literacy, corporate governance and disclosures.

The School's sub-theme on entrepreneurship and innovations emerged out of the SDGs 1, 2 and 9 that emphasises on poverty reduction, zero hunger and innovations. Entrepreneurship has been found to provide solution to poverty reduction, unemployment and under-development. Among other things, this theme focuses on enterprise development and corporate entrepreneurship.

Furthermore, the School also focuses on research that looks at environment and sustainability. SDGs 11, 12 and 16 emphasises on sustainable consumption and production, accountability, good governance and poverty reduction.

At the national level, the proposed themes fit into governments' effort aimed at reducing youth, graduate and female unemployment and to half poverty by 2030. The country has set up the green fund aimed at funding research and training programmes in electronic waste (Hazardous and Electronic Waste Control and Management Law, 2016). Moreover, the themes are also in line with the National Entrepreneurship and Innovation Plan initiative (NEIP). The NEIP is a multi-pronged method aimed at creating the conducive and business-friendly environment to stimulate enterprise activities and provide integrated national support for start-ups and small businesses that would in turn generate employment for the teeming youth of Ghana.

These research themes also fit into the missions of numerous funding and agencies, including the Government of Ghana, European Union, World Bank, UNDP, GIZ and KFW. These bodies and institutions' grants can be sought to finance the research agenda of the school.

The research theme for the School is ***Sustainable Business and Management Practices in the Contemporary World***. The respective departments in the School focus on research related to their areas of concentration. These areas include Accounting and Controlling, Entrepreneurship, Finance, Human Resource Management, Management, and Marketing and Supply Chain Management. Four major themes for the school for the period are:

Environment and Sustainability

This theme focuses on sustainability accounting; eco-entrepreneurship, managing electronic waste; green marketing and sustainable development; extended producer responsibility; marketing of agricultural products and value chain analysis and sustainable and green supply chain management.

Entrepreneurship and Innovation

This concentrates on entrepreneurship education and training; entrepreneurship case research and development; business incubation; entrepreneurial finance; eco-entrepreneurship; innovation management, and financial innovations.

Contemporary Management Policies and Practices

Areas to be covered under this theme are corporate governance and disclosures; corporate social responsibility; public sector productivity; industrial relations in the private sector; work environment, health and safety; gender and diversity at work; public policy; organisational behaviour; and organisational development and policy.

Marketing of Institutions

Among the areas of focus include public sector marketing, religious marketing, higher education branding; student recruitment and retention; and technology in higher education.

The following are the extracts from the research agenda of the various departments in the School:

Department of Accounting

- Accounting and Sustainability
- Corporate Governance and Disclosures

Centre for Entrepreneurship and Enterprise Development

- Entrepreneurship Education and Training
- Entrepreneurship Case research and Development
- Business Incubation
- Entrepreneurial Finance
- Eco-entrepreneurship
- Managing Electronic and Electrical Waste

Department of Human Resource Management

- Public Sector Productivity
- Industrial Relations in the Private Sector
- Work Environment, Health and Safety

Department of Management

- Corporate Governance
- Corporate Social Responsibility
- Gender and Diversity at work
- Public Policy
- Organisational Behaviour
- Entrepreneurship and Innovation Management
- Organisational Development and Policy

Department of Marketing and Supply Chain Management

- Green Marketing and Sustainable Development
- Corporate Social Responsibility and Governance
- Issues on Extended Producer Responsibility (EPR)
- Marketing of Higher Institutions
- Marketing of Agricultural Products and Value Chain Analysis
- Managing Electronic and Electrical Waste
- Sustainable and Green Supply Chain Management