

**BUGEMA UNIVERSITY**

**RESEACH DIRECTORATE  
ANNUAL REPORT 2021/2022**

**By  
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# Introduction

## Bu-Research Directorate – BURD

### **BURD VISION:**

Bugema University Directorate (BURD) envisions excellence in research productivity, publication and dissemination.

### **BURD Mission:**

The mission of BURD is to offer excellent and distinctive research skills, guidance and direction both to students, faculty and staff, through trainings, workshops and seminars for excellence in knowledge production, honest publications and dissemination towards a better society.

### **BURD Objectives**

1. To offer policy guidance for honest research and publication, enhancing research productivity and innovation in Bugema University Community.
2. To lay emphasis on applied research relevant to the development needs of the community, including research leading to the development of patents.
3. To encourage all faculty to devote part of their time to research for publication in the University Journal, and other internationally recognized journals.
4. To provide a dynamic and conducive research and publication environment through maintaining a research training, journal publication and research awards for distinguished research and innovation of the University.

### **BURD Priority Areas and Goals for 2021-2027**

This section deals with the Project Action Plans (PAPs) for the outgoing period 2021-2022 which are a portion that of the overall goals for 2021-2027. Hence, the PAPs for 2021-2022 are partial fulfilment of the overall goals and some are on-going.

**Goal 1: Enhance research production by schools**

**Objective:** To increase the number of faculty and staff involved in research activities by the end of 2021/22

**Milestone:** Statistical Report of Research Participation in *(Increased Participation in percentage (On going: See PAP 1&3).*

**Goal 2. To Attain excellence in research Infrastructure.**

**Objective:** Strengthening Research infrastructure and productivity towards Re-accreditation.

**Milestone:** Completed Self-Assessment Report on Research infrastructure and productivity, ready for accreditation *(On-going: See PAP 2)*

**Goal 3: Articulation and Implementation of Research Ethics Policies at BU**

**Objective:** To have a functional registered REC by December 2021

**Milestone:** Registered and Functioning REC. *(Ongoing See PAP 4)*

**Goal 4: Enhance Dissemination and Utilization**

**Objective:** To improve research and publication culture at BU.

**Milestone:** Measurable Increased avenues for Research Dissemination including e-Journals, seminars and workshops. *(Ongoing: See PAP 5)*

**Goal 5. Capacity Building for Research and Publication**

**Objective:** Improve research skills for faculty and staff.

**Milestone:** Increased attendance in Research workshops/research production levels *(Ongoing See PAP 6).*

**Goal 6: Operationalize research policy**

**Objective:** Enhance Research Policy utilization in all research activities.

**Milestone:** Revised Functional Research Policies in Schools

*(Ongoing thru Adhoc: Research Policy Committee)*

**Goal 7: Strengthening Research Activities in Schools**

**Objective:** To have functional research committees by the end of 2021.

**Milestone:** Functional SRC/RCC per school.

*(DONE & on-going thru monitoring)*

**Goal 8: Adequate Budget for Research****Objective:** To Mobilize adequate resources for research activities**Milestone:** Adequate Budget RD, Faculty and Staff Research Activities.***(Senate Action Pending Implementation)*****Goal 9: Documentation of Research Funds Utilization in Schools****Objective:** To have a policy guideline for research funds distribution in Schools.**Milestone:** Fair Distribution of Research Funds in Schools***(Committee Action being Implemented)*****Goal 10: Building Institutional Research Agenda****Objective:** To consolidate the research focus of the institutional for the 5 years**Milestone:** A Research Agenda Booklet in place to guide research Activities.***(Ongoing thru Adhoc: Research Agenda Committee)***

At the beginning of 2021 academic year, the Research Directorate embarked on the following Project Action Plan and strategic objectives within them as part of the bigger goals stated above.

1. Research and Publication Time line/Road Map
2. Research Infrastructure Self-Assessment
3. BU International Research Conference
4. REC Establishment and Registration
5. Introducing Institutional Multi-Disciplinary Journal
6. Institutional Capacity Building for Research and Publication.

The following report is based on these action plans and their strategic objectives.

# **Project Action Plans for 2021-2022: Annual Report**

## **1. Publication Road Map PAP**

The goal of this PAP was to set the direction of research in the University for 2021-2022 and have a research timeline to guide the research activities. The **strategic objective** was guiding the schools' research committees and research coordinators on the way forward as they work with their faculty on research.

- 1) **BU Research Agenda** was set in place with several **Thematic Areas** according to Schools' Research Committees as Reported by the Research Coordinators of each School.
- 2) The faculty of each school were set into **Research Teams** which worked on synopsis for presentation to fit into the final research presentation of the annual research conference.
- 3) Over 10 research workshops were held and several research synopses were peer reviewed during the workshop presentations of the research teams. The BU Administration funded this activity with rich and nutritious lunches and refreshments to all attendants for each workshop.
- 4) Later, the synopses were converted into **research proposals**. The researchers are expected to be in the field collecting data or analyzing data for the impending research conference in October.
- 5) The final product is set for presentation in the **Annual Research Conference** to be held in October.
- 6) This action plan targeted 15 articles for publication by the end of the year in the Bugema University Pan-African Multi-Disciplinary E-Journal (BU-PAMDJ).
- 7) The Research Directorate has been working with a Team of IT experts from Bugema University who are designing the BU-Electronic Journal and plan are on-going for the finalization of the BU-PAMDJ which will be the maiden University-Wide electronic Journal.

- 8) Thus, this activity will culminate in an **International Research Conference**, which is currently being considered as a **Dissemination Conference** for peer reviewing the final research for the various schools in October 2022.
- 9) **A Research Exhibition** was also planned on the BU 2022 graduation, where the final research product will have its first presentation in a hard copy.
- 10) . This is an on-going PAP. The Research Teams in the Schools are working on their research and some teams have applied for Research Funds. The final results will be followed up in the 2022-2023.

## **2. Research Infrastructure Self-Assessment PAP**

**The goal of this PAP was: To attain excellence in research infrastructure at Bugema University. The strategic objective was to strengthen Research Infrastructure at Bugema University through schools and departments. The specific objective was to achieve the NCHE standards on research requirement by January 2022. The following activities followed:**

- 1) . In October 2021, this PAP was initiated by the Research Directorate on October 2021 by building consensus on Self-Assessment in Schools with Schools Research Committees (SRCs) and Research Coordinators (RCs). A copy of the Research Infrastructure Self-Assessment areas from NCHE was sent to each School for action.
- 2) . The same month, (October 2021), a meeting was undertaken to further sensitize Deans and Schools' Research Committees on the need for Self-Assessment. The outcome of this meeting was that a Self-Assessment Data Collection Tool was drafted and posted to each school for action.
- 3) . On November 11, 2021 a draft Road map for completion of the activities on each Self-Assessment Item was agreed upon with the Schools and a Road map on Research Infrastructure Self-Assessment Report (RISAR) was sent to schools for action.
- 4) . On November 18, 2021, through physical visits to schools and emails as follow up activity, the Research Directorate (RD) followed up the activity to

compile data on Research Infrastructure Self-Assessment (RISA) with the schools. The outcome – No school had compiled any data on this activity as previously agreed upon.

- 5) . On 23<sup>rd</sup> November, 2022 RD called for a research virtual meeting to discuss the data collection and draft the report for RISAR. The schools had excuses and no data was presented for compilation in preparation for the Charter Renewal.
- 6) . A meeting was called on 25<sup>th</sup> November 2021 to urge the schools to work on the draft for RISAR. The virtual meeting failed because no school cooperated in drafting the RISAR Report.
- 7) . To date – There is no RISAR Report from schools that the Research Directorate can present as a report, to indicate the status of each school on RISAR.
- 8) . The good news is that, each School has a Schools Research Committee with a Coordinator for research, although these committees have failed to make a report on the status of research in their various schools to the RD.
- 9) . There is hope that this activity can be followed up and that, since schools have the infrastructure to fulfil this activity, this work can be done in the coming year 2022-2023, and each school presents annual report with the assessment of the activities of research and the status of the total Research Infrastructure and products.

### **3. International Research Conference (IRC) PAP**

**The goal of PAP 3 was to improve research and publication culture at Bugema University. The strategic objective was to increase the percentage of faculty who are involved in research and publication at Bugema University. The specific objective was to hold an international research conference by October 20-21, 2022. The following activities were undertaken to ensure that this plan is carried out effectively.**

- 1) In September 2021 a meeting was held to build consensus to hold a research conference by October 20-21, 2022. The Bugema University Research Conference also established Bugema University Pan African Multi-Disciplinary Journal (BU PAMDJ) Committee.

- 2) In October 2021, the Senate voted that the IRC will be held on October 20-21, 2022 .
- 3) On Nov 23, 2021 the Steering Committee was established to work on the logistics of the IRC.
- 4) In the same month, the Senate voted the steering committee for IRC.
- 5) In December 2021, a draft call for papers was planned, but was not implemented by the steering committee due to the busy schedule of the committee members.
- 6) The PAP is on-going. The following activities are yet to be accomplished:
  - a. Call for papers to faculty members and to external participants.
  - b. Identifying researchers who are ready to present in the IRC
  - c. Setting the Conference committees in place such as logistic, budget, program, venue, and others to facilitate the IRC.
  - d. Drawing up the program and allocation of plenary sessions papers and identification of potential papers for presenting in break-out sessions;
  - e. Publicizing the event to gain momentum since the time is too close to the event.
  - f. Preparation and presentation of the budget for the activity to the Administration for financial support
  - g. The success of this activity will culminate in the IRC.

#### **4. REC Establishment and Registration PAP**

**The Goal** of this activity was to strengthen the Research Infrastructure at Bugema University. **The strategic objective** was to strengthen the ethics and conduct of research through protocol examination of both internal and external protocols. **The specific objective** was to have a functionally registered REC at Bugema University. The following activities were initiated and accomplished:

- 1) In September 10, 2018, The RD set out on a series of meetings with the Bugema University Research Council (BRAC) to build consensus on the activities of the REC and identification of a consultancy to assess the

status of BU on REC registration. These activities did not take off until 2021.

- 2) A REC membership was recommended and voted by the Administration; hence it is ready in place.
- 3) The RD requested for Room Allocation at Kampala Campus for REC. The room was identified but requires furnishing in order to have it functional.
- 4) The training of the REC was undertaken and an additional training for the Chair and the Administrator were undertaken as funded by the Administration.
- 5) The Research Directorate (RD) identified a competent yet affordable Consultancy for REC assessment as required by the NCHE. The Consultancy agreed to carry out the activity, and the issue was brought to the attention of BRAC which approved it.
- 6) The issue was presented to the Senate and an action was taken for RD to engage a REC Consultancy for REC registration.
- 7) In November, 2021 the administration voted to authorize RD to engage the consultancy. The Consultancy is continuing on its work of the process of registration of the REC .
- 8) An assessment report was presented to NCHE Review Board and awaiting response for the registration of BU REC.
- 9) As soon as the response from National Council is available, the 2022-2023 academic year will complete this activity and the REC will begin its official duties as a legal entity, to review external and internal protocols and provide permission. Currently, the activities of the REC are accomplished by the Research Directorate.

##### **5. Introduction of BU Institutional Multi-Disciplinary Journal PAP**

**The goal of this PAP was to improve research and publication culture at Bugema University. The general objective was to establish an electronic Journal by October 2022. The specific objective was to build a consensus among the BU Stake holders, the schools, to have an electronic journal as an avenue for the researchers of all the schools as a representative organ for the entire Institutions.**

- 1) In September 2021, BRAC meeting was set to build consensus among the Deans to create a Road Map for the Bugema University Pan African Multi-Disciplinary Journal (**BU PAMDJ**). As an outcome a vote was undertaken to establish **BU PAMDJ**.
- 2) In the same month, BRAC voted to recommend an editorial Board for BU PAMDJ to the Senate.
- 3) In November 2021, the BRAC and the Editorial Board meeting discussed and agreed on the type of Journal to be designed; and the Research Directorate was mandated to engage IT Consultant to explore the costs of the Journal.
- 4) In October, 2021, the Senate voted for the **Editorial Board** for BU PAMDJ, and vote mandated the Editorial Board to design the BU PAMDJ. The process of designing the BU PAMDJ is ongoing, with the Consultancy, which has presented the Budget
  - a. The status of the BU PAMDJ is as follows:
  - b. The IT Consultancy for BU PAMDJ has presented the budget for the activity and ready to be presented to the Senate.
  - c. The articles for the BU PAMDJ are underway by various schools, where we have Research Teams working on their researches as earlier presented.
  - d. The editorial board will be sitting in 2022-2023 to work on the duties and responsibilities of each member of the editorial board and complete the rest of the activities as outlined in the BU PAMDJ PAP.

## **6. Institutional Capacity Building for Research and Publication**

**The goal** of this PAP was to improve research and publication culture at Bugema University. **The Objective** was to equip research supervisors with basic skills on converting thesis into publication.

- 1) In December 2021, this PAP was kicked off with the training of the REC leadership in research ethics by Makerere University. The BU Administration provided funds for this training which was accomplished. The Chair and the Administrator of the REC were trained and ready for

service. This is awaiting the Registration of the REC as explained in this report.

- 2) In January 2022, RD organized a workshop for transforming thesis into publication. The BU Administration funded this activity, and the Deans, Heads of Departments and faculty attended the training. An expert from Kyambogo University was engaged in this training. This was a second training of its kind. The first was undertaken by ..... where all the deans attended too.
- 3) This PAP has solicited a proposal on engaging the whole faculty into research and publication skills using a consultant and an expert in this activity. The proposal has been presented to the administration.
- 4) The implementation of this activity is awaiting funding for the 2022-2023 Academic year. The outcome of this PAP will be that 50% of the graduate and undergraduate lectures will be engaged in research and publication.

## **SUMMARY OF THE REPORT 2021-2022**

### **ACHIEVEMENTS**

1. Research Agenda, themes and priority areas are now set for Publication
2. Strengthened Research Infrastructures in Schools with functioning coordinators.
3. On Branding and Image enhancement (BIE) Research Directorate has Submitted the REC Registration package documents to National Council and waiting for response
4. On Branding and Image enhancement (BIE), Research Directorate now has the BU PAMDJ Editorial Team awaiting the completion of Journal designing for publishing
5. On BIE, the designing of the Multidisciplinary Journal – BU PAMDJ is in process needing funding.
6. Have a working Template for the Infrastructural Research Assessment and functioning.
7. On BIE, BU has research Teams in schools with their proposals ready and some on data collection
8. On BIE, we have set in place the Editorial Board for BU PAMDJ good to go.
9. On Institutional Capacity Building, (ICB) Research Directorate has completed the 1<sup>st</sup> phase of capacity building for research by the Training of the REC Chair and Administrator for REC through Makerere University Workshop;
10. On ICB Research Directorate has had several workshops, climaxing in the Converting thesis to published book or monograph.
11. We have institutionalized Research Engagement for every lecturer as an activity in the work plan for all lecturers in order to retain or drop (award/punish) those who do not produce research outputs in a given period. Thanks for the Administrations implementation of this recommendation in the Job descriptions of the lecturers.

### **CHALLENGES**

1. Lack of full participation of all faculty into the research workshops due to heavy workloads.

**2. Still we have limmitted funds to implement the Directorate Research Structures**

**such as: IRB Operations; BU-Multidisciplinary E-Journal; Research Grants etc**

**3. We still have limited funding to implement the Directorate Research Structures**

**such as: IRB Operations; BU-Multidisciplinary E-Journal; Research Grants etc**

**4. The research directorate has no ZOOM License to facilitate Virtual International Research Conferences (which can run for hours continuously without breaking).**

**5. No funds for stimulating internal research awards for motivation of researchers**

**7. Competing Interests among some sectors, still sideline the Directorate responsibilities.**

**8. Multi-Responsibilities for Research Personnel – No Secretary or assistant to ease work**

**9. Insufficient Funds to facilitate the strategic plan as discussed.**

**10. Poor Research Data Base management within the University; e.g. Institutional Repository need special personnel who can run reserve time to research data base of the University.**

**11. Monopolizing research supervision in schools and departments for financial benefits is still a problem.**

### **Suggestions and Way Forward**

1. Provide Sufficient funds to Research Directorate Operations to implement the Voted items that can bring in funds.
2. BU E-Journal (BU Multidisciplinary Journal) Implementation – Need more attention as funding is still lacking into this activity to pay the IT specialist to realize this activity.
3. **Purchase Zoom License and improve internet connectivity for Research Directorate to implement International Research Conferences.**
4. **Hire Research Full time Research Grant Writer – To assist in looking for Research Funds**
5. Implement a Reward System for Research outputs of individual faculty.
6. Count Research Proposed Project as Teaching Load to increase research outputs of lecturers
7. Incorporate Research Data Base Management in the Directorate with a full-time individual under the Director. It will bring in cash as individuals use that department as part of the Directorate
8. Inclusivity in Research: Diversify participation of research supervision participation to include all faculty to increase their research experience and production, instead of monopolizing that activity with a privileged few.
9. Include the research activities on the Website to improve the Institutional Ranking.
10. Provide a research website research domain if possible to allow the research to control and upload its activities without going through the IT protocols.

## **APPENDIX**

**Appendix A – C concerns the Research Agenda, Themes, Teams and in Bugema University. The schools that are listed here are the ones that have been very active in the Research Directorate Activities for 2021-2022. They forwarded their themes and their research teams and have participated in most of the Research Workshops.**

## APPENDIX A. SCHOOL OF EDUCATION

### Research Themes & Teams

#### Introduction

The School of Education takes full cognizance of the critical role played by research in the production and dissemination of knowledge both in the academic and public spheres. As such, it is worthwhile to note that for any research endeavour to be successful, a careful identification of research themes should be undertaken. In light of the above, the School of Education has come up with a number of cross-cutting academic research themes aimed at fostering an academic dialogue through a rigorous process of inquiry by both the faculty and students. The themes have been identified with full consideration of the global Sustainable Development Goals (SDGs), Uganda's National Vision 2040 and aligned to Bugema University Research Agenda. This is done with an anticipation that this rigorous scholarly process will help to address some of the overarching and emerging educational issues confronted by the global community and particularly Uganda in the 21<sup>st</sup> century.

#### (a) Description of the themes

S/N	Theme	A brief description of sub-themes
1	Effective pedagogies for the 21 <sup>st</sup> century schools	Pedagogy refers to the broader study of the teaching methodologies. Special focus is placed on methods, approaches, principles and strategies of teaching.
2	School-community engagements	This theme aims to take a critical analysis of the overarching role of school-community collaborations through stakeholder participation in school related activities.
3	School leadership practices	The 21 <sup>st</sup> century is seen as an era of immense leadership and administrative intricacies occasioned by unstable and turbulent trends worldwide. Given this context, the theme explores the critical issues affecting school leadership in

		view of the prevailing environments at national and international levels.
4	Science education	Today, the global community is experiencing a highly pervasive science and technology -led transformation in all spheres of human endeavour, making life extremely challenging than ever before. To mitigate the situation, a deliberate policy of transforming society through a science-led approach has been adapted in many developing countries including Uganda. A lot of inquiry and scholarly endeavour is therefore needed to assess the practicality of this approach in face of the dwindling and stressed economies.
5	Management Development	This theme explores both the practical and theoretical aspects in the development of management competencies, abilities, capabilities, knowledge and skills of education managers with the aim of enhancing their managerial performance. However, scholars have dismally explored this field of study hence necessitating the school of education to undertake further inquiry in this area.
6	Universalization of access to education	It is believed that massification of education is one way in which countries can empower their citizens to engage in productive processes in order to transform their economies. Through widening and deepening access to education, countries can achieve the broad aim of developing their human capital and modernize their societies. This development has come with a lot of complexities and more studies have to be undertaken to come up with a robust approach for mitigating them.

### **(b) Research Teams**

To fulfill our mandate in the area of research and scholarship, the following teams have been identified to kick-start the school's research endeavour and will have to work under the close supervision of the dean. The teams will undertake the research process and strictly align their research topics in accordance with the above research themes. The teams are as follows;

<b>Team</b>	<b>Names</b>
Team 1	<ol style="list-style-type: none"> <li>1. Mr Semugooma John</li> <li>2. Mrs Mugerwa Esther</li> <li>3. Mr Olinga Tom</li> </ol>
Team 2	<ol style="list-style-type: none"> <li>1. Mr Kibaya Edward</li> <li>2. Mrs Hayuni Sarah</li> <li>3. Mrs Ibanda Harriet</li> </ol>
Team 3	<ol style="list-style-type: none"> <li>1. Mr Kanyerezi Richard</li> <li>2. M/S Womeli Harriet</li> <li>3. Mr Kayiwa David</li> </ol>
Team 4	<ol style="list-style-type: none"> <li>1. Mr Magoola Abel</li> <li>2. Mr Kanya Willy</li> <li>3. M/s Masebo Tedalech</li> </ol>
Team 5	<ol style="list-style-type: none"> <li>1. Dr Serunjogi Charles Dickens</li> <li>2. Mr Tumwine Jesse</li> <li>3. Mrs Mburu Sarah Kayiwa Njoki</li> </ol>

### **(c) Analysis of the internal and external environments**

To effectively develop a clear understanding of the situation under which the research teams will work, it was necessary to make an internal and external environment. This situation analysis is presented below;

<b>Internal Environment</b>
<p><b>Strengths</b></p> <ol style="list-style-type: none"> <li>1. Availability of highly qualified staff and faculty needed to engage in research</li> </ol>

2. Willingness and enthusiasm of staff and students to participate in research
3. Diversified nature of staff and students(both national and international)
4. Diversified programmes offered in the school
5. Availability of facilities/equipment

### **Weaknesses**

1. Inadequate working space
2. Poor funding of research activities
3. Heavy workload for staff rendering little or no time for research
4. Lack of incentives for those involved in research
5. Lack of experience by staff/faculty to solicit for international funding
6. Inadequate experience in publishing
7. Poor internet resources
8. Absence of a peer-reviewed journal at the university to aid staff in publishing of scholarly works
9. Lack of team work to engage in collaborative research

### **Opportunities**

1. Biodiversity of the university environment which is conducive for research
2. The university can easily be accessed considering the fact that it is located in a fairly developed environment
3. The new teacher policy is an opportunity to attract more students who will participate in the university's research endeavour
4. There are opportunities for external funding of research activities
5. There is relative peace in the country hence providing a conducive environment for research
6. Government of Uganda(GoU) is committed to provide funding especially in the fields of science and technology

### **Threats**

1. Presence of pandemics/disasters(as a result climate change)hence hindering research activities
2. Global financial crisis/economic slowdown
3. Competition from other universities for the available sources of research funding
4. Persistent poverty limiting research activities
5. Strings attached to some sources of funding which may compromise the university's core values
6. Overdependence on external funding

## APPENDIX B -SCHOOL OF BUSINESS

<b>Research Committee and Themes</b>			
<b>Schools Research Committee</b>		<b>Research Themes</b>	
1) Mrs. Sarah Katamba: (Chairperson)		Business and the Emerging Markets	
2) Mr. Sanctus Atuha		Sustainable Entrepreneurship	
3) Mr. Teddy Odoyo Otieno		Financial Management and Banking	
4) Mr. Okello Eri		Building Business Resilience in the Post-Covid-19 World.	
5) Dr. Jeremiah Nyende		Business in the Post-Covid-19 era.	
6) Mr. Raphael Dismas Ogeto		Contemporary strategic Management	
		Insurance Adoption in the context of Developing Nations.	
		Project Management	
		Quality Management	
		Creativity and Innovation	
		Leadership and Management	
		Supply chain, procurement and Logistics	
		Contemporary Issues in Business	
<b>S/N</b>	<b>NAME</b>	<b>E-MAIL</b>	<b>TEL. CONTACT</b>
1	Mrs. Sarah Katamba (Chairperson)	<a href="mailto:snkatamba@yahoo.co.uk">snkatamba@yahoo.co.uk</a>	0776 947 004/ 0752 870 399
2	Mr. Sanctus Atuha	<a href="mailto:sanctus.atuha@gmail.com">sanctus.atuha@gmail.com</a>	0779 712 576
3	Mr. Teddy Odoyo Otieno	<a href="mailto:odoyoteddy55@gmail.com">odoyoteddy55@gmail.com</a>	0788 140 752
4	Mr. Okello Eri	<a href="mailto:okelloeri@yahoo.co.uk">okelloeri@yahoo.co.uk</a>	0775 692 293

<b>5</b>	<b>Dr. Jeremiah Nyende</b>	<b><u><a href="mailto:jnyendem@gmail.com">jnyendem@gmail.com</a></u></b>	<b>0785 818 507/ 0751 920 169</b>
<b>6</b>	<b>Mr. Raphael Dismas Ogeto</b>	<b><u><a href="mailto:raphaeldismas90@gmail.com">raphaeldismas90@gmail.com</a></u></b>	<b>0777 628 691/ 0789 541 206</b>

**APPENDIX C. SCHOOL OF SOCIAL SCIENCES 2021- 2025**

<b>THEMES</b>		<b>SUB-THEMES</b>
1.	<b>LEADERSHIP AND GOVERNANCE</b>	▪ <b>Leadership in Higher education</b>
		▪ <b>Leadership in organizations</b>
		▪ <b>Leadership in communities</b>
		▪ <b>Family leadership</b>
2.	<b>COVID-19 IMPACT</b>	▪ <b>Impact of COVID-19 on families</b>
		▪ <b>COVID-19 impact on communities</b>
		▪ <b>Policy development and amendment</b>
		▪ <b>Psychosocial issues and covid-19</b>
		▪ <b>COVID-19 and occupational therapy</b>
3.	<b>LIVELIHOOD</b>	▪ <b>Youth</b>
		▪ <b>Community</b>
		▪ <b>Family</b>
4.	<b>MIGRATION AND REFUGEES</b>	▪ <b>Psychosocial issues</b>
		▪ <b>Policy development and amendment</b>
		▪ <b>Mental health issues</b>
5.	<b>CONFLICT</b>	▪ <b>Family</b>
		▪ <b>Organizational</b>
		▪ <b>Mindset change</b>
		▪ <b>Resource distribution</b>
6.	<b>THE PRE AND POST IMPACT OF COVID- 19 EPIDERMIC TO THE MEDIA.</b>	▪ <b>Health Communication</b>
		▪ <b>Religion and Communication</b>
		▪ <b>Culture and Media</b>
		▪ <b>Social Media Impact</b>
		▪ <b>Women and Church</b>



## APPENDIX D- SCHOOL OF NATURAL SCIENCES

### THEMES IN SCHOOL OF NATURAL SCIENCES

#### DEPARTMENT OF STATISTICS

Social Statistics and Demography has a strong reputation for developing methodological innovations and studying population processes.

##### Areas of interest/Pillars

- Demography
- Global Health
- Survey Methods and Official Statistics
- Statistical and computational Modeling

#### DEPARTMENT OF AGRICULTURE / AGRIBUSINESS

***Theme 1: Leveraging markets through improved productivity and competitiveness.*** To run a successful and profitable agricultural businesses, smallholder farmers need improved crop varieties, good quality and affordable seed, organized channels to sell their produce, and access to market information, among many other things. Yet too often, they find themselves trapped in a vicious cycle: low quality seed and inadequate agricultural practices leading to low productivity. CIAT has the world's largest collection of common bean and tropical livestock grass seeds. By protecting and improving this collection, our research aims to both improve seeds, and get them to more farmers, especially by partnering with the private sector and agribusiness for example.

***Theme 2: Agriculture for improved nutrition.*** Africa is the only continent in the world where poverty and malnutrition are on the rise. Agriculture is a source of nutritious food and income, enabling families, especially women, to afford diverse foods and services, such as better healthcare. Families can also build more resilient, healthy families by diversifying the food they grow on their farm. We will generate evidence and support investment in nutritious diets, including ways to track malnutrition before it becomes a crisis, putting in place a firm

plan to help families put more nutritious food on the table.  
(<https://ciat.cgiar.org/where-we-work/africa/>)

***Theme 3: Transforming farms and landscapes for sustainability*** About two-thirds of Africa's land is degraded, while three percent of GDP is lost annually from soil and nutrient depletion from farmland. Strategies are needed to increase agricultural production without putting more pressure on our natural resources: soils; land; water – at no expense to farmers' livelihoods – especially the livelihoods of women. Our research aims to make farms and whole landscapes more resilient and sustainable, providing information about how to improve soil, water and natural resource management, while building up data to address landscape damage at a bigger scale.

***Theme 4: Investment planning for resilient agriculture*** Climate change and variability put crop productivity at risk, and make pest and disease outbreaks more likely to increase. Small-scale farmers in Africa are particularly vulnerable, and need help to make their farms more resilient. We will generate and share robust evidence of the risks associated with climate change – and importantly, the opportunities to address these – especially by generating evidence and options to guide investments in climate resilience.  
(<https://ciat.cgiar.org/where-we-work/africa/>)

## DEPARTMENT OF ENVIRONMENTAL SCIENCE

In **Human and Ecological Risk Assessment (HERA)** we aim to understand and describe the emission, fate, and effects of chemicals in the environment. The studies focus on the development and validation of computer models that describe the environmental impacts of micro-pollutants such as pesticides and pharmaceuticals.

In **Life Cycle Assessment (LCA)** we develop methods to estimate the impacts of products and technologies on human health and biodiversity through various changes in the environment, including climate change, eutrophication, acidification, chemical pollution, and changes in land use.

In **Biodiversity Assessment (BA)** we focus on quantifying the responses of species and ecosystems to anthropogenic environmental change at macro

scales (from landscape to global). We cover the terrestrial and freshwater and marine realms and a variety of taxonomic groups (plants, invertebrates, and vertebrates) and anthropogenic pressures (climate change, land use, eutrophication, and chemical pollution). This broad scope enables us to rank pressures, determine the state of biodiversity change and identify general, overarching response mechanisms.

**In Sustainability Transition Assessment (STA)** we aim to better understand societal responses to environmental challenges, evaluate their effectiveness, and estimate their impacts on the environment. STA relates to sustainability transitions in the industrial and energy sectors, where climate neutrality and circularity require the transformation of large industrial clusters and the implementation of new technologies that are not yet competitive, fully developed, or have generated societal awareness and support. We develop, test, and improve methods for evaluating the environmental impacts of new technologies, assess societal readiness and improve societal engagement. [Adapted from Radboud University, Faculty of Environmental Science. (<https://www.ru.nl/environmentalscience/research/themes/>)]

## DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

### Microbial Food Safety

Research teams leverage complementary expertise, spanning from traditional and molecular microbiology to microbial ecology and epidemiology, to advance food safety and public health.

## **Food-Based Solutions for Enhanced Health**

Foods contain many chemical components that directly or indirectly impact wellness, and are subject to extensive processing prior to ingestion. Departmental researchers work to understand the impact of food and to develop novel food-based solutions for enhanced health.

### **Material Nature of Foods**

This group emphasizes understanding of structure-function relationships at the molecular, microscopic, and macroscopic levels, with the intent of developing prescriptive models that would assist in development of new food. (Adapted from PennState University, College of Agricultural Science. <https://foodscience.psu.edu/research/areas>)

## **DEPARTMENT OF BIOCHEMISTRY**

### **Cell Biology, Development and Genetics**

We use model organisms and in vitro approaches to explore a wide range of processes pertinent to cell biology. Many of the groups have an interest in understanding the molecular mechanisms controlling cell proliferation, differentiation and cell fate determination in the context of development. We also study processes regulating cell division and polarisation, immunity, and cell senescence, as well as developing and applying bio-nanotechnology and proteomic approaches for cell biological purposes.

### **Chromosomal and RNA Biology**

Our research investigates the dynamic regulation of genetic information in the form of DNA and RNA. Using advanced imaging, genomics, and biochemistry we define fundamental mechanisms for chromosome maintenance and behaviour, nuclear organisation, chromatin structure, transcription and RNA metabolism. Our studies embrace classical model systems from bacteria, viruses and yeast through to flies and mammals.

## **Infection and Disease Processes**

**Our research focuses on major human pathogens and their interactions with their human hosts. Using structural, biochemical and biophysical methods to characterize host-parasite interactions, we apply the knowledge we gain to guide development of improved vaccines and therapeutics. We study a wide range of different diseases that affect millions of people worldwide, including malaria, sleeping sickness, and viral infections such as dengue and influenza.**

## APPENDIX E.

THEMES FROM THE SCHOOL OF HEALTH AND NATURAL SCIENCES – RESEARCH THEMES – 2019-2020	
Major Themes	Subthemes:
1. Nutrition	
2. Health Systems Strengthening (HSS)	<ol style="list-style-type: none"> <li>1. Health service delivery</li> <li>2. Health financing</li> <li>3. Human resources for health issues</li> <li>4. Essential medical products, vaccines and technologies - supply chain issues</li> <li>5. Health information systems</li> <li>6. Leadership and governance in health sector</li> </ol>
3. Public Health Emergences	
4. Environmental Health	<ol style="list-style-type: none"> <li>1. Water and sanitation</li> <li>2. Food handling and food hygiene</li> <li>3. Waste management and health</li> <li>4. Water and Air pollution</li> </ol>
5. Maternal and Child Health Issues-	<ol style="list-style-type: none"> <li>1. Maternal Health</li> <li>2. Immunization</li> <li>3. Growth monitoring</li> <li>4. Perinatal/New born Health</li> <li>5. Family planning</li> <li>6. Infertility</li> <li>7. Gender based violence</li> </ol>
6. Health Management Information Systems	(under HSS)
7. Health Policy Issues	<ol style="list-style-type: none"> <li>1. Policy development and planning</li> <li>2. Policy implementation issues</li> <li>3. Policy evaluation</li> </ol>
8. Evaluation Studies	
9. Young People and Health	<ol style="list-style-type: none"> <li>1. Adolescent reproductive health</li> <li>2. Youth friendly services</li> <li>3. Health promotion for the youth</li> <li>4. Epidemiology/ Factors influencing health of young people</li> </ol>
10. ICT and Health (eHealth)	<ol style="list-style-type: none"> <li>1. ICT for health data capture, analysis and reporting</li> <li>2. Health data security</li> <li>3. Telemedicine</li> <li>4. Innovative use of ICT for health</li> </ol>
11. Alcohol and Drug Abuse	<ol style="list-style-type: none"> <li>1. Burden of Alcohol and Drug Abuse</li> <li>2. Alcohol abuse and its health consequences</li> <li>3. Marijuana and other Narcotics</li> <li>4. Smoking cessation and Tobacco control</li> <li>5. Substance Recovery and Recovery</li> </ol>
12. Infectious Disease	<ol style="list-style-type: none"> <li>1. HIV prevention and treatment</li> <li>2. Malaria</li> <li>3. Tuberculosis</li> <li>4. Other Respiratory tract infections</li> <li>5. Diarrheal diseases</li> <li>6. Soil Transmitted Helminths</li> </ol>
13. Non- Communicable diseases	<ol style="list-style-type: none"> <li>1. Diabetes</li> <li>2. Hypertension</li> <li>3. Cancer</li> <li>4. Oral health</li> <li>5. Aging and Health</li> </ol>