

**Center Title and Acronym:** Africa Centre for Research, Agricultural advancement, Teaching Excellence and Sustainability (CREATES)

**Host University and Country:** Nelson Mandela African Institution of Science and Technology (NM-AIST)  
Tanzania

**Center Website Address:** [www.creates.ac.tz](http://www.creates.ac.tz)

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**Primary Thematic Discipline of Center: (Centre Pillars)**

Being under the school of Life science and Bio-engineering CREATES is built upon six core thematic areas or pillars which support the transformation of the interventions into expected outcomes:-

- i. Sustainable Agriculture
- ii. Biodiversity Conservation and Ecosystem Management
- iii. Food and Nutrition Sciences
- iv. Health and Biomedical Sciences
- v. Bio Engineering and Industrial Pharmacy and
- vi. Clinical Human Nutrition and Dietetics.

These pillars also represent the departments of School of Life Science and Bioengineering (LiSBE) and facilitate the strategic setup to ensure effective coordination and achievements of CREATES' objectives.

**Brief Description of Center:**

The Centre for Research, Agricultural advancement, Teaching Excellence and Sustainability in Food and Nutritional Security (CREATES), hosted by the School of Life Sciences and Bioengineering at the Nelson Mandela African Institution of Science and Technology (NM-AIST) has opened its PhD positions for suitable candidates to apply for specialties in the four CREATES main streams, namely; Sustainable Agriculture, Food and Nutrition Sciences, Biodiversity Conservation and Ecosystem Management, and Global Health and Biomedical Sciences. This newly established African Centre of Excellence, CREATES, is aimed at students who are gifted, passionate, creative and free thinkers, innovative, and who will be job-creators rather than job-seekers in the future. CREATES provides experiential teaching, a buzzing atmosphere of international and interdisciplinary research and education activities, novel technologies and private-public partnerships with the industry and the community at large as well as hands-on learning experience and evidence-based problem solving projects. CREATES encompasses novel curricula approaches, cutting-edge research facilities and highly skilled national, regional and international supervisors in various fields of Life Sciences. CREATES encompasses six main streams, i.e., "Sustainable Agriculture", "Food Biotechnology, Clinical Human Nutrition and dietetics", "Biodiversity Conservation and Ecosystem Management" as well as "Global Health and Biomedical Sciences", which involves aspects of drug development and Nanoscience.

**Key Objectives and Expected Outcomes:-**

**Overall Objective:**

The overall objective of the project is to strengthen the capacity of NM-AIST to serve as an African Centre of Excellence for provision of post graduate training (Master and PhD), applied research and outreach programs for Food and Nutrition Security in the Eastern and Southern Africa region.

**Specific objectives**

Specifically the project seeks to strengthen NM-AIST to become a magnet environment that provides innovative opportunities and state-of-the-art learning environments for graduate students (PhD and MSc) as well as for faculty and other relevant stakeholders in the area of Food and Nutrition Security. This will enable NM-AIST produce high quality evidence-based research products, technologies and services with respect to agriculture, health and nutrition

**Expected outcomes:-**

- Increased and cost effective food production, access, and quality
- Enhance predictions, surveillance, modelling, and control of diseases
- Enhanced conservation, on farm adoption and use of medicinal plants
- Sustainable ecosystem management and biodiversity conservation
- Climate change responsive agricultural and natural resource management practices
- New and enabling policies on climate change, biodiversity, sustainable agriculture, ICT, Food and nutrition
- Enhanced job creation and youth employment in CREATE related interventions

**Major Accomplishments to Date:**

1. Enrolment of 29 Masters and PhD students (Masters 17 students and PhD 12 students)
2. Establishment of partnership between Hunan University of Science and Technology from China, Collage of Life Science and Chemistry. The agreement focuses at establishing bilateral cooperation on joint degree programmes, specifically in Biomedical Engineering. A letter of agreement has been signed between CREATES and Kenyatta University of Kenya and Makerere University of Uganda as well as University of Western Cape for partnerships in joint proposal for fund raising and joint programmes.
3. New Curriculum development
4. The Centre managed to secure opportunity for Lab attachment for all our students
- 5.

**Primary Regional and Global Partners:**

Rwanda University, Hunan University of Technology in the Collage of Life Science and Chemistry, Makerere University, Purdue University, University of Applied Sciences, Hamburg, International Livestock Research Institute (ILRI), Hohenheim University, Wageningen University, Uppsala University, Sweden, The Council for Scientific and Industrial Research South Africa, University of Western Cape (UWC) South Africa, Tanzania Livestock Research Institute (TALIRI), Ngorongoro Conservation Area Authority (NCAA), Grumeti Fund Serengeti, State University of New York - Binghamton USA, AWARD – Uganda, RUFORUM – Uganda, Tanzania Women Chambers (TWC), USAID, GIZ, DAAD, KfW

**Senior Faculty**

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