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A REGIONAL INNOVATION HUB FOR DIGITAL TRANSFORMATION IN EAST AFRICA

Dedicated to Excellence, Committed to the Future



www.cenit-ea.org

Skills for Jobs

ABOUT THE CENIT@EA

The East African Community's (EAC) Vision 2050 and the development strategies of the EAC and its Partner States are cognizant of the strategic importance of Information and Communication Technologies (ICT) for the socio-economic development and integration in the region. The EAC's digital transformation has the potential to stimulate growth and competitiveness in all key sectors including industrial development, financial services, education, health, agriculture, energy, tourism, and e-government.

The EAC, in collaboration with the German government, initiated the Centre of Excellence for ICT in East Africa (CENIT@EA), to build technical capacity and strengthen expertise in digital skills and innovation in the region, especially for young people to strengthen their employability. The offers at the centre are designed by a consortium of EAC and German universities, together with the private sector, to respond to the needs of businesses and public sector. CENIT@EA is part of the EAC project Digital Skills for an Innovative East African Industry (dSkills@EA).

Offers at CENIT@EA:



Applied Master's of Science in Embedded and Mobile Systems (MSc EMoS).



Demand – led short courses on advanced digital skills.



Regional networking and linkages between industry and CENIT@EA.

The innovation hub is located at the Nelson Mandela African Institution of Science and Technology (NM-AIST) in Arusha, Tanzania.

APPLIED MASTER'S PROGRAMME IN EMBEDDED AND MOBILE SYSTEMS (MSc EMoS)

The two-year graduate master's programme is a product of the robust collaboration between a consortium of the EAC and German universities. The course integrates applied training modules, linkage to industries and a strong focus on technology transfer, innovation, and entrepreneurship. The programme is meticulously crafted to offer a hands-on and immersive real-world learning experience, supported by an extensive network of regional and global research institutions, industry, and government partners.

Specialisation:

- Mobile Systems
- Embedded Systems

Programme outline:

- **Mobile Systems:** E-commerce, Business Automation Processes, Mobile Application Development, Machine Learning, Data Science, AI etc
- **Embedded Systems:** Systems Engineering, Advanced Applied Electronics with microcontroller, Internet of Things, Data Analytics etc
- **Internship & applied master's theses,** leading to digital products and services for businesses

Why study MSc EMoS at the CENIT@EA

- **Holistic learning** includes entrepreneurship, project management, and other soft skills to **enhance your employability**
- **International innovation exhibitions,** conferences, and events to present your ideas and innovations to businesses
- **International network of companies** for your internship and job opportunities
- **Mentorship, summer schools and academic exchange** with international experts, researchers and universities in EAC and Germany
- **Fully equipped innovation lab** designed for hands-on learning, prototyping and research

The course is designed for ICT young professionals, especially young women in the EAC with a 1st or 2nd upper class degree in ICT-related field. **Limited scholarships are available.**

MSc EMoS HIGHLIGHTS

136

students enrolled
since 2019

112

scholarships awarded
across EAC

36%

of scholarships awarded
to female students

64

students developed and
implemented innovative
digital products

45

students participated in international and
regional platforms to showcase and pilot
innovations

1st International Conference on Technological Advancement in
Embedded and Mobile Systems (ICTA-EMoS) held at the CENIT@EA.



EMoS is a world of exposure. You meet with professionals, companies, and experts in the technology world. I am currently working with IUCEA to develop an innovation to enhance monitoring and evaluation of centres of excellence in the region. My plan is to open my own company. I have been equipped for new opportunities.”

Asimwe Desire

UGANDA





DIGITAL SKILLS TRAININGS AND ENTREPRENEURSHIP

CENIT@EA is benefiting from regional initiatives of the dSkills@EA project, particularly in the areas of digital skills training and entrepreneurship support for both students and graduates, as well as universities across all EAC Partner States. Demand-led trainings are provided in key pillars of digital transformation such as cybersecurity, data science and predictive business analytics, and more.

Through bootcamps, hackathons, national and regional pitch events, young people are equipped with the knowledge to evolve into entrepreneurs and job creators, while trainings offered to universities is helping to strengthen technology transfers from the academia into practical application.

Beneficiaries:

- Staff and lecturers from EAC universities to help improve the standard of teaching and learning of digital skills
- EAC businesses to build their staff capacity in digital skills and boost competitiveness
- Unemployed graduates across EAC trained in digital skills to enhance employability

HIGHLIGHTS SINCE 2021

257

university staff
completed digital
skills training

215

employees from a cross
section of businesses
trained

60

teams of young
innovators from
universities supported
business ideation for
entrepreneurial capacity
development

20

staff from universities
were trained on
intellectual property
management and
commercialization of
innovations



The MSc EMoS is a hands-on solution tailored course. I am already reaping the benefits of my studies here. I'm teaching young people in Burundi on "Internet of Things", one of the topics I love. I'm glad that I can contribute to digital transformation in my country."

Castnel Akeshimana

BURUNDI



INDUSTRY-ACADEMIA COLLABORATION

Through internships with the industry and applied master's theses, students undertaking the MSc EMoS support and innovate digital solutions to solve industries' challenges and increase their competitiveness through research and application of digital innovations.

CENIT@EA with partners are creating linkages between the young innovators, academia, private and public sector to promote the uptake and commercialization of innovations in the EAC.

Highlights:

- **Guest lectures and summer schools** with industry partners to provide insight into how similar skills are used in the labour market
- **Partnership and Memorandum of Understanding signed** with leading ICT developers, e.g., IBM, SAP dual-study and Siemens
- **16 Young Professionals** successfully completed the SAP Dual Study Program Bootcamp
- **50 Industry partnerships** across EAC enabling practical learning experience for young professionals





“Joining this course is the biggest and best thing I have ever done. I was one of the only six young women in my cohort. ICT is the future, and as women, we cannot afford to be left out. Take this opportunity and become the agent of change in digital transformation.”

Shakila Mbaraka

TANZANIA



“Embedded and mobile systems technology is growing, and the next few years will be crucial in the development of these systems. Life in the future will be based around devices, with everything connected and everyone interacting with technology. Gaining knowledge now is very important with EMoS.”

Fabien Ngabayimbere

RWANDA

FACTSHEET

CENIT@EA is an initiative of the East African Community (EAC) and the German Federal Ministry for Economic Cooperation and Development (BMZ), launched in 2019 by the Minister for Education, Science and Technology, Tanzania.

Implementation:

CENIT@EA is implemented under the dSkills@EA project, by the Inter-University Council for East Africa (IUCEA) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), in collaboration with the German Academic Exchange Service (DAAD), an academic consortium from EAC and Germany and the East African Business Council (EABC).

Members of the CENIT@EA Academic Consortium:



CENIT@EA Host Institution

→ The Nelson Mandela African Institution of Science and Technology (NM-AIST), in Arusha Tanzania

Limited scholarships available for qualified nationals of EAC Partner States.



Implemented by:



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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