

CALL FOR SUMMER SCHOOL APPLICATIONS

5TH INTERNATIONAL SUMMER SCHOOL

ARTIFICIAL INTELLIGENCE, BIG DATA AND EARTH OBSERVATION TECHNOLOGIES FOR CLIMATE-RESILIENT WATER RESOURCES MANAGEMENT

12TH – 26TH OCTOBER 2026

Mbeya University of Science and Technology, Mbeya, Tanzania



THEME: “Advancing Digital Frontiers in Water Security: Integrating Artificial Intelligence, Big Data and Earth Observation Technologies for Climate-Resilient Water Resources Management in Africa”



ABOUT THE SUMMER SCHOOL

Mbeya University of Science and Technology (MUST), in partnership with WaterNet, is pleased to announce the 5th International Summer School on Artificial Intelligence (AI), Big Data and Earth Observation (EO) Technologies for Climate-Resilient Water Resources Management, to be held from 12th to 26th October 2026 at MUST, Mbeya, Tanzania. The summer school will be followed by a series of field excursions in Iringa, Dodoma and finally ending up in Arusha where the 27th WaterNet Symposium will be held.

This intensive two-week programme bridges the critical gap between traditional hydrological science and cutting-edge digital transformation technologies, in alignment with the 27th WaterNet Symposium theme and the United Nations Sustainable Development Goals (SDGs). The programme aims to empower the next generation of African water professionals with advanced technical capabilities to leverage Earth Observation and Artificial Intelligence for sustainable water security across Eastern and Southern Africa.

The dynamic curriculum features interactive lectures and technical laboratory sessions, practical fieldwork and educational excursions, science competitions, innovation pitching and three-minute research competitions, creative engagement through art and performance activities, and a recognition award ceremony.



WHAT TO EXPECT

Upon completion of the programme, participants will:

i.	Develop a comprehensive understanding of Integrated Water Resources Management (IWRM), including governance frameworks that promote sustainable water resource management practices.
ii.	Recognise the impacts of climate change on water resources and acquire strategies to develop resilient infrastructure for sustainable water management.
iii.	Understand the interdependencies between water, energy, and food systems, and apply integrated approaches for managing them sustainably.
iv.	Utilise cutting-edge technologies and innovative solutions that enhance monitoring, modelling, and decision-making processes in IWRM.
v.	Understand opportunities and challenges associated with water-ecosystem-environment interactions.
vi.	Promote innovative approaches, best practices, and appropriate technologies to improve sustainable Water, Sanitation and Hygiene (WASH) services.
vii.	Design scientific research in the field of IWRM and strengthen skills in scientific writing and research methodology.
viii.	Develop proficiency in using the EO AFRICA Innovation Lab and Virtual Research Environment (VRE), including AI libraries and open-source tools, for hydrological modelling, satellite image processing, and project development.
ix.	Apply Earth Observation data and knowledge of the Copernicus Programme to utilise optical and SAR satellite imagery for surface water monitoring, hazard assessment, and water resources management.



Programme Outline

A	B	C	D	E	F	G	H	I
Integrated Water Resources Management (IWRM) and governance for sustainability.	Climate change and adaptation strategies for IWRM.	Water-Energy-Food (WEF) Nexus modelling and analysis.	Sustainable Development Goal 6 (SDG 6) and innovative approaches for affordable WASH services.	The Copernicus Programme, cloud-based tools and open Earth Observation data access.	Optical and SAR remote sensing for water monitoring and hazard assessment.	Image processing and machine learning in Python for water resource applications.	Strategies for effective scientific writing and research communication .	Group projects, fieldwork excursions, science competitions and cultural activities.



WHO IS ELIGIBLE

- Postgraduate students (Master's and PhD candidates), postdoctoral fellows, early-career researchers, and professionals working in relevant disciplines, including: Water Resources Engineering, Integrated Water Resources Management (IWRM), Catchment Management, Integrated Sanitation Management, Civil Engineering, Environmental Science, Geomatics/Geoinformatics, Energy, Agriculture, Forestry, Natural Resource Conservation, Urban and Regional Planning, or other closely related fields.
- Applicants who are not currently enrolled as students are required to submit a one-page concept note or proposal outlining how participation in the Summer School aligns with their professional responsibilities, research interests, or institutional mandates.
- Proficiency in the language of instruction (English) is required to ensure effective participation in lectures, practical sessions, and group activities.
- Participants are required to bring their own laptops to facilitate participation in hands-on training sessions.
- Priority for sponsorship to attend the 5th International Summer School will be given to participants who have already secured funding to attend the 27th WaterNet/WARFSA/GWPSA Symposium (Arusha, Tanzania, 28–30 October 2026).



PROGRAMME COST

- The prescribed fee for self-sponsored participants is USD 700 for international participants and TZS 750,000 for local participants, which covers registration, training, accommodation, lunches, and teas during training for the entire two (2) weeks of the Summer School as well as on transit accommodation to Arusha.
- Self-sponsored participants are responsible for their own flights and airport transfers.
- A limited number of full and partial sponsorships are available from WaterNet for financially needy candidates from SADC countries who meet the criteria to participate in the two weeks of the Summer School.



HOW TO APPLY

- Interested applicants should submit their applications through the following link: [APPLY HERE](#)
- Applicants who are not currently enrolled as students must attach a one-page concept note or proposal as described under eligibility.
- Applicants from the Eastern and Southern African regions are encouraged to apply.

THE DEADLINE FOR APPLICATIONS IS 31TH JULY 2026. Late and incomplete applications will not be considered.



PAYMENT DETAILS

Payment details for local (Tanzanian) participants please click [here](#).

Payment details for international participants (WaterNet)

Account Holder Name	WaterNet Trust
Account Number	9060002591915
Bank Name	Stanbic Bank Botswana Limited
Branch	Fairgrounds
Swift Code	SBICBWGX
Currency	USD
Reference to be used	Summer School, Initials, Surname (e.g. Summer School, D. Kidawa)

Mbeya University of Science and Technology/WaterNet

