

MBEYA UNIVERSITY OF SCIENCE AND TECHNOLOGY

OFFICE OF THE DEPUTY VICE CHANCELLOR - ACADEMIC, RESEARCH AND CONSULTANCY

COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

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In reply please quote:
Ref. No.

Date: 27th August 2025

SHORT COURSES ANNOUNCEMENT

Civil Engineering Department is under the College of Engineering and Technology (CET) at Mbeya University of Science and Technology (MUST). The department's core mission is to provide top-quality teaching, carry out impactful research, and offer industry-relevant consultancy services in the diverse disciplines of civil engineering. The academic programs within the department include diplomas, undergraduate degrees, postgraduate degrees (Master's and Ph.D.), and short courses in civil engineering. To enhance skills and knowledge in civil engineering, the department has developed a variety of short courses and invites a wide range of stakeholders to apply. These courses will be conducted in different regions of Tanzania, as outlined in the schedule provided below.

The schedule for short courses offered by the Civil Engineering Department at Mbeya University of Science and Technology (MUST) for the year 2024/2025.

S/No.	DETAILS OF THE COURSE	
1.	Short Course Title	Labour Based Technology
	Contents	1. An introduction to labour-based technology, 2. Community Based Organization (CBO), 3. Earth and gravel roads construction,

	4. Earth and gravel road maintenance, 5. Construction and maintenance of road drainage system, 6. Maintenance of bituminous roads, 7. Stone pitching/construction, 8. Cement concrete pavement construction, 9. Road side development and arboriculture, 10. Preparation and fill the Bill of Quantities (BOQ) for road works, 11. Introduction to safety practices and Practical and Site visit.	
Target Group	Individuals engaged in road construction activities, and laborers from construction industry.	
Learning Objectives	Participants will be able to construct and maintain earth and gravel roads, stone and cement concrete pavement, drainages, maintain bituminous roads, prepare and fill the Bill of Quantities (BOQ), and adhere to safety procedures. In addition, participants will have the capability to establish self-employment opportunities.	
Participation Fee	450,000 TZS for Tanzanian and 800 USD for Non-Tanzanian	
Date and Region	18 th -29 th August- August 2025	Dar es salaam and Zanzibar Conducted in collaboration with TUCASA
	8 th -26 th September 2025	Moshi-Kilimanjaro
	3 rd -21 st November 2025	Mbeya
	9 th – 27 th March 2026	Dodoma

		6 th -24 th April 2026	Rukwa Conducted in collaboration with MRCC
		3 rd -22 nd May 2026	Mwanza
2.	Short Course Title	Analysis and Design of Multi-Storied Building Using Prota Structure Software	
	Contents	1. Introduction to reinforced concrete design and detailing, 2. Modelling of structural elements including slab, beams and columns, 3. Analysis of 3D model under gravity and wind load, 4. Design of building elements using British Standard, 5. Preparation of design report and 6. Preparation of drawings, details and bar bending schedule.	
	Target Group	Civil Engineers who want to gain cutting-edge knowledge on how to use computer software for accurate and faster building design.	
	Learning Objectives	At the end of the training, participants are expected to: Understand the process involved in the design of building elements, Perform 3D modelling of reinforced concrete building. Analyze and design different elements of the building. Prepare bar bending schedule. Produce high quality drawings and all design documentation.	
	Accreditation	Professional engineers will receive Professional Development Units (PDUs). The number of PDUs will be announced before starting of the course.	

	Participation Fee	600,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	9 th -13 th March 2026	Mbeya
3	Short Course Title	Road Maintenance, Prioritization and Traffic Planning	
	Contents	<ol style="list-style-type: none"> 1. Introduction to road maintenance, prioritization and traffic planning. 2. Maintenance Techniques. 3. Materials and Equipment for Maintenance. 4. Maintenance, Planning and Scheduling. 5. Prioritization of road projects, including collection and analysis for Maintenance prioritization. 6. Prioritization of road projects based on economic, environmental, and safety considerations. 7. Planning and management of traffic systems using modern techniques and technologies. 	
	Target Group	All civil technicians and engineers involved in civil construction works.	
	Learning Objectives	The participants will be able to perform road maintenance, prioritization and traffic planning.	
	Participation Fee	600,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	18 th -26 th November 2025	Mbeya
4.	Short Course Title	Building Maintenance	
	Contents	1. Introduction to Building Maintenance	

		2. Types of Building Maintenance 3. Building Inspection and Assessment 4. Safety and Compliance in Building Maintenance 5. Maintenance of concrete roof slab leakage, 6. Wall cracks repair, 7. Demolition procedure, 8. Painting, 9. Cement sand floor finish repair, 10. Terrazzo floor repair. 11. Budgeting and Cost Estimation for Maintenance	
	Target Group	Individuals engaged in building construction and maintenance activities, labours from the construction sector.	
	Learning Objectives	The course objectives are to provide participants with a thorough understanding of maintenance safety operations, various methods for concrete roof slab maintenance and repair, the causes of cracks and their repair techniques, and effective supervision and monitoring of maintenance activities, specifically for wall cracks, cement sand floors, and concrete roof slab leakage.	
	Participation Fee	1,200,000 TZS for Tanzanian and 1200 USD for Non-Tanzanian.	
	Date and Region	1 st -12 th December 2025	Mbeya
5.	Short Course Title	Analysis and Design of Reinforced Concrete Box Culvert Using Computer Software	

	Contents	<ol style="list-style-type: none"> 1. Introduction to Reinforced Concrete Box Culverts 2. Analysis and design of box culverts using computer software. 3. Highlights on preparation of detailed drawings in AUTOCAD. 4. Preparation of detailed design calculations report 5. Preparation of Bar Bending Schedule. 	
	Target Group	The course is suitable to all civil engineers engaged in road design and construction, whether in the public or private sector, as well as SEAP engineers, Technical Managers, and Project Managers.	
	Learning Objectives	The participant will be able to analyse and design reinforced box culverts by using computer software, prepare bar bending schedule and produce accurate design report.	
	Accreditation	Professional engineers will receive Professional Development Units (PDUs). The number of PDUs will be announced before starting of the course.	
	Participation Fee	800,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	25 th - 29 th August 2025	Mbeya
6.	Short Course Title	Application of EPANET Design Software in Water Supply System Planning and Analysis	
	Contents	<ol style="list-style-type: none"> 1. Fundamentals of Water Distribution Systems 2. Principles of Hydraulic Modeling for Water Supply Networks 3. Introduction to EPANET 4. Network Modeling and Simulation Techniques 5. Water Quality Analysis and System Performance 	

		Evaluation 6. Design Optimization and Troubleshooting Strategies 7. Hands-on Software Application for Network Design and Analysis 8. Field Application: Real-World Water Distribution System Case Study	
	Target Group	All water supply engineers, utility engineers, civil/environmental engineers, water utility planners, and technical officers involved in water distribution system planning, design, and management.	
	Learning Objectives	Participants will be able to model, design, analyze, and optimize water distribution systems using EPANET computer software and practical field-based applications.	
	Participation Fee	600,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	11 th -16 th January 2026	Mbeya
7.	Short Course Title	Ethics and Integrity in Water sector	
	Contents	1. Introduction to Water governance and Integrity 2. Principles and Frameworks of Ethics and Integrity in the Water Sector 3. Common Integrity Risks and Governance Challenges in Water Institutions. 4. Tools and Strategies to Strengthen Water Integrity. 5. Case Studies on Successful Integrity Interventions in the Water Sector 6. Action Planning: Developing Institutional Integrity	

		Improvement Plans	
	Target Group	All officials in water sector (water supply and sanitation authorities, basin offices, catchment offices).	
	Learning Objectives	The short course is intended to develop institutional capacities and prepare for change through increased knowledge and enabled action on integrity, transparency and accountability. Participants will learn how to identify integrity risks, apply ethical decision-making, and strengthen accountability to ensure clean, reliable, and fair water services for all.	
	Participation Fee	600,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	13 th -17 th April 2026	Mbeya
8.	Short Course Title	Structural Detailing of Reinforced Concrete Structures Using AutoCAD	
	Contents	<ol style="list-style-type: none"> 1. Introduction to Structural Analysis and Design 2. Introduction to Reinforced Concrete Structural Detailing 3. Preparation of Structural Layouts 4. Detailing of Foundations, Columns, Beams and Slabs. 5. Detailing of Stairs and Shear walls. 6. Preparation of Bar Bending Schedule 	

	Target Group	Civil and structural engineers, draftsmen, and technicians who want to gain practical and cutting-edge knowledge on how to prepare accurate and professional structural drawings for buildings using AutoCAD, in line with industry standards and codes..	
	Learning Objectives	At the end of this AutoCAD-focused reinforced concrete detailing short course, participants are expected to: Interpret structural design drawings for reinforced concrete buildings, prepare bar bending schedules for common RC elements, produce detailed reinforcement drawings using AutoCAD software, and understand the documentation requirements for reinforced concrete detailing.	
	Participation Fee	600,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	27 th April to 01 st May 2026	Mbeya
9.	Short Course Title	Preparation of Bar Bending Schedule (BBS) for Reinforced Concrete Structures	
	Contents	<ol style="list-style-type: none"> 1. Introduction to Bar Bending Schedule (BBS) 2. The fundamentals of reinforced concrete and steel reinforcement. 3. Interpretation of structural drawings related to Reinforced Concrete structures. 4. Preparation of clear and practical BBS in tabular formats for construction. 5. Utilizing computer-based software to automate BBS preparation. 	

		6. Practical Exercises & Case Studies	
	Target Group	All civil technicians and engineers involved in civil construction works.	
	Learning Objectives	The participants will be able to design and Construct Low Volume Roads.	
	Participation Fee	600,000 TZS for Tanzanian and 800 USD for Non-Tanzanian.	
	Date and Region	20 th April to 24 th May 2026	Mbeya
10.	Short Course Title	Water Pump Mechanics and Maintenance	
	Contents	1. Introduction to Pump Mechanics 2. Pump Classification. 3. Pump Operation Mechanism. 4. Pump Performance. 5. Pump Selection. 6. Pump Troubleshooting. 7. Pump Maintenance and Repair	
	Target Group	Water Supply Engineers, Civil/Environmental Engineers, Procurement Officers, Water Technicians, Plumbers, Pump Attendants, and both professionals and non-professionals involved in water management.	
	Learning Objectives	1. To provide in-depth knowledge of water pump mechanics and their critical role in water supply systems. 2. To enhance skills in selecting, operating,	

		troubleshooting, maintaining, and repairing pumps. 3. To offer hands-on experience in pump operation and real-world problem-solving.	
	Participation Fee	700,000 TZS for Tanzanian and 700 USD for Non-Tanzanian.	
	Date and Region	20 th April to 24 th May 2026	Mbeya

IMPORTANT INFORMATION

1. The deadline of the application shall be six (6) days before the start of the course.
2. Participation fee should be paid through the Control Number/Account Number provided by MUST, following consultation with the short course coordinators.
3. For further details, contact the provided email addresses and mobile phone numbers:
 - Head of Civil Engineering Department: [**patrice.mkono@must.ac.tz/**](mailto:patrice.mkono@must.ac.tz)
 - Short course coordinator email: [**smnassibu@gmail.com**](mailto:smnassibu@gmail.com)
 - Short course coordinators' mobile phones: **0717762003, 0756263982, 0759026563, 0768959378.**