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PROGRAMME BROCHURE · MASTERS

Master of Science in Civil Engineering

2 Year(s) · Part Time · School of Engineering and Technology

Qualification level	Masters
Duration	2 Year(s)
Mode of study	Part Time
Awarded by	Technical University of Mombasa
Sponsorship	Self-Sponsored
School / institute	School of Engineering and Technology
Department	Building and Civil Engineering
Programme code	MSCE

Overview

The Master of Science in Civil Engineering at the Technical University of Mombasa is a two-year postgraduate programme designed to equip graduates with advanced engineering knowledge, specialised technical competencies, analytical skills and research capabilities to address complex challenges in civil engineering and infrastructure development.

The programme offers three areas of specialisation:

- **Structural Engineering:** Focuses on advanced structural analysis, design, construction materials and the performance of safe, durable and resilient structures.
- **Highway and Transportation Engineering:** Focuses on transportation planning, traffic engineering, pavement engineering and the development of efficient, safe and sustainable transportation infrastructure.
- **Water Resources Engineering:** Focuses on advanced hydraulics, hydrology, water resources planning and management, and sustainable water infrastructure development.

The programme integrates advanced coursework with independent research, enabling students to apply engineering theories, analytical methods, modelling and innovative technologies to contemporary engineering challenges. Students undertake supervised research in their chosen area of specialisation, culminating in a research thesis.

Emphasis is placed on critical thinking, innovation, research excellence, professional integrity and sustainable infrastructure development. The programme prepares graduates for advanced professional practice, specialist engineering consultancy, technical leadership, research, academia and doctoral studies in civil engineering and related disciplines.

Through research and specialised training, graduates are equipped to contribute to the advancement of engineering knowledge and the development of practical, innovative and sustainable solutions to national and global infrastructure challenges.

Entry requirements

To qualify for admission into the Master of Science in Civil Engineering programme at the Technical University of Mombasa, an applicant must meet any of the following requirements:

1. Bachelor's Degree - Second Class Honours (Upper Division)

A Bachelor's degree in Civil Engineering with at least Second Class Honours (Upper Division) or a cumulative Grade Point Average (GPA) of 3.00 on a scale of 4.00 from an institution recognised by the Commission for University Education (CUE).

OR

2. Bachelor's Degree - Second Class Honours (Lower Division)

A Bachelor's degree in Civil Engineering with Second Class Honours (Lower Division) or a cumulative Grade Point Average (GPA) of 2.50 on a scale of 4.00, with all the following:

- Additional relevant training.
- Evidence of research capability.
- At least two years of relevant working experience.

OR

3. Equivalent Qualifications

Any other equivalent qualification from an accredited institution recognised by the Technical University of Mombasa Senate and the Commission for University Education (CUE).

All applicants shall also satisfy the applicable admission requirements and regulations of the Technical University of Mombasa School of Graduate Studies.

What you will learn

Upon successful completion of the Master of Science in Civil Engineering programme, graduates will be able to:

1. Apply advanced academic and professional knowledge, skills and competencies in civil engineering practice.
2. Conduct research through critical analysis of literature and data, and present and interpret research findings to address problems and challenges in civil engineering.
3. Communicate scientific findings professionally, facilitate knowledge transfer, deliver scientific presentations and publish research findings in scholarly publications.
4. Apply advanced civil engineering knowledge to develop effective and innovative solutions to societal challenges involving the use of engineering materials, structures, systems and processes for specific purposes.

Career prospects

Graduates of the Master of Science in Civil Engineering programme are equipped with advanced technical knowledge, specialised engineering competencies, research capabilities and analytical skills to pursue professional, technical leadership and research opportunities in the civil engineering and infrastructure development sectors, both locally and internationally.

Potential career pathways include:

- Structural Engineering and Advanced Structural Design
- Highway and Transportation Engineering
- Traffic Engineering and Transportation Planning
- Pavement Engineering and Management
- Water Resources Engineering and Management
- Hydraulic and Hydrological Engineering
- Engineering Consultancy
- Infrastructure Planning and Development
- Construction and Infrastructure Project Management
- Engineering Research and Innovation
- Construction Materials Research and Development

- Infrastructure Asset Management
- Sustainable Infrastructure Development
- University Teaching and Academic Research
- Engineering Entrepreneurship and Technical Advisory Services

Potential employers include:

- Engineering consulting firms
- Building and civil engineering contractors
- Government ministries, departments and agencies
- County governments
- Road and transportation authorities
- Water resources management authorities
- Water and sanitation service providers
- Ports, railway and airport authorities
- Infrastructure development companies
- Universities and research institutions
- Engineering research and materials testing laboratories
- International development organisations
- Multilateral development agencies
- Non-governmental organisations

Graduates may also establish engineering consultancy and research enterprises, advance into senior technical and managerial positions, or pursue Doctor of Philosophy (PhD) studies in civil engineering and related disciplines, subject to the applicable academic, professional registration and licensing requirements.

How to apply

Apply online through the student information system at **smis.tum.ac.ke/application/register**. Have your academic certificates, national ID or passport and a passport photograph ready. For admission dates, requirements for your intake and help with your application, contact the office above.

Contact us

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