



Technical University of Mombasa

ACADEMIC STAFF CURRICULUM VITAE

Dr. GACHERU ESTHER Esther NJOKI

Lecturer · School of Engineering and Technology

1. PERSONAL AND PROFESSIONAL DETAILS

Full Name	Dr. GACHERU ESTHER Esther NJOKI
Academic Rank	Lecturer
Department / School	School of Engineering and Technology
Official Email	gacheruesthernjoki@tum.ac.ke

2. PROFESSIONAL PROFILE

Dr. Esther Njoki Gacheru is a Lecturer and Chairperson of the Department of Building and Civil Engineering at the Technical University of Mombasa. She holds a PhD and MSc in Construction Project Management from Jomo Kenyatta University of Agriculture and Technology and a Bachelor of Education in Technology (Building and Construction) from Moi University.

She is a registered Professional Engineering Technologist with the Kenya Engineering Technology Registration Board (KETRB), with over 15 years of experience in higher education, technical training and construction practice.

Her areas of expertise include construction project management, quality assurance in construction, competency-based education and training (CBET), curriculum development and engineering education. Her research focuses on improving quality assurance practices in the construction industry, particularly among building contractors in Kenya.

Dr. Gacheru has contributed to national curriculum development, authored educational textbooks and published research in construction management and quality assurance. She has also served in academic quality assurance, curriculum development and institutional leadership roles.

As Chairperson, she is committed to strengthening academic excellence, practical engineering education, applied research and industry collaboration to prepare competent and innovative engineering professionals.

3. ACADEMIC QUALIFICATIONS

Year	Qualification	Specialization	Institution
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2025	PhD	Construction Project Management	Jomo Kenyatta University of Agriculture and Technology
2015	MSc	Construction Project Management	Jomo Kenyatta University of Agriculture and Technology
2008	B. Ed. Tech.	Building and Construction	Moi University

4. CURRENT POSITION AND RESPONSIBILITIES

Current Position: Lecturer

Key Responsibilities:

1. **Teaching and Learning:** Delivering undergraduate and postgraduate courses in construction technology, building technology, construction management and research methodology, including preparation of course materials, assessment and evaluation of student learning.
2. **Research and Supervision:** Supervising undergraduate and postgraduate research projects, conducting scholarly research and contributing to publications in construction project management, quality assurance and engineering education.
3. **Curriculum Development:** Participating in the development, review and improvement of academic programmes, course outlines and instructional materials to ensure relevance to industry needs and academic standards.
4. **Student Mentorship and Academic Advising:** Providing academic guidance, mentoring students and supporting their professional development and research activities.
5. **Practical Training:** Coordinating laboratory activities, field visits and practical learning experiences to strengthen students' technical competencies and application of engineering principles.
6. **Assessment and Quality Assurance:** Preparing and moderating examinations, assessing student performance and ensuring compliance with university academic regulations and quality assurance requirements.
7. **Academic and Industry Engagement:** Participating in academic committees, professional development activities, research collaborations and industry engagements that enhance teaching, learning and knowledge transfer.

5. TEACHING & RESEARCH EXPERTISE

Teaching Areas: Construction Management, Construction Project Management, Building Technology, Construction Technology, Engineering Materials, Engineering Drawing, Workshop Technology and Practice, and Research Methodology.

Research Interests: Construction Project Management; Quality Assurance and Quality Control in Construction; Sustainable Construction Materials and Technologies; Construction Industry Regulation

and Compliance; Infrastructure Performance and Sustainability; Competency-Based Education and Training (CBET); Engineering Education; and Curriculum Development and Implementation.

Research Collaborations:

NextGen Build: Empowering Green Innovation and Carbon Intelligence in African and Danish Cities (2026-2027)

A DANIDA Fellowship Centre SEED-funded initiative under the Knowledge and Innovation Programme, focusing on sustainable built environments, low-carbon construction and climate-responsive urban development. The project explores innovative approaches to reducing carbon emissions in the construction sector, including Building Information Modelling (BIM), Life Cycle Assessment (LCA) and digital technologies for carbon monitoring. The seed phase supports international research partnership development and preparation of a comprehensive collaborative research proposal.

6. PUBLICATIONS AND SCHOLARLY OUTPUTS

Peer-reviewed Journal Articles:

1. Gacheru, E. N., Diangá, S., Masu, S., & Onchiri, R. (2024). A framework for enhancing quality assurance practices of building contractors. *Africa Habitat Review*, 19(1).
2. Gacheru, E. N., Diangá, S., Masu, S., & Onchiri, R. (2023). Evaluating factors influencing quality assurance of building construction projects: A PLS-path modelling approach. *Multidisciplinary Journal of TUM*, 2(2), 2023-2052. <https://doi.org/10.48039/mjtum.v2i2.66>
3. Gacheru, E. N., & Diang', S. O. (2015). Regulating building contractors in Kenya and challenges of enforcing the National Construction Authority mandate. *International Journal of Soft Computing and Engineering*, 5(1).

7. POSTGRADUATE SUPERVISION AND MENTORING

Master's: 4 ongoing.

9. PROFESSIONAL & LEADERSHIP EXPERIENCE

1. Chairperson, Department of Building and Civil Engineering | Technical University of Mombasa | June 2025 - Present

Providing academic and administrative leadership, coordinating departmental programmes, overseeing staff and academic activities, promoting research and industry partnerships, and ensuring compliance with university academic standards.

2. Departmental Examinations Coordinator | Technical University of Mombasa | August 2016 - January 2019; May 2024 - February 2025

Coordinated examination preparation, moderation, administration and processing of examination results while ensuring adherence to university examination regulations.

3. Departmental Timetabler | Technical University of Mombasa | February 2019 - January 2023

Coordinated departmental teaching and examination timetables to support effective academic planning and utilisation of teaching resources.

10. AWARDS, MEMBERSHIPS & PROFESSIONAL CONTRIBUTIONS

Professional Registration and Memberships

1. Registered Professional Engineering Technologist (P. Eng. Tech), Kenya Engineering Technology Registration Board (KETRB), Registration No. P00597/5-19.
2. Member, Institution of Engineering Technologists and Technicians of Kenya (IET-K), Membership No. 257.
3. Licensed Trainer and Assessor in Building and Construction Technology, Technical and Vocational Education and Training Authority (TVETA), Licence No. TVETA/T247523.

Academic and Professional Service

1. Internal and External Examiner for postgraduate research, contributing to academic quality assurance and scholarly assessment.
2. Research Ethics Reviewer, Technical University of Mombasa Scientific and Ethics Review Committee.

Curriculum Development and Professional Contributions

1. Contributor to national curriculum development through the Kenya Institute of Curriculum Development (KICD) and National Industrial Training Authority (NITA).
2. Author and co-author of educational textbooks in Pre-Technical Studies (Grades 7-9) and Building and Construction (Grade 10 and 11).
3. Trainer of Master Trainers in Competency-Based Education and Training (CBET).
4. Member, Technical University of Mombasa Recognition of Prior Learning Policy Development Committee (2026).

Industry and Community Engagement

1. Patron, Civil Engineering Club, Technical University of Mombasa.
2. Engagement with professional bodies, construction industry practitioners and government agencies to promote practical engineering education, professional development and industry collaboration.

11. KEY ACHIEVEMENTS / IMPACT

1. Research Contribution to Construction Quality Assurance

Developed a research-based framework for enhancing quality assurance practices among building contractors in Kenya through doctoral research, contributing to knowledge on construction quality

management, regulatory compliance and industry performance.

2. National Curriculum Development and Educational Publishing

Contributed to the development of national competency-based curricula and educational resources in Kenya. Co-authored textbooks in Pre-Technical Studies for Grades 7-9 and Building and Construction for Grade 10 and 11, supporting the implementation of competency-based education.

3. Academic Leadership and Institutional Development

Provided academic and administrative leadership within the Department of Building and Civil Engineering at the Technical University of Mombasa, supporting curriculum development, academic quality assurance, research engagement and improvements in departmental operations.

4. Scholarly Research and Publications

Published peer-reviewed research addressing construction quality assurance, construction project management and regulation of building contractors in Kenya, contributing to scholarly discourse and evidence-based improvements in construction practice.

5. International Research Collaboration

Participating in the DANIDA SEED-funded NextGen Build international research collaboration, which promotes green innovation, carbon intelligence and sustainable urban development through partnerships involving institutions in Denmark, Kenya and South Africa.

6. Professional Recognition and Technical Education

Attained registration as a Professional Engineering Technologist with the Kenya Engineering Technology Registration Board (KETRB). Contributed to technical education through competency-based curriculum development, training of trainers and professional capacity-building initiatives.

7. Academic Quality Assurance and Research Supervision

Contributed to institutional academic quality assurance through programme audits, examination coordination, postgraduate research examination and supervision of undergraduate and postgraduate research projects.

8. Student Mentorship and Professional Development - Civil Engineering Club

Serving as Patron of the Civil Engineering Club at the Technical University of Mombasa, providing academic guidance and mentorship to students and supporting initiatives that connect classroom learning with professional engineering practice. Facilitating student engagement through industry talks, technical webinars, educational site visits and interactions with practising engineers and professional institutions.