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## KeNHA to Partner with Moi University in Research

Moi University and Kenya National Highways Authority has signed an Intent to Collaborate in Research and Innovation. The partnership will see implementation of new technologies and modern methodologies that will solve problems in the road and transport sector in Kenya, in the wake of climate change. The delegation from KenHA visited Moi University for further engagement with the Vice-Chancellor, led by the Deputy Director- Research, Innovation & Knowledge Management, Eng. Dr. Victoria Okumu.

# School of Engineering Participates in 5<sup>th</sup> Engineering Partnership Convention

## *Message from the CS -Roads & Transport*

The 5<sup>th</sup> Engineering Partnership Convention (EPC) was held at Dedan Kimathi University of Technology from May 7-10, 2024. The theme of the convention was “Engineering@60: Reflections, Response, resetting” aims to provide a comprehensive platform for engineers, scientists, innovators, and stakeholders to engage in meaningful discussions, knowledge exchange, and envision the future of engineering. The CS reiterated the need to harness the collaboration and partnership in redefining the various Subsectors of Engineering to meet the demands of changing times-offering unquestionable safety and security. On innovation, the CS pointed out that universities in the world have become what they are, because the centers of innovation are not the industry out there, but the industry as established within the university environment

In attendance were Engineers representing government departments, parastatals, engineering institutions, private sector and Universities. The Vice-Chancellor of moi University was represented by the Dean- School of Engineering (Eng. Prof. Augustine Makokha)



*Celine Kichwen – Chair TSA*



*Paul Kihara – 5<sup>th</sup> year, EC*



# TSA Executive Council -2024/2025



**Celine Kichwen**  
**Chairperson**

Student leadership presents an opportunity to create progressive change. The legacy we'll live by and create as a team is that we did better and were better for the students and the association.



**Joshua Kimeto**  
**Vice Chairperson**

I am grateful that engineers of Moi university have trusted me again with responsibility as Vice Chair. I promise to do my best to build and grow TSA.



**Ruth Mokeira**  
**Sec. General**

In collaboration with the entire TSA team, we will inculcate a holistic growth and development for all the engineering students, in all aspects of university life.



**Chris MC'Donge**  
**Projects Coordinator**

I stand at the helm of an exciting journey towards innovation, collaboration, and progress. Let us embrace our dreams as blueprints for a better tomorrow.



**Kelvin Chemjor**  
**Finance Secretary**

Being a great leader is not just about having grand visions, but being able to inspire and empower others to share that vision.



**Caren Bor**  
**Publicity Secretary**

“Leadership is the capacity to translate vision into reality”. I’m therefore looking at making TSA realize its vision through the Publicity Docket.

# Partnerships & Linkages



University Students from Purdue, Texas, San Francisco and Colorado visit School of Engineering

Students from Colorado school of mines, San Francisco State University, University of Texas and Purdue University led by Assistant Prof. Caroline Marete visited the School of Engineering to explore possible collaboration in student activities like joint Capstone Projects. The students were drawn from Nursing, Mechanical Engineering and Biomedical Engineering tracks. The team paid a courtesy call on Vice-Chancellor, who was represented by the DVC-Academics, Research, Extension & Students Affairs- Prof. Isaac Kimengi.



## MSc-Biomedical Engineering Launched: 2024/25 Intake

The department of Electrical and Communications Engineering, in collaboration with other departments in the School of Engineering, has launched a graduate program that leads to Master of Science (MSc) in Biomedical Engineering with specialties in:

1. Biomedical Instrumentation and Control,
2. Biomechanical Engineering
3. Biomedical Structures.

This is done through coursework, examination, and thesis. The programme aims to create scholarly research and develop capacity in the specialist area of Biomedical Engineering. It captures recent developments in innovative research. The first cohort of students will join in September 2024.

# Kenya-Norway Engineering Students Exchange Program under NORPART



## Moi University Students at NMBU meet with the Dean-School of Engineering

### 01 MSc Thesis presentation

Two students, Karina and Øyvind successfully defended their MSc theses at NMBU on 7<sup>th</sup> June 2024. They participated in exchange program at Moi University, School of Engineering.

### 02 Moi University students at NMBU

Five students (Jack Munialo, Roselyn Sugut, Jackline Jepkoskei, Smret Demewez and Angeline Nzambi) from Moi University report at Norwegian University of Life Sciences for one semester of course work under NORPART Program.



Prof. Augustine Makokha, the Dean, School of Engineering and Prof Lucy Rono from School of Business & Economics attended a research seminar with master's students from Moi University who are currently on an exchange program at the Norwegian University of Life Sciences under the NORPART project

## Council of Engineering Deans and EBK hold Consultative Meeting at Moi University



### Message by Registrar/ CEO- EBK

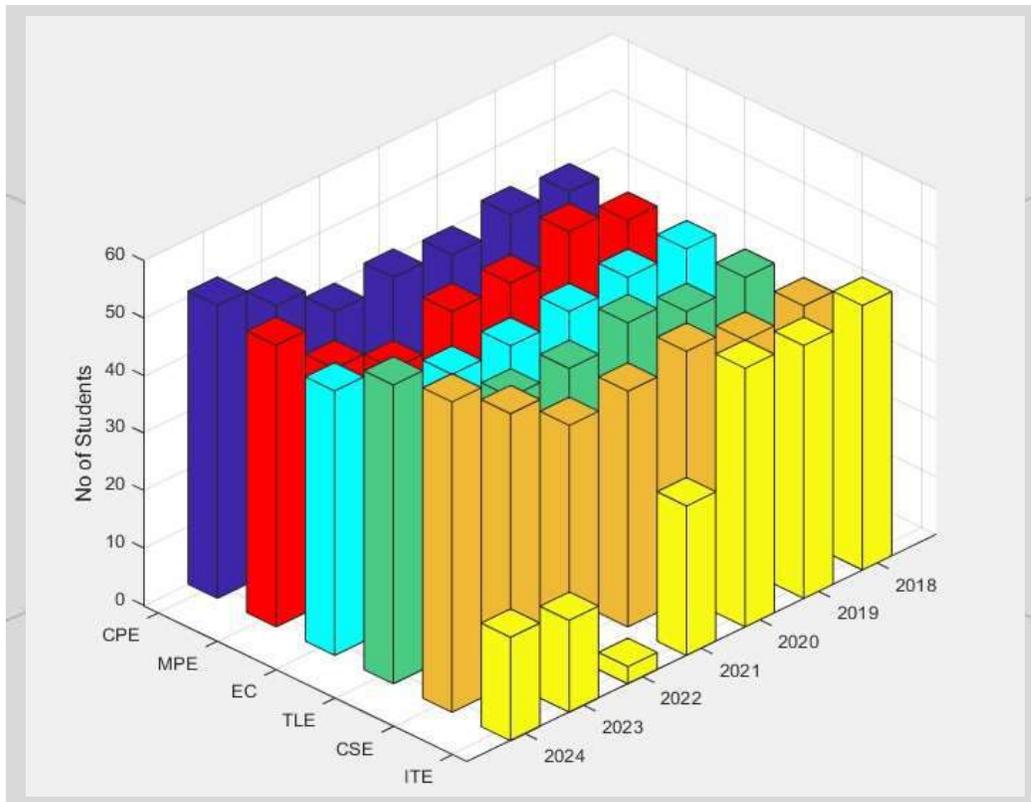
The Council of Engineering Deans (CoED), led by the Chairman, Eng. Prof. Bernard Ikua held a consultative meeting with the Engineering Board of Kenya (EBK) at Moi University. The EBK was led by the CEO, Eng. Margaret Ogai. Other members present



were Eng. Johnson Matu and Eng. Prof. Silvester Abuodha. The team started with a courtesy call on the Vice-Chancellor, Prof. Isaac Kosgey, who was represented by the Principal College of Health Sciences, Prof. Robert Tenge.

The Registrar and CEO of EBK reiterated that the CoED is an important forum to link the Engineering education and professional bodies. That there are 64 engineering degree programmes in Kenya that are recognized by EBK. That EBK will assist Universities to address lack of proper equipment and qualified academic staff to teach engineering.

# 277 first year students set to Join School of Engineering-Moi University



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Under the new funding model, the fees payable to the university for the B.Eng. programmes is Ksh. 336,600 per year.

## 2018 - 2024 KUCCPS Admission Statistics

2023/2024 236

↑ 17.4%

2024/2025 277%

The student enrollment levels in engineering degree programs at Moi University has been steadily growing since 2022. This year a total of 277 students have been admitted into the six Bachelor of Engineering Programs of Moi University, representing a 17.4% increase from 2023. Chemical & Process (CPE), Electrical & Telecommunication (TLE), Civil & Structural (CSE), and Mechanical & Production (MPE) all filled their declared admission capacities.

# School of Engineering Participates in TEA forum in Kigali Rwanda



The FCDO (UK) hosted the 2024 Transforming Energy Access Forum on 13 March 2024, in Kigali, dedicated to advancing an inclusive clean energy transition. The event provided a platform for sharing knowledge and insights to accelerate clean energy access in sub-Saharan Africa, South Asia, and the Indo-Pacific region, with a focus on advancing technologies, skills, and business model innovations. Representatives from the TEA - LP

“  
Embracing partnerships,  
delivering impact and  
fostering locally driven  
energy access

partner universities in Africa were present at the Forum. Among these were [Moi University](#), [Busitema University](#), [the Federal University of Technology Owerri](#), [Obafemi Awolowo University Ile-Ife](#), [Strathmore University](#), [the University of Zimbabwe](#), [the University of Energy and Natural Resources](#), the [University of Nigeria/Nsukka](#), and the [University of Rwanda](#).

Tanya Kothari, Head of Portfolio for Micro-entrepreneurs and FCDO highlighted how the partnership with SunCulture made climate-smart irrigation products more accessible for smallholder farmers in Kenya by leveraging carbon credits which meant the farmers could reduce the total cost of owning solar water pumps by 40%.

# Recent Research Publications in School of Engineering

01

Musongwa, G., Manirambona, E., Talai, S. M., & Muliwa, A. M. (2024). Combustion and emission characteristics of distilled waste plastic pyrolysis oil-gasoline blends using single cylinder motorcycle petrol engine. *International Journal of Sustainable Engineering*, 17(1), 46–55. <https://doi.org/10.1080/19397038.2024.2358908>

02

S. Chege and T. Walingo, "Deep Learning Multi-User Detection for PD-SCMA," in *IEEE Access*, vol. 12, pp. 75136-75145, 2024.

DOI: [10.1109/ACCESS.2024.3405192](https://doi.org/10.1109/ACCESS.2024.3405192)

03

Z. Wongbae, C. Kabubo, and A. Owayo, "The Effect of Waste Marble Dust and Corncob Ash on the Engineering and Micro-Structural Properties of Expansive Soil for Use in Road Subgrades", *Eng. Technol. Appl. Sci. Res.*, vol. 14, no. 2, pp. 13765–13772, Apr. 2024.

<https://doi.org/10.48084/etasr.7034>

04

Katche, M. L., Makokha, A. B, Siagi O. Z and Muyiwa S. Adaramola. Techno-Economic Assessment of Solar–Grid–Battery Hybrid Energy Systems for Grid-Connected University Campuses in Kenya. *Electricity* 2024, 5(1), 61-74;

<https://doi.org/10.3390/electricity5010004>

# PhD, MSc – Research Posters: 2024

## Best Ranked Postgraduate Posters

*Criteria:* Interesting, easy to read, concise, logical, attractive, explains complex topics well to a general audience, has multidisciplinary appeal.



Egbe Terence – PhD Student

Title: Hydrothermal Carbonization of Empty Palm Bunches to Produce Nano Char for Electrochemical Energy Storage Materials:

**Supervisors:**

Dr. Joseph K. Kiplagat, Dr. Stephen K. Kimutai, Dr. Achisa C. Mecha

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Humphrey Mutuma – MSc

Title: Influence of Competing ions on the Degradation Kinetics of Tetracycline using Sensitized Photocatalyst (g-C<sub>3</sub>N<sub>4</sub>/ZnFe<sub>2</sub>O<sub>4</sub>)

**Supervisors:**

Prof. Milton Arimi, Dr. Cleophas Achisa

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Nelius Maina – MSc Student

Title: Performance Assessment of the Garissa Solar Power Plant in Kenya

**Supervisors:**

Prof. Augustine Makokha, Prof. Samuel Adaramola

# Two more Staff Attain PhD in the School of Engineering



**Dr. Janet Kipsanai**  
PhD- Industrial Engineering

Thesis Title: "Development and Performance Evaluation of Diatomaceous Earth-Based Geopolymer Concrete Incorporated with Sisal and High-Density Polyethylene (HDPE) Wastes."

Supervisors:

Prof. Paul Wambua, - Moi University

Prof. Saul S. Namango, - Moi University

Prof. Sofiane Amziane - Institut Pascal, UMR 6602

Université Clermont Auvergne (UCA) – CNRS, France



**Dr. Emmanuel Chemweno**  
PhD- Electronics Engineering

Thesis Title: design and investigation of substrate integrated waveguide-fed dielectric resonator antennas for D-band applications

Supervisors:

Prof. Thomas Afullo, - University of Kwazulu-Natal

Prof. P. Kumar - University of Kwazulu-Natal





# THANK YOU

**Let's Continue Ensuring ZERO Corruption**



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