

Nahshon Mokuu Obiri

Date of birth: 06/03/1993 | **Nationality:** German, Kenyan | **Phone number:** (+49) 1777368929 (Mobile) |

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● ABOUT ME

I am a dynamic, team-spirited, and performance-driven graduate engineer with an excellent learning attitude; trainable and ready to embrace positive change with a positive mindset. I am active in outdoor leadership and mentorship programs and am ready to motivate others to achieve their dreams.
Pursuing a Ph.D. to attain scholarly excellence in teaching and research toward attaining Sustainable Development Goals.

● WORK EXPERIENCE

01/10/2023 – CURRENT Siegen, Germany

PHD RESEARCHER UNIVERSITY OF SIEGEN

A. Research and Development:

- Conduct advanced research in Artificial Intelligence (AI) and Data Science, including machine learning, neural networks, and big data analysis.
- Develop and implement innovative algorithms and models to solve complex technical problems.

B. Data Analysis and Modeling:

- Collect, clean, and analyze large datasets to support research projects.
- Apply statistical methods and machine learning techniques for pattern recognition, predictive modeling, and data interpretation.

C. Publications and Presentations:

- Publish research findings in reputable journals and present at international conferences.
- Share research results at academic and industry events to promote scientific exchange and networking.

D. Project Management and Collaboration:

- Participate in interdisciplinary research projects and collaborations with other universities and industry partners.
- Manage project tasks, including planning, budgeting, and reporting for research projects.

E. Teaching and Mentoring:

- Assist in teaching courses in electrical engineering, computer science, and AI.
- Mentor and supervise Master's and Bachelor's students in their research projects and theses.

Department Electrical Engineering and Computer Science |

Website <https://ubicomp.eti.uni-siegen.de/home/index.html.en?lang=en>

01/02/2022 – CURRENT Nyeri, Kenya

ASSISTANT LECTURER DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

A. Teaching and Research

- Preparing teaching materials for the units allocated based on the recommended course books.
- Conducting lectures for the allocated units in strict compliance with the University semester schedules.
- Setting examinations for the units allocated.
- Mentoring and supervising graduate assistants assigned to me.
- Supervising students on external attachment.
- Organizing and supervising academic trips for students.
- Attending and participating in the School Board, Departmental Board, and class advisory meetings as scheduled.
- Conducting research and publishing papers in peer reviewed journals and author books in my thematic area.
- Developing grant proposals and source for grants to carry out research.
- Carrying out extension consultancy work on behalf of the University.
- Continuously engaging in self-development skills upgrading activities.

Units Assigned so Far:

1. Circuit and Theory of Networks II
2. Circuit and Theory of Networks III
3. Microprocessors
4. Introduction to Engineering and Computing.
5. Wireless Communication I.

- 6. Control Engineering I
- 7. Signals and Communication II
- B. Departmental Exams Coordinator
 - Scheduling and collecting draft examinations and for external moderation.
 - Overseeing timetabling of departmental examinations.
 - Collecting and processing marked scripts for moderation.
 - Implementing of approved examination procedures.
 - Advising the department on examination best practices.

Business or Sector Education | **Department** Electrical and Electronic Engineering. |

Address Private Bag – 10143, Dedan Kimathi, Nyeri, Kenya | **Website** <https://www.dkut.ac.ke/>

17/07/2022 – CURRENT Meru, Kenya

ENGINEERING LECTURER (PART-TIME) MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

- Preparing teaching materials for the units allocated based on the recommended course books.
- Conducting lectures for the allocated units in strict compliance with the University semester schedules.
- Setting examinations for the units allocated.

Units Assigned

- Electrical Measurements and Instrumentation

Business or Sector Education | **Department** Electrical and Electronics | **Address** P.O BOX ,972, 60200, Meru, Kenya |

Website <https://www.must.ac.ke/>

01/03/2022 – 30/07/2022 Kutus, Kenya

ENGINEERING LECTURER (PART-TIME) KIRINYAGA UNIVERSITY

- Preparing teaching materials for the units allocated based on the recommended course books.
- Conducting lectures for the allocated units in strict compliance with the University semester schedules.
- Setting examinations for the units allocated.

Units Assigned

- Electromagnetics
- Digital Electronics II

Business or Sector Education | **Department** Engineering and Technology | **Address** P.O.Box 143, 10300, Kutus, Kenya |

Website <https://www.kyu.ac.ke/>

01/05/2021 – 01/02/2022 Nyeri, Kenya

GRADUATE ASSISTANT DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

- Preparing teaching materials for the units allocated based on the recommended course books.
- Conducting lectures for the allocated units in strict compliance with the University semester schedules.
- Setting examinations for the units allocated.

Units Assigned

1. Circuit and Theory of Networks II
2. Circuit and Theory of Networks III
3. Microprocessors
4. Introduction to Engineering and Computing.
5. Wireless Communication I.

Business or Sector Education | **Department** Electrical and Electronic Engineering |

Address Private Bag – 10143, Dedan Kimathi, Nyeri, Kenya | **Website** <https://www.dkut.ac.ke/>

26/09/2018 – 02/02/2021 Nyeri, Kenya

GRADUATE STUDENT AND ASSISTANT DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

A. Assigned Roles:

- Diploma tutor at the Institute of Technical and Professional Studies (ITPS).
- Assisted in project coordination for undergraduate student.
- Internal attachment software trainer for undergraduate students.
- Assisted in the Commission for University Education (CUE) documents review and editing

B. Extra Duties:

- Teaching courses and/or discussion sections at the undergraduate level.
- Instructing and supervising undergraduate level labs and projects.
- Grading and/or evaluating performance of undergraduate students.
- Collecting and processing research data for the department.
- Preparing materials for presentations.
- Assisting with the assessment of the programs and services.

Business or Sector Education | **Department** Electrical and Electronic Engineering |

Address Private Bag – 10143, Dedan Kimathi, Nyeri, Kenya | **Website** <https://www.dkut.ac.ke/>

01/06/2018 – 31/08/2018 Nairobi, Kenya

ELECTRICAL AND ELECTRONIC ENGINEER (INTERN) COMMUNICATIONS AUTHORITY OF KENYA

- Managing the country's frequency spectrum and numbering resources.
- Facilitating the development of e-commerce.
- Regulating retail and wholesale tariffs for communications services.
- Monitoring the activities of licensees to enforce compliance with the license terms and conditions as well as the law.

Business or Sector Information and communication | **Department** Frequency Spectrum Management (FSM) |

Address P.o. Box 14448, 00800, Nairobi, Kenya | **Website** <https://www.ca.go.ke/>

01/02/2018 – 31/05/2018 Nairobi, Kenya

FIELD OFFICER (DATA COLLECTION) THE NATIONAL CONSTRUCTION AUTHORITY (NCA)

- Field data collection under the overall supervision of the head office, coordinated by the regional offices.
- Data entry with the aim of capturing the construction workers details.
- Data analysis and classification based on factors like age, gender, mode of qualification etc.

Business or Sector Construction | **Department** Rapid Result Initiative (RRI) | **Address** P.O.Box 21046, 00100, Nairobi, Kenya |

Website <https://nca.go.ke/>

01/01/2017 – 30/04/2017 Nairobi, Kenya

ELECTRICAL AND ELECTRONIC ENGINEER (INTERN) MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING AND URBAN DEVELOPMENT

- Electrical installations (lighting and power).
- Vertical transportation systems.
- Security surveillance systems (CCTVs).
- Standby power facilities (generators and solar).
- Structured cabling installation (Data communication systems).
- Design considerations and calculations for interior lighting and power.
- Preparation of electrical engineering drawings.
- Preparation of bills of quantities.

Business or Sector Construction | **Department** State Department for Public Works |

Address P.o Box 52692, 00200, Nairobi, Kenya | **Website** <https://publicworkskenya.com/>

01/01/2016 – 30/04/2016 Naivasha, Kenya

ELECTRICAL AND ELECTRONIC ENGINEER (INTERN) KENYA ELECTRICITY GENERATING COMPANY

- Instrumentation and Controls
- Basics of geothermal well drilling technology
- Corrective maintenance of power plants
- Routine motor and generator maintenance
- Disabling and assembling of electrical equipment during Rig down and Rig up
- Involved in electrical installations

Business or Sector Electricity, gas, steam and air conditioning supply | **Department** Electricity Generation, Olkaria |

Address P.o. Box 47936, 00100, Naivasha, Kenya | **Website** <https://kengen.co.ke/>

● **EDUCATION AND TRAINING**

01/10/2023 – CURRENT Siegen, Germany
DOCTOR OF ENGINEERING Universitaet Siegen

Website <https://www.uni-siegen.de/> | **Field of study** Electrical Engineering and Computer Science

30/05/2023 – 29/09/2023 Düsseldorf, Germany
DEUTSCH INTENSIV FÜR STUDIUM & BERUF Institut für Internationale Kommunikation e.V. (IIK Düsseldorf)

Website <https://www.iik-duesseldorf.de/en/german/> | **Field of study** Arts and humanities | **Final grade** B1.1

26/09/2018 – 15/12/2021 Nyeri, Kenya
MASTER OF SCIENCE IN TELECOMMUNICATION ENGINEERING Dedan Kimathi University of Technology

- Wireless Communication
- Advanced Electromagnetics, Antennas and Radio-frequency Propagation
- Telecommunication Network Design and Planning
- Digital Signal Processing

Address Private Bag – 10143, Dedan Kimathi,, Nyeri, Kenya | **Website** <https://www.dkut.ac.ke/> |

Field of study Engineering, manufacturing and construction | **Final grade** A |

Thesis A Water Quality Monitoring System using Wireless Sensor Networks

12/09/2012 – 28/04/2017 Nyeri, Kenya
BACHELOR OF SCIENCE IN ELECTRICAL AND ELECTRONIC ENGINEERING Dedan Kimathi University of Technology

A Degree in Electrical and Electrical Engineering
A total of 84 courses completed successfully.

Address Private Bag – 10143, Dedan Kimathi,, Nyeri, Kenya | **Website** <https://www.dkut.ac.ke/> |

Field of study Engineering, manufacturing and construction | **Final grade** First Class Honors

02/02/2008 – 15/11/2011 Kisii, Kenya
KENYA CERTIFICATE OF SECONDARY EDUCATION (KCSE) St. John’s Nyamagwa Boys High School

General High School Education

Address P.O Box 505, 40200, Kisii, Kenya | **Final grade** A -

01/01/1999 – 20/11/2007 Kisii, Kenya
KENYA CERTIFICATE OF PRIMARY EDUCATION (KCPE) Mavuno Complex Academy Primary School

General Primary School Studies

Final grade 377/500

● **LANGUAGE SKILLS**

Mother tongue(s): **SWAHILI** | **ENGLISH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
GERMAN	C1	C2	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Software and Office Tools

Microsoft Office | Microsoft Excel | Microsoft Word | Microsoft Powerpoint | Team-work oriented | Outlook | Zoom | Google Drive

Programming Languages:

Python | Programming (Matlab Python) | C, C++ C#

Simulation and CAD Tools:

Matlab Simulink PSCAD Multisim Proteus Electronic Work Bench Power World Simulator

Data Analysis and Machine Learning:

Data Analysis and Machine Learning

Software Development and Programming:

AI and Neural Networks | Cloud Computing (AWS, Azure, Google Cloud) | Programming and Software Development | Integrated Development Environments (IDEs) like Visual Studio and PyCharm

Database Management:

Database Management | InfluxdB

Freelancing and Expressed Writing:

Freelancing Platforms (Upwork, Fiverr) | Freelancing Skills | Expressed writing and editing skills | Professional Writing and Editing Skills | Technical Documentation

Project Management and Organizational Skills:

Project Management Tools (Microsoft Project, JIRA, Trello) | Resource Allocation | Time Management and Scheduling | Google Docs | Organizational and planning skills | Decision-making

Social Media Skills:

Social Media Management (Facebook, Twitter, LinkedIn) | Content Creation and Marketing | Blogging Platforms (WordPress, Medium)

Interpersonal and Soft Skills:

Public Speaking and Presentation Skills | Leadership and Team Collaboration | Problem-Solving and Critical Thinking | Creativity and Innovation | Adaptability and Resilience

Tools for Enhanced Productivity:

Note-taking Apps (OneNote, Evernote) | Collaboration Tools (Slack, Microsoft Teams) | Task Management Apps (Asana, Todoist) | Design and Prototyping Tools (Figma, Adobe XD)

● **PUBLICATIONS**

2021

[Anomaly Detection for Raw Water Quality – A Comparative Analysis of the Local Outlier Factor Algorithm and the Random Forest Algorithms](#)

M. Nahshon, W. M. Ciira and K. Henry, "Anomaly Detection for Raw Water Quality – A Comparative Analysis of the Local Outlier Factor Algorithm and the Random Forest Algorithms" *International Journal of Computer Applications*, vol. 174, no. 26, pp. 47-54, 2021. DOI: 10.5120/ijca2021921196

Journal Paper (Peer-Reviewed)

2021

[A Raw Water Quality Monitoring System using Wireless Sensor Networks](#)

M. Nahshon, W. M. Ciira and K. Henry, "A Raw Water Quality Monitoring System using Wireless Sensor Networks," *International Journal of Computer Applications*, vol. 174, no. 21, pp. 35-42, 2021. DOI: 10.5120/ijca2021921113

2019

A Study on the Performance of LoRa in a Rural Environment: Connectivity and Range Evaluation

N. Mokua and C. Maina, "A Study on the Performance of LoRa in a Rural Environment: Connectivity and Range Evaluation", *DeKUT International Conference on Science, Technology, Innovation and Entrepreneurship*, vol. 5, 2019.

Conference Paper (Abstract-Reviewed)

● **NETWORKS AND MEMBERSHIPS**

11/06/2017 – CURRENT Kenya

Graduate Engineer (Electrical and Electronic Engineer)

Engineering Board of Kenya (EBK)

Registered Number: B12410

15/12/2016 – CURRENT Kenya

Associate Member

Geothermal Association of Kenya (GAK)

Registered Number: 200

● **DRIVING LICENCE**

Driving Licence: B

Driving Licence: C

Driving Licence: D

● **CONFERENCES AND SEMINARS**

10/11/2019 – 14/11/2019 Nyeri, Kenya

DeKUT International Conference on Science, Technology, Innovation and Entrepreneurship

Presented a research paper on: A Study on the Performance of LoRa in a Rural Environment: Connectivity and Range Evaluation

10/09/2016 – 20/09/2016 Naivasha, Kenya

Workshop: Geothermal Projects and Finance Management

Workshop: Geothermal Projects and Finance Management.

Key Area: Emerging Trends in Project Management.

22/05/2025 University of Siegen

Center for Sensor Systems PhD Forum

PhD Forum:

Presented the following:

POSTER: LoRaWAN-integrated Wearable Sensor Networks for Remote Human Activity Recognition: Applications, Challenges, and Possible Solutions: A Review.

LIGHTNING TALK: LoRaWAN Path Loss Measurements in an Indoor Setting, including Human and Environmental Effects.

Link https://www.uni-siegen.de/zess/kombibox/zess_phd_forum_2024.html

● **PROJECTS**

05/01/2016 – 18/08/2016

Text Message Based Electrical Devices Monitoring and Control System Using GSM Technology

System Development.

Undergraduate studies requirement.

03/01/2020 – 10/05/2021

A Water Quality Monitoring System using Wireless Sensor Networks

Postgraduate Research

● HONOURS AND AWARDS

30/03/2023

Kenyan - German Postgraduate Training Programme, 2023/24 – German Academic Exchange Service (DAAD)

A scholarship by the DAAD for further study and training.

Link <https://www.daad-kenya.org/en/>

26/09/2018

Scholarship Award – Dedan Kimathi University of Technology

MSc. Telecommunication Engineering
Full Sponsorship.

10/12/2013

Merit Awards and Honors – Dedan Kimathi University of Technology

Best Performance Overall: Position Two (First Year)
Bachelor of Science in Electrical and Electronic Engineering

10/12/2014

Merit Awards and Honors – Dedan Kimathi University of Technology

Best Performance Overall: Position Two (Second Year)
Bachelor of Science in Electrical and Electronic Engineering

10/12/2016

Merit Awards and Honors – Dedan Kimathi University of Technology

Best Performance Overall: Position Two (Fourth Year)
Bachelor of Science in Electrical and Electronic Engineering

10/09/2016

Training Grant – Geothermal Association of Kenya (GAK)

Geothermal Projects and Finance Management Training Grant

● MANAGEMENT AND LEADERSHIP SKILLS

Departmental Examinations Coordinator

Dedan Kimathi University of Technology
2021 till 2023.

Departmental Undergraduates' Engineering Projects Coordinator

Dedan Kimathi University of Technology
2019 to 2020

Students Leadership

Speaker of the Congress
2015 to 2016
Dedan Kimathi University of Technology

● HOBBIES AND INTERESTS

Hobbies

- Travelling
- Soccer activities
- Watching plays and art performances

- Researching
- Coding etc.

● **VOLUNTEERING**

05/08/2017 – CURRENT Nyeri, Nairobi

Community Services

- Charity donations mainly at Nyeri and Kasarani, Nairobi – Kenya.
- Volunteering movements like tree planting.
- Fund-drive activities organizing and chairing.