

CURRICULLUM VITAE
DR. Njoroge David Kimemia
Email:kimemianjoroge@gmail.com

Carrier Profile: A dedicated and Passionate University lecturer of Electrical and electronics Engineering with over 15 years of experience with commitment to excellence in teaching. I excel in teaching Electrical Engineering units in the department, preparing course materials. My experience has leveraged my expertise in lecturing, curriculum development, academic journal reviewing, lesson preparation, assessment. Moreover, I also possess good communication skills which immensely enhance knowledge dissemination while teaching, in conference and publications. I have the ability to work independently and as part of team. Dr. Kimemia is passionate about making a difference in the lives of students and has good interpersonal skills which contribute to independent working potentials and as part of a team regarding research interest.

TELEPHONE

CONTACT: 0726946912

POSTAL

ADDRESS: Current Work Place: Department of Electrical and Electronics Engineering, Murang`a University of Technology(MUT), P.O. Box, 75 – 10200, Murang`a.

Private: P.O. Box, 351-10200, Murang`a

EDUCATION

BACKGROUND: Doctor of Philosophy (PhD): Kenyatta University; 2024;

Area of Research: Luminescent Solar Cells

Thesis Title: Synthesis, Fabrication and Characterization of Solid Titanium Dioxide - Based Solar Cell Doped with Different Organic and Inorganic Luminescent Materials

Master of Science (MSc.): Kenyatta University; 2017:

Area of Research: Carbon Dispersed Titanium Dioxide Solid Solar Cells

Thesis Title: Fabrication and Characterization of a Graphite Dispersed Titanium Dioxide Solid Solar Cells

Bachelor of Technology Education (BTED): Moi University: 2011

Area of specialisation: Electrical and Electronics in Technology Education

Diploma in Technical Education: Kenya Technical Teachers College (KTTC): 1994

Specialities: Electrical and Electronics Engineering

Craft Certificate Part III, II & I: 1990, 1989 & 1988: Kenya National Examination Council (KNEC) at Rift Valley Institute of Science & Technology (RVIST);

Specialities: Electrical and Electronics

Kenya Certificate of Education (KCE) (Division Two 29 points): Kenya National Examination Council (KNEC) at Subukia Secondary School:1986:

Certificate of Primary Education (CPE) (29 points): Kenya National Examination Council (KNEC) at Mwireri Primary School – Subukia: 1982:

National Examinations Marking Certificate: Kenya Education Management Institute and Kenya National Examination Council:2012:

Key Skills and Competencies trained: Measurement, Assessment and Evaluation; Principles and Procedures of Effective marking; Coordination of Examiners; Importance of Report Writing; Ethics and Integrity in Marking; Application of conveyor Belt System to Marking; Establishing and Maintaining Examination Standards; Detecting and Handling Cheating in Examinations during Marking; ICT Integration in Examinations.

TVET Curriculum

Development

Assessment

and Certification: Trained in Trainer of Trainers(ToT) in competence based assessment in: Overview of Competency based Education and Training (CBET); Plan and organise assessment; Design and develop assessment Tools; Verify and validate assessment; Conduct assessment; Manage assessment Results; Overview of competence certification; Develop occupational analysis chart; Develop occupational standards; Develop competence based curriculum; Plan and organise assessment.

Key Skills and

Competencies: Collaborative Accomplishment: Skillful in promoting learning and diversification of scholarly concepts, evaluating learners' abilities by categorizing them through conceptual assessment and laboratory assignments.

Research and writing skills: Demonstrated potential to conduct academic assignments and formulate articles for publication in peer and reviewed journals.

Work History: Lecturer Department of Electrical and Electronics; 31st July, 2024 to date

Duties and Responsibilities;

Teaching: Circuit Theory and Analysis I & II; Analogue Electronics I & II; DC machines and Transformers; AC and Special Machines; Basic Electronics; Power system protection; Power electronics; Material science; Engineering Design I & II; Supervised Design and fabrication of Electrical hardware projects;

Senior Technologist Department of Electrical and Electronics; 31st April, 2013 to 31st July 2024;

Duties and Responsibilities; Supervised Design and fabrication of Electrical hardware projects; Teaching: Circuit Theory and Analysis I & II; Analogue Electronics I & II; DC machines and Transformers; AC and Special Machines; Basic Electronics; Power system protection; Power electronics; Material

science; Engineering Design I & II; Supervised Design and fabrication of Electrical hardware projects.

Senior Lecturer, Lecturer, Assistance Lecturer and Technical Teacher Under Teachers Service Commission;1994 to 2013

Duties and Responsibilities; Teaching Engineering Science; Power Systems; Workshop practice; Engineering drawing; Control Systems: Electrical Installation; Electrical Principles; Entrepreneurship Education.

Electrician with Kenya Cooperative Creameries company(KCC), H-Young and Company

Duties and Responsibilities; Fault Diagnosis and repairing single and three phase machines breakdowns; control circuits (such as D.O.L., Star Delta Circuits and Pneumatic valves); Cold rooms, Condensers, Fluids level control systems, Call Circuits, Heaters, Steam pressure systems including boiler systems, installing domestic and industrial power and lighting systems, overhead cranes.

Workshops

Attended: 4th and 5th September at Murang'a University of Technology; Engaged in a workshop on Eco-mobility development with the aim of improving ecosystems by green gases reduction with enhancement of transportation using electric automobiles. Improvement of electric charge capacities enhancement, potential on recycling disposable electronic components and the legal policies involved were among the skills enhanced

PUBICATIONS: Journals papers

1) D. K. Njoroge¹, W. K. Njoroge² and I. W. Mwangi³, "Effect of Varying Titanium Dioxide and Iodine on Open Circuit Voltage and Short Current Density" IJARR, 3(9), 46-57, 2018

2)D. K, Njoroge¹, W.K. Njoroge² and I.W. Mwangi,³ "Effect of the Graphite Dispersed Titanium Dioxide Solid Solar Cell Composition on the Generated Potential (Voc.)" AJSTE 1, (1-21) 6th September,2020

3) D.K. Njoroge, "Effect of Varying Thickness on Performance of Titanium Dioxide Solar Cell." AJSTE, Volume 2, pp (1- 9), 05th Nov, 2021

4)D. K. Njoroge¹, W.K. Njoroge.² and I.W. Mwangi³, and M. Tonui⁴, "Effect of the use of inorganic- based photoluminescent materials in solar energy devices application." WJAETS, 09 (02), 016–025, 17th May, 2023

5) D. K. Njoroge¹, W.K. Njoroge² and I.W. Mwangi³ and M. Tonui⁴, "Effect of Doping Silver Nano Particle-enhanced Titanium Dioxide with Organic Luminescent Materials for Solar Cell Application." IJRAMT, 4(8), August, 2023

6) D. K. Njoroge, "Titanium dioxide Ag NP enhanced solid solar cell electrodes for favourable efficiency." STET 78(26), 5, 29th August, 2023

Conference Papers:

- 1) D. K. Njoroge¹, W.K. Njoroge² and I.W. Mwangi, “Effect of the Graphite Dispersed Titanium Dioxide Solid Solar Cell Composition on the Generated Potential (Voc.)”, AGCNSSR, Kutus, Kenya, August, 2018, (1-21)
- 2) D.K. Njoroge,” Effect of Cell Composition on Internal Resistance Open Circuit Voltage and Short Circuit Current Density of A Fabricated Titanium Dioxide Cell”, ESEDKTR, Kutus, Kenya, September, 2019
- 3) D. K. Njoroge, “Investigating Effect of IR Emitting Element to Time Constant of Solar Cell Lifetime”, ASDIRGC, Kirinyaga University, Kutus, Kenya, 2021
- 4) D.K. Njoroge, “Effect of Varying Thickness on Performance of Titanium Dioxide Solar Cell” ASDIRGC, Kirinyaga University, Kutus, Kenya, 2021

Conference Attended

- 1) Kirinyaga University 15-16, August, 2018, “Addressing Global Challenges through Natural and Social Science Research” Kutus, Kenya
- 2) Kirinyaga University 11-13, August, 2019, “Enhancing Sustainable Economic Development and Knowledge Transfer Through Research”, Kutus, Kenya
- 3) Kirinyaga University 24-25, March, 2019, “Achieving Sustainable Development Through Innovation Research and Global Collaboration” Kutus, Kenya
- 4) Kirinyaga University 24-25, March, 2021, Achieving Sustainable Development Through Innovation Research and Global Collaboration” Kutus, Kenya

Professional**Membership**

Organisation: Institution of Engineering Technologist and Technicians of Kenya;
Registration Certificate Number:1386; Class of Membership: Member

Referees: Professor Christopher Muriithi Maina

Professor of Power Systems, Department of Electrical and Electronics;
Murang`a University of Technology - Kenya
Tel:+254721791736
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Professor Livingston Asombe Ngoo

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Dr. Isaac Waweru Mwangi

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Dr. Walter K. Njoroge
Senior Lecturer of Material Science Department of Physics
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Technology Education; University of Eldoret – Kenya
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