



# MULTIMEDIA UNIVERSITY OF KENYA

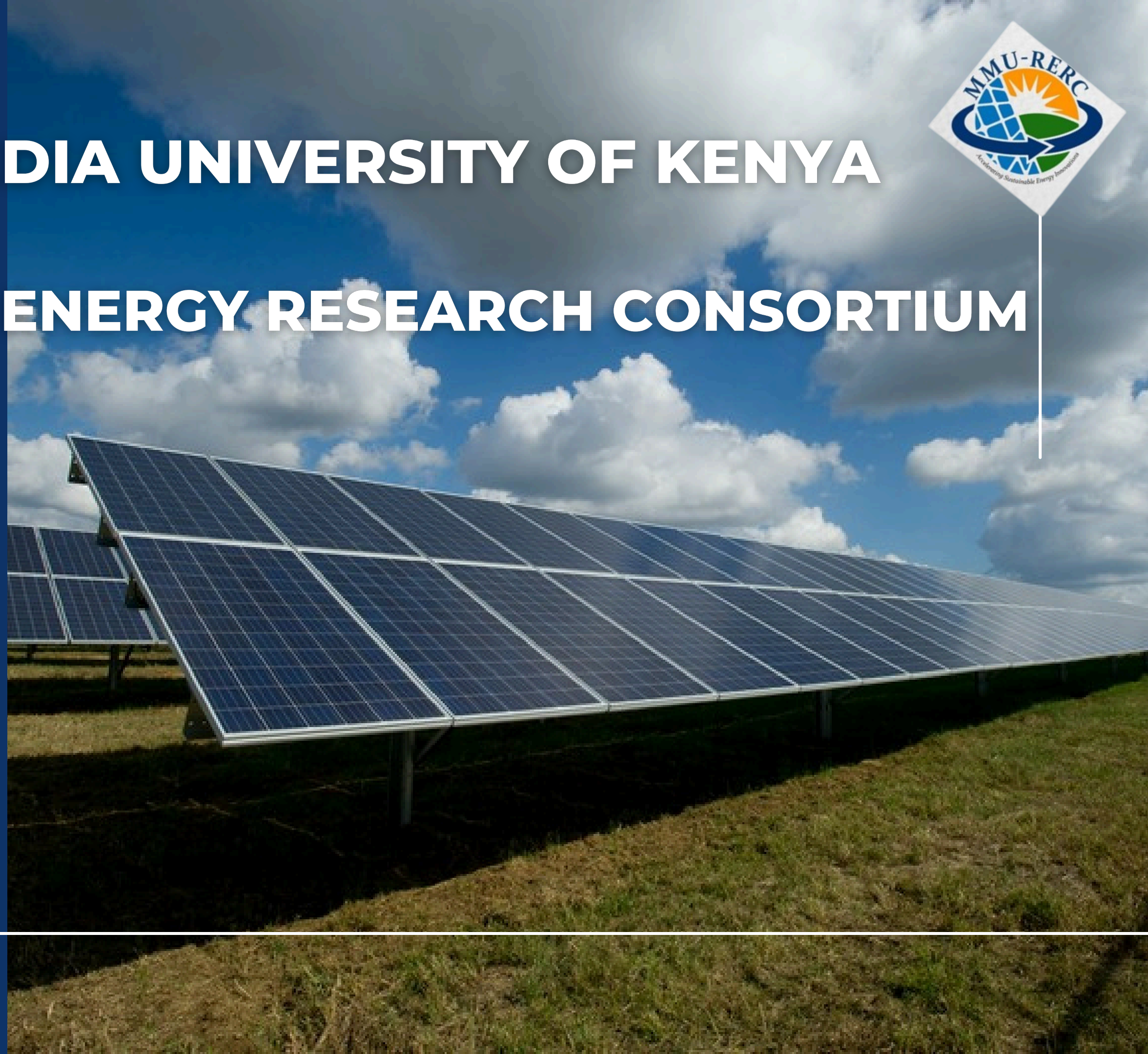


## RENEWABLE ENERGY RESEARCH CONSORTIUM

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Short Course Trainings  
Calendar 2024/2025

[www.muresa.org](http://www.muresa.org)



# BACKGROUND

The Multimedia University of Kenya's Renewable Energy Research Consortium (RERC) was established in 2019 to address the challenges of sustainable energy production and utilization.

Since its inception in 2019, the RERC has focused on research, consultancy, training, and testing within the renewable energy sector.



**Dr. Wafula Wekesa** CEM®; CMVP® ; Ph.D  
Lead Trainer & EPRA Certified Energy Auditor

# Mission & Values

To advance renewable energy research and training, contributing to the energy transition and supporting the socio-economic development of East Africa.

## Innovation

Encouraging creative solutions and advancements in renewable energy.

## Sustainability

Prioritizing environmentally friendly practices and technologies.

## Collaboration

Partnering with industry, academia, and government to drive impactful change.

## Excellence

Committing to high-quality research, training, and consultancy services.



# Vision

- To be a leading research and consultancy hub for renewable energy and technology innovations in Africa, contributing to sustainable development through cutting-edge research, capacity building, and stakeholder engagement.



# OUR SHORT COURSES

## ENERGY MANAGEMENT

Fee: KSH 50,000

## T1/T2 Solar PV Course

Fee: KSH 48,000

## T3 Grid Tie Solar PV Course

Fee: KSH 48,000

## SOLAR WATER PUMPING

Fee: KSH 50,000



# T1/T2 Solar PV Course

**Focus:** This level covers the basics of solar PV systems, particularly for small-scale installations such as residential or small commercial projects.

## ● **Content Highlights:**

- Introduction to solar energy and its applications.
- Basic components of a solar PV system (panels, inverters, batteries, etc.).
- System design principles for off-grid and grid-tied systems.
- Safety practices during installation and maintenance.
- Practical hands-on experience in setting up and testing small PV systems.

● **Target Audience:** Individuals with little to no prior knowledge of solar PV systems, electricians, or technicians looking to enter the renewable energy sector.





# T3 Grid Tie Solar PV Course

**Course Objectives:** The T3 course aims to provide in-depth technical knowledge and practical skills for handling grid-tied solar PV systems, including design, installation, troubleshooting, and compliance with industry standards.

## ● Focus

### 1. Grid-Tied PV System Design

- Principles of grid-tied solar PV systems.
- Load analysis and system sizing for residential, commercial, and industrial applications.
- Selection of components: inverters, panels, protection devices, and monitoring systems.

### 2. Installation and Integration

- Wiring, earthing, and commissioning of grid-tied systems.
- Connecting solar systems to the grid: Net metering and feed-in-tariff mechanisms. and working with single-phase and three-phase systems.

# T3 Grid Tie Solar PV Course

## 3. System Performance and Maintenance

- Monitoring and evaluation of system performance.
- Troubleshooting common issues in grid-tied systems.
- Preventative and corrective maintenance practices.

## 4. Practical Training

- Hands-on sessions in designing and installing a grid-tied solar PV system.
- Performance testing and commissioning procedures.
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## ● Target Audience

- Certified solar technicians who have completed T2 or equivalent training.
- Engineers, energy consultants, and project managers involved in medium to large-scale grid-tied solar projects.
- Professionals seeking to specialize in solar PV systems for grid integration.



# Solar Water Pumping

**Course Objectives:** To equip participants with the technical knowledge and practical skills needed to design and implement efficient, cost-effective solar water pumping solutions for various applications.

## ● Focus

### **.Introduction to Solar Water Pumping Systems**

- Overview of solar energy principles and water pumping technologies.
- Applications in agriculture, domestic water supply, and livestock.

### **System Components and Selection**

- Photovoltaic modules: Types, sizing, and efficiency.
- Pumps: Types (submersible, surface, centrifugal), selection, and specifications.
- Controllers and inverters: Role and selection for optimal performance.
- Storage options: Water tanks and pressure systems.

**Target Audience:** Technicians and engineers working in renewable energy or water projects. Farmers and community leaders seeking self-reliant water solutions.



# Energy Management

**Course Objectives:** To train professionals in managing energy resources efficiently, reducing energy costs, and minimizing environmental impact through innovative and sustainable practices.

## ● Focus

- Introduction to Energy Management
- Energy Efficiency Principles and Energy Auditing Techniques
- Renewable Energy Integration
- Energy Monitoring and Control Systems
- Financial and Regulatory Aspects

## Target Audience

- Energy managers and facility operators in industries, commercial buildings, and public institutions.
- Engineers, technicians, and consultants in the energy sector.
- Policy-makers and professionals in energy regulatory bodies.



# Why Choose MMU RERC

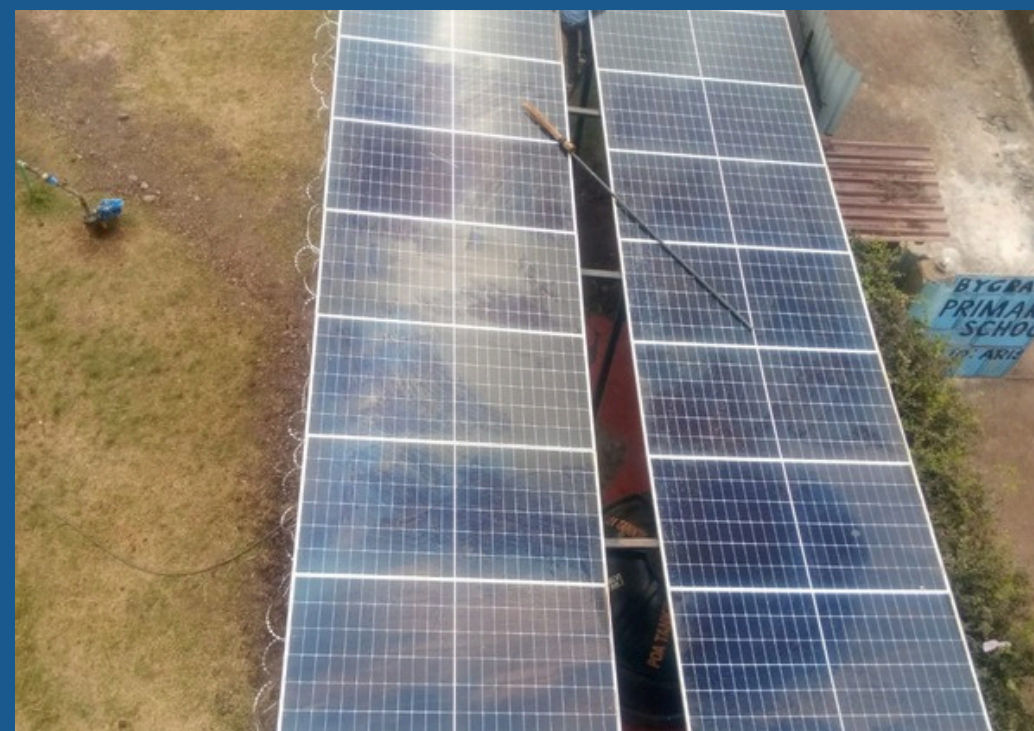
- **Expertise:** Access to highly skilled researchers and practitioners in the renewable energy sector.
- **State-of-the-Art Facilities:** Equipped with modern laboratories for testing and simulations.
- **Industry Connections:** Partnerships with governmental bodies, international organizations, and local industries, ensuring practical and real-world applications of research.
- **Track Record:** Proven success in consultancy and research projects, including collaboration with World Bank and GIZ on high-impact renewable energy projects.



# Gallery









# Get in Touch



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