



UNIVERSITY OF NAIROBI
Faculty of Science & Technology
DEPARTMENT OF PHYSICS

SOLAR ACADEMY

Mission Statement: The academy's mission and its commitment to promoting solar energy education, sustainability, and clean energy practices.

The solar academy exists to enhance solar PV uptake through quality training and information dissemination to impact generations towards value added research and training in Solar Photovoltaic, and in the process create a body of well-trained solar Photovoltaic Professionals ,experts and researchers while enlightening the public on solar photovoltaic through dissemination of accurate related Information.

Overview: The Solar Academy began about 13 years ago when after reading reports and hearing from people on the ground, we realized there was a problem with solar Photovoltaic design, sizing and installation coupled with a general lack of information to the larger public. We decided to be part of the solution and thereby a team of staff members from the Solar Energy Research group went for some Training or Trainers (ToTs) in a neighboring country. On coming back, the participants trained the other staff members in the Department and in 2012 the first cohort of about 41 trainees went through the T1&T2 training successfully, paving way for a series of trainings. Ever since, the solar Academy has trained at least two Cohorts every year. This combined with the special groups trained amounts to about 26 solar academies. The trainers enhance their skill and improve their experience by actively being involved in fieldwork installations and through ToTs organized by other stakeholders. The solar academy aims at training and releasing into the market professionals and experts in the solar PV sector. The academy has one of the highest concentration of human capacity in solar with about 10 trainers and facilitators putting it in a competitive edge compared to other training centers.

Vision: The academy's vision for the future of solar energy education and its role in shaping the renewable energy landscape. The Solar Academy's vision is to be a: A World class solar training Centre. We endeavor to influence communities' thorough quality training and information sharing and thus contribute to the achievement of United Nations goal number 7: promote affordable, reliable; clean energy to all. This will in turn promote education, agriculture, health among other sectors and thus help to eradicate poverty. This is expected to promote the use of solar energy as a renewable energy source.

Numbers: 500 trainees have successfully graduated since 2012

Curriculum: The academy offers a comprehensive solar energy curriculum. This includes: the importance of solar photovoltaic (PV) technology, the benefits of training in solar, PV status & Regulation Basic electricity, Introduction to PV, Modules/Panels types and characterization Module Interconnection & Standards, Types of PV Systems & Mounts, PV Storage Batteries Charge controllers, Power management & conditioning –Inverters, Inverters, features, types, selecting, PV appliances, PV wiring, Basic DC electrical wiring, PV Design and Sizing Planning, Installation & Commissioning, PV trouble shooting & PV System status Solar Pumping, Solar products marketing, PV to grid connection, Introduction to grid connected PV, need for grid connected PV Technical challenges, Grid connected PV technology, Installation of grid connected PV system

Training: The academy provides practical training for real-world projects, teaching students about installing solar systems, designing, and sizing photovoltaic systems. It also provides opportunities for professional growth to students, professionals, and businesses. Upon successfully finishing the training, participants receive a certificate of completion.

Facilities and Resources: The academy has state-of-the-art facilities, solar labs, training equipment, and resources available to support practical learning and research in solar energy technologies. This includes: a potentiostat for charge transport, spray pyrolysis, vacuum coater, spin coater, spectrophotometer, talystep thickness scanner, programmable furnace, vacuum furnace, solar trainer for helping to demonstrate concepts, we have a solar simulator for measuring the efficiency of solar panels, thermos camera, insulation tester, earth desistance tester, battery tester, Iv analyzer, battery charger, light meter, training computers, installed solar system, batteries, panels, inverters, charges controllers, wires and all accessories needed for installation.

Industry Partnerships: The academy has collaborated with key industry organizations to enhance the academy's programs and provide students with real-world exposure. These include Uppsala University that supports us by providing assistance with equipment and various resources. Proven Kenya Ltd collaborates with us by accepting our trainees for project assignments. Additionally, parastatals such as KPLC, government entities like KNHA and REA, and other private companies and organizations like World Vision, M-KOPA Solar, Nairobi Water, polytechnics, and universities

Alumni Success: Our students have excelled in the solar industry and contributed significantly to the field. Several trainees attending the training mention that even Energy and Petroleum Regulatory Authority (EPRA) recommended them to us by previous trainees, and in some cases.

Testimonials: Trainees admitted that following the completion of their training, they acquired new knowledge and felt more self-assured in providing advice to their clients, resulting in an enhancement of their relationships with the clients. They also expressed improved proficiency in handling solar installations, leading to a boost in their business with an influx of additional contracts and job opportunities. The trainees mentioned receiving positive feedback from both clients and supervisors after the training, and some even began offering training to others. Most notably, they generously extended the training to their fellow technicians, particularly within their workplace. Additionally, they expressed their willingness to recommend the training program to others.

"Thank you so much for making this course so memorable. Thank you Dr. Waita and your team. You really are passionate about solar. You did it so effortlessly I admire that. ...May the sun shine upon all of us that we may be agents of change to the community and our environment"

" The Phrase, what a class? what a trainer? Typically will remain on our thoughts and be proud of your teaching. God bless you D. Waita you have brightened our career,"

Contact Information: For more information, please visit the Departmental website at <https://physics.uonbi.ac.ke/>. Or email The Chairman on: physics@uonbi.ac.ke or call: +254794587933/+2542049914119 or reach out to the Training Coordinator on email:swaita@uonbi.ac.ke; Mobile: +254722838140.

You can also physically come to the Department based on:

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