The **Solar Academy** is run by the **Department of Physics,** University of Nairobi offers a short professional course in design, installation and maintenance of Solar PV systems. The training program is held twice a year run for two weeks.

Green Energy is gaining a lot of worldwide attention owing to the challenges nations are facing with the conventional sources of energy. The Kenya Government and the private sector have focused on the development of **solar Photovoltaic (PV) as a source of electricity** through projects such as the construction of solar PV mini-grids as well as licensing of MW scale PV plants. These initiatives have created a high demand for **local capacity to do design, install and carry out operation and maintenance of the installed systems**.

The **Solar Academy at the University of Nairobi was therefore established to build this capacity** through several training programmes.

Basic and Intermediate Solar PV Training

November 5th-15th, 2018

The basic/intermediate course aims to provide practical training on basics of solar electricity, solar resource mapping, and site assessment and planning, design of solar PV systems as well as installation and maintenance.

Target and Qualifications

The training prepares one for accreditation by National Industrial Training Authority (NITA) in line with the Energy Regulatory Commission (ERC) Solar PV Licensing Regulations.

The applicant must have at least Kenya Certificate Secondary Education (or equivalent) plus Diploma in Electrical and/ or Electronics or BSc. Electrical Engineering or relevant degree or Higher National Diploma. Those who have been practicing installation or retailing for at least 2 years will also be considered for the training.

The training is ideal for groups or individuals from government, public or private institutions, electrical installation technicians, teachers, technical institute tutors, NGO's outreach personnel and solar PV retailers.

Areas Covered

1. Occupational Health and Safety
2. Basics of solar PV electricity,
3. Solar PV characteristics
4. Solar PV components (panels, batteries, charge controllers, inverters),
5. Solar V appliances (lights, refrigerators, TV, radio, water pumping),
6. Site survey and solar system sizing,

7. Solar PV systems Installation and maintenance
8. Entrepreneurship in Solar PV applications

Training Materials

- Copies of training manual, practical manuals
- Stationery
- Equipment, accessories and tools for demonstration
- Tools and equipment for installation practical

Certification

On successful completion of the course students receive a certificate of participation from the University of Nairobi for accreditation and licensing by ERC

Course Duration

The course duration is Two Weeks at a cost of KShs 46,000 per person for Kenyans or US$ 570 for non-Kenyans. Fees cover tuition, training materials, lunch and teas.

Advanced Grid Connected Solar PV Design

November 19th-24th, 2018

The course aims to provide training on site assessment and planning, design, resource assessment and energy yield estimation methods, use of advanced simulation software, and PV projects' economic analysis. The course also covers commercial rooftop grid tie systems and solar PV plant projects of MW scale. Participants shall carry out designs using advanced 3D PV simulation software.

The course will be delivered in lecture format using PowerPoint, sharing of case examples, design exercises, energy yield estimation exercises, design tasks exercise and practical site visit.

The capacity is limited to a maximum 15 participants and is available both full time and evening programme.

Target and qualifications

The course targets solar PV engineers, Solar Industry professionals (engineers, banking industry, insurance etc.), system designers or anyone else involved with designing/ implementing grid-connected PV systems. It is recommended that one has pre-requisite basic/intermediate knowledge of solar PV systems, components, sizing, installation and maintenance.

Areas Covered

1. Review of solar PV technology, characteristics of solar modules
2. System design parameters
3. Site solar resource
4. Array-inverter Matching
5. System protection
6. DC and AC cable sizing & selection
7. Site assessment & planning for commercial rooftop and solar PV power plants
8. Array layout design
9. Loss estimation, Performance ratio & energy yield simulation
10. Use of advanced 3D simulation software for project bankability, internal rate of return, etc.
11. Design task exercise
12. Site visit

Training Materials

- Copies of training manual, practical manuals
- Stationery
- Equipment, accessories and tools for demonstration
- Tools and equipment for installation practical

Certification

On successful completion of the course students receive a certificate of participation from the University of Nairobi.

Course Duration

The course duration is Six Days at a cost of KShs. 51,000 per person for Kenyans or US$ 620 for non-Kenyans. Fees cover tuition, training materials, lunch and teas.