

Renewable Energy Technologies for TVET - PV

Sample Course 2: PV Designing of Off-Grid PV Systems for Teachers and Trainers

In this module teachers and trainers will get introduced in the use of yield prevision tools for deploying electrical energy via photovoltaics (PV). Finally, competencies in dimensioning off-grid PV systems are promoted for TVET.

- **Content, elements, format and duration can be customized to the respective needs**

Learning outcomes

On completion of the training, participants are able to

- apply online services for yield estimations
- teach calculation of life cycles of lead acid batteries
- train to design application-based off-grid PV systems
- design systems according to customers need
- dimension PV systems economically
- predict battery replacement cycles

Contents

- Introduction into the used LMS system
- Off-grid calculation
- DC-/AC-coupling
- Economic optimization
- Online services and databases for PV
- Battery lifetime
- Replacement cycles

Formats

The training is designed to be provided in an e-learning format. Main didactical elements are:

- 1 week self-study e-learning in pairs
- Support through online sessions and forums

Language

- English
- German
- Upon request: other languages with interpreters

Target groups

- TVET teachers and trainers who are going to train PV (max. 14 p/ course)

Participation requirements

- Fundamental skills in electrical engineering
- Basic knowledge on PV cells, parameters and system behaviour of cells
- Basic PC and internet knowledge

Duration

- 1 Week ~20 hrs/week self organized learning time in pairs
- 3 Online sessions (45 min each)
- 2 Guided forum times (1 hr each)

Equipment

- Notebook / PC (Win 10)
- Current web browser
- Online sessions: Fast internet connection

Certificate

The participants will receive a certificate of participation after successful completion of the course.

Your contact

TVET Academy

Academy for International Cooperation
Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH

E tvvet-academy@giz.de

I www.giz.de/tvvet-academy