



Project Title: Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan

Acronym: MUREE

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1. Introduction

HU organized a workshop entitled:

"Solar PV Systems: the European Experience - the Hashemite University Activities"

on Wednesday 17/12/2014 from 12:30 -- 15:30. This workshop is one of MUREE activities to build capacity in the field of RE. It is required after the academic and training visits. Several staff from the Faculty of Engineering at HU participated in these visits. The organizers of the workshop are:

- 1) Dr. Awni Itradat
- 2) Dr. Mohammad Al-Abed
- 3) Dr. Bashar Hammad
- 4) Eng. Abdullah Al-Masri

and the speakers in this workshop are:

- 1) Dr. Muhammad Abed (He visited the University of Cyprus within the academic visit in this project)
- 2) Dr. Ahmad Ghandoor
- 3) Eng. Abdullah Al-Masri (He visited the University of Cyprus within the training visit in this project)

The workshop took Place at:

- 1) Auditorium of Faculty of Engineering
- 2) PV Solar energy projects at HU
 - a) near Engineering workshops
 - b) near HU presidency building

2. Activities Description

A flyer was distributed to all colleges at HU and posted on HU academic groups in Facebook. A copy of this flyer is attached in Appendix I. The major part of it is in Arabic but we can easily conclude that it is part of MUREE activities (A translated version into English is also provided). The invited Groups are:

- 1) Faculty at HU
- 2) Administrative at HU
- 3) Students at HU
- 4) Stakeholders from local Industry

Eighty one (81) responded to the above and participated in this workshop. A complete list of participants is in Appendix II. Many students attended the workshop completely while others attended either the first half or the second half according to their lectures' schedule (See Figure 1).

The workshop began with a presentation showing the capabilities of University of Cyprus in the field of PV (research projects and educational laboratories). Appendix III is the presentation prepared especially for this workshop and delivered by the speakers. Field visits to the projects of solar energy near the Presidency Building and Engineering Workshops were made, Figures 2, 3, and 4.

3. Results and Discussion

Dr. Al-Abed and Eng. Al-Masri talked about their visits to University of Cyprus and show the teaching capabilities and research projects, components, and instruments in the PV Center. The participants obtained an idea about

- 1) The different types of PV panels
- 2) The main components of any PV system
- 3) Types of PV systems (on-grid, off-grid, fixed, and trackers)
- 4) Economic impact of the current HU PV projects

4. Conclusions

This training workshop achieved its objectives that can be summarized as follows:

- Getting an exposure to EU experience in Renewable Energy and PV.
- Spreading the culture of Renewable Energy among students especially at undergraduate level, and the importance of PV systems and how can be used to mitigate the energy crisis in Jordan.
- Building capacity in the field of Renewable Energy and especially PV.

Almost all participants expressed their pleasure to participate in this workshop requesting to organize more workshops at introductory and advanced levels.



Figure 1: Participants of the training workshop.



Figure 2: Control and monitoring room of 30 kW project at Presidency Building.



Figure 3: Fixed PV systems of 30 kW project at Presidency Building.



Figure 4: The 3 kW solar car park project near Engineering Workshop.