



**Modernising Undergraduate Renewable Energy Education (MUREE)
TEMPUS project Number 530332-TEMPUS-1-2012-1-JO-TEMPUS-JPCR**

**University of Cyprus
Nicosia, Cyprus
Progress Meeting
10-11 September 2014
Minutes of Meeting**

Participants

- Abdallah Al-Zoubi, Yazan Abu Yaghi, PSUT, Jordan
- Suhil Kiwan, JUST, Jordan
- Handri Amari and Ayman Maaitah, Mutah University, Jordan
- Manuel Castro and Salva Ros, UNED, Spain
- Maria Hadjipanayi, UCY, Cyprus
- Jens Palacios, TU-Berlin, Germany
- Katuscia Cipri, Sapienza, Italy

1. The meeting commenced with welcome remarks by the host of the meeting Dr Maria Hadjipanayi, followed by a brief on the progress of the project and feedback from EC on the intermediate report by its manager Professor Abdallah Al-Zoubi. Each workpackage leader then gave a brief on the progress of the workpackage they lead.

2. Jordanian partners presented the status of the courses developed within WP2, giving an outline of the problems encountered including the quality and state-of-the-art requirements. Discussions showed that 4 courses are ready to be delivered by the end September 2014 while the Solar Thermal course is only 85% complete. Teaching of the Energy Conversion will begin in the first semester of the academic year 2014/2015 in JUST and MUTAH University, Drives and Machines in PSUT, PV in University of Jordan and Renewable Energy System in Hashemite University. In addition, internal accreditation of all suggested courses and inclusion in the respective study plans have already been achieved in all 5 partner universities.

Participants have subsequently agreed to set a target of 5 months to finish teaching the courses and to receive feedback from students. Online evaluation of students is foreseen by perhaps allocating a student area in the MUREE website to evaluate each course delivered. Template for surveys will be prepared.

The question of delivering the courses in a way to comply with the ECTS system was then raised and discussed in detail. Consequently, it was agreed to integrate the student effort into the courses and to apply the European marking system in one pilot course taking into account marks in lectures, homework, reading, projects, exams, mid-terms, etc.

Dr Suhil Kiwan offered to teach the Wind Energy Conversion course in the second semester of the academic year 2014/2015 by applying the ECTS system. Project-based learning exercise may also be adopted in teaching this course by benefiting from TUB experience. Special arrangements will be made by TUB and JUST to fulfil this objective. A team from TUB will visit Jordan for at least 1 week, tentatively in March-April 2015, to serve this purpose and deliver a renewable energy lab.

3. Dr Salva Ros presented the proposed design and delivery mode of the renewable energy remote labs already installed in 4 Jordanian universities and gave a brief about the software and hardware requirements. Discussions showed that 90% of the status of operation of the remote labs is completed and plans are being prepared for a UNED team to visit Jordan by the end of 2014.
4. Purchase of the equipment for the training centre to be set up at University of Jordan is under way and will be ready within one month. A visit by a UoJ team is foreseen in the near future to Sapienza and Cyprus to finalise the preparations of the centre and to plan for RE training workshops.
5. A brief on the quality plan of the project was presented including selection of external evaluator, development of monitoring and evaluation plan, equipment purchase report, partners agreement template for equipment and resources. An outline of a quality plan that needs to be dealt with by 1/10/14 included:
 - ✓ Evaluation of curriculum's relevance for the industry requirements,
 - ✓ Close collaboration and peer-review from external evaluator in developing curriculum
 - ✓ Contact the initial 23 companies in Jordan for feedback,
 - ✓ Questionnaire template development for monitoring of addressed target market (statistics, gender, etc.). MUTAH is responsible to prepare (TUB will send existing questionnaire to be adapted),
 - ✓ MoU signing with a ceremony to inaugurate the equipment of traditional labs,
 - ✓ Improve sustainability plan to include fee paying training for engineers and technicians using the training centre at UoJ,
 - ✓ Enhance student exchange in the project particularly from Europe to Jordan,
 - ✓ Operation of remote labs needs to speed up,
 - ✓ Communications should be improved between partners
 - ✓ Prepare a plan final quality reports 14/10/15
6. Management of financials aspects needs to focus on use of Intranet to record spending particularly on staff costs and updating expenses of partners.
7. Participants decided to organise the MUREE final conference for the 10 September 2015.
8. The next steering committee meeting will be held in JUST in the period 17-18 November 2014 and the last meeting in UNED or Sapienza, while the next Dissemination committee meeting will be held in TUB (time will be coordinated between TUB, UoJ and PSUT).