



# Modernising Undergraduate Renewable Energy Education: EU Experience for Jordan (MUREE) Technical Meeting UNED, Spain 27-30 July 2015 Minutes of Meeting

## Monday, 27 January 2015

Mr. Mamoun Dmour has summarized the status of the remote laboratories at the Jordan Universities. A key element at this moment is the design of new HTML interfaces.

Professor Manuel Castro has talked about the relevance of remote laboratories in distance education. He also has introduced Go-Lab project.

Mr. Felix Garcia has given an introduction to the use of remote laboratories in Massive On-line Open Courses. In particular, he has talked about the experience of UNED with VISIR remote laboratory. This talk highlights the different behaviours of the students, the most used days and hours of the remote laboratories and the relevance of a good scheduling schema.

Professor Rafael Pastor has explained RELATED platform for management of remote laboratories. In particular, he has discussed with the partners the relevance of the monitoring system.

After lunch, participants has discussed the best approaches to the design of the new HTML interfaces.

### Tuesday, 28 January 2015

Dr. Llanos Tobarra has talked about the design of experiment interfaces. She has explained the HTML5 elements, JavaScript libraries and the AJAX technologies applied in the UNED experiments. A prototype of the first PSUT experiment has been designed. Participants have agreed to test this prototype.

PhD Elio San Cristobal and Pablo Losada has talked about Responsive interfaces and apps for Remote Laboratories. They has presented the HTML5 characteristics that are relevant for the remote laboratories interfaces.

Mr. Pablo Losada has also presented a talk about management and Administration of Moodle platform in the context of other educative project.

# Wednesday, 29 January 2015

PhD Llanos Tobarra has explained the functionality of the Moodle LabCalendar for Remote Laboratories:

- Plugin Development
- Installation and configuration
- Lecturer's view
- Student's view
- Laboratory monitoring

All the explanation has been recorded by the partners. The Moodle log feature has been also explained for monitoring purposes.

Dr. Agustin C. Caminero has talked about the performance evaluation in educational platforms. He has presented a review of existing tools for the measurement of different parameters related to Virtual Learning Environments such as JMeter. Afterwards partners has discussed different strategies for monitoring students.

The designed prototype HTML interface has been successfully tested at PSUT server.

Partners also has reviewed the access to UNED Remote Laboratories by PSUT Moodle. The connection problems are solved.





# Thursday, 30 January 2015

Professor Salvador Ros has presented a talk about remote laboratories management and monitor: review of the existing characteristics of the Moodle plugin and different scheduling schema. Further arrangements for the next visit of students to Madrid have been discussed.