

Students Workshop at the Technische Hochschule Ostwestfalen-Lippe (TH OWL)

Event type	Workshop
WP Number	WP3
WP Leader	NTUA
Event date	12.06.2023-23.06.2022
Number of Participants	8
Total number of pages	9

Project Coordinator

Prof Ahmed Al-Salaymeh,

The University of Jordan (UJ)

Queen Rania Street | Amman 11942, Jordan

Tel: +962-6-53 55 000 Ext. 22816 | Fax: +962-6-53 00 237

Email: Eco-car@ju.edu.jo

Project website: <http://sites.ju.edu.jo/en/ECO-CAR/Home.aspx>



1 Event Description

The students training at the TH-OWL was focused on the fundamentals and the application of electrical machines and drivers, as well as on Hydrogen production and use. The workshop included practical investigations in the laboratories of TH OWL and also an excursion to the innovation power plant center and center for hydrogen production, storage and use.

The first day, after welcoming the students by Prof. Salman Ajib, local coordinator of the project at TH OWL, the students were introduced to the week's program. After that the students has made their first experiments in the field of "smart grid".

On the second day, the topic of smart grid was deepened by further experiments.

The following two days, Wednesday and Thursday, the subject area of electrolysis and the fuel cell were investigated with various experiments.

Friday was dedicated to the topic of energy generation using photovoltaics.

At the beginning of the second week, the topic of energy generation through wind turbines was examined, and the experiments were interrupted on Tuesday by an excursion to Wendlinghausen. There, an innovation center of power plants was visited. This center is a research center for production of hydrogen and its synthesis into methane and methanol. Furthermore, in the center the energy production and energy storage belong to the topics, which could be investigated and optimized. The students could make some experiments related to these topics. Finally, they have discussed and evaluated the investigation results.

On Wednesday, the experiments on the topic of wind turbines were continued in Höxter.

The theme of Thursday was the electro mobility. Various battery storage systems were examined. The investigations included the affect parameters on the efficiency of different battery systems.

In the last day, the training was finalized through discussions the results of the experimental investigations of the above mentioned topics. Finally, the training certificates have been distributed to the participants.

2 Agenda

Below, the agenda of the training workshop can be found.

Agenda of the students training

Venue: laboratory 5202 at TH-OWL - Höxter / second floor

Day	Date	Description
Monday (1)	12.06.2023	Welcome and further information, experiments Smart Grid
Tuesday (2)	13.06.2023	Experiments Smart Grid
Wednesday (3)	14.06.2023	Experiments with hydrogen (electrolyseur and fuel cell)
Thursday (4)	15.06.2023	Experiments with hydrogen (electrolyseur and fuel cell)
Friday (5)	16.06.2023	Experiments photovoltaics
Monday (6)	19.06.2023	Experiments wind power plant
Tuesday (7)	20.06.2023	Excursion to hydrogen plant in Wendlinghausen (Methanisation and Methanolisation)
Wednesday (8)	21.06.2023	Experiments wind power plant
Thursday (9)	22.06.2023	Experiments E-mobility
Friday (10)	23.06.2023	Experiments E-mobility

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3 Attendance sheet



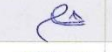














ERASMUS+ PROGRAMME
Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP
ECO-CAR Project
"Vocational Training Diploma on Electrical and Hybrid Vehicles"
Student Training Workshop – TH-OWL
June 12th – 23rd June 2023

No.	Participant Name	Institution	Signatures				
			Mon. 12.06.23	Tues. 13.06.23	Wed. 14.06.23	Thurs. 15.06.23	Fri. 16.06.23
1.	Hasan Mahmoud Isamil Rababa	UJ					
2.	Qadri Qusai Qadri Qamhawi	UJ					
3.	Mohammad Zeyad Ali AlAwamleh	UJ					
4.	Ali Mohammad Khader Al Qura'n Alziadat	HTU					
5.	Ahmed Majed Hasan El-Hanbali	HTU					



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6.	Husam S. I. Yasin	ASU					
7.	Omar I. Y. Aliwaiwi	ASU					
8.	Mahmoud Fatehi Hafeth Alhumsi	ASU					
9.	Mohammad Baseil Tayser Ta'mneh	BAU					
10.	Mohammad Omaih Abdulwahab Tarawneh	MU					
11.							
12.							
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14.							
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6.	Omar I. Y. Aliwawi	ASU					
7.	Mahmoud Fatehi Hafeth Alhumsi	ASU					
8.	Mohammad Baseil Tayser Ta'mneh	BAU					
9.	Mohammad Omaih Abdulwahab Tarawneh	MU					
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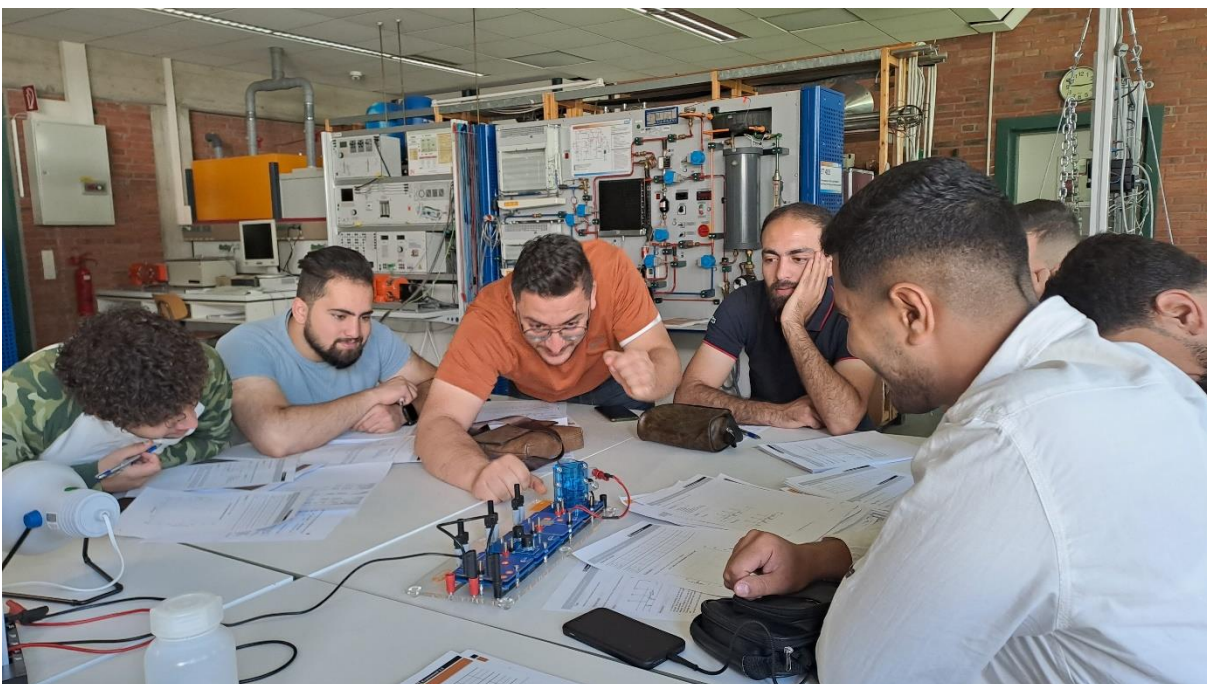
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4 PPTs for training material

<https://drive.google.com/drive/folders/1IsZSO90LZtrn0-jX9XUhhHWWqCt4c6Y8J?usp=sharing>

5 Photos

An excerpt of photos is shown below:



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