

# ECO-CAR NEWSLETTER

Vocational Training Diploma on Electrical and Hybrid Vehicles / ECO-CAR

## 2021-2024

Project Facts Type: Erasmus+ Programme Grant Holder: The University of Jordan (UJ) Duration: 3 Years Start Date: 15 January 2021 UNDER "ERASMUS+ CAPACITY BUILDING IN THE FIELD OF HIGHER EDUCATION"

### **Project Profile**

**ECO-CAR** ECO-CAR is a 3-years project that started on the 15th January, 2021 and is co-funded by the Erasmus+ programme of the European Union. It is coordinated by The University of Jordan (UJ) with 13 Jordanian and European partners.

The main objective of ECO-CAR project is to develop a multidisciplinary diploma in the field of Electrical and Hybrid cars as well as to bring together and strengthen the cooperation between companies and HEIs.

The primary purpose of this project is to develop the capacities in the field of Electrical and Hybrid cars in Jordan, and bring together and strengthen the cooperation between companies and HEIs through empowering the engineers with needed skills that meet the market need. This include providing specialized engineers to work in servicing and maintaining EV/HEV companies and also providing the vocational training centers with qualified trainers to graduate qualified technicians that able to meet market needs.

#### **CONTACT INFORMATION**

Prof. Ahmed Al-Salaymeh (UJ, General Coordinator) 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 Joint the Network Follow us on:

in ECO- CAR Deco-CAR Project



## PARTNERS



P1 - The University of Jordan ( UJ ) Project General Coordinator Contact Person: Prof. Ahmed AL- Salaymeh: salaymeh@ju.edu.jo



P2 - Jordan University of Science and Technology (JUST) Contact Person: Prof. Fahmi Abu AlRub: abualrub@just.edu.jo



P3 - Mutah University Contact Person: Prof. Omer Maaitah: maaitah\_noor@hotmail.com



P4 - Tafila Technical University (TTU) Contact Person: Dr. Wael Adaileh wadaileh@ttu.edu.jo



P5 - Al-Balqa Applied University ( BAU ) Contact Person: Prof. Rebhi Damseh rdamseh@yahoo.com / rdamseh@bau.edu.jo



P6 - Al-Hussein Technical University (HTU) Contact Person: Prof. Tarek A. Tutunji Tarek.Tutunji@htu.edu.jo



P7 - Applied Science University (ASU) Contact Person: Dr. Mohammad Bani-Khaled: m banikhaled@asu.edu.jo



P8 - Al-Zaytoonah University of Jordan (ZUJ) Contact Person: Dr. Loai Dabbour: loai dabbour@hotmail.com



P9 - Technische Hochschule Ostwestfalen-LIPPE (TH OWL) Contact Person: Prof. Salman Ajib salman.ajib@th-owl.de



P10 - Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH) Contact Person: Prof. Dirk Uwe Sauer DirkUwe.Sauer@isea.rwth-aachen.de



P11 - Universidad de la Iglesia de Deusto Entidad Religiosa ( UD ) Contact Person: Ivan Dyukarev ivan.dyukarev@deusto.es



P12 - Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME) Contact Person: Máté Zöldy mate.zoldy@auto.bme.hu



P13 - National Technical University of Athens -NTUA (NTUA) Contact Person: Prof. Dimitrios Koulocheris dbkoulva@mail.ntua.gr



P14 - Universita Degli Studi Dell'aquila (UNIVAQ) Contact Person: Prof. Michele Anatone

Contact Person: Prof. Michele Anatone michele.anatone@univaq.it

Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.





WP1. Establishing university-enterprise cooperation network
WP2: Baseline Study
WP3: Capacity Building
WP4: Establishment of EV/HEV labs
WP5: Developing ECO-CAR Professional Diploma
WP6: Quality and Impact Evaluation
WP7: Dissemination and Sustainability
WP8: Management

## WP1: ESTABLISHING UNIVERSITY-ENTERPRISE COOPERATION NETWORK

**Duration:** M19 to M24 **Lead University:** Jordan University of Science and Technology (JUST)

Co-Lead University: Al-Hussein bin Abdullah II Technical University (HTU)

## TRAINING FOR TRAINERS AT TVTA

August 9<sup>th</sup> 2022 A workshop in the Technical Vocational Training Academy (TVTA)

### **Event Main Objectives:**

- Train Trainers to use ECO-CAR vocational diploma equipment and devices.
- Exchange knowledge and raise awareness to Hybrid and Electric Cars Engineering topics.
- Engage the stakeholders to the ECO-CAR project.
- Disseminate ECO-CAR project objectives and vision.

### **Event main Results and Achievements:**

- Professors and engineers have attended the workshop from local parties.
- EV and HEV workshops.
- The Participate visited the TVTA Academy and were trained to use the ECO CAR equipment.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Duration: M19 to M24 Lead University: National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## **LITHIUM SULFUR BATTERIES IN AUTOMOBILES BY TTU**

July 27<sup>th</sup> 2022

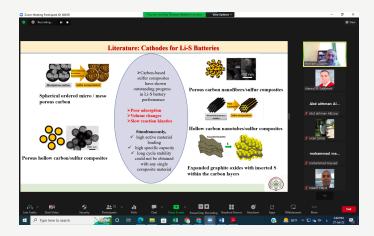
The workshop was conducted by Tafila Technical University (TTU).

### **Event Main Objective**

- Build the capacities of the professors who will teach the diploma in the Partner Universities. •
- Exchange knowledge and raise awareness to Hybrid and Electric Cars Engineering topics. •
- Engage the stakeholders to the ECO-CAR project. •
- Disseminate ECO-CAR project objectives and vision. •

### **Event Main Results and Achievements**

- Professors, engineers, students, technicians, and stakeholders have attended the workshop from local and international parties.
- Networking and exchanging knowledge between industry and academia.
- Expand the ECO-CAR network members.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

DISCLAIMER: This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



### Duration: M19 to M24 Lead University: National Technical University of Athens- NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## HOW TO CONVERT PPT TO A VIDEO BY UJ

July 17<sup>th</sup> 2022

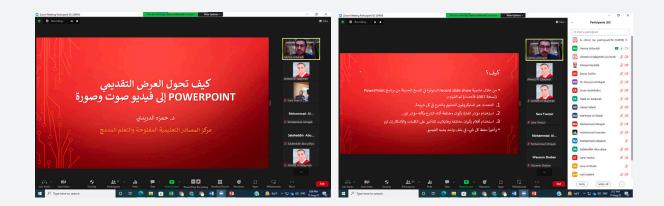
The workshop was conducted by Dr. Hamza Al Duraidi from Open Educational Resources & Blended Learning Center in the University of Jordan.

### **Event Main Objective**

- Start the workshop by ECO CAR Project brief. •
- Exchange knowledge and raise awareness of the teaching skills and methodologies
- Enhance the Academic staff with new teaching skills. •
- Disseminate ECO-CAR project objectives and vision. •

### **Event Main Results and Achievements**

- Professors, engineers have attended the workshop from local and international Partners.
- Networking and exchanging knowledge between different academic staff. •



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

DISCLAIMER: This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## BATTERY STORAGE AND ITS APPLICATIONS IN EV AND ESS WORKSHOP BY MU

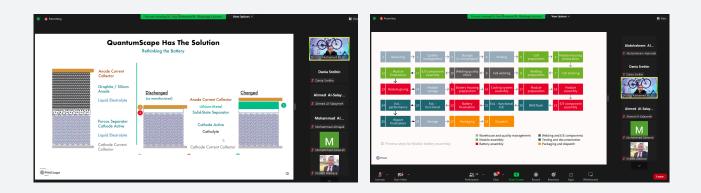
October 7<sup>th</sup> 2022

### **Event Main Objective**

- Build the capacities of the professors who will teach the diploma in the Partner Universities.
- Exchange knowledge and raise awareness to Hybrid and Electric Cars Engineering topics.
- Engage the stakeholders to the ECO-CAR project.
- Disseminate ECO-CAR project objectives and vision.

### **Event Main Results and Achievements**

- Professors, engineers, students, technicians, and stakeholders have attended the workshop from local and international parties.
- Networking and exchanging knowledge between industry and academia.
- Expand the ECO-CAR network members.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## (RWTH AACHEN UNIVERSITY) WORKSHOP IN GERMANY

November 7th – 11th, 2022

A training workshop was conducted in Aachen, Germany via RWTH on November 7th – 11th, 2022.

### **Event Main Objective:**

- Focused on the fundamentals and the application of batteries for electro-mobility.
- Knowledge of RWTH Aachen Members was transferred to the participants via lectures, informal discussions, and lab visits.
- Build the capacities of the professors who will teach the diploma in the Partner Universities.
- Exchange knowledge and raise awareness to Hybrid and Electric Cars Engineering topics.
- Engage the stakeholders to the ECO-CAR project.
- Disseminate ECO-CAR project objectives and vision.

### **Event Main Results and Achievements:**

- Professors and engineers have attended the workshop from local parties.
- EV and HEV workshops.
- a large-scale 5 MWh battery storage (M5Bat) was visited, and the participants could get an insight into the challenges of the operation of large battery systems.
- The participate visited the RWTH Aachen University labs.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## (UNIVERSITY OF DEUSTO) WORKSHOP IN SPAIN

January 9th – 13th, 2023

A training workshop was conducted in Bilbao, Spain via the University of Deusto on January 9th – 13th, 2023. The TOT workshop focused on Vehicle modelling using Car Maker Software.

### **Event Main Objective:**

- Focused on the fundamentals and the application of Vehicle Dynamics in electric vehicles.
- Focused on the comfort modelling on electric vehicles, which focused on standards, models and variables involved in vehicle dynamics comfort modelling.
- Build the capacities of the professors who will teach the diploma in the Partner Universities.
- Exchange knowledge and raise awareness to Hybrid and Electric Cars Engineering topics.

### **Event Main Results and Achievements:**

- Professors and engineers have attended the workshop from local parties.
- EV and HEV workshops.
- The participate visited MUBIL.
- The participate visited the Smart Moto Challenge laboratory in the University of Deusto
- The participate visited the FabLab.
- FFT theory was introduced to calculate the comfort model.
- optimization of the vehicle model dynamics by Carmaker software.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## TRAINING OF TRAINER [TRANSFER KNOWLEDGE] TTU IN-HOUSE TRAINING (BME)

November 2<sup>nd</sup> 2022

The members of the ECOCAR project team at Tafila Technical University conducted the event "Training of Trainers for the Experience of the University of Budapest in the Field of Electrical, Hybrid and Self-Driving Vehicles", which is part of the activities of the project and aims to transfer the European experience.

#### **Event main objective**

- Knowledge transfer from the BME experience to the TTU staff
- Educate the TTU staff the new developments in the vehicles sector.
- Implant new teaching materials in the course materials of the diploma programs.

#### **Event Results and achievements**

- Start up a road map for course development based on the provided information.
- Setting up the Vehicles laboratory to accommodate related experiments and tests.
- Direct the staff research towards new scopes in the automotive field of research.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

### **BAU IN-HOUSE TRAINING (BME)**

November 7<sup>th</sup> 2022

As part of ECO-CAR project: Al-Balqa Applied University – Al-Huson University College Held a TOT training workshop for the staff members in the Mechanical Engineering department and Electrical Engineering department.

### **Event main objective**

- Knowledge transfer from the BME experience to the BAU staff
- Educate the BAU staff the new developments in the vehicles sector.
- Implant new teaching materials in the course materials of the diploma programs.

### **Event Results and achievements**

- Start up a road map for course development based on the provided information.
- Setting up the Vehicles laboratory to accommodate related experiments and tests.
- Direct the staff research towards new scopes in the automotive field of research.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** National Technical University of Athens- NTUA NTUA

Co-Lead University: ASU, BME, RWTH Aachen

## ZUJ IN-HOUSE TRAINING (BME & AACHEN)

January 8<sup>th</sup> 2023

The members of the ECO CAR project team at Al-Zaytoonah University OF Jordan conducted an Energy Storage Workshop, which is part of the activities of the project and aims to transfer the European experience.

### **Event main objective**

- Give a brief introduction about the energy storage systems and battery principles
- Give an introduction about the battery types such as Li-ion batteries, Nickel Metal Hydride Batteries (NiMH), and Supercapacitors
- Summaries the Safety conditions for battery and health surveillance

### **Event Results and achievements**

- Understand the necessity and usage of different energy storage schemes for different purposes.
- Have a technological overview of various energy storage schemes.
- Understand the operational mechanisms of each energy storage system.
- Understand the fundamentals of battery safety
- Understand the required knowledge for safety working place



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## WP4: ESTABLISHMENT OF EV/HEV LABS

Duration: M19 to M24 Lead University: BAU

Co-Lead University: UJ, JUST, NTUA

## **EQUIPMENT TRAINING FOR ECO-CAR LABS**

A visit to ECO-CAR Labs in the 8 Jordanian universities were carried out by Technical Vocational Training Academy to Train Trainers to use ECO-CAR vocational diploma equipment and devices as shown in the table.

### **Event Main Objective**

Build the capacities of the professors who will teach the diploma in the Partner Universities. Exchange knowledge and raise awareness to Hybrid and Electric Cars Engineering topics. Engage the stakeholders of the ECO-CAR project.

### **Event Results and Achievements:**

Professors, engineers, technicians, and stakeholders have attended the workshop from local parties.

Networking and exchanging knowledge between industry and academia. Expand the ECO-CAR network members.

ASU	31 of July 2022
MU and TTU	2nd of August 2022
UJ	4th of August 2022
BAU and JUST	11th of August 2022
HTU	16th of August 2022





Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## **WP4**: **ESTABLISHMENT OF EV/HEV LABS**

Duration: M19 to M24 Lead University: BAU

Co-Lead University: UJ, JUST, NTUA

## **ECO-CAR CENTER'S OPENING CEREMONY AT MU**

December 5<sup>th</sup> 2022

As part of ECO-CAR project: Vocational Training Diploma on Electrical and Hybrid Vehicles, Mutah University – College of Engineering Held the ECO-CAR Centre's Opening Ceremony at the Hybrid and Electric Vehicles Workshop, ECO-CAR Centre lab at Mutah University is fully equipped and operational.

### **Event main Objective:**

- Show detailed explanation of the nature of the project, its objectives, the devices funded through the project, and its functional operation.
- stressed that the opening of this laboratory comes to support technical and vocational training, which leads to the development of the integrated system and comprehensive strategy.

### **Event Results and Achievement:**

- The Staff members and students became familiar with ECO-CAR Lab equipment that will be • used in teaching and training of the vocational training diploma.
- The center will be serving the local community in Karak Governorate.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

DISCLAIMER: This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## **WP4: ESTABLISHMENT OF EV/HEV LABS**

Duration: M19 to M24 Lead University: BAU

Co-Lead University: UJ, JUST, NTUA

## **ECO-CAR CENTER'S OPENING CEREMONY AT ZUJ**

December 6<sup>th</sup> 2022

As part of ECO-CAR project: Vocational Training Diploma on Electrical and Hybrid Vehicles, Al-Zaytoonah University of Jordan Held the ECO-CAR Centre's Opening Ceremony at the Hybrid and Electric Vehicles Workshop on behalf of Prof. Mohammad Al-Majali, President of Al-Zaytoonah University of Jordan.

### **Event Main Objectives:**

- ECO-CAR Centre lab Opening. •
- Provide a short overview of ECO-CAR Project and its objectives. •
- Distribution of Promotional Materials for ECO-CAR project among staff members and • students.
- Give an overview about the ECO-CAR project equipment and its operation.

### **Event Results and Achievements:**

- ECO-CAR Centre lab is fully equipped and operational. •
- Staff members and students become familiar with ECO-CAR vocational training diploma on electric and hybrid vehicles.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

DISCLAIMER: This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## WP5: DEVELOPING ECO-CAR PROFESSIONAL DIPLOMA

**Duration:** M19 to M24 **Lead University:** BME

Co-Lead University: TH-OWL, RWTH Aachen, UNIVAQ

## **IMPLEMENTATION OF ECO-CAR DIPLOMAS**

- The Vocational Diploma started on 02.10.2022 at the University of Jordan with 23 students.
- The Associate Degree Diploma started on 02.10.2022 at the Al-Balqaa Applied University with 56 students.
- The Associate Degree Diploma started on 02.10.2022 at the Tafila Technical University with 10 students.
- The Vocational Diploma started on 11.09.2022 at Al-Hussein Technical University in cooperation with Al Hakama with 26 students.
- The Vocational Diploma started on 01.09.2022 at Mutah University with 13 students.
- The Vocational Diploma started on 15.11.2022 at Applied Science University with 17 students.
- The Vocational Diploma started on 27.12.2022 at Jordan University of Science and Technology with 11 students.
- The Vocational Diploma started on 08.01.2023 at Al-Zaytoonah University of Jordan with 15 students.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## WP5: DEVELOPING ECO-CAR PROFESSIONAL DIPLOMA

Duration: M19 to M24 Lead University: BME

Co-Lead University: TH-OWL, RWTH Aachen, UNIVAQ

# LAUNCH CEREMONY AND TESTER WORKSHOP AT UJ

September 22<sup>th</sup> 2022

### **Event Main Objectives**

- Piloting two Diplomas at the University of Jordan: Professional and Vocational.
- Disseminate for the whole project.
- Tester workshop to test the modules and provide feedback in order to further improve their utility and usefulness.

### **Event Main Results and Achievements**

- Under the Patronage of The UJ president, the piloting at UJ took place where media coverage was also present.
- The three FGs Diplomas of ECO-CAR project have been presented to the participants to clarify the main aim, target groups, credit hours, and programme learning outcomes of each diploma.
- The stakeholders' representative pointed out the stakeholders involved in the project, and their role during the project's phase and during diplomas phase.
- The three Diplomas study plans and courses were also presented to the participants.
- Answering all participant inquiries.
- Recommendations were taken from participants regarding some courses and credit hours.
- The University of Jordan Radio holds a meeting with Prof. Dr. Ahmed Al-Salaymeh to talk about the project.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



## WP6: QUALITY AND IMPACT EVALUATION

Duration: M13 to M18 Lead University: UD

Co-Lead University: TTU, ZUJ, BME

## **QUALITY COMMITTEE MEETING**

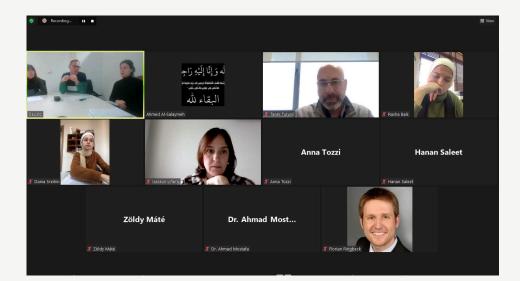
26 of January 2023

### **Event Main Objectives**

• Discussion on ECO-CAR courses' pre and post-questionnaires at each university.

### **Event Main Results and Achievements**

- The questionnaires for pre- and post- course evaluation should include both English and Arabic translation in same form.
- All partners within their assigned person will be responsible to share the links of pre and post-course questionnaires with their students to guarantee feedback.
- As soon as responses are received for each individual course and the survey is closed, UD will download responses in Excel sheet and will send it to UJ for translation.
- Finally reports to be conducted by UD.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** Al-Hussein bin Abdullah II Technical University (HTU)

Co-Lead University: MU, ZUJ, TH-OWL

## UJ-INFO\_DAY

August 9<sup>th</sup> 2022

### Event Main Objectives:

- Disseminate an overview of ECO-CAR Project.
- Market the ECO-CAR program, Vocational diploma.
- Distribution of Promotional Materials for ECO-CAR project among staff members and students.

### **Event Results and Achievements:**

- Provided ECO-CAR information to participants.
- Attracted students' attention.
- Collect contact data of interested students.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** Al-Hussein bin Abdullah II Technical University (HTU)

Co-Lead University: MU, ZUJ, TH-OWL

## HTU-INFO\_DAY

October 31<sup>st</sup> 2022

### **Event Main Objectives:**

- Disseminate an overview of ECO-CAR Project.
- Market the ECO-CAR program, Vocational diploma.
- Distribution of Promotional Materials for ECO-CAR project among staff members and students.

### **Event Results and Achievements:**

- Provided ECO-CAR information to participants.
- Attracted students' attention.
- Collect contact data of interested students.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Duration:** M19 to M24 **Lead University:** Al-Hussein bin Abdullah II Technical University (HTU)

Co-Lead University: MU, ZUJ, TH-OWL

## **UJ-INFO\_DAY AT NUCT**

November 13<sup>th</sup> 2022

During the activities of the Open Day of the National University College of Technology (NUCT). The Dean of the National University College of Technology (NUCT) Prof. Ahmed Al-Salaymeh reviewed a summary of international projects which included a definition of the ECO-CAR project and its objectives to students and attendees.

### **Event Main Objectives:**

- Disseminate an overview of ECO-CAR Project.
- Market the ECO-CAR program, Vocational diploma.
- Distribution of Promotional Materials for ECO-CAR project among staff members and students.

### **Event Results and Achievements:**

- Provided ECO-CAR information to participants.
- Attracted students' attention.
- Collect contact data of interested students.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Duration: M19 to M24 Lead University: Al-Hussein bin Abdullah II Technical University (HTU)

Co-Lead University: MU, ZUJ, TH-OWL

## **ECO-CAR PROFESSIONAL DIPLOMA WORKSHOP** AT - UJ

January 12<sup>th</sup> 2023

A workshop (INFO-DAY) was conducted at the University of Jordan to disseminate the Professional diploma at the Faculty of Engineering.

### **Event Main Objectives**

- Piloting the Professional Diploma at the Faculty of Engineering, University of Jordan •
- Introducing the study plan for the professional diploma. •
- Encourage students to enroll in professional diplomas.
- Disseminate for the whole project. •

### **Event Main Results and Achievements**

- Introduction speech from the Coordinator of the ECO-CAR project Prof. Ahmed Al-Salaymeh, • with a brief presentation about the project and its objectives.
- The Head of the Mechanical Engineering Department Dr. Moudar Zgoul pointed out the importance of Career-oriented diplomas for the graduates.
- The Head of the Mechatronics Engineering Department Prof. Osama Habahbeh introduced the study plan for the professional diploma.
- Eng. Rasha Al-Baik presented the difference between Master's and Professional Diplomas for undergraduates.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

DISCLAIMER: This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.





13th Online Management Meeting 14th Online Management Meeting

### THE 13TH ONLINE MEETING ESTABLISHMENT OF MANAGEMENT AND OPERATIONAL STRUCTURES AND RUNNING THE PROJECT

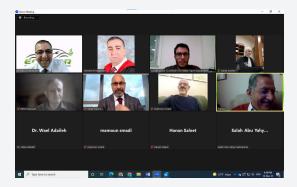
November 16<sup>th</sup> 2022

### **Event Main Objective**

The main aim is to follow up with the implementation of ECO-CAR diplomas at each of the Jordanian universities and other follow-ups, with the overall planning and monitoring of the work of the consortium.

### **Event Main Results and Achievements**

- Underlined the achievements of each university up-to-date and what is expected from each university to be achieved in the upcoming months.
- Diplomas status in each of the Jordanian universities.
- In-house training from staff who attended the TOT in AACHEN and BME in order to transfer the knowledge to other academic staff.
- Memorandum of Understanding (MoU) in order to be signed with different stakeholders in cooperation with each institution.





Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



### THE 14TH ONLINE MEETING FOLLOWING THE IMPLEMENTATION OF ECO CAR DIPLOMA AT EACH UNIVERSITY AND THE TOT WORKSHOPS

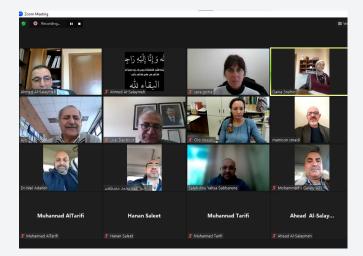
January 19<sup>th</sup> 2022

### Event Main Objective:

- The main aim is to follow up with the implementation of ECO-CAR diplomas at each university and follow-up with TOT at some EU partners and other follow-ups, with the overall planning and monitoring of the work of the consortium.
- Underlined the results and outcomes of the University of Deusto TOT workshop. In addition to specifying the date of the next steering committee.

### **Event Main Results and Achievements:**

- Diplomas status in each of the Jordanian university.
- Events template (ECO-CAR word template) in order to be filled with every event (Seminar, Workshop, Info-Day, etc.) each institution conducts.
- Memorandum of Understanding (MoU) in order to be signed with different stakeholders in cooperation with each institution.
- EU Stickers to be provided to all partners so they stick them to all equipment, and thus opening their ECO-CAR labs.
- Dates set out for the next TOT workshops:
- The TOT workshop will be in 8th 12th May 2023 in TH-OWL.
- The TOT workshop will be at the end of June or the beginning of July in NTUA.
- The TOT workshop will take place in Sep 2023 in UNIVAQ.
- Dates set out for the next Steering Committee Meeting at the University of Deusto on 15-17th March 2023.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.





The 4th Steering Committee meeting will take place at Bilbao, Spain at our partner university University of Deusto in March 2023. The meeting will be held to discuss and follow-up the project deliverables. Also, special session will be conducted for ECO-CAR Diploma Work package and taking decisions about the activities to be implemented as well as on the Action as a whole.



ECO-CAR Staff Training Workshop will take place at Höxter- Germany at Technische Hochschule Ostwestfalen-Lippe (TH OWL) in May 2023. The workshop will be held to discuss and follow-up the courses, Visit to the Hydrogen production and storage factory kiwi e-gas in in Werlte, Niedersachsen and Lectures at the fields of fuel cells, charge systems and hydrogen production.



Erasmus+ Programme, ECO-CAR Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

**DISCLAIMER:** This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

