

Career-Oriented Curricula Development for Road Vehicle Maintenance

CODE

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PARTNERSHIP FOR CAREER-ORIENTED EDUCATION



Project Focus

Establishing an academic-enterprise-official partnership for vehicle engineering and maintenance education. It will transfer to local partners skills and know-how relevant to identify local job needs; curricula development for modern vehicle technologies.



Career-Oriented Curricula Develop

Curricula Development Discussion Meetings



Within the framework of CODE project activities on automotive engineering curricula development, Mechanical Engineering Department in Palestine Polytechnic University organized a series of meetings and discussion sessions aimed at the development of the current automotive engineering curricula. The main objective is to respond to the needs of target sector while observing the local and international accreditation requirements at the same time. University president, vice president for community services, and college of applied professions dean attended the meetings in their capacity as staff members of mechanical engineering department together with the head and other staff members.



Training on Maintenance, Management and Economy - Hebron

Palestine Polytechnic University hosted the first training program within the framework of Tempus project (CODE) during the period of 8–12 March 2015, where the training covered topics related to vehicle maintenance Methodology, Management and Economy. The training focused on the needs of the current and new workforce required competence in maintenance management activities using an integrated approach. Knowledge of the complementary and relevant disciplines was introduced to create an added value to the sought career-oriented educational model. Therefore, the trainees were orientated and introduced to the business general management; maintenance productivity and performance; associated rules and regulations; professional communications; competences and capabilities development, which was ended by forming a team responsible to develop a joint course for engineering students from PPU and BZU. The trainers are Prof. Dan SCARPETE from Romania and Prof. Luciano FRATOCCHI from Italy.



First Coordination Visit in Europe

During the period of 17–30 January 2015, CODE Project Coordinator conducted the first coordination visit to European partners in Italy and France. The mission mainly addressed the implementation of WP2 and WP3 of the project workplan. During the first part of the visit, the coordinator with the WP3 leader in Italy (UNIVAQ) launched the process of curricula development based on the identification of student learning outcomes based on project first phase outcomes. The second part of the visit covered the preparation for the training activities as planned in the second phase of the project workplan, and was conducted in France. The visit activities involved all European partners, specially the WP2 leader (MedLink). Two days meeting, 26–27 January 2015, was hosted in CNAM for planning training sessions and identifying trainers and experts for conducting the training; both local training in Palestine and specialized training in Europe based on the outcomes of the first phase that covered target sector needs assessment.



plement for Road Vehicle Maintenance

Training on Electronic Systems – Birzeit

During the period of 30/8/2015 and 3/9/2015 in Birzeit University (BZU), the first part of the third training track (CODE-WP2-TS3 Part I) on “Electronic Systems of the Vehicles” was organized. This training aimed to develop competences and skills that cover the important topics that are highlighted in the outcomes of the project first phase, which are mainly related to electronic systems of the vehicles in order to directly impact on the target workforce competence building and knowledge. The training was a multidisciplinary one that covers the core specialization topics in addition to the relevant disciplines including methodological aspects. The introduced knowledge covered main and complementary aspects of electronic systems of the vehicles to help creating an added value to the sought career-oriented educational model. The training was organized in the form of topic-based sessions and lectures were complemented with discussion and group work. The main topics were introduction to embedded systems, real time computing, tasks, scheduling, and programming using Linux which had a significant part of the training. It included the scheduling in Linux, how to manage the process in the operating systems. Linux commands, signal handling and pipe communication. Prof. Maryline CHETTO – Universite’ de Nante and Prof. Samia Bouzefrane – CNAM – Paris were the trainers.



Joint Graduation Projects

Towards enhancing student skills through work in a group from different universities and developing specific competencies and know-how, CODE project finished two graduation projects between Palestine Polytechnic University (PPU) and Birzeit University (BZU) in summer 2015.



The first one on developing training module on embedded systems applications in automotive was supervised by Dr. Momen Sughayyer from PPU and Dr. Ahmed Abu Hanieh from BZU. The PPU students team consisted of Sanad Jaradat, Rafat Sharawi, and Sameer Salhab and so the BZU students team consisted of Shadi Khalil, Mazen Soboh, and Majd Masalmah.

While the second one on dealing with technologically end-of-life vehicles in West Bank was supervised by Dr. Hussien Amro from PPU and Dr. Mohammad Qaraen from BZU. The PPU students team consisted of Sofian Bahar, and Rabee Alqam and so the BZU students team consisted of Safwan Awade, Mohammad Beidas, Bahjat Dweik, and Abed Al Qader Mukluf.

Training on Mechanical Systems - Nablus

During the period of 13-17 September 2015 in Hisham Hijjawi College of Technology (HHCOT) and in Birzeit University (BZU), the first part of the second training track (CODE-WP2-TS2 Part I) on “Maintenance of Vehicle Mechanical Systems” was organized. This training aimed to develop competences and skills that cover the important topics that are highlighted in the outcomes of the project first phase, which are mainly related to internal combustion engines in order to directly impact on the target workforce competence building and knowledge. The training was a multidisciplinary one that covers the core specialization topics in addition to the relevant disciplines including methodological aspects. The introduced knowledge covered main and complementary aspects of internal combustion engines to help creating an added value to the sought career-oriented educational model. The training was organized in the form of topic-based sessions and lectures were complemented with discussion and group work. The main topics were mobility, energy and environment, characteristics and classification, thermodynamic cycles, power and torque, characteristic curves, gas exchange process, supercharging, in-cylinder charge motion, mixture formation in SI engines, combustion in SI engines, fuel injection and combustion in CI engines, fuels, air pollution, ECUs, heat transfer, and Electric hybrid vehicles. Prof. Michele Anatone was the trainer in Mechanical Engineering at the University of L’Aquila.





CODE Consortium

Palestine Polytechnic University

Università degli Studi dell'Aquila

Conservatoire National des Arts et Métiers

University "Dunarea de Jos" of Galati

Birzeit University

Hisham Hijjawi College of Technology

Palestine Technical University - Kadoorie

Ministry of Labour

MedLink Association.

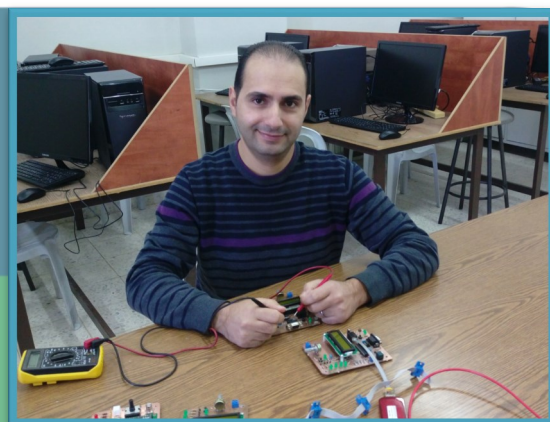
Ministry of Higher Education

Engineers Association - Jerusalem Center

University College of Applied Sciences

Specialized Technical Training in France

Eng. Alaa Jalal Al-Tamimi, from Palestine Polytechnic University, attended a specialized technical training program in France. The program was on "Building Electronic Kits for Training on Automotive Control Technologies". This training program comes within the framework of the CODE project, and was organized by MedLink Association, which is one of the European partners. The main objective of the training was to transfer the knowledge of preparing and building electronic kits on CAN bus systems, which are core topic in modern automobiles control systems. The training kits were designed to be used in local training CODE-WP2-TS3 for all Palestinian partners. For this purpose, the program of the training was organized at IUT Cachan in Paris from June 08, 2015 to June 19, 2015, and the trainers were three professors from IUT, who were generously, dedicated their time and efforts for transferring the required training program knowledge.



Grant-Holder



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