PARTNERSHIP

- Warsaw University of Technology (PL), https://pw.edu.pl/
- IHU - International Hellenic University (GR), https://www.ihu.gr/
- EDUMOTIVA - European Lab for Educational Technology (GR), http://edumotiva.eu
- University of Padova (IT), https://www.unipd.it/
- University of Applied Sciences in Tarnow (PL), https://pwsztar.edu.pl/

CONTACT:

www.engined.eu

angelika.tefelska@pw.edu.pl

@projectENGINE1

@EUprojectEngine

Erasmus+

This project has been funded with support from the European Commission. This publication 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.

ENGINE

THE ENGINE PROJECT

TEACHING ONLINE ELECTRONICS, MICROCONTROLLERS AND PROGRAMMING IN HIGHER EDUCATION

MARCH 2021 - FEBRUARY 2023

GRANT NUMBER: 2020-1-PL01-KA226-HE-095653

SUMMARY

The ENGINE project focuses on the customization of the standard face to face educational resources for teaching technical subjects in the engineering field to meet the needs of online education. This need emerged during the COVID-19 pandemic, where many higher institutions were called to change their teaching practices and update their training methods and materials.
The challenge is still here especially for technical subjects that require hands-on practice and use of hardware and devices.

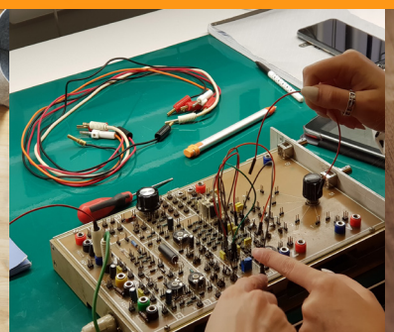
The ENGINE project aims at supporting higher education institutions in sharing good practices which were initiated during the COVID-19 emergency in the Spring of 2020. The project aspires to further set a basis whereupon new virtual and remote laboratories for computer science and electronics curricula can be developed and/or inspired. In the context of the project a set of 3 online courses with supporting educational resources for teaching online electronics, microcontrollers and programming languages. A pedagogical tutorial will be also developed to support educators in using tools and technologies that can improve the online learning experiences. The developed resources will be piloted in higher education institutions in 3 countries, Poland, Italy and Greece.

ENGINE E-LEARNING PLATFORM

- **http://study.engined.eu/**

MAIN TARGET GROUPS

- Higher education students
- Higher education teaching staff



PROJECT OBJECTIVES

ENGINE aims to:

- create a rich collection of OERs for higher education community to facilitate the online teaching of technical subjects in the field of engineering
- support educators in improving and/or updating their online teaching methods
- offer virtual/online solutions that can support higher education students in continue their engagement with technical subjects even when laboratories are closed
- set a basis whereupon good practices for blended- learning approaches in the field of engineering can be shared and practiced
- promote European collaboration by bringing together higher education institutions that confront similar challenges and building synergies among pedagogical and technical experts at European level

PROJECT RESULTS

The results include:

- The online course for electronics, which consists of two modules: beginner level and intermediate level
- The online course for microcontrollers, which consists of four modules from novice to advanced level
- The online course that focuses on programming languages that are usually combined with electronics components (microprocessors, microcontrollers, SoCs, FPGAs, CPLDs etc.)
- The tutorial for educators with technologies/ tools and tips that can be used to facilitate educational needs and improve the online learning experiences
- A training workshop for knowledge and experience sharing among the participating organizations
- Pilot applications with higher education students
- Three multiplier events in Greece, Poland and Italy