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ERASMUS+ PROGRAMM

Introduction to STEM: Arduino, Android, Raspberry Pi and your computer

Target group

The course is addressed to students and teachers that are interested in STEM and want to enter the brave new world of robotics, mobile development and Arduino.

Objectives

The training course is based on a blended learning model with class based learning modules (formal teaching with a teacher / tutor in a classroom) and laboratory based learning modules (Hands on workshops with all the necessary equipment).

The participants will be introduced to the basics of Arduino, the Arduino IDE, and they will build automation projects. They will investigate on how App Inventor can create mobile apps for the control of Arduino, and find out how Rapsberry Pi can connect Arduino to the Internet.

Methodology

The teacher will start with a lecture, but very soon the students will have to work in pairs or groups to finish certain tasks which teacher will assign to them. At the end of the course they will have to present their project based on everything they learned on the course.

Contacts

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Services

Emetris provides vocational education and training for adults promoted by public national authorities, but also business training for companies and European training projects.

Experience

Emetris activates in the field of education since 2010 and specialized at making lifelong learning programs, the promotion of the employment and the development of entrepreneurship.

Network

Emetris has a strong educational business network within and outside the country with associate business partners, representatives and educational providers.

Modules

Day 1	Circuits and intro to Arduino IDE, Analog vs Digital, LEDS.
Day 2	Program a blinking LED, make it blink faster
Day 3	Fade, use of switches and potentiometer.
Day 4	Sensors-Buzzer
Day 5	Servos
Day 6	Cultural activities (Visit to Knossos, the center of Minoan civilization and capital of Minoan Crete)*
Day 7	Cultural activities (Visit to Archaeological Museum of Herakleion)*

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Collaboration

We collaborate with 22 partners in the private sector that concerns specialized training centers (fully equipped with all modern technological and educational resources for the full implementation of education), trainers, hotels etc.

Adaptable

For every program we adapt to the needs of the concerned group, choosing partners, timetable, the composition of lessons and the trainers, aimed at acquiring or developing knowledge, skills and competences, which contribute to the formation of an integrated personality, vocational integration and development of the individual, social cohesion and social, economic and cultural development.

Modules

Day 8	Introduction to App Inventor
Day 9	Use App Inventor with Arduino
Day 10	Introduction to Raspberry Pi, connect Arduino to the Internet
Day 11	Participants will create their own project
Day 12	Final test –- Evaluation (Questionnaires) – Europass Certifications
Day 13	Cultural activities (Visit to Aquarium)*
Day 14	Cultural activities (Visit to Traditional Cretan Village)*

Course Dates (optional)

* Please note, that cultural activities are not included in the price of the program

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