ERASMUS+ KA1 · TEACHER TRAINING COURSE

Robotics in STEAM Education: Coding, Creativity & Inclusive Learning

7 Days • Heraklion, Crete • OID: E10020547

About the course

Robotics is one of the most engaging ways to bring coding, creativity and teamwork into the classroom. This practical course takes teachers from unplugged coding games and block programming to micro:bit, Arduino and LEGO Education robotics kits, with a first introduction to AI and machine learning.

Participants learn to design robotics activities for primary and secondary learners, link robots to literacy, art and other subjects, make robotics inclusive so every learner has a role, and take on a real-world challenge: robots for a smart, sustainable city.

Course at a glance

Duration: 7 training days

Location: ErasmusLearn Training Center, Heraklion, Crete

Language: English (B1 or higher recommended)

Who it's for: Primary, secondary, VET, adult and special education teachers, trainers, curriculum staff

Level: Introductory, no coding or robotics experience needed

Certificate: Certificate of Attendance

Funding: Eligible for Erasmus+ KA1 (course fees)

OID: E10020547

What you will learn

- Teach computational thinking through unplugged activities
- Use block coding with Scratch and micro:bit
- Build simple Arduino projects with sensors
- Introduce AI and machine learning in an accessible way
- Build and program robots with LEGO Education kits
- Link robotics to literacy, art and other subjects
- Make robotics inclusive so every learner takes part
- Design robotics challenges on real-world, green topics

How you will learn

Hands-on coding and building workshops, team challenges, project-based learning, peer feedback and group reflection. Participants build and program their own robots and leave with ready-to-use classroom activities. Tools: Scratch, micro:bit and MakeCode, Arduino, LEGO Education robotics kits and Teachable Machine.

Course language

English. B1 level or higher is recommended. Practical, hands-on activities make it easy for everyone to take part with confidence.

What's included

- Coffee Breaks that include traditional products.
- Guided tour of the Historical Center of the town.
- Dinner in a traditional restaurant in the town.
- Europass Mobility.
- A small gift with traditional Cretan products.
- Certificate of Attendance, for participants who attend at least 80% of the course.

Course Agenda

DAY 1 · Welcome & Orientation

- Welcome, practical arrangements and course timetable
- Presentation of participating organisations
- Icebreakers and introduction to the course

DAY 2 · STEAM & Scientific Thinking

- Why STEAM: linking school subjects to real life
- Developing a scientific mind and attitude
- The scientific method through a simple experiment
- Girls in STEAM: inclusive science for all learners

DAY 3 · Coding for Everyone

- Unplugged coding games for all ages
- Computational thinking in everyday lessons
- Block coding with Scratch: stories and games
- Low-cost coding activities for inclusive classrooms
- Included: guided cultural tour of the historical centre of Heraklion
- Included: dinner at a traditional Cretan restaurant

DAY 4 · Arduino, micro:bit & Intro to AI

- Block coding with micro:bit in MakeCode
- Arduino basics: circuits, sensors and mini-projects
- Intro to AI: simple machine learning with Teachable Machine

DAY 5 · Robotics for Primary Classrooms

- Introduction to LEGO Education robotics kits
- Building and programming your first robot
- Robotics stories and team roles for every learner

DAY 6 · Creative Robotics Challenges

- Advanced builds with sensors and motors
- Designing a robotics curriculum for your class
- Challenge: robots for a smart, sustainable city
- Robotics competitions and project-based learning

DAY 7 · Next Steps & Certification

- Erasmus+: objectives, priorities, actions, budget and tips for applicants
- Planning follow-up and dissemination of learning outcomes
- Course evaluation and certificates

ErasmusLearn

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Ready to join? Book your place at www.erasmuslearn.eu

erasmuslearn@gmail.com

+30.2810-312123