ERASMUS+ KA1 · TEACHER TRAINING COURSE

STEAM Education for Sustainable & Creative Classrooms

7 Days • Heraklion, Crete • OID: E10020547

About the course

STEAM brings science, technology, engineering, arts and mathematics together so that learners explore real problems, ask questions and create solutions. This practical course gives teachers a rich toolkit of low-cost experiments, creative arts activities, coding with micro:bit and Arduino, and a first introduction to AI and machine learning.

Sustainability runs through the week: participants run science experiments on the beach, explore climate change through nature-based activities, design green STEAM projects and visit the Museum of Ancient Greek Technology to link ancient inventions with today's innovation.

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 programming or robotics experience needed

Certificate: Certificate of Attendance

Funding: Eligible for Erasmus+ KA1 (course fees)

OID: E10020547

What you will learn

- Link school subjects to real-life problems through STEAM
- Develop learners' scientific thinking with simple experiments
- Use art, music and creative writing in science lessons
- Code simple projects with micro:bit and Arduino
- Introduce AI and machine learning in an accessible way
- Run low-cost outdoor experiments on sustainability and climate
- Make STEAM more inclusive and engaging for girls
- Design green STEAM projects for your own learners

How you will learn

Hands-on experiments, creative workshops, coding labs, outdoor activities on the beach and in nature, a study visit to the Museum of Ancient Greek Technology, teamwork and group reflection. Tools: micro:bit and MakeCode, Arduino, Teachable Machine and low-cost everyday materials.

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 · Art & Creativity in STEAM

- The role of art in STEAM: lecture and workshop
- Science haikus, tweet stories and digital e-books
- Music and maths: the fruit piano
- Introduction to 3D design
- 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 · Ancient Greek Technology

- Study visit: Museum of Ancient Greek Technology
- Hi-tech inventions then and now
- From ancient invention to a classroom STEAM project

DAY 6 · Green STEAM: Climate Experiments

- Greenhouse effect and emissions: hands-on experiments
- Ocean and coastal challenges: science on the beach
- Atmospheric dynamics and an ecosystem in a bottle
- Gamifying sustainability: a science escape room

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

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