

STEM AND STEAM: INSPIRING INNOVATION AND CREATIVITY IN EDUCATION



**Organisation ID:
E10384986**

 europexchangecentre

 EuropeXchange

 Torrox Costa, Malaga, Spain



www.europex-change.com



COURSE OVERVIEW

This course provides teachers and educators with practical tools and methodologies to integrate STEM (Science, Technology, Engineering, Mathematics) and STEAM (adding Arts) approaches into their teaching. Participants will learn how to design interdisciplinary projects that foster curiosity, problem-solving, and innovation among students. Combining theory with hands-on experimentation, the course encourages educators to use inquiry-based learning, creativity, and technology to prepare learners for the challenges of the 21st century.

COURSE OBJECTIVES

By the end of this course, participants will be able to:

- To understand the principles and educational value of STEM and STEAM learning.
- To explore interdisciplinary approaches that combine science, technology, and art.
- To develop project-based learning activities that promote critical and creative thinking.
- To integrate digital tools, robotics, and engineering challenges in the classroom.
- To motivate students through experimentation, collaboration, and discovery.



LEARNING OUTCOMES

After completing this course, participants will be able to:

- Participants will understand how STEM and STEAM support innovation and creativity.
- They will design hands-on, inquiry-based projects that connect theory to practice.
- They will integrate technology, coding, and design thinking into lessons.
- They will promote teamwork, problem-solving, and curiosity in students.
- They will apply inclusive strategies to engage learners of all abilities and interests.

DURATION:

5 Days

LANGUAGE:

English or Spanish

SCHEDULE:

Monday to Friday

09:30 – 14:30
5 hours per day

OTHER SERVICES

- Beach front accommodation
- Airport transfers
- Local transport
- One day trips
- Documentation support
- Additional project assistance

CERTIFICATES

A certificate of attendance will be issued to all the participants at the end of the course.

TRAINING ACTION

Day 1

Introduction to STEM and STEAM Education

- Understanding STEM and STEAM concepts and benefits.
- From STEM to STEAM: the role of creativity and the arts.
- The importance of cross-curricular and hands-on learning.
- Group discussion: examples of innovative teaching practices.

Day 2

Inquiry-Based and Project-Based Learning

- Learning through curiosity and experimentation.
- Designing classroom projects that connect disciplines.
- Encouraging collaboration and critical thinking.
- Workshop: creating a mini STEM/STEAM activity.

Day 3

Tools and Technologies for STEM and STEAM

- Exploring educational technologies and digital tools.
- Introduction to coding, robotics, and simple engineering challenges.
- Low-cost and no-tech approaches for all school contexts.
- Practical session: building and testing prototypes.

Day 4

Creativity and the Arts in STEM Education

- The role of art and design in problem-solving and innovation.
- Integrating visual arts, music, or drama into STEM lessons.
- Storytelling and creative thinking as learning drivers.
- Outdoor creative project in the local environment.

Day 5

Implementing STEM and STEAM in Schools

- Developing interdisciplinary lesson plans and projects.
- Encouraging gender balance and inclusion in STEM fields.
- Sharing participants' projects and ideas for classroom use.
- Reflection, evaluation, and certification ceremony.

*Please note that program content may be subject to change based on input from our trainers.



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