

## COURSE TITLE

# FROM STEM TO STEAM PROJECTS

### Presentation

The students' attitude towards projects that link Science, Technology, Engineering and Mathematics (STEM) has been approached from different perspectives that include the interest, the own aspirations and capacities in STEM. In recent years, the A (from Arts) has been included in order to broaden the idea of the need for interdisciplinary work to activate learning and also to give representation to the artistic disciplines in the design of projects.

The research about the concept of self-efficacy (perception that students have about their own abilities when participating in scientific-technological activities) has allowed finding strategies to improve student's motivation and entrepreneur attitudes inside STEAM tasks.

Knowing the evidence and existing strategies in this field is a useful resource to improve the capability to design learning situations by teachers.

The **objectives** of the course are:

- To know the main characteristics of STEAM projects
- To know the entrepreneur competences needed for the XXIst century
- To know different learning strategies to improve students' entrepreneur competences
- To know examples of good practices of STEAM projects being develop on schools today
- To know a tool to analyse the presence of different disciplines within a STEAM project

### Target group

The training course is addressed to primary and secondary school teachers, VET teachers, VET trainers, adults' teachers, managers and employees of enterprises as well as social and youth workers of non-profit organization and public entities.

### Course language

This course can be provided both in English and Spanish.

### Methodology

The methodology used in the course combines cooperative work techniques and practical tasks with the teacher's explanation of specific contents related to the objectives of the course.

The use of co-evaluation techniques are also practiced as an example of formative evaluation.

### Course structure & contents

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| Day 1 | <ul style="list-style-type: none"><li>• Introduction to STEAM</li><li>• STEAM resources</li></ul>   |
| Day 2 | <ul style="list-style-type: none"><li>• Students on STEAM: Self-efficacy &amp; identity</li><li>• Technological and scientific literacy through STEAM &amp; resources</li></ul>                       |
| Day 3 | <ul style="list-style-type: none"><li>• Entrepreneur competences for XXIst century</li><li>• The Big 13 &amp; Entrepreneur competences passport</li></ul>   |
| Day 4 | <ul style="list-style-type: none"><li>• Creation of a STEAM entrepreneur project</li></ul>  |
| Day 5 | <ul style="list-style-type: none"><li>• Visit to a school implementing STEAM projects.</li><li>• Handing out the Certificates of Participation.</li><li>• Farewell dinner &amp; live music.</li></ul> |

**NOTE: This training course can be funded using Erasmus+ grants (under Key Action 1). In case you need help with the application process, please, let us know.**