Course Title: Cross-Curricular Computing

Course Description:

Cross-curricular learning involves establishing patterns of information between different academic subjects. It offers a creative way of developing knowledge, understanding and practical skills through a study of interconnected topics.

Studies have shown that computing is one of the most fundamentally cross-curricular subject areas in education. It is about using critical and creative thinking together with technological resources to solve problems that cross all disciplines. The more complicated problems are the more their solutions require teamwork, and therefore, good cooperation and communication among the members of a team.

This course starts with an introduction to cross-curricular teaching and then focuses on practices where computing can be used to facilitate teaching and learning in other subject areas. The course material covers various teaching approaches, which include the use of educational computing resources and tools in order to meet learning objectives.

> *"Computing is not about computers any more. It is about living", Nicholas Negroponte*

Course Objectives:

The course aims to make participants aware of the following matters:
- The concept of cross-curricular teaching
- The need for cross-curricular approaches
- How to set up a cross-curricular lesson
- Modern computing and ICT in education
- Computing for the cultivation of the 4 Cs
- Teaching strategies for integrating computing in other subject areas
- Cultivating intercultural awareness through computing projects

- Promoting the exchange of ideas and teaching experiences between participants from different European countries
- Encouraging future Erasmus+ partnerships

Methodology:

Our main priority is to promote cooperation between teachers from different European countries. Most of the course sessions will take place in a conference room, but there will also be a few outdoor activities in the city centre. We will stay committed to learning by doing, an approach that CodeNPlay has long applied.

Preparation:

All participants will receive a questionnaire by email, which they will be asked to complete in order to give us an idea about their educational needs and expectations from the course. This will enable the course instructors to deliver the course in ways that best suit the participants. Instructions and course material will be provided during the course.

Course Contents Overview:

- Introduction to cross-curricular teaching
- The benefits of cross-curricular education
- Obstacles to cross-curricular teaching
- How to set up a cross-curricular lesson
- Modern computing and ICT in education
- Computing vs ICT
- Computing and the 4 Cs
- Can computing be interdisciplinary?
- How can I benefit from incorporating computing in my lessons?
- Computing in Art
- Computing in Music
- Computing in Humanities
- Computing in Sciences
- Let's compute a cross-curricular lesson! (Workshop)

Course participants will be given several practical exercises based on the theoretical background provided and their own teaching experiences.

Target Audience: Primary, secondary school teachers and educators of all subject areas