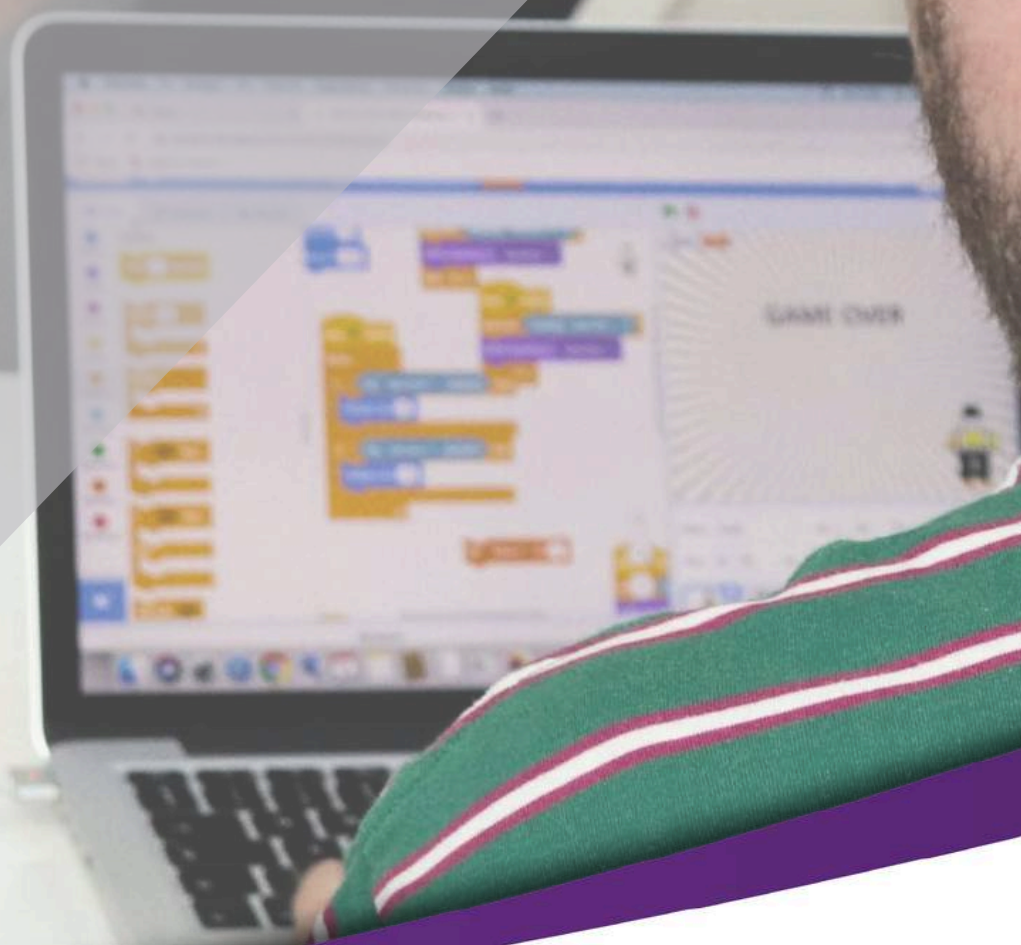


**TRAINING COURSE**

# CREATION OF EDUCATIONAL VIDEO GAMES



Digital School



Funded by the  
Erasmus+ Programme  
of the European Union



inerciadigital

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Thank you for registering for our training courses!  
Here you will find detailed information regarding the training course

# 1. Training Course Information

*“Programming is not an exclusive tool for the engineers anymore! Learn how a computer program works and how to create them with your students using visual coding”*

**Training Course:** Creation of Educational Video Games

**Course Code:** DS42018

**Programme:** Digital School (Erasmus+).

**Venue:** Centro de Formación e Innovación de Inercia Digital.

**Address:** Plaza Tallista Miguel Hierro Número 9, A, 21007, Huelva, Spain.

**Duration:** 5 days courses (35 hours). According to the Flipped Classroom methodology, it will take 20 presential hours (during the morning, from 9:00 to 13:00), and 15 hours of self-learning out of this time slot.

**Training fee covered:** 100%

**Special instructions:** 100% presence is required.

**Preliminary requirements:** An A1 level (newcomer) in all of the DigCompEdu Framework competences (Certification not needed).

**Additional resources available:** computers, Internet connection, digital projector, speakers, headphones, tutors, online platform with supporting materials, papers, pens.

**Proficiency profile:** B1 – Integrator / B2 – Expert

**Methods and schedule for evaluation:** This training course will follow a Non-Formal methodology in every domain, in order to promote the interaction between learners and trainers as well as between students themselves. Different methods will be developed within the in-person sessions, giving special attention to the Case method, methodology based on project, learning by doing and the Interrogative one. The basic methodology of the course is the flipped one. It means that students will work on the Inercia Digital's online platform. It will be useful to download the learning and supporting materials, to participate in debate forums, to ask doubts, to interact with other students, to complete the required tasks for evaluation, and to do the final self-assessment of their achievement theoretical questionnaires. The learners will have access to the online platform at any moment, and they must spend almost 10 hours of dedication. All this provision is completed with in-person classes, in which different activities are carried out to definitively integrate conceptual, procedural and attitudinal course content. This method is based on some curriculum conditions, referring to both the methodology and the content of the courses, according to the DigCompOrg framework.

- Staff and learners are both creators of contents, as the courses are adapted depending on the specific learning objectives, context, pedagogical approach, and learner group. used Curricula are redesigned or reinterpreted to reflect the pedagogical possibilities afforded by digital technologies
- Content repositories are widely and effectively used. Intellectual property and copyright are respected. Digital tools and contents are licensed as required, although Open Educational Resources are promoted.

**Evaluation:** in order to guarantee the quality of our courses, evaluation is perceived as an extended process. This will mean the continuous evaluation of the learners in several aspects, which are discussed below:

- **Initial assessment:** before the start of the course, participants will be evaluated on their willingness to participate, as well as on certain aspects related to the course organization.

- **Theoretical:** The wide theoretical knowledge will be evaluated at the end of the course with a questionnaire that will be done on the online platform. The theoretical evaluation is the 40% of the final mark and it is compulsory in order to pass the course. Students' digital competence is developed across the curriculum, and that's why this evaluation will be used to define the proficiency profile of each participant, according to the DigCompEdu (Digital Competence Framework for Educators) system, proposed by the European Commission.
- **Practice:** This training course is based on the Continuous Assessment. Therefore, the students will participate in the debates and sessions planned. The participation and realization of the sessions' tasks will be 60% of the final mark and it is compulsory in order to pass the course. In order to evaluate learners' participation and dedication, all the daily activities will be saved on the online platform. The tutor will write every evaluation of the sessions on the online platform to establish a continuous feedback system.
- **Final assessment:** participants will be evaluated on their participation and own considerations and proposal.

### Type of Certification of Attendance Awarded

- Certificate of attendance including description of training content and time input
- Europass mobility certificates – to be issued by the applicant's NA

**General objective:** The main objective of the course is to help educational staff, students and teachers understand the fundamental ideas about computers and programming, and develop some basic problem-solving and project design skills. It will also help teachers to integrate basic programming instruments into their educational process in order to increase the students' versatility when it comes to creative ways in which they can approach real-life problems.

### Specific objectives:

- To learn the concept of programming,
- To know the educative use and values of creating applications,
- To solve real problems using code,
- To promote ICT teaching to boost its learning in the educational system.

### Learning outcomes:

- Participants will learn the fundamental principles of coding and how it can be used in the educational process,
- Participants will be familiarized with the Scratch Development Environment,
- Participants will learn how to create video games in an easy way in order to make coding an interesting activity for their students,
- Participants will be able to integrate digital tools into daily work.

### Competences acquired by our learners:

*Competences were designed and distributed according to what the European Commission establishes in the European Framework for the Digital Competence of Educators. This training course is designed under the influence of all the competencies defined in the framework, and they are taken into account in a transversal sense.*

- To use digital technologies to engage in collaboration with other educators and professionals, sharing and exchanging knowledge and experience, and collaboratively innovating pedagogic practices.
- To organize digital content and make it available to learners, parents and their educators.
- To appropriately manage and orchestrate digital teaching strategies, planning for and implementing digital resources in the teaching process, so as to enhance the effectiveness of teaching interventions.
- To use digital technologies and services to enhance the interaction with learners, individually and collectively, within and outside the learning session, as well as to enhance learner collaboration, enabling learners to use digital technologies as part of collaborative assignments, as a means of enhancing communication, collaboration and collaborative knowledge creation.
- To use digital technologies to offer timely and targeted guidance and assistance, experimenting with and developing new forms and formats for offering guidance and support.

## 2. Training Course Programme

### DAY 1. ARRIVAL. INTRODUCTION TO CODING (MONDAY)

**09:00 - 09:15** Welcome. Greetings and introductions (meeting each other).

- Foster understanding of the culture and mentality of the host country.

**09:15 - 09:30** Presentation of the Training Course and Training Programme.

- Aim topics and methods. Importance of the active participation

**09:30 - 10:00** Presentation of the Moodle Platform.

- How to use the online platform. Online activities.

**10:00 - 10:15** *Break.*

**10:15 - 11:45** What is coding? How can it help us? The environment and the basics.

**11:45 - 12:45** First activity: Developing content for the course.

**12:45 - 13:00** Sharing. Group Conclusions.

**13:00** End of the sessions (morning).

*Activities on the online platform: Reading the content of the topic discussed and completing the required task on the platform (4 hours).*

### DAY 2. INTRODUCTION TO PROGRAMMING. SCRATCH (TUESDAY)

**9.00 - 9.15** Welcome. Objectives Exhibition Session.

**9.15 - 10.45** Scratch programming language.

**10.45 - 11.15** *Break.*

**11.15 - 12.45** Scratch programming language. The coordinated system. Animations.

**12.45 - 13.00** Sharing. Group Conclusions.

**13.00** End of the sessions.

*Activities on the online platform: Reading the content of the topic discussed and completing the required task on the platform (4 hours).*

### DAY 3. LOCAL GOOD PRACTICES: VISITS DAY (WEDNESDAY)

**From 9.00 to 13.00-** Participants will visit three different Local Strategic Partners of Inercia Digital, that develop Good Practices in Education in the field of Creation of Educational Video Games.

*Activities on the online platform: Reading the content of the topic discussed and completing the required task on the platform (3 hours).*

### DAY 4. OTHER PROGRAMMING LANGUAGES (THURSDAY)

**9.00 - 9.30** Review of topics covered the previous day. Exhibition Session Objectives.

**9.30 - 10.45** Variables and conditionals. Introduction to Microbit.

**10.45 - 11.15** *Break.*

**11.15 - 12.45** Creating a game. Introduction to Lego Mindstorms and Python.

**12.45 - 13.00** Sharing. Group Conclusions.

**13.00** End of the sessions.

*Activities on the online platform: Reading the content of the topic discussed and completing the required task on the platform (4 hours).*

### DAY 5. EDUCATIONAL SOCIAL NETWORKS. GOODBYE, EVALUATION AND DEPARTURE (FRIDAY)

**9.00 - 9.30** Review of topics covered the previous day. Exhibition Session Objectives.

**9.30 - 10.45** Solving small problems. Practical projects.

**10.45 - 11.15** *Break.*

**11.15 - 11.30** Sharing. Group Conclusions.

**11.30 - 12.30** Complete the assessment questionnaire course. Evaluation and conclusions of the course. Suggestions. Complete the quality evaluation questionnaires.

**12.30 - 13.00** Delivery of certificates.

*Goodbye and have a nice trip back!*

# End of the course

*All training courses and the evaluation processes coordinated and delivered by Inercia Digital are based on the UNE-EN-ISO 9001:2015, UNE-EN-ISO 14001:2015 and ISO/IEC 27001:2013 standards to achieve continuous improvement in the quality of the services provided and the activities developed by Inercia Digital, minimizing the environmental impact of our actions. Our courses in Digital and Entrepreneurial school are also based on the DigComp 2.0 conceptual reference model, Inercia Digital develops all courses under the European Reference Framework of Digitally Competent Educational Organisation (DigCompOrg), the European Framework for the Digital Competence of Educators (DigCompEdu), the EntreComp: Entrepreneurship Competence Framework, and the EntreCompEdu, Developing teachers' entrepreneurial education skills. Both are initiatives by the European Commission, Directorate-General for Education and Culture (DG EAC).*



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