

# **Course: 3D Printing and Robotics in Education**

# Organization E10026783

#### **Target Participants:**

Teachers (Pre-school, primary, secondary, vocational, adult, special needs), Teacher trainers, Careers officers, educational guides and counselors, Inspectors, Head teachers/principals/managers of schools/organizations offering adult education, Other (Paid or voluntary) management staff in the institution/organization, Members of students/teachers councils in adult education, Other, namely: Local municipal education officers, Members of students/teachers councils in adult education

# **Training Venue:**

FCT FABLAB

Ed. IV | Faculdade de Ciências e Tecnologia | Universidade Nova de Lisboa | Campus de Caparica 2829-516 Caparica - PORTUGAL

Click here

**Accommodation and Meals:** <u>Accommodation and meals are not included in this course</u>, just are some refreshments during the course.

Participants must find and book their own accommodation.

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phone: +351 91 944 944 5



#### Preparation

There is no special preparation for this course.

## **Objectives**

- Understand the principles of 3D printing technology and its applications in education;
- Familiarize themselves with various 3D printing software and hardware;
- Develop hands-on experience in operating 3D printers and preparing 3D models for printing;
- Gain a basic understanding of robotics concepts, including mechanics, electronics, and programming;
- Learn how to assemble and program simple robots using various robotics kits;
- Explore different types of robots and their applications in education;
- Develop computational thinking skills and problem-solving abilities through robotics programming;
- Explore innovative pedagogical approaches to incorporating 3D printing and robotics into the classroom;
- Learn how to design and implement engaging cross-curricular projects using these technologies;
- Develop strategies to assess student learning and promote creativity, collaboration, and critical thinking through 3D printing and robotics activities;
- Cross-cultural Collaboration and Sharing of Experiences;
- Promote a global perspective on the application of 3D printing and robotics in education;
- Facilitate the development of collaborative projects that utilize the expertise of teachers from diverse backgrounds;
- Design and create engaging 3D models and robotic projects that align with educational objectives;
- Integrate 3D printing and robotics into various subject areas, including STEM, arts, and humanities.



# Methodology

- Active, Collaborative, and Participative Approach;
- Conceptual and Theoretical Framing of Concepts and Combinations;
- Sharing and Development of Products;
- Critical analysis and reflection relating theoretical and practical dimensions, with objects produced;
- Evaluation (with forms filled by trainees and trainers);
- Dissemination and Follow-up Strategies.

## Follow-up

Allow participants to share their experience and develop the project (and other projects) by web networking.

#### **Actions:**

- Creation social media groups;
- Upload of the pedagogical objects and critical approaches in a LMS;
- Upload of pedagogical object developed by trainees in their own professional contexts using the Pedagogical Kit;
- European Projects Development among participants.

#### Certification

- A certificate of attendance is presented to participants at the end of the course.
- Europass Mobility

#### **COURSE FEE AND FUNDING**

Course fee: 400€ for a 5 days course.

Participants should pay the course fee 4 months before the course starts.

Cancellation by the participant, between 6 and 3 weeks before the course, results in a cancellation fee of 60%.

Cancellation by the participant, later 3 weeks before the course, results in a cancellation fee of 80%.

If the organizers cancel the course, they reimburse the already paid amount to the beneficiary.

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## **Funding**

You can request an Erasmus+ grant from your National Agency which will cover almost all costs of this course. <a href="https://erasmus-plus.ec.europa.eu/contacts/national-agencies">https://erasmus-plus.ec.europa.eu/contacts/national-agencies</a>

We can guide you through the process of funding and application. To do so, you need the make a pre-registration. After pre-registration, we'll contact you by mail and provide the application help.



View of Almada, on the left side of the Tagus river, and Lisbon in the right side

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