



**INSPIRING REVOLUTIONARY  
EDUCATIONAL CREDENTIALS**

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# **Module 12**





1506  
UNIVERSITÀ  
DEGLI STUDI  
DI URBINO  
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## ABOUT THE PROJECT

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OBEC (2020-1-SE01-KA204-077803) is a KA2 Strategic Partnership co-funded by the Erasmus+ of the European Union. Led by Swideas in Sweden, the project gathers partners in Croatia (Regional Development Agency of Sisak-Moslavina County - SIMORA), Italy (LAI-MOMO Società Cooperativa Sociale & Università degli studi di Urbino Carlo Bo), Belgium (EURADA - Association Européenne Des Agences Développement).

OBEC is an innovative project that aims to explore the potentials of Blockchain technology to promote competency development and recognition of skills and qualifications by creating an innovative system to issue and validate learning credentials on a trial basis. Through this effort, the project's goal is to encourage the professional and academic integration of migrants, exchange students, and individuals with informal and non-formal learning backgrounds.

By contributing to the educational and economic integration of these targeted groups, OBEC envisions to benefit individuals with migrant background, students, teachers, education institutions, and employers. Focusing on the key issue of lack of uniformity and transparency in systems of validation of credentials, it is expected that this effort will result in positive effects in the working context, promoting employability, empowerment, and accessibility to the labour market.



## MODULE 12 – Coding in Classroom

### 1. What?

- The main topics of the course

The main topics of this course are: The language of things, Introduction to Code.org., Creating content and dissemination through Scratch, Practical applications of computational thoughts. The module will employ both frontal lectures and practical activities. Frontal lectures are going to be employed to teach the technical language and to highlight the procedures that shall be employed to learn how to code. Practical activities will be employed to force the students to apply what they have learnt and to check whether such students actually understood the material taught during the frontal lectures.

Education Coding in Classroom is carried out by Universita' degli Studi di Urbino Carlo Bo.

### 2. Why?

- What are the motivations behind the courses?

The main aim of the module is to teach the basics of coding in a simple and direct way. The goal is to improve individuals understanding of coding and show them that such concept is omni-comprehensively present in our daily lives. Moreover, the modules can provide teachers with the tools to teach coding in early stages of education, providing their students with the basic understanding of coding that they can then expand during their educational life.

### 3. Who?

- Target groups of this education
- Teachers

### 4. How?

- Describe the methodology of the course

THEMES	DESCRIPTION
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<p>The language of things</p>	<p>This section will highlight that we are surrounded by programmable objects in our daily lives. Moreover, it will be highlighted that those programmable objects have been coded by someone who wants to tell the object to perform a specific action which is desirable by us. Finally, it will be shown that coding is indeed the easiest way to get objects to do things that are desirable by us.</p> <p>4) Practical applications of computational thoughts.</p> <p>In this last section, all the things that students learnt in the previous sections will be put into practice. The students will learn how to actually program objects and get them to do what they desire them to do.</p> <p>Duration: 3 hours.</p>
<p>Introduction to Code.org.</p>	<p>This section will introduce the code.org platform. In particular, the opportunities that code.org offers will be presented, highlighting how such platform could be employed to enhance the learning experience of students that are learning coding in a simple fashion.</p> <p>Duration: 10 hours.</p>
<p>Creating content and dissemination through Scratch</p>	<p>This section will introduce the Scratch project. In particular, it will be shown how Scratch can be employed to code employing already existing code blocks. Emphasis will be placed on</p>

	practical understanding of the concept of block coding. Duration: 5 hours.
Practical applications of computational thoughts	In this last section, all the things that students learnt in the previous sections will be put into practice. The students will learn how to actually program objects and get them to do what they desire them to do. Duration: 10 hours.

#### 5. When?

- The timing of each component of the course

The course is split into four parts. The first part will introduce the concept of a programmable object and will give the students the terminological proficiency that s/he might employ later in the course. This first part will last around 3 hours, depending on the ability of the students to complete the assignments. Following this first part, a second part will follow which will focus on the introduction of the platform code.org. All the elements of such platform will be explained, and the students will learn how to employ it to teach programming to children. This part will last around 10 hours. The third part of the course will then focus on Scratch, teaching the students how to use this second platform to create contents and teaching materials. Such part will last around 5 hours. Finally, the fourth part will provide practical examples of how the platforms that have been introduced have been used to create innovative contents. This final part will last around 10 hours and will mostly be composed of assignments.

The course is expected to take place around January 2022 and to end by March 2022.

#### 6. MILESTONES

The course will provide the students with 3 main badges, each indicating a competence they acquired while following the course:

1. Competence with code.org.
2. Competence with Scratch.
3. Being able to practically apply the theoretical knowledge about code.org and Scratch.

## 7. IMPLEMENTERS

- Universita' degli Studi di Urbino Carlo Bo

Access: <https://mooc.uniurb.it/wp/codemooc/>

Disclaimer: this module is part of the Universita' degli Studi di Urbino Carlo Bo curriculum and is available on their website [here](#). The module was resorted to as contribution to the other modules within the testing phase with the goal of increasing the number of students who had the opportunity to test the possibilities of Blockchain technology to issue and certify educational credentials.