



Coding and Robotics Made Easy

By Patrick O'Hare

Course details

- 🕒 One week course
- € Starting from 480€ (Cultural activities included)*
- 👥 Min. 4 - max. 14 participants
- 📄 Certificate of attendance included (80% of attendance required)
- 📍 Available in Dublin, Malta, Rome, and Split

* A 60 € late registration fee will be applied if you register less than 8 weeks before the course start date.

Course description

Robotics and coding can seem intimidating to both teachers and students, but it does not have to be this way.

This course makes coding and robotics accessible, straightforward, and fun for every classroom. Robotics and coding can help students develop many skills, such as logical reasoning and problem-solving, that apply to many subjects and are indispensable for many future careers.

Stimulate your students' creativity and imagination with coding and robotics! This course provides the teacher with a step-by-step procedure for how to use coding and robotics with classroom-based lessons. Participants will learn how to bridge the gap between software and hardware in an exciting and easy-to-understand way.

By the end of this course, participants will be comfortable teaching students the fundamentals of coding and robotics which are captivating and student-centered. Furthermore, participants will be able to adapt to many different classrooms and subjects.

Requirements

Suggested computer proficiency: Intermediate



Learning outcomes

The course will help the participants to:

- Understand and utilize the fundamentals of coding and robotics;
- Develop the skills and knowledge to use them in their classroom in a fun and interesting way.

Tentative schedule

Day 1 – Introducing coding and robotics

- Introduction to the course, the school, and the external week activities;
- Icebreaker activities;
- Presentations of the participants' schools;
- What is Robotics?
- Robotics and STEAM;
- 21st Century Literacy;
- Hands-on Learning;
- Lesson Plans.

Day 2 – Code and create

Circuits and Coding

- Learn about circuits using the MakeyMakey;
- Introducing Scratch;
- Combining the MakeyMakey, Conductive Material, and Scratch to learn about coding and circuits.

Introduction to Scratch

- Learning with Scratch;
- Create your own interactive stories, animations, and games;
- Imagine, create and share: how to use Scratch in the classroom.





Combining the Micro:bit and Scratch

- Code and create with the Micro:bit;
- Program a LED display, buttons, motion sensors, and more;
- Bridge the gap between the digital and physical world;
- Scratch and Micro:bit projects.

Day 3– Lesson planning and projects

Micro:bit project

- Lesson planning with Micro:bit;
- Present your Micro:bit project.

Child-centered Coding

- Minecraft Lesson Plans;
- Minecraft Hour of Code tutorial;
- Coding fundamentals.

Day 4 – Kitronik robotics Kit and 3D printing

- Robotics Lesson Plans;
- Building and Setup;
- Creating the robotics code;
- Moving, stopping, and turning;
- Designing challenges;
- Robotics kit adaptations;
- Design alterations;
- Other 3D printing applications.

Day 5 – Robotics and coding in your classroom

- Participants create and demonstrate a Robotics and Coding based lesson plan for their classroom;
- Sharing of resources and ideas.





Day 6 – Course closure and cultural activities

- Course evaluation: round-up of acquired competencies, feedback, and discussion;
- Awarding of the course Certificate of Attendance;
- Excursion and other external cultural activities.

*The schedule describes likely activities but may differ significantly based on the requests of the participants, and the trainer delivering the specific session. Course modifications are subject to the trainer's discretion. If you would like to discuss a specific topic, please indicate it at least 4 weeks in advance.

Our courses usually include two cultural activities. Further information is available on the webpage of each course location.

About the provider

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