

FONDAZIONE LUIGI CLERICI

TRAINING TRAINERS WEEK IN MILAN

EDUCATIONAL ROBOTICS

- ✓ **Educational robotics** regard the design, analysis, application and operation of robots. Educational robotics can be taught from elementary school to graduate programs.

In the training trainers week of educational robotics, the learning of new skills is done playing, discovering, feeling and reasoning. The use of robots in learning how to design and program complex systems generates curiosity and stimulates creativity and motivation.

Through robotics, it's possible to teach autonomy in dealing with problems and learning to plan strategies to solve them. The use of robots enhances the visual and spatial skills and allows to refine the ability to interact with non-human organisms.

This training trainers week is the way to "discovering robotics" based on cooperation and aimed at programming your own robot.

- ✓ **Target:** elementary school teachers to graduate programs teachers
- ✓ **General objectives** are focused on the understanding and use of:
 - ✓ Enrichment of the professional profile of teachers involved, connecting the world of school with the world outside.
 - ✓ Promotion of technology and robotics in schools as transversal components of the school curricula
 - ✓ Knowledge, technical skills and competences concerning the use of technical tools
- ✓ **skills involved:**
 - Cognitive skills:** decision making, problem solving, critical thinking
 - Emotional skills:** stress management
 - Relational skills:** interpersonal relations, empathy, effective communication

Program

1. DAY –WELCOMING SESSION

- ✓ *Introduction of the training trainers week in Educational robotics: the first algorithm, robots, defragmentation and commands.*
- ✓ *Sharing experiences and expectation with participants.*
- ✓ *Tour of Milan City.*

2. DAY –mBOT

- ✓ *In the second day the topic will be “mBot”. It’s a tool, a low cost, easy-to-run robot kit for kids to get hands-on experience about graphical programming, electronics, robotics. It is an all-in-one solution for robotics learning and designed for STEM education. The participants can practice in two programming tools: Arduino IDE and mBlock, a drag-and-drop programming tool based on Scratch 2.0*

3. DAY –SAM

- ✓ *The participants can test the sam’s steam kit.
The sam’s steam kit is the ultimate classroom solution to invent, create and be creative with steam, while learning about coding.*

4. DAY –EDO

- ✓ *e.DO is a flexible, interactive open-source robot designed to stimulate creativity and participation inside and outside a classroom setting. The Industry 4.0-enabled robot is part of an open and modular ecosystem that helps educators deploy robotics to address a variety of interests and target groups as part of a modern and highly-relevant didactical path. The e.DO™ Experience Suite was created to facilitate a pragmatic approach to learning that spans multiple disciplines and age groups. In the classroom or at an event, e.DO can help deliver a hands-on experience that encourages participation, cooperation and inclusion among participants. e.DO also provides an unconventional and engaging learning journey and develops the ability to link disciplinary learning to the world at large.*

5. DAY –CLOSING DAY

- ✓ *During the final day of the training trainers week, the participants can have a moment to think about the experience in order to understand what is the best tools tested.*
- ✓ *The participants will evaluate the experience*
- ✓ *The certification will be delivered*