Future Classroom Lab course

Programming for the 21st century classrooms

13-14 May 2019, Brussels

Coding and computational thinking are becoming more and more important in our society and working life. Learning to code develops various skills such as problem-solving, abstract-thinking, communication, logical reasoning and creativity, and impacts student motivation in mathematics theory as it encourages them to apply their knowledge. Schools play a key role in introducing programming to students in an engaging way and help students discover career opportunities offered by computer science. During the course teachers will learn about the importance and applications of programming in today's society and education, learn ways to introduce programming in their teaching, discover and test different programming tools, explore ways to motivate and encourage students, and develop a programming lesson plan for their classrooms.

The course is addressed to secondary school teachers:

- Computer science teachers who want to enhance the teaching of their subject
- STEM and other teachers who would like to link and/or apply programming in their subjects

The participants are expected to have intermediate computer skills, but previous programming experience is not necessary.

Day 1 – Monday 13 May	
9:15-9:30	Arrival and registration
9:30	Course introduction • Objectives and programme • EU Code Week • Who is who: participants and trainers
10:00 (incl. coffee break)	Future Classroom Lab tour Exploring education technology and flexible learning spaces Key competences and programming
12:30	Lunch
13:15 (incl. coffee break)	**Creativity** Visual programming language; Scratch and MakeyMakey
17:00	End of the day at the lab
17:00-18:30	*Social/cultural activity: Interactive city walk (optional)*
19:30	Dinner at the Brussels centre

Day 2– Tuesday 14 May	
9:00 (incl. coffee break)	**Entrepreneurship, innovation and perseverance** Robotics with EV3, Wedo, BeeBots, mBot Making and tinkering
12:30	Lunch
13:15 (incl. coffee break)	**Analytical thinking and problem-solving** Computational thinking Computer science unplugged
16:15	End of the day at the lab
16:30-18:00	*Social/cultural activity: Visiting the House of European History (opt.)*