Future Classroom Lab course
Programming for the 21st century classrooms

9-13 October 2017, Future Classroom Lab, Brussels

INTRODUCTION

Programming and computational thinking skills are becoming ever more important in our society and working life. Learning to code develops various skills such as **problem-solving, logical reasoning and creativity**, and can help student motivation in mathematics theory as it encourages them to apply their knowledge. Schools are key players in introducing programming to students in an engaging way, and help defuse negative stereotypes around computer science. During the course teachers will learn about the importance of programming in today's society and education, learn ways to introduce programming in cross-curricular work, discover and test different programming tools, explore ways to motivate and encourage students, and develop a programming lesson plan for their classrooms.

The course objectives are:

- To support teachers who are or will be involved in the teaching of computer science, either as a direct subject or as an element of another subject, with their delivery of computer science theories, concepts, principles and activities
- To provide teachers with concrete ideas and resources in teaching programming
- To provide teachers with an overview of the societal context and rationale for the teaching of programming
- To offer teachers a place of exchange with like-minded peers to exchange resources, ideas and provide guidance to each other

The course is **addressed to secondary school teachers**:

- Computer science teachers who want to get new ideas, tools for teaching their subject
- STEM and other teachers who would like to link to computer science concepts and/or apply programming in their subjects

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

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TRAINERS

MARGO TINAWI

Some years ago Canadian Margo Tinawi left her a career as a commercial lawyer to plunge into Europe's start-up IT scene. After completing Le Wagon's programming bootcamp in Brussels, she launched Kidzeum, a gaming app for museums. When she's not busy designing awesome games, Margo enjoys sharing her fascination with IT by teaching web programming at Le Wagon and giving introductory coding workshops to kids and teens at Techies Lab.

PRE-COURSE ACTIVITIES

To be provided later

DAILY PROGRAMME

Changes to the programme are possible

Day 1 – Monday 9 October	
9:00-9:30	Arrival and registration
9:30	Course and topic introduction Introducing participants (ice-breaking activity)
10:15 (incl. coffee break)	Game-based learning
12:30	Lunch
13:15	**Group 1** (2/3-day participants) Visual programming tools: Scratch · **Group 2** (5-day participants) Game-based learning (cont.)
15:10	Coffee break
15:30 (incl. coffee break)	Future Classroom Lab tour: Exploring the lab in an interactive way
17:00	End of the day at the lab
18:00	*Social/cultural activity: Interactive city walk / Treasure Hunt*
19:30	Dinner at the Brussels centre

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Day 2– Tuesday 10 October		
9:00 (incl. coffee break)	**Group 1:** Minecraft Education	**Group 2:** Lego Mindstorms & WeDo
12:30	Lunch	
13:15 (incl. coffee break)	**Group 1:** Lego Mindstorms & WeDo	**Group 2:** Minecraft Education
16:30	End of the day at the lab	
16:45	*Social/cultural activity: informal networking (Belgium fries and beer)*	

Day 3 – Wednesday 11 October		
9:00	**Workshop 1:** Twine, interactive storytelling	**Workshop 2:** Drawing through coding
10:45	Coffee break	
11:00	**Workshop 3:** Website deployment through an FTP server / GitHub Pages	**Workshop 4:** Pocket Code: creating games, animations and music videos
12:30	Lunch	
13:15	Presentation: Computational thinking	
13:45	**Group 1:** eTwinning workshop	**Group 2:** Computer Science unplugged
15:00	Coffee break	
15:15	**Group 1:** Computer Science unplugged	**Group 2:** eTwinning workshop
16:30	End of the day at the lab	
16:45	*Social/cultural activity: Visiting the Parlamentarium or the Museum of European history*	

Day 4 – Thursday 12 October		
9:00	**Group 1:** Visual programming tools (Scratch)	**Group 2:** App development (App Inventor)
10:50	Coffee break	

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11:10	**Group 1:** App development (App Inventor)	**Group 2:** Visual programming tools (Scratch)
13:00	Lunch	
13:45 (incl. coffee break)	Group work: Working on lesson plans & activities of free choice	
16:30	End of the day at the lab	
19:30	*Social/cultural activity: Informal dinner*	

Day 5 – Friday 13 October	
9:00 (incl. coffee break)	Hackathon
13:00	Lunch
13:45	Conclusions of the week Presenting the lesson plans/activity/idea Certificates
15:00	End of the course

Cultural/evening programme

The course participants are invited to take part in the following cultural/evening activities:

- **Monday:** get to know Brussels through our interactive Treasure Hunt
- **Tuesday:** Let's enjoy together an informal drink and original 'Belgium fries' at Place Jourdan www.maisonantoine.be – at the cost of your drink and fries: about 5€
- **Wednesday:** Visiting Parlamentarium (European Parliament's visitor centre) – free www.europarl.europa.eu/visiting/en/visits/parlamentarium.html.
- **Thursday:** Informal dinner

Brussels offers also many other options to spend time:

- What to visit/see: http://visitbrussels.be/bitc/BE_en/do-see/to-see/
- Parks and gardens: http://www.brussels.be/artdet.cfm/5443
- Free exhibition on the city of Brussels: http://experiencebrussels.biponline.be/en/exhibition
- Free museums/exhibitions: http://www.brusselsmuseums.be/en/faq.php?id=5
- Discover Belgium beers: http://belgium.beertourism.com/belgian-beers
- Discover Belgium chocolate: http://www.visitbelgium.com/?page=chocolate-lovers

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Accommodation

The participants who have the hotel booked and organised by EUN

You will stay in Citadines Aparthotel Sainte Catherine (Quai au Bois à Brûler 51, 1000 Bruxelles). It is individual room, breakfast included. For arrival instructions, see the separate document.

The hotel will be booked according to the length of your course:

- 2-day course 9-10 October: check-in 8 October; check-out 10 October.
- 3-day course 9-11 October: check-in 8 October; check-out 11 October.
- 5-day course 9-13 October: check-in 8 October; check-out 13 October.

The participants who take care of their own accommodation arrangements

You can find many options at www.booking.com or www.airbnb.com/s/Brussels--Belgium. The following hotels are some of the options close to the course venue:

- Adagio Access Bruxelles Europe; www.booking.com/hotel/be/adagio-access-bruxelles-europe.en-gb.html
- Hotel Motel One: www.booking.com/hotel/be/motel-one-brussels.en-gb.html
- Hotel Chambord: www.booking.com/hotel/be/chambord.en-gb.html
- Chelton Hotel: www.booking.com/hotel/be/chelton.en-gb.html
- Hotel Le Berger: www.booking.com/hotel/be/le-berger.en-gb.html
- Silken Berlaymont Brussels: www.booking.com/hotel/be/silkenberlaymont.en-gb.html
- Thon Hotel EU: www.booking.com/hotel/be/thon-eu.en-gb.html

It is advised to avoid areas close to the two train stations Gare du Nord and Gare du Midi, which are not so nice areas for visitors. If you have any questions e.g. regarding the hotel location, public transport connections to the course venue or similar, please let me know.

How to arrive to Brussels

Brussels has two airports: Brussels National airport (Zaventem), about 30 min to the city centre, and Brussels South airport (Charleroi), about 60 min to the city centre. You can arrive conveniently to Brussels also by train from London (Eurostar), Paris, Amsterdam and Cologne (Thalys).

From the Brussels airport (Zaventem) to the centre

- **BY BUS:**
  - The buses **Number 12** (Monday to Friday until 20h) and **Number 21** (weekends all day and weekdays after 20h) take you to **Diamant, Schuman and Luxembourg**. The ticket costs 4.5€ (from the automat) or 6€ (from the driver). You find the bus schedules here: http://www.stib.be/horaires-dienstregeling.html?l=en
  - The **"De Lijn" bus N° 471** provides an express bus services between the airport and the **Brussels North train station**. https://www.delijn.be/en/lijnen/lijn//3/471/1/BUS#2

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- **BY TRAIN:** The train takes you to the **main train stations** in the Brussels city area: Gare du Nord, Gare Centrale, and Gare du Midi every 15-20 min. There is also a direct train from the airport to Schuman every 30 min. The ticket costs 8.5€. The trains leave from the Level -1 of the airport terminal: www.brusselsairport.be/en/passngr/to_from_brussels_airport/train/

From the Charleroi airport to the centre:

- Take the Brussels City Shuttle bus which takes you to the **Brussels Gare du Midi** (main train station). A return ticket costs 28 euros (and a one-way ticket normally 14 euros).

- For the bus schedule, see here: www.charleroi-airport.com/en/passengers/acces-and-parking/brussels-city-shuttle/index.html

- At Gare du Midi you can continue your journey by using different metro lines, buses or pre-metro.

- See the Brussels metro map here: http://www.stib-mivb.be/irj/go/km/docs/WEBSITE_RES/Attachments/Network/Plan/Net_Reseau/Plan_Metro_Train_20161110.pdf

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Course venue and how to arrive

The courses will be organised in Brussels, at European Schoolnet's Future Classroom Lab.
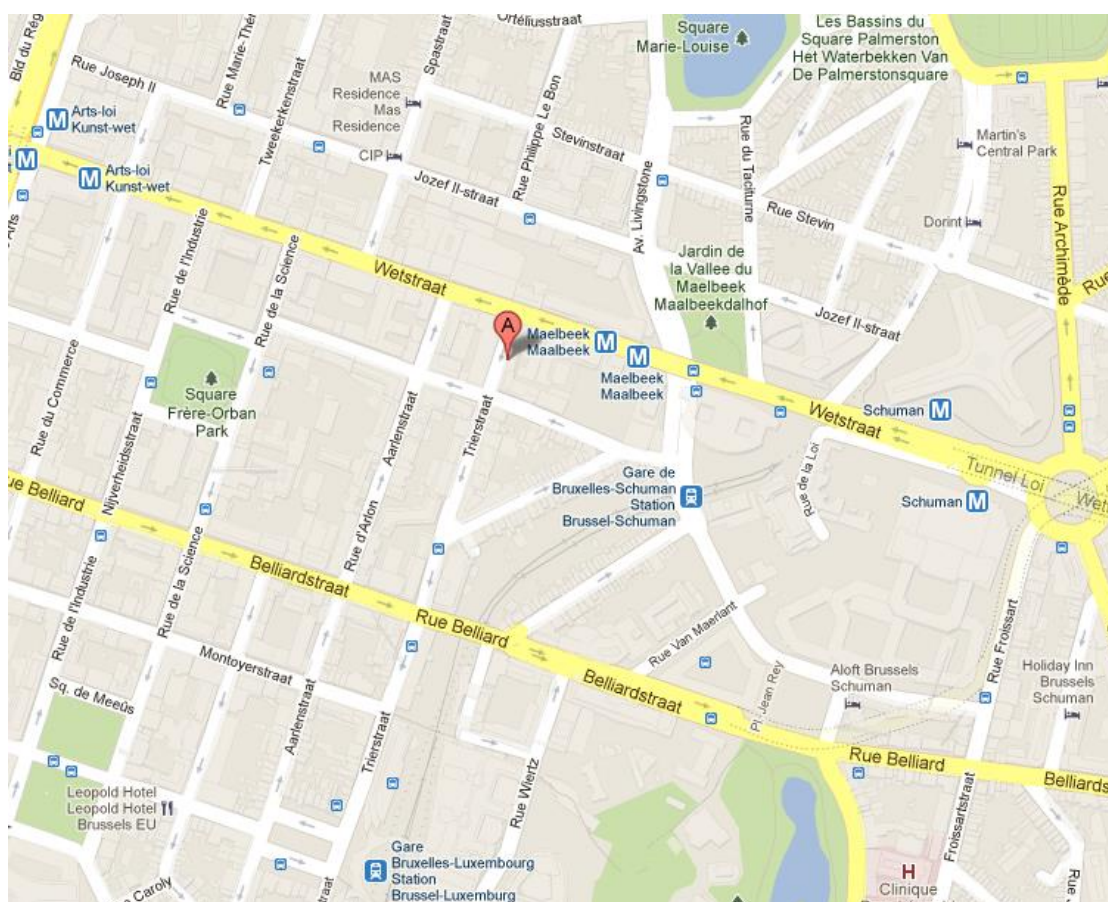
Address: European Schoolnet, Rue de Trèves 61 – 3rd floor, 1040 Brussels (see the map below) www.europeanschoolnet.org/

Future Classroom Lab - The Future Classroom Lab is a fully equipped, reconfigurable, teaching and learning space developed by European Schoolnet, its 30 supporting Ministries of Education and leading educational technology providers. Future Classroom Lab helps to visualise how conventional classrooms and other learning spaces can be reorganised to support changing styles of teaching and learning. Read more: http://fcl.eun.org

How to best reach the EUN office and Future Classroom Lab

The office is close to the following places:

- Schuman (buses, metro lines 5 & 1, train, airport bus): 10 min walk
- Luxembourg (buses, train, airport bus): 10 min walk
- Arts-Loi (metro lines 1, 2, 5, 6): 10 min walk
- Maelbeek metro station (lines 1 and 5): take the exit "Rue de la Loi", 2 min walk
- Thon EU hotel: 1 min walk (across the street)

Be aware of pick-pockets whenever you are in public places, especially when using public transports.

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Insurance

We ask the course participants to confirm they have health insurance that is internationally valid during their stay in Brussels. EU citizens can obtain a free European Health Insurance Card (EHIC).

Cancellation policy

If the participant cancels his or her participation up to 6 weeks before the course begins, there are no cancellation fees. If the participation is cancelled between 6 weeks and 2 weeks before the course starts, 50% of the course fee will be charged. If they cancel any later, there will not be any refund. Substitutions are possible right up to the start of the course.

About European Schoolnet

European Schoolnet is the network of 30 European Ministries of Education, based in Brussels. As a not-for-profit organisation, we aim to bring innovation in teaching and learning to our key stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners. www.eun.org

Contact

For any questions related to the course please contact Elina Jokisalo, elina.jokisalo@eun.org

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