

SYLLABUS ECCC

Area: Digital competences – DigComp 2.1
Module: DC 2.1 M5 Problem Solving
Level: Intermediate (B4) – Independently, according to my own needs, and solving well-defined and non-routine problems.

Module DC 2.1 M5 Problem Solving Level B4 includes proficiency Level 4 of the DigComp 2.1 framework in the Competence Area 5: Problem Solving.

Competences are verified in the following competence titles:

1. **Solving technical problems.**
To identify technical problems when operating devices and using digital environments, and to solve them (from trouble-shooting to solving more complex problems).
2. **Identifying needs and technological responses.**
To assess needs and to identify, evaluate, select and use digital tools and possible technological responses and to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility).
3. **Creatively using digital technologies.**
To use digital tools and technologies to create knowledge and to innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.
4. **Identifying digital competence gaps.**
To understand where one's own digital competence needs to be improved or updated. To be able to support others with their digital competence development. To seek opportunities for self-development and to keep up-to-date with the digital evolution.

The competence verification is carried out in the following groups:

1. Knowledge (K).
2. Skills (S).
3. Abilities (A).

The scope verified by the ECCC exam of module DC 2.1 M5 (Level B4)

COURSE PURPOSES		LEARNING OUTCOMES			K	S	A
B4_CP1	(5.1) To develop skills of solving technical problems.	DC2.1_1	Can differentiate technical problems when operating devices and using digital environments.				
		DC2.1_2	Can select solutions to them.				
		B4_LO1	Knows where to look for solving a problem	✓			
		B4_LO2	Knows sources of information and where to find help for problem-solving and trouble shooting.	✓			
		B4_LO3	Can recognize the basic possible failure of a device or program.		✓		

COURSE PURPOSES		LEARNING OUTCOMES		K	S	A
		B4_LO4	Can recognize basic problems in the operation of programs.		✓	
		B4_LO5	Is able to solve a basic technical problem or to decide what to do when technology does not function.		✓	
		B4_LO6	Is willing to seek advice when a problem arises			✓
B4_CP2	(5.2) To develop skills of identifying needs and technological responses.	DC2.1_3	Can explain needs.			
		DC2.1_4	Can select digital tools and possible technological responses to solve those needs.			
		DC2.1_5	Can select ways to adjust and customise digital environments to personal needs.			
		B4_LO7	Knows the range of things that can be done using technologies.	✓		
		B4_LO8	Understands the potential and limitations of digital devices and resources.	✓		
		B4_LO9	Can choose the most appropriate technologies according to the problem.		✓	
		B4_LO10	Understands the limitations of e-mail and other forms of digital communication.		✓	
		B4_LO11	Can properly connect and configure headphones, microphone and webcam.		✓	
		B4_LO12	Can check if the device has communication with the network and will take action to restore it.		✓	
		B4_LO13	Is interested in new technologies.			✓
B4_CP3	(5.3) To develop knowledge of creatively using digital technologies.	DC2.1_6	Can differentiate digital tools and technologies that can be used to create knowledge and to innovate processes and products.			
		DC2.1_7	Can engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.			
		B4_LO14	Is able to build meaningful knowledge through interaction with digitally available resources.		✓	
		B4_LO15	Is pro-active in collaborative problem solving.			✓
		B4_LO16	Is open to revise his/her values and attitudes according to the situation.			✓
B4_CP4	(5.4) To develop skills of identifying digital competence gaps.	DC2.1_8	Can discuss on where his/her digital competence needs to be improved or updated.			
		DC2.1_9	Can indicate how to support of others to develop their digital competence.			
		DC2.1_10	Can indicate where to seek well-defined opportunities for self-developments and to keep up-to-date with the digital evolution.			
		B4_LO17	Understands where ICT comes from, who develops it and for what purposes.	✓		

COURSE PURPOSES		LEARNING OUTCOMES			K	S	A
	B4_LO18	Knows about the existence of various types of courses and training in the area of specific tools of digital technologies.	✓				
	B4_LO19	Understands the wider context of digital tools in a 'digital age' characterised by globalisation and networks.	✓				
	B4_LO20	Possesses the skills to update knowledge about the availability of digital tools.		✓			
	B4_LO21	Is able to stay informed using a combination of active search and personalised, automated delivery of information.		✓			
	B4_LO22	Can prepare a simple course on a given digital technology tool / tools and publish it using other tools.		✓			
	B4_LO23	Is able to broaden/update digital competences according to personal/professional needs.				✓	
	B4_LO24	Has a positive attitude to learning about new digital technologies.				✓	
	DigComp 2.1 Examples.	Can discuss the digital competence, to be able to use MOOCs for professional career.		✓			
		Can tell where to find and how to use MOOCs to develop and update proficiency level of digital competences to improve own professional career.		✓			
		Can deal with any issue while doing such activities, e.g. evaluating whether new digital environments that is found while surfing are appropriate means of improving his/her digital competence' proficiency level.		✓			
		Can discuss the digital competence needed to use the tools of a MOOC for studies in math.		✓			
		Can show where he/she finds and uses MOOCs according to learning needs.		✓			
		Can tell which digital activities and pages he/she surfs in order to keep digital competence updated so that he/ske can profit the most from digital learning platforms for own learning needs.		✓			

Practical skills, verified by the ECCC DC2.1 M5 exam, concern:

1. A computer workstation as PC / laptop equipped with a camera, microphone, speakers / headphones, scanner and with Internet access with a minimum bandwidth of 2 Mb/s.
2. Operating system: MS Windows 7 or newer.
3. A tablet (Windows or Android compatible with the device) or smartphone (Android compatible with the device).
4. Microsoft Office 2007 or newer (MS Word, MS Excel, MS Power Point) or Libre Office v.5 or newer.