



# Closing The Digital Gap for Women NEETs Through Serious Gaming



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## 1.0 Introduction

### 1.1 The Coding4WIN project

Six partners from five EU countries -**Denmark, Greece, Cyprus, Portugal and Turkey**- have come together to implement the “**Coding4WIN: Closing the Digital Gap for Women NEETs**” project, which aims to equip adult learning centres and trainers with a range of training materials to help women who are Neither in Employment nor in Education or Training (NEETs), especially those aged 25 and over, to acquire digital skills, which are most in demand in online job advertisements.

The project seeks in a culturally responsive way to encourage these women to re/enter the labour market by providing them with a basic introduction to the world of digital skills, ICT and coding using innovative training methods such as micro-learning and serious gaming.

The project will run from **01 November 2023** to **31 October 2025** (24 months) under the grant agreement number 2023-1-DK01-KA220-ADU-000161507.

The **Coding4WIN consortium** consists of the following organisations:

- LUDUS XR, Denmark (coordinator) - <https://www.ludusxr.com>
- SYMPLEXIS, Greece - <https://symplexis.eu>
- iED - INSTITUTE OF ENTREPRENEURSHIP DEVELOPMENT, Greece - <https://ied.eu>
- RESET - RESEARCH AND EDUCATION OF SOCIAL EMPOWERMENT AND TRANSFORMATION, Cyprus - <https://resetcy.com>
- INOVA+ - INNOVATION SERVICES, Portugal - <https://inova.business>
- FORCE & BROTHERS CONSULTANCY INC., Turkey - <https://www.forcebrothers.com>

The project’s main target groups include: a) Adults neither in employment nor in education or training with a special focus on **women NEETs (aged 25 and above)**, b) **Trainers/adult educators**, especially those that work with low skilled adults, NEETs, or vulnerable groups.

The Coding4WIN project activities are organised under the following Work Packages (WPs):

- WP1: Project Management (Monitoring and Quality Assurance Plan, Communication, Exploitation and Evaluation Plan)
- WP2: Coding4Win Curriculum Development
- WP3: Development of the Coding4Win Digital Knowledge Hub - and Interactive Training Modules
- WP4: Creation of the Coding4Win Serious game.

The concrete results that the project will produce are:

- The Coding4WIN Curriculum and Training Materials: an innovative adult education curriculum specifically tailored to the most sought-after transversal digital skills in today’s labour market.
- The Coding4WIN Digital Learning Hub: an online space where all learning materials will be open and free to both adult educators and women NEETs.
- The Coding4Win Serious Game: an innovative game that will focus on teaching ICT & coding skills to women NEETs.



Specific objectives of the Coding4Win project are to:

- Create an attractive and up-to-date tailor-made adult educational material and learning opportunities for women NEETs in the field of digital, ICT, and coding knowledge and skills through the Coding4Win curriculum and training materials
- Enhance the coding education, and the transversal competencies of the target group focusing on skills such as creativity, interpersonal cooperation, cross-cultural cooperation, coding communication, problem-solving, and self-expression, through the Coding4Win Digital Knowledge Hub.
- Improve digital literacy and basic coding skills of disadvantaged women and increase women's ICT confidence and ability through Coding4Win serious game
- Encourage women NEETs in learning more about IT skills, as a source of economic growth, and act as role models.

During its 24-month lifetime, Coding4WIN will directly and indirectly positively impact at least:

- 300 learners of the Coding4Win digital learning hub and interactive training modules
- 25 female NEETs and 50 adult educators who will pilot the training material
- 60 users of the application during the pilot phase for the Coding4WIN serious game
- 250 visitors to the Coding4Win website
- 120 participants in the 6 open information days organised in Denmark, Greece, Cyprus, Portugal and Turkey.

## 1.2 WP2: Coding4Win Curriculum Development

The Coding4WIN WP2, led by Symplexis, aims to create an up-to-date inclusive curriculum specifically addressed in increasing adult Women NEETs (not in Education, employment or training) digital and ICT skills.

The WP2 will focus on the following objectives:

- ✓ develop and deploy the **Coding4Win strategy** that will align partners activities, engage the target groups and stakeholders and set a plan for the implementation of the activities,
- ✓ develop **Women NEETs digital and ICT skills** to raise their employability and professional development,
- ✓ create an **inclusive pedagogical approach** that will be gender inclusive, user friendly, and with plain language appropriate to the target group,
- ✓ create **flexible learning opportunities** for both AE trainers and Women NEETs through the interactive training modules with the use of the micro-learning methodology, to develop their digital, ICT, coding skills.

The main result of WP2 will be: the **Coding4Win Curriculum** with 6 interactive training modules, and recognized and validated results through **Open Badges** and the European classification of Skills, Competences, Qualifications, and Occupations (**ESCO**).



To reach its objectives, WP2 encompasses the following activities:

- ✓ **A1. Development of Coding4Win implementation & engagement strategy (responsible partner: iED) –Plan for Coding4Win Implementation & Engagement Strategy:** iED is responsible for the strategy to align activities and engage Target Groups (TGs) and stakeholders.
- ✓ **A2. Development of the Curriculum Structure (responsible partner: Symplexis) – Report on Curriculum Units and validation of skills:** Symplexis is responsible to finalise the curriculum's structure after feedback from all partners. Symplexis is also responsible for the validation - recognition of the curriculum units through open badges and the use of ESCO classification.
- ✓ **A3. Evaluation, Translation & Release (responsible partner: RESET) – Evaluation, Translation of the contents and Release of curriculum:** All partners, Target Groups representatives (through focus groups), and the quality expert will give feedback. After the evaluation, the partners will translate the output and will disseminate it.
- ✓ **A4. Kick-off meeting in Denmark (responsible partner: LUDUS XR).**

### 1.3 WP2-A2 Task: Development of the Curriculum Structure

The Coding4WIN task A2 reflects the content of the training modules to be developed in WP3: Development of the Coding4Win Digital Knowledge Hub. In the context of WP2-A2, Symplexis provided an internal document with guidelines and a detailed example on how the other partners should develop their own units, including learning objectives & outcomes, methods (including assessment), learning materials, validation and recognition of competences.

The result of this task is this publication which describes the Coding4WIN Curriculum Unit Development & Skills Validation and covers the following topics:

- How to use the Coding4WIN Curriculum
- The Coding4WIN curriculum development process (Key facts and useful statistical data, Needs analysis focusing on women NEETs, Methodological approaches, EU Frameworks & skills' validation)
- The Coding4WIN Curriculum (Course Overview & Modules Overview)
- Inclusive teaching strategies (Adult learning principles & Practical tips for the Coding4WIN trainers).

The finalisation of the Coding2WIN curriculum took place after the completion of the WP2-A3 activity mentioned above, involving 32 participants in a mix of online and face-to-face sessions in all partner countries, focusing on the evaluation of the material produced in WP2-A2.

The findings from both the focus groups and the evaluation forms highlighted the overall effectiveness and relevance of the Coding4Win curriculum in improving young women's digital literacy. The feedback received emphasised areas for improvement, including the need for clear and easy-to-follow instructions, interactive elements and the need to target the material at different skill levels. Key recommendations included simplifying technical language, more hands-on activities, and expanding the coverage of cybersecurity and coding topics.



## 2.0 How to use the Coding4WIN Curriculum

### ***What is the Coding4WIN Curriculum?***

The Coding4WIN Curriculum is a document containing the Coding4WIN curriculum units and validation of skills. Curriculum, in simple terms, is a description of what, why, how and when students - in our case NEET women - should learn and how this will improve their knowledge, skills and competence.

In the present document “Curriculum development” is used as synonymous to “course planning” or “course development”. As already mentioned, the Coding4WIN curriculum mirrors the content of the training modules that will be developed in the project’s WP3: Development of the Coding4Win Digital Knowledge Hub. It is mentioned that the validation/recognition of the curriculum units in WP3 will be through open badges and the use of ESCO classification, that will be explained in unit 3.4.2.

### ***For whom is the Coding4WIN Curriculum?***

For Adult Education Centers and Trainers, in particular those supporting women NEETs (Not in Education, Employment or Training).

### ***How should it be used?***

It should be used alongside the training materials to help trainers deliver the latest digital, ICT/Information and Communication Technology and coding knowledge and skills to women NEETs, raising their employability and professional development.

The curriculum is not an end in itself. Its aim is to accomplish valuable and practical learning objectives for students while also meeting various societal needs. A principal objective of a quality curriculum is, in a fair and inclusive manner, to enable students to acquire and develop the knowledge, skills and values, and the associated capabilities and competencies, to lead meaningful and productive lives (UNESCO, 2016).

Each module’s overview includes the following, helping educators/trainers to organize their lessons:

#### **MODULE’s number & title**

- Aim & objectives: 2-3 sentences describing briefly the general aim and learning objectives of the module. Following [EASO guide \(2018\)](#), aims are broad general statements of teaching intention, i.e. they indicate what the trainer intends to cover in the module. Objectives are usually more specific statements of what the trainer intends for the learners and are generally part of a teacher/instructor-centered approach.
- Level: (Beginner – Intermediate – Advanced)
- Estimated effort: ~ 2,5 - 3 hours
- Key-words: 3-5 basic terms
- Prepared by: responsible project partner
- Full list of modules’ topics (contents)
- Learning outcomes: in comparison to learning objectives, learning outcomes are learner-centered, observable and measurable and written with a focus on how the learner will demonstrate achievement, making it easier to assess learning.





The recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework (EQF) (cited in EASO 2018:5) includes the following definitions that are helpful to all professionals and adult educators who will be involved in the Coding4WIN trainings:

*“(f) ‘learning outcomes’ mean statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence;*

*(g) ‘knowledge’ means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the EQF, knowledge is described as theoretical and/or factual;*

*(h) ‘skills’ mean the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments);*

*(i) ‘competence’ means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy.”*

**It is underlined that this document is subject to updates and revisions to ensure accuracy and relevance after the completion of WP3: Development of the Coding4Win Digital Knowledge Hub.**





## 3.0 The Coding4WIN curriculum development process

### 3.1 Key facts and related statistics

The “NEET indicator” which refers to people - particularly young people - who are “Neither in Employment nor in Education or Training” is a relatively new indicator that gained popularity in the 1990s because it was believed to provide a more comprehensive view of young people’s disengagement and future vulnerability than the youth unemployment indicator ([Assmann & Broschinski, 2021](#)). Today, official statistics classify young people as NEET if they are unemployed/not engaged in any form of employment or inactive/not actively looking for a job or training opportunity and have not participated in formal or non-formal education or training in the four weeks prior to the survey (Eurostat 2021; ILO 2015). While originally used for the specific age group of 16–18-year-olds, the NEET concept has been extended to other age groups, resulting in a more diverse NEET population.

It is widely recognised that a number of different personal factors have a significant impact on the likelihood of an individual, particularly young people, becoming NEET. These factors range from family background and economic reasons to early school leaving and lower educational attainment, or from single parenthood to addictions, illness or disability, and from living in rural or small urban areas to having a migration status outside the EU ([Assmann & Broschinski, 2021](#)).

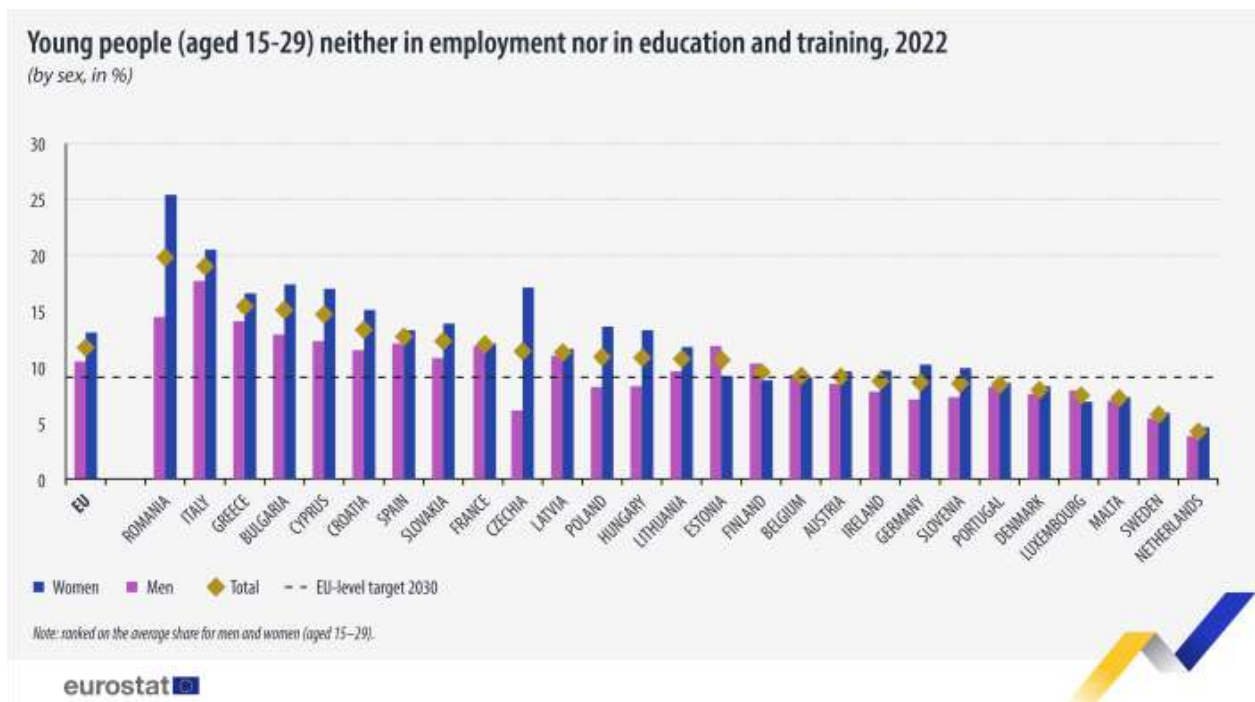
Analysis by [Assmann & Broschinski \(2021\)](#) shows that the institutional causes of NEET also vary widely, reflecting the diversity within the group itself. For example, countries with limited family services and inadequate formal long-term care have higher numbers of young NEETs with caring responsibilities, particularly in Central Eastern European countries. In contrast, Northern European countries with generous but ineffective disability benefit systems that create disincentives to labour market participation have higher proportions of NEETs who experience disabilities. In addition, regions severely affected by economic crises combined with labour market rigidities and inadequate vocational training, such as Southern and some Central-Eastern European countries, have higher levels of unemployed and discouraged young NEETs.

Some of the latest statistics and information on people who are neither in employment nor in education and training in Europe are summarised below (Eurostat, 2021; 2023), highlighting the challenges faced by women in particular and the importance of targeted policies and actions to support them:

- Over one in six (approximately 17.6%) of young adults aged 20 to 34 were NEET in 2020 in the EU, an increase of 1.2 percentage points over 2019.
- In 2020, the share of women NEET was higher in every country as compared to men. Among people aged 20-34, over one in five (21.5%) young women and below one in seven (13.8%) young men were NEET, but these shares varied considerably across the EU Member States.
- In 2022, 11.7 % of 15–29-year-olds in the EU were neither in employment nor in education and training.
- As of 2022, 13.1% of young women aged 15–29 in the EU were classified as NEETs.
- The proportion of 15–29-year-olds in the EU neither in employment nor in education and training in 2022 ranged from 4.2 % in the Netherlands to 19.8 % in Romania (see fig. 1).



**Figure 1: Statistics on young people not in education, employment or training (NEETs) by country and sex in %, 2022**



Source: [Eurostat, 2023](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

- For the age group 15-29, the European Union has set an EU-level target stipulating that the share of young people neither in employment nor in education or training should be less than 9 % by 2030.

### 3.2 Needs analysis focusing on women NEETs

Digital technologies are radically changing our societies, transforming people's personal and professional lives. The COVID-19 pandemic and its far-reaching effects have accelerated the demand for digital skills in many occupations, while the effective use of new technologies has proven to be a driver of resilience, helping professionals and entire organisations adapt to new realities. According to the World Economic Forum's Future of Jobs Reports, 50% of all employees will need reskilling by 2025, as the adoption of technology increases.

However, adult learning opportunities do not always seem to reach the most vulnerable target groups, such as low-skilled NEETs (people Not in Education, Employment or Training) and adults from socially or economically vulnerable communities. At the same time, the fact that women face inequalities in the digital transition process is unfortunately nothing new.

Furthermore, research reports that there is a general shortage of qualified adult educators, equipped to teach digital skills and Information Communication Technology/ICT tools in the adult learning community (European Association for the Education of Adults, 2021). According to a recent OECD survey, particular attention should be given to the participation of adult NEETs and low-skilled adults in digital open education.

A digitally skilled workforce is critical for organisations, essential in supporting their capacity to innovate and keep up with their competitors. With 70% of EU companies reporting lack of adequate digital skills as an obstacle to investment, Europe faces a considerable skills gap (European Commission, 2021).

Cedefop “Skills Intelligence” section (2022a, 2022b) brings insights on jobs and skills requested in online job advertisements. Based on an ongoing project, these findings cover 28 European countries with more than 100 million online job advertisements collected and analysed. Some interesting findings follow:

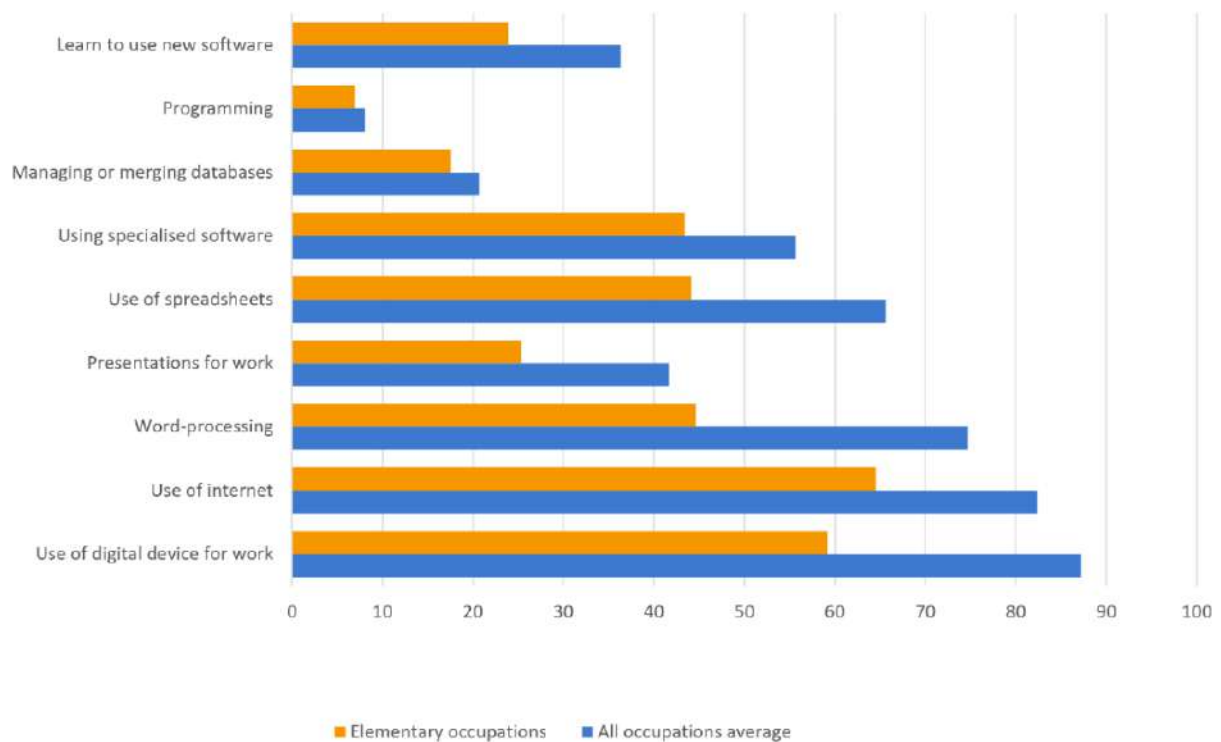
- The top three sectors in online job advertisements are: Administrative services, Professional services and Manufacturing.
- Top skills include the use of digital tools for collaboration, content creation and problem solving.
- The share of adult workers who had to learn new digital technologies in 2020-2021 has been 35%, while the share of jobs demanding at least basic digital skills in the EU in 2021 was 87%.

Data insights concerning skill opportunities and challenges especially for elementary occupations (Cedefop, 2024) reveal the following:

- Around 16.6 million people were employed in elementary occupations in 2022, which accounts for 8.4 per cent of total EU employment.
- Workers in elementary occupations are spread across many economic sectors. In 2021, the largest shares of these workers were occupied within the Administrative and support service activities sector (15%) and the Wholesale and retail trade sector (12%).
- In 2021, the shares of workers in elementary occupations who held low qualification levels (International Standard Classification of Education/ISCED 2 or lower, namely lower secondary education) and medium qualification levels (ISCED 3 and 4 in 2021, equivalent to upper secondary education and respectively post-secondary non-tertiary education) were almost equal to each other (about 46%). By 2035, most workers in elementary occupations are forecast to be holding medium level qualifications.
- Workers in elementary occupations are almost equally distributed across genders. In 2021, 53% of workers in elementary occupations were women and 47% were men.
- Workers in elementary occupations will have to adjust to technological change (such as automated cleaning technologies or the use of smart devices in construction and mining) and sustainability requirements in the fields in which they are employed.

For those wishing to improve their employability, acquiring and improving the following skills identified by Cedefop (2023) could significantly improve their job prospects: using digital devices for work and new (specialised) software, using word processing, spreadsheets and the internet, presentations, databases and programming (see fig.2).

**Figure 2: Digital skills and tasks (share of people reporting that a task/skill is part of their job)**



Source: [Cedefop European Skills and Jobs Survey](#) as presented in [Cedefop \(2023\)](#)

In particular for low-skilled women NEET who seek employment, the most wanted ICT and digital skills are often those that can be quickly learned and applied in a variety of job settings. Upskilling in the following areas can significantly improve employment prospects for low-skilled individuals:

- **Basic computer skills:** Understanding basic computer operations and software such as Microsoft Office is essential for many entry-level jobs.
- **Internet navigation and research:** The ability to effectively use search engines, evaluate online resources and conduct research is critical in all career fields.
- **Email and communication tools:** Email communication skills and familiarity with tools such as Slack or Microsoft Teams can be important.
- **Social media management:** For roles in marketing and customer service, a basic knowledge of managing social media platforms can be beneficial.
- **Data Entry and Management:** For administrative and clerical roles, skills in managing databases and spreadsheets and accurately entering data are in demand.
- **Cybersecurity Awareness:** Understanding the basics of internet safety and privacy is increasingly important for all users.
- **Content creation:** Basic digital content creation skills, such as using content management systems or simple graphic design tools, can open up opportunities in a variety of fields.
- **E-commerce platforms:** Knowledge of e-commerce systems can be useful for retail and sales positions.
- **Coding:** Even outside of the tech sector, listing programming languages on an application can help candidates stand out, simply because knowing how to code demonstrates an ability to learn new technologies and shows strong problem-solving skills.

The Coding4WIN Curriculum has been developed based on the six most required digital & ICT knowledge and skills identified by Cedefop (2021, 2022a, 2022b, 2023, 2024) and will be described in detail in chapter 4.0 The Coding4WIN Curriculum.

### 3.3 Methodological approaches

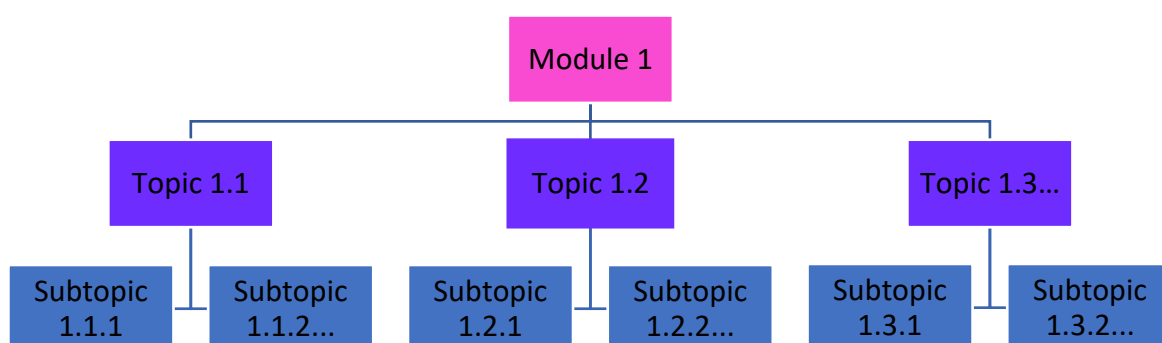
The Coding4WIN curriculum follows a pedagogical approach that is gender inclusive, user friendly and with plain language appropriate to the target group of women NEETs. **Flexible learning formats**, such as **blended** (face-to-face and/or online) and **self-paced** training modules, allow participants to seek support guidance when needed and learn at their own pace and on their own schedule.

The Coding4Win training modules are developed following a **micro-learning methodology** that offers knowledge by breaking information into bite-sized, easily understandable pieces. Microlearning has its roots in Hermann Ebbinghaus’s concept called the “forgetting curve,” which says that participants tend to forget more than 50% of their newly learned material 20 minutes immediately after the lesson ends, while that learned percentage falls to 40% in nine hours, and then to 24% in 31 days if no revision or repeat learning takes place and all other variables remain constant ([Shail, 2019](#)).

Following the modular framework (model), the project’s curriculum (the Coding4WIN course) has been structured into independent modules and each module is dedicated to a particular area or skill. Modules are designed to be taught separately but it is easy to be combined or rearranged to meet learners' preferences or needs ([Alsulaili, 2023](#)).

Within each module there are topics and subtopics (subunits) that create a linear –yet flexible– flow of what learners should attend and do (see fig. 3). Emphasis has been placed on achieving distinct learning outcomes within each module.

**Figure 3: The Coding4WIN module’s structure (indicative example)**



The key aspects of each of the Coding4WIN micro-learning modules can be summarised as follows:

- Brief and focused, providing targeted learning content in a short amount of time
- The duration of each **module** is approximately **2 ½ - 3 hours**
- The duration for each **topic** is around **30-45 minutes**
- The duration for each **subtopic** is about **5-10 minutes**

In order to lead to higher engagement, various interactive elements are included such as interactive presentations, quizzes, video, content allowing users to add multiple choice and fill in the blank questions, pop-up text, interactive content and assessments. In each microlearning module, the learner has the opportunity to learn, for example, by:

- Watching a short instructional **video** and answering a question.
- Playing an online **learning game** designed to teach a specific task.
- Reading **web text** and answering a short series of **questions**.
- Viewing an **infographic** and answering a short series of questions.
- Using virtual **flashcards** to prepare for a quiz.
- Doing activities like true-false, fill-in the gaps etc.
- Virtually participating in a scenario-based simulation etc.

### 3.4 EU Frameworks & skills' validation

#### 3.4.1 European Qualifications Framework

The Coding4WIN curriculum describes its qualifications in terms of **learning outcomes** following the approach adopted by the [European Qualifications Framework \(EQF\)](#). The [EQF](#) is an 8-level, learning outcomes-based framework for all types of qualifications that provides a common reference framework which assists in comparing the national qualifications systems, frameworks and their levels. It makes qualifications more readable and understandable across different countries and systems in Europe.

Each of the 8 levels of the EQF is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any qualifications system.

The learning outcomes are defined by [Europass](#) in terms of :

- **Knowledge:** in the context of EQF, knowledge is described as theoretical and/or factual.
- **Skills:** In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).
- **Responsibility and autonomy:** In the context of the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility (see table 1).

**Table 1: Learning outcomes per EQF level by [Europass \(n.d.\)](#)**

Level 1 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context



Level 2 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
Level 3 - learning outcome		
Knowledge	Skills	Responsibility and autonomy
Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems
Level 4 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
Level 5 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others
Level 6 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
Level 7 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research. Critical awareness of knowledge issues in a field and at the interface between different fields	Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams



Level 8 - learning outcomes		
Knowledge	Skills	Responsibility and autonomy
Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

The Coding4WIN curriculum is structured in 3 levels: Beginner Level (EQF 1 & 2) – Intermediate Level (EQF 3 & 4) – Advanced Level (EQF 5).

### 3.4.2 European Skills, Competences, Qualifications and Occupations

[ESCO \(European Skills, Competences, Qualifications and Occupations\)](#) is a European Commission project, run by Directorate General Employment, Social Affairs and Inclusion. It is the European multilingual classification of Skills, Competences and Occupations that aims to support job mobility across Europe and therefore a more integrated and efficient labour market, by offering a “common language” on occupations and skills that can be used by different stakeholders on employment and education and training topics. In other words, ESCO functions as a dictionary, describing, identifying and classifying professional occupations and skills relevant for the EU labour market and education and training.

ESCO provides descriptions of 3008 occupations and 13.890 skills linked to these occupations, translated into 28 languages (all official EU languages plus Icelandic, Norwegian, Ukrainian, and Arabic). The qualifications pillar of ESCO was developed in a way that is consistent with the EQF, allowing to build on the results achieved during the work on the EQF. It is available in an online portal and can be consulted free of charge. Its first full version (ESCO v1) was published on the 28th of July 2017, while the latest version of the classification can be downloaded or retrieved through the [ESCO API](#).

Used in online applications and platforms, ESCO connects people and jobs and also promotes mobility. Its concepts and the relationships between them can be understood by electronic systems, allowing different platforms to use ESCO to suggest the most relevant jobs to job seekers based on their skills, or the most relevant training to people who want to re-skill or up-skill. At the same time, ESCO contains accurate descriptions of occupations and skills that can be used in both job advertisements and CVs, facilitating comparability and matching. Through its use in the EURES portal and many other online platforms, it helps Europe's public and private employment services to deliver their services across borders, languages and electronic systems to better support people who want to work in another European country.

Recognising that ESCO links employment and education, Coding4WIN has explored how the use of ESCO in online job advertisements can help education and training providers understand what skills the labour markets need. As a result, the Coding4WIN curriculum has been adapted to better prepare NEET women for tomorrow's labour markets. ESCO also helps potential employers to better understand what Coding4WIN participants have learned.

## 4.0 The Coding4WIN Curriculum

### 4.1 Course Overview

#### AIM

A high quality, flexible course with micro-learning modules that aim to develop the digital skills and competences of NEET women, reducing the digital divide and opening up new employment opportunities for them.

#### Coding4WIN modules:

##### Beginner Level (EQF 1 & 2)

**M1 - Basic Digital Skills:** For users with low level of digital literacy.

##### Intermediate Level (EQF 3 & 4)

**M2 - How to use the computer in your job:** Focusing on the OFFICE program, offering a basic introduction to Word, Excel, Microsoft Outlook etc.

**M3 - Digital tools for communication and collaboration:** How to use the latest software for communication & collaboration online.

##### Advanced Level (EQF 5)

**M4 - Basics of computer programming:** Focusing on what computer programming is about, the importance and uses of coding etc.

**M5 - Computational thinking:** A module that will help users to identify some of the elements of computational thinking such as breaking down data, processes, or problems into smaller, manageable parts, pattern recognition, etc.

**M6 - Coding every day:** Providing users with a compendium of examples, case studies and exercises that they can relate to.

#### 6 e-learning modules

for blended (face-to-face and/or online) and self-paced learning



~ 3 hours each

=

~ 18 hours of study

Interactive elements plus extra study material

#### OUTLINE (WP2-A2)

13/05/2024: draft curriculum report | 27/05/2024: partners' feedback |  
31/05/2024: final curriculum report | 30/06/2024: Translation in national languages

Denmark

Greece

Cyprus

Portugal

Turkey



Co-funded by  
the European Union

## 4.2 Modules Overview

No of Module	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6
Responsible Partner	Force & Brothers	RESET	INOVA+	LUDUS XR	Symplexis	iED
Content overview	<b>Basic Digital Skills</b>	<b>How to use the computer in your job</b>	<b>Digital tools for communication and collaboration</b>	<b>Basics of computer programming</b>	<b>Coding every day</b>	<b>Computational thinking</b>
Estimated duration of the full module: <b>2,5 - 3 hours</b>	<b>Topic 1.1: Introduction to Digital Technology</b>	<b>Topic 2.1: Microsoft</b>	<b>Topic 3.1: Basic tools for daily communication</b>	<b>Topic 4.1: Demystifying Coding</b>	<b>Topic 5.1: Start your own website with WordPress</b>	<b>Topic 6.1: Introduction to Computational Thinking</b>
Duration for each topic: <b>30-45 minutes.</b> Duration for each subtopic: <b>5-10 minutes.</b>	Subtopics	Subtopics	Subtopics	Subtopics	Subtopics	Subtopics
	1.1.1: Types of Digital Devices	2.1.1: Microsoft Office	3.1.1: Instagram	4.1.1 What is coding and why it matters	5.1.1: Setting up your WordPress: navigating the dashboard	6.1.1: Historical Context and Evolution
	1.1.2: Understanding Software and Hardware Components	2.1.2: Microsoft Excel	3.1.2: Facebook	4.1.2 Uses of coding in real life	5.1.2: Designing your website/blog: customized themes and layouts	6.1.2: Understanding Computational Thinking
	1.1.3 Computer operating systems (Apple iOS, Microsoft Windows, Apple macOS Linux Operating System)	2.1.3: Microsoft Power Point	3.1.3: WhatsApp	4.1.3 Coding with no code tools	5.1.3: Enhancing functionality with plugins	6.1.3: Applications and examples of Computational Thinking
	1.1.4 Hardware (Input devices, Output devices, Storage devices, Processor (CPU))	2.1.4: Microsoft OneNote	3.1.4: LinkedIn		5.1.4: Uploading and editing media	
	<b>Topic 1.2: Initiating Digital Device</b>	<b>Topic 2.2: Graphic Design Software</b>	<b>Topic 3.2: Basic tools for daily job communication and collaboration</b>	<b>Topic 4.2: Introduction to Programming Fundamentals</b>	<b>Topic 5.2: Your First Steps in Email Marketing with Mailchimp</b>	<b>Topic 6.2: Problem Decomposition and Abstraction</b>
	Subtopics	Subtopics	Subtopics	Subtopics	Subtopics	Subtopics
	1.2.1 Turning on Devices (laptop (Windows 10), Desktop computer (Windows 10), Android Phone, iPhone)	2.2.1: Adobe Photoshop	3.2.1: Microsoft Team	4.2.1: Understanding Programming Languages	5.2.1: Setting up your audience	6.2.1: Decomposing Problems
	1.2.2 Restarting Devices	2.2.2: Adobe Illustrator	3.2.2: Slack	4.2.2: Fundamental Concepts of Programming	5.2.2: Customizing your signup form	6.2.2: Abstraction
	1.2.3 Fixing problems with Devices (Error Messages etc.)	2.2.3: Canva	3.2.3: Trello	4.2.3: Syntax and Structure of Code	5.2.3: Creating an email	6.2.3: Practical Applications- examples
	1.2.4 Basic Navigation Skills (Computer, Laptop, Smart Phone)	2.2.4: CorelDRAW	3.2.4: Miro	4.2.4: Debugging and Troubleshooting	5.2.4: Creating a campaign	
	1.2.5 Using Accessibility Features (verbal control, magnifier etc.)			4.2.5 Empowering Women in Tech (Success stories for motivation)		

	<b>Topic 1.3: Introduction to Internet and the World Wide Web</b>	<b>Topic 2.3: Time Management Tools</b>	<b>Topic 3.3: Tool to communication and Collaboration in Tech World</b>	<b>Topic 4.3: Getting Started with Coding</b>	<b>Topic 5.3: Mastering Programming Basics</b>	<b>Topic 6.3: Algorithmic Thinking and Pattern Recognition</b>
	Subtopics	Subtopics	Subtopics	Subtopics	Subtopics	Subtopics
	1.3.1 Connecting to the internet through Wi-Fi	2.3.1: Introduction to Time Management Techniques	3.3.1: Github	4.3.1: Writing Your First Program	5.3.1 Challenges and Practice Exercises	6.3.1: Pattern Recognition
	1.3.2 Understanding a URL – the address of a website	2.3.2: Time management techniques for remote work	3.3.2: Jira	4.3.2: Understanding Algorithms	5.3.2 Portfolio Development and Career Readiness	6.3.2: Introduction to Algorithms
	1.3.3 Navigation buttons in Google Chrome	2.3.3: Using Todoist for Task Management	3.3.3: Confluence	4.3.3: Interactive Coding Exercises	5.3.3 Basics of Coding Revisited	6.3.3: Types of Algorithms
	1.3.4 Downloading/saving files	2.3.4: Basics of Toggl Time Tracker		4.3.4: Mentorship and Support (Resources and communities offering support for beginners in coding, including those specifically focused on aiding NEET individuals.)	5.3.4 Next steps	6.3.4: Practical Applications-examples
	1.3.5 Safe browsing on the Internet					
	<b>Topic 1.4: Staying safe online: Cyber security</b>	<b>Topic 2.4: Web Development and Design Tools</b>		<b>Topic 4.4: Exploring Resources for Learning Programming</b>	<b>Topic 5.4: Exploring Resources for Learning Programming</b>	<b>Topic 6.4: Computational Thinking in Real World Scenarios</b>
	Subtopics	Subtopics		Subtopics	Subtopics	
	1.4.1 Key Terms used in Cyber Security	2.4.1: Introduction to HTML and CSS		4.4.1: Learning Materials and Platforms	5.4.1: Learning Materials and Platforms	6.4.1: Benefits of Computational thinking
	1.4.2 Types of Personal Data Targeted in Cyber Attacks	2.4.2: Basics of Wix Website Builder		4.4.2: Real-World Applications of Programming	5.4.2: Real-World Applications of Programming	6.4.2: Opportunities in Real Life where we can use computational thinking
	1.4.3 Threats to personal data	2.4.3: Introduction to Adobe Dreamweaver		4.4.3: Building Confidence in Coding	5.4.3: Building Confidence in Coding	6.4.3: Collaboration and Communication
	1.4.4 Strategies for dealing with cyber security threats			4.4.4: Practical Projects and Exercises	5.4.4: Practical Projects and Exercises	6.4.4: Continuous Learning and Adaptation

## Beginner Level

### Module 1 -Basic Digital Skills

**RESPONSIBLE PARTNER:** Force & Brothers, Turkey

**KEY WORDS:** Digital Devices, Software and Hardware Essentials, Operating Systems, Troubleshooting and Maintenance, Internet and Connectivity, File Management, Cyber Security Basics

**ESTIMATED DURATION:** 2,5 - 3 hours (the duration for each topic is 30-45 minutes. The duration for each subtopic is 5-10 minutes).

**AIM & LEARNING OBJECTIVES:** This module is designed for users with low digital literacy. Its goal is to equip learners with essential knowledge and skills to recognize and differentiate various digital devices, comprehend software and hardware components, navigate multiple operating systems, and perform basic functions such as turning on devices, troubleshooting errors, and ensuring safe internet browsing.

#### STRUCTURE, CONTENT & LEARNING OUTCOMES:

On successful completion of the topics and subtopics in this module, learners (women NEETS) will have acquired the knowledge, skills and competences described in the table below.

Topic 1.1: Introduction to Digital Technology	
Subtopics	On successful completion, learners will be able to:
1.1.1: Types of Digital Devices	LO 1.1.1: Identify personal computers and their primary functions, distinguish between laptops and desktops, noting key differences, describe the features of tablets and their common uses, recognize the capabilities of smartphones in daily tasks and explain the role of modems in internet connectivity
1.1.2: Understanding Software and Hardware Components	LO 1.1.2: define hardware and software, explaining their fundamental differences, list common hardware components and their functions, identify various types of software and their purposes, differentiate between system software and application software and also explain how hardware and software interact within a computer system.
1.1.3 Computer operating systems (Apple iOS, Microsoft Windows, Apple macOS Linux Operating System)	LO 1.1.3: Navigate and utilize the user interfaces of Apple iOS, Microsoft Windows, Apple macOS, and Linux, identify the unique characteristics and advantages of each operating system, perform basic system management tasks across different operating environments and troubleshoot common issues in various operating systems.
1.1.4 Hardware (Input devices, Output devices, Storage devices, Processor (CPU))	LO 1.1.4: Identify different types of input devices, output devices, storage devices, and processors, recognizing their roles in computing systems; understand the connection and interaction between different hardware components within a computer system, select appropriate hardware components based on specific computing needs and requirements, troubleshoot hardware-related issues and perform basic maintenance tasks to ensure optimal functionality and longevity.
Topic 1.2: Initiating Digital Device	
Subtopics	On successful completion, learners will be able to:
1.2.1 Turning on Devices (laptop (Windows 10), Desktop computer (Windows 10), Android Phone, iPhone)	LO 1.2.1: Power on laptops, desktops, Android phones, and iPhones, understand startup processes for different devices, troubleshoot

	common startup issues, navigate the user interface post-startup and safely power off devices and manage power settings.
1.2.2 Restarting Devices	LO 1.2.2: Restart computers, smartphones, tablets, and other digital gadgets, understand the benefits of restarting devices, identify when restarting is appropriate, differentiate between restarting, shutting down, and resetting and follow safety protocols to prevent data loss and ensure functionality.
1.2.3 Fixing problems with Devices (Error Messages, Hardware does not response etc.)	LO 1.2.3: Identify and interpret common error messages on various devices, understand causes of hardware issues and implement troubleshooting steps, diagnose software-related problems and apply effective solutions, utilize built-in diagnostic tools and system utilities for troubleshooting, follow systematic procedures to isolate, correct, and verify solutions.
1.2.4 Basic Navigation Skills (Computer, Laptop, Smart Phone)	LO 1.2.4: Navigate the user interface of computers, laptops, and smartphones to access essential features and applications, understand the layout and organization of operating system interfaces on different devices, perform common navigation tasks, such as opening/closing applications and switching screens or windows, utilize built-in navigation tools and features to enhance productivity, and adapt navigation techniques to different device types and operating systems.
1.2.5 Using Accessibility Features (verbal control, magnifier etc.)	LO 1.2.5: Utilize verbal control features to interact with devices via voice commands, operate magnification features to enlarge on-screen content for better readability, configure accessibility settings to meet individual preferences and needs. identify additional accessibility features such as screen readers and alternative input methods, and promote awareness for accessibility in digital design and implementation.
<b>Topic 1.3: Introduction to Internet and the World Wide Web</b>	
Subtopics	On successful completion, learners will be able to:
1.3.1 Connecting to the internet through Wi-Fi	LO 1.3.1: Identify and select available Wi-Fi networks for establishing internet connections, configure Wi-Fi settings, including entering network credentials and adjusting parameters, troubleshoot common Wi-Fi connectivity issues and apply solutions, secure Wi-Fi connections using best practices and encryption protocols, optimize Wi-Fi performance by managing signal strength and network congestion.
1.3.2 Understanding a URL – the address of a website	LO 1.3.2: Identify and interpret the components of a URL, including protocol, domain name, and path, understand the function and significance of each URL component, recognize different types of URLs, such as absolute and relative URLs, navigate the web using URLs to access specific websites and resources, discern the security implications of URLs, including identifying secure connections and recognizing malicious URLs.
1.3.3 Navigation buttons in Google Chrome	LO 1.3.3: Utilize navigation buttons in Google Chrome, including back, forward, refresh, home, and bookmark, understand the functions of each navigation button, use keyboard shortcuts and mouse gestures for common navigation tasks, explore additional navigation features, such as the omnibox, tab management, and browsing history, customize navigation settings and preferences in Google Chrome.
1.3.4 Downloading/saving files	LO 1.3.4: Download files from the internet using web browsers or downloading software, recognize different file formats and the applications needed to open them, manage downloaded files by organizing, renaming, and relocating them, ensure the security and integrity of downloaded files by verifying authenticity and scanning for malware, utilize various file-saving options, including local, external, and cloud storage.

1.3.5 Safe browsing on the Internet	LO 1.3.5: Recognize online threats such as malware, phishing scams, and malicious websites, identify indicators of secure websites, including HTTPS, SSL certificates, and padlock icons, utilize built-in security features in web browsers, like pop-up blockers and anti-phishing filters, maintain privacy and confidentiality by using strong passwords and avoiding unsecured websites, evaluate online content critically to discern credible information from misinformation.
<b>Topic 1.4: Staying safe online: Cyber security</b>	
Subtopics	On successful completion, learners will be able to:
1.4.1 Key Terms used in Cyber Security	LO 1.4.1: define essential cybersecurity terms such as malware, phishing, encryption, firewall, and data breach, understand the significance and context of each key term within cybersecurity, articulate cybersecurity concepts effectively using appropriate terminology, recognize common cyber threats, attack vectors, and associated security measures.
1.4.2 Types of Personal Data Targeted in Cyber Attacks	LO 1.4.2: Identify various types of personal data targeted by cyber attackers, including financial, personal, login, and medical information, understand the value and sensitivity of personal data and the potential consequences of unauthorised access, implement measures to protect personal data, such as encryption and multi-factor authentication, raise awareness about safeguarding personal data and recognizing cyber threats.
1.4.3 Threats to personal data	LO 1.4.3: Identify and categorize various threats to personal data, including cyberattacks and data breaches, understand the potential consequences of personal data threats, assess and evaluate the risk landscape for personal data and implement risk mitigation strategies, stay informed about emerging and evolving threats to personal data.
1.4.4 Strategies for dealing with cyber security threats	LO 1.4.4: Identify and categorize various cybersecurity threats, such as malware, phishing, and DDoS attacks, understand principles of cybersecurity risk management, including risk assessment and mitigation, implement proactive measures to prevent cybersecurity incidents, apply incident response and recovery procedures to minimize impact and restore operations.

#### SKILLS & COMPETENCES (FOLLOWING ESCO CLASSIFICATION):

**Broader concepts:** [Working with computers](#)

**Narrower skills:** [Use ICT hardware](#)

**Broader concepts:** [Information and communication technologies \(icts\)](#)

**Narrower concepts:** [Computer use](#)

**Broader concepts:** [Core skills and competences](#)

**Narrower skills:** [Conduct web searches](#), [Create digital content](#), [Use communication and collaboration software](#), [Operate digital hardware](#), [Apply digital security measures](#)





## Intermediate Level

### Module 2 - How to use the computer in your job

**RESPONSIBLE PARTNER:** RESET, Cyprus

**KEY WORDS:** Microsoft Office, spreadsheets, presentation, note-taking, graphic designing, time management, task management, remote working, productivity tools, web development, HTML, CSS, website builders

**ESTIMATED DURATION:** 2,5 - 3 hours (the duration for each topic is 30-45 minutes. The duration for each subtopic is 5-10 minutes).

**AIM & LEARNING OBJECTIVES:** This module aims to provide learners with a fundamental understanding of essential computer applications commonly used in various job roles, focusing on Microsoft Office, graphic design software, time management tools, and web development and design tools. Understanding how to use your computer in your job by using these tools is essential for professional success in today's digital age.

#### STRUCTURE, CONTENT & LEARNING OUTCOMES:

On successful completion of the topics and subtopics in this module, learners (women NEETS) will have acquired the knowledge, skills and competences described in the table below.

<b>Topic 2.1: Microsoft Office</b>	
Subtopics	On successful completion, learners will be able to:
2.1.1: Microsoft Word	LO 2.1.1: Demonstrate proficiency in navigating Microsoft Word, including formatting text, creating and editing documents, and utilizing basic features such as spell check and word count.
2.1.2: Microsoft Excel	LO 2.1.2: Utilize Microsoft Excel for data entry, manipulation, and basic analysis, including formatting cells, creating formulas and generating simple charts and graphs.
2.1.3: Microsoft Power Point	LO 2.1.3: Create engaging presentations using Microsoft PowerPoint, including designing slides, incorporating multimedia elements, and delivering presentations effectively.
2.1.4: Microsoft OneNote	LO 2.1.4: Organize notes, ideas and tasks efficiently using Microsoft OneNote, including creating notebooks, sections, and pages, and utilizing features like tags and search functionalities.
<b>Topic 2.2: Graphic Design Software</b>	
Subtopics	On successful completion, learners will be able to:
2.2.1: Adobe Photoshop	LO 2.2.1: Use Adobe Photoshop to edit images, apply filters and effects, and manipulate layers to create visually appealing graphics for various digital and print media.
2.2.2: Adobe Illustrator	LO 2.2.2: Use Adobe Illustrator to create graphics, illustrations, and logos, including techniques such as drawing shapes, applying gradients, and working with typography.
2.2.3: Canva	LO 2.2.3: Design professional-looking graphics and visual content using Canva, including creating social media posts, presentations, posters, and other marketing materials with ease.
2.2.4: CorelDRAW	LO 2.2.4: Use CorelDRAW to design layouts, illustrations, and marketing materials, including tasks such as tracing, blending, and exporting designs for print or digital use.



<b>Topic 2.3: Time Management Tools</b>	
Subtopics	On successful completion, learners will be able to:
2.3.1: Introduction to Time Management Techniques	LO 2.3.1: Understand the principles of effective time management, including setting goals, prioritizing tasks, and utilizing tools to increase productivity and reduce stress.
2.3.2: Time management techniques for remote work	LO 2.3.2: Apply specific time management strategies tailored for remote work environments, including managing distractions, establishing routines, and maintaining work-life balance.
2.3.3: Using Todoist fro Chromoe, for Task Management	LO 2.3.3: Use Todoist to manage tasks effectively, including creating projects, setting deadlines, organizing tasks into categories, and collaborating with team members.
2.3.4: Basics of Toggl Time Tracker	LO 2.3.4: Use Toggl Time Tracker to monitor and analyze their time usage, including tracking work hours, categorizing activities, and generating reports for self-assessment and productivity improvement.
<b>Topic 2.4: Web Development and Design Tools</b>	
Subtopics	On successful completion, learners will be able to:
2.4.1: Introduction to HTML and CSS	LO 2.4.1: Comprehend the fundamentals of HTML and CSS, including creating and styling web pages, incorporating multimedia elements, and understanding basic concepts such as tags, classes, and IDs.
2.4.2: Basics of Wix Website Builder	LO 2.4.2: Create professional-looking websites using the Wix Website Builder, including tasks such as selecting templates, customizing design elements, and adding content and features to enhance user experience.
2.4.3: Introduction to Adobe Dreamweaver	LO 2.4.3: Use Adobe Dreamweaver for website design and development. They will be able to create and edit web pages, manage site files effectively, and grasp basic coding concepts essential for web development.

#### SKILLS & COMPETENCES (FOLLOWING ESCO CLASSIFICATION):

**Broader concepts:** [Working with computers](#)

**Narrower skills:** [Using digital tools for collaboration, content creation and problem solving](#), [Using word processing, publishing and presentation software](#), [Using computer aided design and drawing tools](#), [edit photographs](#)

**Broader concepts:** [Working efficiently](#), [Self-management skills and competences](#)

**Narrower skills:** [Manage time](#), [Manage quality](#), [Work independently](#), [Work efficiently](#), [Meet commitments](#), [Attend to detail](#), [Maintain concentration for long periods](#)



## Intermediate Level

### Module 3 - Digital tools for communication and collaboration

**RESPONSIBLE PARTNER:** INOVA+, Portugal

**KEY WORDS:** Collaboration, Management, Productivity, Integration, Innovation.

**ESTIMATED DURATION:** 2,5 - 3 hours (the duration for each topic is 30-45 minutes. The duration for each subtopic is 5-10 minutes).

**AIM & LEARNING OBJECTIVES:** The aim of this module is to provide learners with the skills needed to effectively use modern digital tools for collaboration, communication, project management, and productivity in professional environments. Learners will delve into the functionalities of tools such as Microsoft Teams, Slack, Trello, Miro, GitHub, Jira, and Confluence, learning to set up and manage digital workspaces, enhance team communication, and implement efficient project management strategies. Through practical applications, they will develop skills in managing projects, handling version control, and fostering team collaboration. The module also emphasizes continuous learning and innovation, preparing learners to adapt to new technologies and maintain a competitive edge in the workplace. By the end of the module, participants will be equipped to integrate these tools into their workflows, leading to improved efficiency and innovative practices in their organizations.

#### STRUCTURE, CONTENT & LEARNING OUTCOMES:

On successful completion of the topics and subtopics in this module, learners (women NEETS) will have acquired the knowledge, skills and competences described in the table below.

<b>Topic 3.1: Basic tools for daily communication</b>	
Subtopics	On successful completion, learners will be able to:
3.1.1: Instagram	LO 3.1.1: Identify primary platform functions (such as feed, search, upload, activity, and settings), create and configure accounts, use hashtags and geolocations, post photos and videos with filters, applying editing tools. In addition, they will be able to analyze likes, comments, and shares, evaluating posting strategies and privacy settings and create a content strategy with photos, videos, stories, and reels to maximize engagement.
3.1.2: Facebook	LO 3.1.2: Identify main functions like News Feed, friends, and events. They will understand profile creation and privacy controls, apply skills by posting content and interacting, analyze privacy settings and evaluate interaction methods. Finally, they will create digital marketing strategies.
3.1.3: WhatsApp	LO 3.1.3: Identify key features like messaging, calls, and status updates. They will understand privacy settings, apply skills in messaging, calling, and managing groups, analyze encryption's impact on security and evaluate communication methods. Finally, they will create personalized communication strategies for groups or businesses.
3.1.4: LinkedIn	LO 3.1.4: Identify key profile components: experience, education, and skills. They will understand the importance of profile optimization for visibility, apply this by updating their profiles and using job search functions. They will analyze networking strategies and evaluate connection quality. Finally, they will create a personal branding strategy using LinkedIn's features.
<b>Topic 3.2: Basic tools for daily job communication and collaboration</b>	
Subtopics	On successful completion, learners will be able to:
3.2.1: Microsoft Team	LO 3.2.1: Identify key features: channels, chats, meetings, and file sharing. They will understand account setup and customization, will apply skills in initiating chats,



	scheduling meetings, and collaborating on documents. They will analyze integration capabilities and evaluate collaboration strategies. Finally, they will create workflows to enhance team productivity and project management.
3.2.2: Slack	LO 3.2.2: Identify main functions: channels, direct messaging, and file sharing. They will understand workspace creation and management, apply knowledge by using channels, integrating apps, and managing notifications. They will analyze search functionalities and evaluate communication practices. Finally, they will create best practices for improving communication and collaboration on Slack.
3.2.3: Trello	LO 3.2.3: Identify components: boards, lists, and cards. They will understand project board setup and task organization, apply skills in managing cards, using labels, and setting deadlines. They will analyze organizational strategies and evaluate Power-Ups. Finally, they will create project management workflows using Trello's features to enhance organization and collaboration.
3.2.4: Miro	LO 3.2.4: Identify key features: digital whiteboard, drawing tools, and real-time collaboration. They will understand board setup and use of templates, apply knowledge in brainstorming, project planning, and workshops. They will analyze visual collaboration benefits and evaluate Miro's effectiveness in team creativity and problem-solving. Finally, they will create visual projects integrating various media and collaboration tools.
<b>Topic 3.3: Tool to communication and Collaboration in Tech World</b>	
Subtopics	On successful completion, learners will be able to:
3.3.1: Github	LO 3.3.1: Identify key GitHub functions: repositories, branches, and commits. They will understand version control and pull requests, will apply these by managing and contributing to projects. They will analyze workflow efficiency and evaluate collaboration. Finally, they will create optimized development workflows.
3.3.2: Jira	LO 3.3.2: Recognize Jira components: tasks, sprints, and boards. They will understand agile fundamentals and apply them to manage projects, they will analyze agile practices and evaluate team progress with Jira's reports. Finally, they will create customized dashboards to monitor software development.
3.3.3: Confluence	LO 3.3.3: Learners will identify Confluence features: document creation, content management, and collaboration. They will understand space setup and content management. They will apply collaboration and organization skills, analyze team interactions, and evaluate content strategies. Finally, they will create a knowledge base integrated with project workflows.

### SKILLS & COMPETENCES (FOLLOWING ESCO CLASSIFICATION):

**Broader concepts:** [Transversal skills and competences](#), [Knowledge](#), [Communication](#), [collaboration and creativity](#)

**Narrower concepts:** [Social and communication skills and competences](#); [Information and communication technologies \(icts\)](#); [Inter-disciplinary programmes and qualifications involving information and communication technologies \(icts\)](#)



## Advanced Level

### Module 4 - Basics of computer programming

**RESPONSIBLE PARTNER:** LUDUS XR, Denmark

**KEY WORDS:** Popular programming languages (focus on C#, mention of C languages, Python, Java, SQL and similar), Variables, Data types, Control structures, Loops, Conditionals, Functions, Syntax, Debugging, Troubleshooting

**ESTIMATED DURATION:** 2,5 - 3 hours (the duration for each topic is 30-45 minutes. The duration for each subtopic is 5-10 minutes).

**AIM & LEARNING OBJECTIVES:** A module focusing on what computer programming is all about, the importance and main uses of coding. The main language for building coding skills will be C#. This module will introduce learners to the fundamentals of programming, including understanding programming languages, fundamental concepts such as variables, data types, and control structures, syntax and structure of code, debugging and troubleshooting, and empowering women in tech through motivational success stories.

#### STRUCTURE, CONTENT & LEARNING OUTCOMES:

On successful completion of the topics and subtopics in this module, learners (women NEETS) will have acquired the knowledge, skills and competences described in the table below.

<b>Topic 4.1: Demystifying Coding</b>	
Subtopics	On successful completion, learners will be able to:
4.1.1 What is coding and why it matters	LO 4.1.1: Understand the basic concepts of coding and its importance in the digital age, recognise the role of coding in shaping different technologies and industries and appreciate the relevance of coding skills in modern workplaces and career opportunities.
4.1.2 Uses of coding in real life	LO 4.1.2: Identify real-world applications of coding in fields as diverse as software development, web design, data analysis and robotics, explore how coding is used in everyday devices, services and systems, from mobile apps to smart appliances and analyse case studies to understand the impact of coding on innovation, problem solving and societal development.
4.1.3 Coding with no code tools	LO 4.1.3: Learn about the concept of no-code and low-code platforms and their role in simplifying the development process and identify various no-code tools and platforms available for various purposes.
<b>Topic 4.2: Introduction to Programming Fundamentals</b>	
Subtopics	On successful completion, learners will be able to:
4.2.1: Understanding Programming Languages	LO 4.2.1: Comprehend the importance of programming languages in contemporary technology, recognize popular programming languages and their applications, distinguish key characteristics of different languages, and discuss how programming languages intersect with software development methodologies.



4.2.2: Fundamental Concepts of Programming	LO 4.2.2: Demonstrate proficiency in fundamental programming concepts, including variables, data types, and control structures; comprehend and apply loops, conditionals, and functions in program development; define variables, identify data types, explain their significance; explain basic control structures to solve programming problems; and implement functions to modularize code and enhance reusability.
4.2.3: Syntax and Structure of Code	LO 4.2.3: Understand and apply the syntax and structure of code in C#, including proper formatting, organisation, and commenting practices; analyse and interpret C# syntax; explain effective code structuring to enhance readability and maintainability; and apply coding conventions and best practices to write clean and efficient code.
4.2.4: Debugging and Troubleshooting	LO 4.2.4: Acquire skills to identify and resolve common errors in C# code, employing debugging techniques and troubleshooting strategies; develop skills in identifying and isolating syntax errors, logical errors, and runtime errors; employ systematic debugging techniques to diagnose and resolve issues effectively; and apply debugging tools and strategies to troubleshoot complex code and enhance program reliability.
4.2.5 Empowering Women in Tech (Success stories for motivation)	LO 4.2.5: Use as motivating examples the success stories of women in tech, gain insight into the achievements and contributions of successful women in tech, identify barriers faced by women in the industry and explore strategies for overcoming gender-based challenges, and be empowered to leverage skills and knowledge to make meaningful contributions to the tech community, fostering diversity and inclusion.
<b>Topic 4.3: Getting Started with Coding</b>	
Subtopics	On successful completion, learners will be able to:
4.3.1: Writing Your First Program	LO 4.3.1: Independently write a basic program in C#, demonstrating understanding of fundamental programming concepts and syntax; develop and execute a simple computer program applying these concepts to create functional code; write clear and concise code with appropriate formatting and commenting practices to enhance readability and maintainability; and gain confidence in programming abilities as they transition from theoretical learning to practical application, setting the stage for continued growth in coding.
4.3.2: Understanding Algorithms	LO 4.3.2: Proficiently comprehend the concept of algorithms, their role in programming, and their significance in problem-solving; analyse and implement basic algorithms in C#; acquire a comprehensive understanding of algorithms and their role in solving computational problems; analyse and evaluate various algorithmic strategies for their efficiency and applicability; and apply algorithmic thinking to devise effective solutions to real-world problems, enhancing problem-solving skills and computational thinking abilities.
4.3.3: Interactive Coding Exercises	LO 4.3.3: Actively engage in coding exercises to apply programming concepts learned earlier; participate in interactive coding sessions to reinforce C# programming fundamentals; engage in hands-on coding challenges and activities to foster an active learning environment and enhance practical coding skills.
4.3.4: Mentorship and Support	LO 4.3.4: Identify and utilise resources and communities that offer mentorship and support for beginner coders, with a focus on aiding NEET individuals; access a comprehensive array of resources, including online forums, coding communities, and mentorship platforms for guidance and support; engage with experienced mentors and peers to seek advice, share experiences, and collaborate on projects; explore specialised support services to address the unique challenges faced by NEET individuals, empowering them to pursue rewarding careers in technology.

Topic 4.4: Exploring Resources for Learning Programming	
Subtopics	On successful completion, learners will be able to:
4.4.1: Learning Materials and Platforms	LO 4.4.1: Proficiently evaluate and select appropriate learning materials and platforms for acquiring programming skills, considering content relevance, accessibility, and instructional quality; navigate various online learning platforms and resources effectively to optimise the learning experience; and develop a personalised learning plan tailored to individual goals and preferences, utilising a combination of resources and materials for ongoing learning.
4.4.2: Real-World Applications of Programming	LO 4.4.2: Recognize and describe real-world applications of programming, demonstrating understanding of how programming concepts are utilised across industries and fields; explore diverse programming applications, gaining insight into practical relevance and versatility of coding skills; analyse case studies and examples, identifying patterns and best practices for leveraging programming to solve complex problems and drive innovation; and propose innovative solutions to real-world challenges using programming concepts, fostering creativity and critical thinking.
4.4.3: Building Confidence in Coding	LO 4.4.3: Develop strategies and techniques to enhance confidence in coding, approaching challenges with self-assurance and resilience; cultivate a growth mindset towards coding, embracing challenges as opportunities for learning and growth; build self-confidence through iterative practice and reflection, acknowledging progress and achievements; and engage in collaborative coding activities to develop confidence in working effectively in team environments and contributing to collective goals.
4.4.4: Practical Projects and Exercises	LO 4.4.4: Undertake practical coding projects and exercises, applying newly acquired skills to real-world scenarios and enhancing proficiency through hands-on experience; complete a series of projects and exercises, ranging from simple tasks to complex challenges; gain hands-on experience in project development, honing problem-solving skills and coding proficiency in real-world contexts; and showcase projects, sharing experiences with peers, receiving feedback, and contributing to a collaborative learning community.

#### SKILLS & COMPETENCES (FOLLOWING ESCO CLASSIFICATION):

**Broader concepts:** [Transversal skills and competences](#)

**Narrower concepts:** [Dealing with problems](#), [Planning and organising](#), [Processing information, ideas and concepts](#), [Thinking creatively and innovatively](#)

**Broader concepts:** [Thinking skills and competences](#)

**Narrower skills:** [Memorise information](#), [Think quickly](#), [Think analytically](#), [Think holistically](#), [Think critically](#)

**Broader concepts:** [Processing information, ideas and concepts](#)

**Narrower skills:** [Execute analytical mathematical calculations](#), [Use analytics for commercial purposes](#), [Address problems critically](#)

**Broader concepts:** [Demonstrating willingness to learn](#), [Working with digital devices and applications](#)

**Narrower skills:** [Use query languages](#), [Apply basic programming skills](#)



## Advanced Level

### Module 5 - Coding every day

**RESPONSIBLE PARTNER:** Symplexis, Greece

**KEY WORDS:** Coding, no code tools, everyday examples, WordPress, website, MailChimp, campaign

**AIM & LEARNING OBJECTIVES:** A module that provides users with a compendium of “coding every day” examples, case studies and exercises that they can relate to. It aims to equip learners with essential coding skills and practical knowledge of website development (using WordPress) and email marketing (using Mailchimp), helping them to gain the confidence and skills to actively engage in digital pursuits. Through this module, learners will: a) Understand the fundamentals of coding, its real-world applications, and the use of no-code tools to effectively initiate coding practices, b) Acquire the skills necessary to build a functional website using WordPress and c) gain the basic understanding and practical skills required to set up email marketing campaigns using Mailchimp.

**ESTIMATED DURATION:** 2,5 - 3 hours (the duration for each topic is 30-45 minutes. The duration for each subtopic is 5-10 minutes).

#### STRUCTURE, CONTENT & LEARNING OUTCOMES:

On successful completion of the topics and subtopics in this module, learners (women NEETS) will have acquired the knowledge, skills and competences described in the table below.

<b>Topic 5.1: Start your own website with WordPress</b>	
Subtopics	After completing each subtopic, learners will be able to:
5.1.1: Setting up your WordPress: navigating the dashboard	LOs 5.1.1: Understand the WordPress dashboard (purpose and layout, including its main components such as the admin toolbar, navigation menu, and various widgets), navigate dashboard menus and submenus (including Posts, Pages, Media, Appearance, Plugins, and Settings) and customize Dashboard Settings according to their preferences to improve workflow and productivity.
5.1.2: Designing your website/blog: customized themes and layouts	LOs 5.1.2: Explore different themes and layout options available in WordPress to customize the appearance of a website or blog, understand the principles of responsive design and how to select themes that adapt to various screen sizes and devices and customize theme settings, colors, fonts, and layout elements to create a unique and visually appealing website or blog.
5.1.3: Enhancing functionality with plugins	LOs 5.1.3: Explore the wide range of plugins available in WordPress and their diverse functionalities, learn how to search, install, activate, and configure plugins to add new features and enhance the functionality of a website or blog and apply best practices for managing plugins, including updates, compatibility checks, and troubleshooting common issues.
5.1.4: Uploading and editing media	LO 5.1.4: Upload images, videos, audio files, and other media types using the media library, organize media files, create galleries, and embed media into posts and pages, and use built-in editing tools to crop, resize, rotate, and optimize images directly within WordPress for better presentation and performance.
<b>Topic 5.2: Your First Steps in Email Marketing with Mailchimp</b>	
Subtopics	After completing each subtopic, learners will be able to:
5.2.1: Setting up your audience	LOs 5.2.1: Set up and manage audience effectively to target the right subscribers, understand the importance of audience segmentation for personalized email campaigns and explore strategies for building and growing email subscriber lists.



5.2.2: Customizing your signup form	LOs 5.2.2: Discover how to create and customize signup forms to capture essential subscriber information, learn best practices for designing signup forms that align with a brand and encourage signups, acknowledge the role of signup forms in optimization for email marketing efforts.
5.2.3: Creating an email	LOs 5.2.3: Master the process of creating and designing professional emails using Mailchimp, develop skills in crafting engaging subject lines, persuasive copy, and effective calls-to-action to drive engagement and explore email formatting techniques and personalization features to deliver impactful messages to subscribers.
5.2.4: Creating a campaign	LOs 5.2.4: plan and execute an email marketing campaign, understand the importance of campaign goals, target audience definition, and content planning and explore different types of email campaigns leveraging Mailchimp's features for successful campaign execution.
<b>Topic 5.3: Mastering Programming Basics</b>	
Subtopics	After completing each subtopic, learners will be able to:
5.3.1 Challenges and Practice Exercises	LOs 5.3.1: Explore challenges and practise exercises (through the C4WIN serious game)
5.3.2 Portfolio Development and Career Readiness	LOs 5.3.2: Tackle various coding challenges and practice exercises to reinforce programming skills and problem-solving abilities in a supportive environment; engage in exercises designed to reinforce key programming concepts and problem-solving skills; apply critical thinking to identify optimal solutions to coding problems, iterating and refining approaches as needed; and demonstrate resilience and perseverance in overcoming challenges, developing confidence in tackling complex programming tasks effectively.
5.3.3 Basics of Coding Revisited	LOs 5.3.3: Revisit and reinforce understanding of fundamental coding concepts covered throughout the module; review foundational coding concepts and techniques, deepening understanding and mastery of programming principles; identify areas for improvement and set personalised learning goals for continued skill development; and consolidate knowledge and skills through hands-on practice, solidifying proficiency in coding and preparing for advanced coursework or projects.
5.3.4 Next steps	LOs 5.3.4: Acquire knowledge and skills to identify and pursue next steps in their programming journey; reflect on learning journey, achievements, and areas of growth; develop a roadmap for continued advancement in programming, outlining specific goals and action plans; and engage with resources and communities for ongoing support and professional development, fostering a lifelong commitment to learning and growth in the field.
<b>Topic 5.4: Exploring Resources for Learning Programming</b>	
Subtopics	After completing each subtopic, learners will be able to:
5.4.1: Learning Materials and Platforms	LO 5.4.1: Proficiently evaluate and select appropriate learning materials and platforms for acquiring programming skills, considering content relevance, accessibility, and instructional quality; navigate various online learning platforms and resources effectively to optimise the learning experience; and develop a personalised learning plan tailored to individual goals and preferences, utilising a combination of resources and materials for ongoing learning.
5.4.2: Real-World Applications of Programming	LO 5.4.2: Recognize and describe real-world applications of programming, demonstrating understanding of how programming concepts are utilised across industries and fields; explore diverse programming applications, gaining insight into practical relevance and versatility of coding skills; analyse case studies and examples, identifying patterns and best practices for leveraging programming to solve complex problems and drive innovation; and propose innovative solutions to real-world challenges using programming concepts, fostering creativity and critical thinking.
5.4.3: Building Confidence in Coding	LO 5.4.3: Develop strategies and techniques to enhance confidence in coding, approaching challenges with self-assurance and resilience; cultivate a growth

	mindset towards coding, embracing challenges as opportunities for learning and growth; build self-confidence through iterative practice and reflection, acknowledging progress and achievements; and engage in collaborative coding activities to develop confidence in working effectively in team environments and contributing to collective goals.
5.4.4: Practical Projects and Exercises	LO 5.4.4: Undertake practical coding projects and exercises, applying newly acquired skills to real-world scenarios and enhancing proficiency through hands-on experience; complete a series of projects and exercises, ranging from simple tasks to complex challenges; gain hands-on experience in project development, honing problem-solving skills and coding proficiency in real-world contexts; and showcase projects, sharing experiences with peers, receiving feedback, and contributing to a collaborative learning community.

**SKILLS & COMPETENCES (FOLLOWING ESCO CLASSIFICATION):**

**Broader concepts:** [Transversal skills and competences](#)

**Narrower concepts:** [Dealing with problems](#), [Planning and organising](#), [Processing information, ideas and concepts](#), [Thinking creatively and innovatively](#)

**Broader concepts:** [Using digital tools for collaboration and productivity](#), [Problem-solving with digital tools](#), [Creatively use digital technologies](#), [Plan marketing strategy](#)

**Narrower skills:** [Monitor technology trends](#), [Stimulate creative processes](#), [Plan digital marketing](#), [Stimulate creativity in the team](#), [Seek innovation in current practices](#), [Develop creative ideas](#), [Develop media strategy](#)

## Advanced Level

### Module 6 -Computational thinking

**RESPONSIBLE PARTNER:** iED, Greece

**KEY WORDS:** Computational thinking, algorithms, abstraction, problem solving, decomposition, pattern recognition, skills

**ESTIMATED DURATION:** 2,5 - 3 hours (the duration for each topic is 30-45 minutes. The duration for each subtopic is 5-10 minutes).

**AIM & LEARNING OBJECTIVES:** A module that will help users to identify some of the elements of computational thinking such as breaking down data, processes, or problems into smaller, manageable parts, pattern recognition, etc. The module aims to introduce the learners to the principles and applications of computational thinking. Through exploring historical context, understanding computational thinking, and examining its practical applications and real-world scenarios, learners will develop a solid foundation in computational thinking concepts. Learning objectives include understanding problem decomposition, abstraction, algorithmic thinking, and pattern recognition, as well as recognizing opportunities for applying computational thinking in various real-life scenarios, fostering collaboration, communication, continuous learning, and adaptation.

#### STRUCTURE, CONTENT & LEARNING OUTCOMES:

On successful completion of the topics and subtopics in this module, learners (women NEETS) will have acquired the knowledge, skills and competences described in the table below.

<b>Topic 6.1: Introduction to Computational Thinking</b>	
Subtopics	On successful completion, learners will be able to:
6.1.1: Historical Context and Evolution	LO 6.1.1: Identify the historical context and evolution of computational thinking, demonstrating an understanding of key milestones and influences in its development
6.1.2: Understanding Computational Thinking	LO 6.1.2: Explain the core concepts of computational thinking.
6.1.3: Applications and examples of Computational Thinking	LO 6.1.3: Apply computational thinking principles to real-world problems, showcasing the ability to recognize opportunities for computational solutions and providing concrete examples of how computational thinking can be utilized in various fields
<b>Topic 6.2: Problem Decomposition and Abstraction</b>	
Subtopics	On successful completion, learners will be able to:
6.2.1: Decomposing Problems	LO 6.2.1: Deconstruct complex problems and break them down into smaller, more manageable components.
6.2.2: Abstraction	LO 6.2.2: Manage the abstraction of complex concepts or problems into simplified models or representations.
6.2.3: Practical Applications- examples	LO 6.2.3: Apply decomposition and abstraction techniques to real-world problems, demonstrating their ability to break down complex issues into manageable components and create simplified models or representations that capture essential characteristics for effective problem-solving.

<b>Topic 6.3: Algorithmic Thinking and Pattern Recognition</b>	
Subtopics	On successful completion, learners will be able to:
6.3.1: Pattern Recognition	LO 6.3.1: Show expertise in identifying patterns across various data sets or scenarios.
6.3.2: Introduction to Algorithms	LO 6.3.2: Identify fundamental algorithms and algorithmic structures.
6.3.3: Types of Algorithms	LO 6.3.3: Categorize and differentiate between various types of algorithms
6.3.4: Practical Applications-Examples	LO 6.3.4: Apply algorithmic thinking principles into the analysis and implementation of practical examples across various domains
<b>Topic 6.4: Computational Thinking in Real World Scenarios</b>	
Subtopics	On successful completion, learners will be able to:
6.4.1: Benefits of Computational thinking	LO 6.4.1: Identify the benefits of computational thinking.
6.4.2: Opportunities in Real Life where we can use computational thinking	LO 6.4.2: Identify and assess opportunities for applying computational thinking in real-life scenarios
6.4.3: Collaboration and Communication	LO 6.4.3: Demonstrate effective collaboration and communication skills in the context of computational thinking
6.4.4: Continuous Learning and Adaptation	LO 6.4.4: Engage in continuous learning and adaptation in the context of computational thinking and adapt their problem-solving approaches to evolving challenges and contexts.

#### SKILLS & COMPETENCIES (FOLLOWING ESCO CLASSIFICATION):

**Broader concepts:** [Knowledge, Thinking](#)

**Narrower concepts:** [Information and communication technologies \(icts\)](#)

**Broader concepts:** [Skills](#)

**Narrower concepts:** [Working with computers](#)

**Broader concepts:** [Transversal skills and competences](#)

**Narrower concepts:** [Dealing with problems, Planning and organising, Processing information, ideas and concepts, Thinking creatively and innovatively](#)

**Broader concepts:** [Using digital tools for collaboration, content creation and problem solving](#)

**Narrower skills:** [Problem-solving with digital tools](#)

**Narrower concepts:** [Computer use, Database and network design and administration, Software and software and applications development and analysis](#)



## 5.0 Adult learning and inclusive teaching strategies

In the post-COVID age of digital literacy -or even better “literacies” in the plural, adult educators and trainers are no longer “experts” but co-creators of knowledge with their students; facilitators and mentors at the same time and lifelong learners themselves! As a result, classroom activities, whether face-to-face or online, are fundamentally different, theory is infused with practice, and the goal is much more than the “transmission” of knowledge. It is also about rebuilding the educator-learner relationship and helping people to feel welcome, respected and more empowered and capable for a better future.

Inclusive education is the first principle of the European Pillar of social rights which underlines that: *“Everyone has the right to quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market”* ([European Commission, European Education Area, n.d.](#)).

Inclusive education is at the heart of the Coding4WIN project and means real learning opportunities for traditionally excluded groups, such as women, minorities, individuals who experience disabilities, socio-economically disadvantaged communities, migrants, refugees, LGBTQ+ individuals, older adults, individuals from rural or remote areas et.al. Inclusive Coding4WIN classrooms value the unique contributions that women NEET from all backgrounds bring to the lesson, allowing diverse groups to learn and grow together for the benefit of all ([UNICEF, n.d.](#)).

### 5.1 Adult learning principles

The basic principles of adult learning highlight the fact that adult learners are very different from children in terms of their motivation, the relevance of education to their lives, and the ways in which they apply the knowledge, skills, attitudes, and experiences they acquire through education, whether formal or non-formal ([Knowles et al, 2020](#)). The following key principles adapted by [Collins \(2004\)](#) can serve as a guide for adult educators and trainers involved in the Coding4WIN project, helping them to design and deliver non formal training that is tailored to the specific needs of their adult learners: women who are not in employment, education or training.

- ✓ Adults need to understand the purpose of learning. They are motivated to learn when they believe it will help them in their personal or professional development, e.g. to carry out practical tasks or deal with everyday problems.  
*“What should I do as a trainer?”* Show them how the Coding4WIN training can be applied to their future work or other responsibilities to be of value to them. If necessary, adapt the material and activities or examples to reflect their own interests.
  
- ✓ Adults are goal-oriented and appreciate an educational programme that is well organised with a clear structure and relevant, useful content. They look for the relevance of what they are learning to what they want to achieve.  
*“What should I do as a trainer?”* Explain to learners how this course will help them achieve their goals. Show learners the big picture from the outset, provide clear and specific objectives and ground learning in practical outcomes.



- ✓ While adults respond to external pressures, they are mostly driven by internal motives, e.g. the desire for increased job satisfaction, self-esteem, quality of life and the like are powerful motivators for adult learners.  
*“What should I do as a trainer?”* Knowledge for its own sake may be demotivating for many NEETs. Be explicit about how the course will help them in their life and work. Use real life examples that will motivate them.
- ✓ Adults bring a rich pool of experience that forms the basis of their learning and learn more easily when learning is active. Therefore, they learn better when they can draw on their experience and learn in the context of real-life tasks and problems.  
*“What should I do as a trainer?”* Encourage them to share personal stories, experiences and knowledge relevant to the topic. Encourage thinking, discussion and interaction, ask questions, organise teamwork activities, practical demonstrations, etc.
- ✓ Adults are self-directed learners and want to take responsibility for their decisions about education, including when, how and what to learn. While self-direction is a key aspect of adult learning, critics point out that not all adults prefer or are capable of self-directed learning, so the role of the trainer/facilitator is crucial.  
*“What should I do as a trainer?”* Involve them in the learning process, co-create the “educational contract” of your class with them and encourage their active participation to promote a sense of ownership and empowerment. Keep in mind that the availability of Open Educational Resources (OER) can “change the nature of the teaching activity itself, with self-directed learners able to take more control over their learning” ([European Commission, 2012, p. 22](#)). However, as not all students know how to use the full range of new technologies or don't have good navigation skills, the key for educators is to help them to identify, search, evaluate, analyse and use effectively the vast number of sources and information that surround us in the digital age.
- ✓ Adults feel the need to be respected and recognised for their contributions and experience, so they expect to have the opportunity to express their opinions and be heard.  
*“What should I do as a trainer?”* Be courteous and patient, learn and use participants' names correctly, and show value in all contributions. Spend time getting to know your audience: who they are, what they know, what they want to know and, finally, what they have learned.

## 5.2 Practical tips for the Coding4WIN trainers

Think for a moment about your current or previous classes. Could your group be considered diverse because of one or more of the following? Age – Disability – Sex – Gender – Sexual orientation – Marriage and civil partnership – Pregnancy and maternity – Race and ethnicity – Ethnic origin – Language – Religion or belief (including lack of belief) or any other status or characteristic. Consider also whether you have students with different levels of motivation, attitudes, academic or work experience, or different responses to particular classroom environments and teaching practices.

In a diverse yet inclusive classroom, whether physical or virtual, effective teaching means the work of effective teachers or trainers. But who is the effective inclusive educator?

Effective inclusive educators focus not only on things like clarity of instruction, variety of instruction, engagement in the learning process and learners’ success rates, but also - and this is a critical point -



on the inclusion of participants from diverse backgrounds, with diverse needs and diverse abilities. Inclusive, effective educators:

- ✓ have an inclusive attitude, using and constantly seeking teaching methods, tools and resources that enable all students, whatever their background or circumstances, to enjoy and benefit from the best possible learning experience.
- ✓ value the unique talents and contributions of their students and seek to make learning more varied and richer for all, setting high goals for all learners and motivating them
- ✓ recognise that a more critical understanding of any subject is possible when a wider variety of perspectives and experiences are present in the classroom.
- ✓ are highly patient, welcoming, friendly, motivated and committed, empathetic and good listeners
- ✓ demonstrate problem-solving skills, are flexible and try to think “outside the box”
- ✓ update their digital skills, their knowledge and use up-to-date teaching materials/resources/tools.
- ✓ work as a team with their class and other educational professionals as appropriate.

Based on [Wyatt-Ross \(2018\)](#) and [Yale University - Poorvu Center for Teaching and Learning \(2017\)](#), we have adapted and propose -in random order- various relationship-building approaches that can help educators -both in physical and online classes- to build a welcoming and safe classroom for all:

- ✓ Learn and pronounce students' names correctly to show respect for their identities.
- ✓ Spend time building relationships by allowing students to share short stories and ask questions to build connection and trust.
- ✓ Engage in regular one-to-one conversations with students to build rapport and address concerns early, rather than waiting for problems to arise.
- ✓ Demonstrate passion and expertise in your subject to inspire and motivate students, fostering a collaborative learning environment, promoting understanding.
- ✓ Provide support through additional learning opportunities and reliable communication, demonstrating commitment to students' successful completion of the course.
- ✓ Incorporate diversity into the curriculum through inclusive materials and sensitive language so that all students feel represented and valued.
- ✓ Reflect on implicit biases and attitudes towards students, actively monitor interactions and implement strategies to minimise bias and maintain high expectations for all.
- ✓ Use international days as opportunities to discuss and raise awareness of critical issues, e.g. International Day of Women and Girls in Science, International Women's Day, International Day for the Elimination of Violence against Women, Global Pride Day and many more!
- ✓ See yourself as the Coding4WIN participants see you! What kind of facial expressions do they see? What does your tone of voice and body language tell them about how comfortable you are with them? What language do you use? What perceptions do learners have of you based on how you look, dress and talk? Let your group get to know you. Things you think don't matter, such as your favourite colour or TV show, actually matter because they make them feel closer to you!

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