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UNIHEAL+ - Contextualizing UNiversal HEALTH resilience through health professionals' re-skilling for digital health services provision

Project Number: 2021-1-ES01-KA220-VET-000033271

R1: UNIHEAL+ Framework Courses – a completed approach

COMPETENCE UNITS' PROPOSAL



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INTRODUCTION

The UNIHEAL+ project

UNIHEAL+ is an ERASMUS+ KA2 project with an implementation period of 24 months, between **01/02/2022 - 31/01/2024**. The project is being conducted by a consortium of SEVEN (7) partners from five (5) European countries: Spain, Lithuania, Romania, Cyprus, and Greece.

The **digitization of health care** has long been on the European Agenda to modernize and improve healthcare and resilience across Member States; following the health impacts and the health care needs the global current pandemic has caused, OECD (Report 2020) has drawn some policy conclusions for health care provision pointing out that the Covid-19 crisis has demonstrated the importance of universal health education as a key element for the resilience of health systems, which can be issued successfully only through training and raising awareness for health professionals:

- On the one, reskilling and upskilling of the health professionals can be proven very useful to provide additional support and allows for a more flexible management of health risks and threats, and then for creating the grounds for a universal answer (at local-national level) to health services and consequently for health resilience.
- On the other, given the fact also that the digital transformation and the need for contemporary ways of services delivery have been established in the (vocational) education, skilling health professionals in an era-attached way means providing them with digital health services training: digital technology – including mHealth and eHealth is an inevitable part of the future of European Healthcare without meaning that automatically our health professionals are prepared.

Reports, research and papers have demonstrated not only the need but also the insufficient training on health digital technology or digital literacy on health with digital health services delivery. The need for digital skills is widely acknowledged but there is limited reference to the health professionals as also the existing digital health professional curricula are inadequate – there is the need to strengthen the educational curricula of health professionals and use continuous professional development programs to provide them with useful digital skills training. As also intensively considered in Journal of Medical Education and Curricular Development (2020), integrating digital health into the curriculum entails how to educate future and present health professionals to work in an era of digital tools and reskilling them towards digital health services provision.

Taking this into consideration, there has been this **dilemma of how best to address the integration of digital health services into vocational curricula and training adapted to labor markets**. Arguably, it is in the best interest for health professionals to be reskilled and be prepared for adequate digital health services provision and to respond successfully to a health landscape that may see significant disruption due to technological upheavals.

The project main objectives are:

1. addressing the needs of the health professionals for further skilling, re- and upskilling, with a specific VET curriculum updated on further needs-centered skills building and adapted to labour market needs
2. recognizing the significance of digital health services deriving also from the recent health situation/emergency and the dominance of the ICT context in personal and professional life
3. equipping health professionals to better deliver their jobs, by digital health services training, thus improving their use of computational technologies, smart devices, communication media, etc, and, aids healthcare professionals and their patients manage illnesses, health risks, as well as promote health and wellbeing
4. maximizing potential in their employment through the recognition of skills and qualifications due to the EQF, ECVET & ECTS units
5. constructing well-stepped units of training, educational materials, work-based scenarios, guides for the VET educators as well Health services providers, such as health professionals and nursing and midwifery professionals have been in the centre of our project for vocational empowerment and further coordinated and integrated training for re-skilling on digital health services provision.

The **UNIHEAL+ project consortium** is formed by consortium of consortium of SEVEN (7) partners from five (5) European countries: Spain, Lithuania, Romania, Cyprus, and Greece:

Table 1. UNIHEAL+ CONSORTIUM

Partner No.	Country	Name	Acronym
P1	ES	Fundación Ayesa	FA
P2	LT	MB Homo eminens	Xwhy
P3	GR	Xenios polis	Xenios
P4	RO	Gripen Europe	Gripen
P5	GR	Proleptis	Proleptis
P6	ES	Innovation Training Center, SL	ITC
P7	CY	CSI	CSI

The project is organized in 4 Results:

1. UNIHEAL+ Framework Courses – a completed approach. This document is part of this result.
2. The Adaptation and Training Guide for UNIHEAL+ Educators
3. eLearning Resources & Digital Tools
4. UNIHEAL+ Skills Assessment, Validation and Recognition Content & Tools.

Target groups

The Target groups addressed in the research phase are:

- a) The **frontline health sector staff/professionals** (e.g., Nurses, doctors, pharmacists, physicians, dentists, midwives, etc.) as confronted with the need for further skilling and re-skilling regarding the contemporary health demands and the digital character of their health services.
- b) The **VET educators** who undertake the role and tasks of effectively address the training of health professionals, making use of multiple pathways, such as also differentiation pedagogy, practical guidance, re-feedback context. UNIHEAL+ also meets the needs of the VET educators since it contributes to an extent to the professional development of VET trainers to cultivate for them effective innovative training methods by including teaching in virtual environment, vocational and digital pedagogy, and in diverse and multicultural environments.

This document

The project results will be built upon the first result, that is **UNIHEAL+ Framework Courses – a completed approach** setting the basis and embedding intermediate results of:

- Project Result 2 (The Adaptation and Training Guide for UNIHEAL+ Educators),
- Project Result 3 (eLearning Resources & Digital Tools)
- Project Result 4, UNIHEAL+ Skills Assessment, Validation and Recognition Content & Tools.

Project result 1, **UNIHEAL+ Framework Courses – a completed approach** has been organized in 4 steps:

- Phase 1: RESEARCH CONTEXT (questionnaires & focus groups) for the data gathering concerning health professionals needs and profiles
- Phase 2: UNIHEAL+ COURSES DESIGN
- Phase 3: UNIHEAL+ CONTENT AND EXERCISES DEVELOPMENT
- Phase 4: PILOT REVIEW AND EVALUATION

This document presents the results of the second phase of the project Result 1, that is: UNIHEAL+ COURSES DESIGN. It is divided onto the following chapters:

1. Summary of research findings
2. Proposal of curriculum: 6 competence units

Annex: Training curriculum template

1. SUMMARY OF RESEARCH FINDINGS

The results obtained in the research do allow the UNIHEAL+ team to design a transversal curriculum and the content development for the digital reskilling and upskilling of the health professionals.

The result of this document has implications for the development of:

- R1: UNIHEAL+ Framework Courses – curriculum design and content development.
- R2: Adaptation and Training Guide for UNIHEAL+ Educators
- R3: eLearning Resources & Digital Tools
- R4: UNIHEAL+ Skills Assessment, Validation and Recognition Content & Tools.

As a summary of the results, we can say that:

Desk research has **reassured the emerging need for the digital reskilling and upskilling of the health professionals** across the EU in general and in the researched countries, that is: Cyprus, Greece, Lithuania, Romania, and Spain-

There were 167 participants to the survey and 29 to the focus groups, so that the total number of participants reached at this research phase is 196.

Regarding the **6 competence units proposed**, all the participants from the survey agree on the importance of all competence units with CU3 eHealth & mHealth context and content reaching the highest average scores.

Regarding the focus groups, it was also highlighted:

- the importance of **Cyber Security, Data Privacy and Link between privacy and data security**
- include information about **universal access points to data so health professionals can collaborate and share information across countries**
- Make sure to **mention GCP-ICH Guidelines** (GCP is an international ethical and scientific quality standard for designing, conducting, recording, and reporting trials that involve human subjects. Compliance with GCP assures that the rights, safety, and well-being of trial subjects are protected and that the clinical trial data are credible and International Conference on Harmonization (ICH): guidance provides a unified standard for the European Union, Japan, and the United States to facilitate the mutual acceptance of clinical data by the regulatory authorities in those jurisdictions) that ensure the quality of the clinical study.
- Consider the reorganisation of the following competence units:
 - ✓ *CU1: Framework skills and aptitudes for digital communication.* **Make sure digital health administration is included.** Make sure you also connect with those technologies that facilitate digital communication with cases and use in the health sector
 - ✓ *CU2 Computer literacy, data analysis, data protection programs* to be renamed and **include computer literacy and revolution of big data**: data lifecycle, interoperability, data protection, analytics, algorithms, big data, and artificial intelligence.

- ✓ **CU3: eHealth & mHealth context and content is a very wide competence unit. Make sure you do not overlap with CU 5 or even CU3 could absorb CU 5: Mobile applications, cloud storage, internet usability-functionality.** Make sure you include cases to show how digital transformation is affecting the health sector
- It is important to make the titles attractive and appealing to the health professionals; to make sure we deal with different levels of the learners. An idea would be to include in each competence unit a basic level and a medium level and consider the possibility of making up pre-evaluation questionnaires to see the level and expectations of the learners and compare with final tests.

Moreover, in the focus groups, the main concerns about the skills and elaboration of the contents are:

- Consider the **possibility of implementing an Evaluation Phase prior the Training Phase** – in this way, they can be directed to a specific level of training (beginners/intermediate/advanced), or to the appropriate competence unit(s) based on their existing knowledge/educational background
- Consider **dividing the content of the training in the following 3 broad topics: prevention, diagnosis, treatment.**
- Make sure that the **overlap of contents in the different units is avoided**
- Make sure the **skills are linked (or can be linked in any way) to the real performance of the health professionals**
- Consider the **possibility to link with National NQF level** in the planning of the curriculum to be able to offer the results to the different stakeholders that could incorporate the learning proposed into official programmes
- **Make sure the learners always know what s/he is supposed to learn and where in the platform is during the whole learning process**
- **Include self-learning (including short videos, pdfs...etc) that can be adapted to the timing of the learner.**

As to the **CHOICE OF MEDIA** and **EDUCATIONAL MATERIALS**, the survey showed that the media reflecting higher scores are learning platforms, OER and audio and video files.

Regarding the focus groups, it was also highlighted:

- it is important to **ensure that platforms are straight forward and easily accessible** or **guidelines might need to be provided as an initial step**
- Consider the **possibility of blended learning: a combination of online and in person training**
- For the older generation of doctors, teachers and training in person seems to be very relevant, valued and needed.
- Consider the **possibility include links inside the learning** so that students cannot only access links via “further readings” but also check information, definitions...etc. and **even short exercises where the learner must find specific information and then check if they have found the right way**
- Make sure the **media used is attractive and appropriate**
- Make sure there is **someone following the training and always supporting the learners**
- Consider the possibility of using **“flipped classroom” online techniques** and consider the **possibility to use “live sessions” where there is a speaker interacting with the learners.**

Regarding the **CHOICE OF METHODS**, the survey showed that the methods reflecting higher scores are everyday life problems and group work followed by frontal instruction and stories and case studies.

Regarding the focus groups, it was also highlighted:

- **Group work could be useful** as they can exchange knowledge/experience and can be highly interactive; however, it is important that various group sessions are provided with different dates/hours to match health professionals' availability to the most.
- **Role playing could be considered a 'sensitive method' that could produce negative reactions**, and it does not sound appropriate for the provision of theoretical knowledge.
- **Storytelling could be useful method** as it can generate dilemma and facilitate discussions between professionals (i.e., why 'this software' has failed, what the consequences are?)
- **Consider group work as an extra activity**: to learn from what others do or even as an optional evaluation activity.
- **In the methods selected, make sure you include enough "everyday health professionals' issues"** that can not only illustrate but offer different opportunities for learning from others and make sure all the methods are well explained and closely related to what the learner must learn.

Moreover, in the open questions to the survey:

- The keywords we have been able to find regarding what the participants believe would make the course interesting are: USEFUL, APPLICABLE, INTERACTIVE, AUDIO VISUAL, CERTIFICATION, UPDATED.
- The keywords regarding their main concerns are: NOT APPLICABLE, NOT CLEAR LEARNING OBJECTIVES, DIFFICULT TO FOLLOW, TOO THEORETICAL, LACK OF TIME.
- And finally, the keywords we have been able to find regarding their final suggestions are: MAKE IT PRACTICAL, PLACE EMPHASIS ON DESIGN, PROMOTE MOTIVATION, FLEXIBLE AND ADAPTABLE TO THE LEARNER NEEDS, LEVELS OF KNOWLEDGE.

All partners and particularly leaders of R2 to 4 are highly encouraged to read this report and come up with a list of key points to integrate into their planning and results.

2. PROPOSAL OF CURRICULUM: 6 COMPETENCE UNITS

The following Table includes a summary of the 6 competence units per partner that have been drafted in the period May-September 2022:

COMPETENCE UNIT/MODULE	PARTNER
CU1: Framework skills and aptitudes for digital communication	Xenios polis
CU2: Computer literacy, data analysis, data protection programs	Gripen
CU3: eHealth & mHealth context and content	CSI
CU4: Medical devices compatibility	PROLEPSIS
CU5: Mobile applications, cloud storage, internet usability-functionality	FAYESA
CU6: Universal digital health coverage	XWHY

Annex 1 includes the template partners have used to complete the competence units.

MODULE 1	MODULE TITLE: FRAMEWORK SKILLS AND APTITUDES FOR DIGITAL COMMUNICATION
AUTHOR	XENIOS POLIS
Objectives	<p>The aim of this module is to provide learners with essential knowledge on skills and aptitudes for digital communication which are considered necessary in the personal and professional space. The module consists of the following sections:</p>
Contents	<p>1. The essence and the origin of communication</p> <p>Communication has been a necessity for the human species since its appearance. Communication changes forms with the passage of time along with the evolution of the human species and the continuous evolution of technology.</p> <p>2. Digital communication</p> <p>In this section, the basic types of digital communication are thoroughly analyzed.</p> <p>3. Skills and aptitudes for digital communication</p> <p>Digital communication is not a source in contrast to physical communication. For this reason, its achievement presupposes the acquisition of certain skills.</p> <p>4. New data concerning digital communication</p> <p>The dynamic presence of digital technology in our lives results in the organized acquisition of digital skills.</p>
Units	<p>Unit 1: The essence and the origin of communication</p> <p>Topic 1: Communication – essence and origin</p> <p>Topic 2: Verbal-nonverbal communication</p> <p>Topic 3: Communication skills</p> <p>Unit 2: Digital communication</p> <p>Topic 1: What is digital communication.</p> <p>Topic 2: Digital communication methods</p> <p>Unit 3: Skills and aptitudes for digital communication</p> <p>Topic 1: Digital communication skills</p> <p>Topic 2: Tips for improving your digital communication skills.</p> <p>Topic 3: Advanced digital communication skills</p> <p>Unit 4: New data concerning digital communication.</p> <p>Topic 1: Workshops for digital skills</p> <p>Topic 2: Digital communication skills self-assessment tools</p>
Duration	10 hours online

<p>Learning outcomes</p>	<p>By the end of the training participants will be able to:</p> <p>The essence and the origin of communication: The learner will gain knowledge about the history and concept of communication and will know what communication skills are.</p> <p>Digital communication: The learner will come into contact with the concept of digital communication as well as its methods.</p> <p>Skills and aptitudes for digital communication: The learner will know the digital communication skills. Moreover, s/he will know manners to improve the digital communication skills and to obtain advanced digital communication skills.</p> <p>New data concerning digital communication: The learner will find out which methods s/he will be able to acquire digital communication skills and the related self-assessment tools that can be used.</p>
<p>Training methodology</p>	<p>The educational methodology will consist of: ppt presentations, videos, exercises</p>
<p>Training tools</p>	<ul style="list-style-type: none"> - computers - tablets - smartphones - internet connection
<p>Learning materials</p>	<p>PPT presentations, links, videos</p>
<p>Assessment methodology</p>	<p>Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.</p>

MODULE 2	MODULE TITLE: COMPUTER LITERACY, DATA ANALYSIS, DATA PROTECTION PROGRAMS
AUTHOR	GRIPEN
Objectives	The module aims to provide learners with essential knowledge on computer literacy. Furthermore, it gives them the opportunity to know data analysis and data protection programs which are deemed necessary when browsing the internet.

Contents

1. Computer literacy

In the last decades, electronic computers, tablets, and mobile phones overwhelm the life of modern man. However, because knowledge of their use is not assumed, this unit provides basic information for anyone interested in acquiring navigational skills.

2. Data analysis

This unit will provide learners with a good understanding of data content and the data analysis process, as well as the importance and benefits of data analysis in the Health sector.

3. Data protection

This unit will explain the meaning of data protection with reference to the General Data Protection Regulation. Moreover, in the context of this unit will address the importance of data protection in the Healthcare sector and will present some best practices and data protection programmes.

Units

Unit 1: Computer literacy

- 1: Computer literacy
 - 1.1: The importance of computer literacy
- 2: Digital skills
 - 2.1: Main types of digital skills
 - 2.2: The importance of digital skills
 - 2.3: Ways to develop digital skills
- 3: Useful steps to navigate on the internet
 - 3.1 Web browsers
 - 3.2 How to navigate to Web Pages

Unit 2: Data analysis

- 1: Data
 - 1.1: Types of data
- 2: Data analysis
 - 2.1: The importance of data analysis
- 3: Data and data analysis in Health sector

	<p>3.1: The importance of healthcare data analysis</p> <p>3.2: Benefits of data analysis in healthcare</p> <p>4: Main types of data analysis</p> <p>5: Data analysis process</p> <p>Unit 3: Data protection</p> <p>1: Data protection</p> <p>2: The General Data Protection Regulation (GDPR)</p> <p>2.1: The importance of data protection</p> <p>3: Data protection in Health sector</p> <p>4: Data protection best practices</p> <p>4:1 Data protection programs</p>
Duration	10 hours online
Learning outcomes	<p>By the end of the training participants will be able to:</p> <ul style="list-style-type: none"> ❖ Computer literacy: The learner will acquire basic digital skills. Moreover he/she will become familiar with the navigation on the internet via a computer or mobile device. ❖ Data analysis: The learner will acquire the meaning of data analysis and he/she will understand its main importance and benefits. The learner will also know the most important types of data analysis. ❖ Data protection: The learner will acquire the meaning and the importance of data protection Furthermore, the participant will be familiar with data protection in the Health sector and some data protection best practices and programs.
Training methodology	<p>The training methods will consist of:</p> <ul style="list-style-type: none"> ❖ PPT presentations ❖ Educational videos ❖ Practical cases
Training tools	For innovative training delivery internet connection is necessary. The training can be held through computers, tablets, or smartphones.
Learning materials	PPT presentations, links, videos
Assessment methodology	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

MODULE 3	MODULE TITLE: EHEALTH AND MHEALTH CONTEXT AND CONTENT
AUTHOR	CSI
Objectives	<p>The aim of this module is to highlight the importance of currently prominent components of healthcare, the electronic health (eHealth) and mobile health (mHealth) and build and strengthen learners' knowledge of different healthcare services.</p>
Contents	<p style="text-align: center;">1. Fundamentals of eHealth and mHealth</p> <p>eHealth and mHealth systems have been recognised as invaluable and indeed extremely necessary tools within the health system that are constantly growing. We will be introduced to eHealth and mHealth definitions, their role in the EU and their relevance to the new decade. Different studies on the <u>use</u>, <u>benefits</u>, and effectiveness of those applications established worldwide will be presented.</p> <p style="text-align: center;">2. Forms of eHealth and mHealth applications</p> <p>We will learn various eHealth and mHealth applications that aim to promote more effective and user-friendly health services. This unit will explain how those applications can solve health and healthcare system-related problems. This unit will also enable us to identify the stages of eHealth activities and gaps in relation to eHealth and mHealth systems in EU countries.</p> <p style="text-align: center;">3. Challenges of implementing eHealth and mHealth concepts</p> <p>Besides the broad opportunities those systems can bring to the health field, it is undoubtable that several challenges exist. It is important to acknowledge those barriers to suggest potential solutions.</p>
Units	<p>1. Fundamentals of eHealth and mHealth.</p> <p>1.1. eHealth and mHealth Definitions</p> <p>1.2. Role and Benefits (i.e., Cost-effective and less time-consuming, improved quality of life, reduced hospitalization) – <i>provision of examples/cases emphasizing how digital transformation is affecting the health sector</i></p> <p>1.3. Relevance to the new decade</p> <p>2. Forms of eHealth and mHealth applications</p> <p>2.1. eHealth applications (i.e., electronic patient record, electronic prescription, Remote medical consultations,)</p> <p>2.2. mHealth applications</p> <p>3. Challenges of implementing eHealth and mHealth concepts i.e., confidentiality and security, eLearning in health, limited quantitative data on the effectiveness of those programmes, ethical and legal issues arised and low digital skills of healthcare professionals.</p>
Duration	10 hours online learning
Learning outcomes	<p>By the end of the training participants will be able to:</p> <ul style="list-style-type: none"> ● Increase their knowledge regarding what eHealth and mHealth are, what role is in Healthcare systems and how they can benefit from them.

	<ul style="list-style-type: none"> • Understand the barriers in deploying eHealth and mHealth, and potential ways to overcome them. • Identify eHealth and mHealth applications currently available and their purposes with the aim to increase their understanding of their significance. • Be aware of not only the opportunities they can offer, but also the challenges.
Training methodology	Online lectures, guidelines, video tutorials and case-studies
Training tools	Personal computers/laptops/tablets and/or smartphones. An internet connection
Learning materials	<p>PPT presentations with both audio and links to online sources (articles, websites, and YouTube videos).</p> <p>Detailed documents on the available eHealth and mHealth applications – available to be downloaded for easy access and future use.</p>
Assessment methodology	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

MODULE 4	MODULE TITLE: MEDICAL DEVICES COMPATIBILITY
AUTHOR	PROLEPSIS
Objectives	The module aims to provide learners with essential knowledge on digital medical devices and how they can be used in all aspects of clinical work and management. This module will cover the following:

Contents

1. Fundamentals of medical and digital medical devices
 Medical and digital devices are used to diagnose, prevent, monitor, manage or treat a disease or condition. It is important that healthcare professionals know the fundamental requirements for how to effectively use and manage these devices. Thus, this unit includes fundamental information on medical devices.
2. Medical Devices and practical applications
 This unit will provide learners with a good understanding of all relevant aspects of practical applications of medical device use and management. This includes good practices, maintaining and storage of different types of medical devices, and the responsibilities the use of medical devices has for healthcare organizations and staff.
3. Risk and Safety for using Medical Devices
 Ensuring safe use of medical devices for patients and healthcare professionals is a crucial responsibility. This unit will provide an overview of the regulatory framework on digital medical devices and discuss some common threats that require hospitals and healthcare staff to evaluate and manage a set of risks.
4. Available trainings for digital medical devices and other resources
 This unit will cover the available training courses and important resources for digital medical devices, for various health specialties across all partner countries.

Units	<p>Unit 1: Fundamental of Digital Medical Devices</p> <p>Topic 1: The origin and history of medical devices</p> <p>Topic 2: The need for medical devices</p> <p>Topic 3: Innovation in the digital medical devices sector</p> <p>Unit 2: Medical Devices and practical applications</p> <p>Topic 1: Good practices</p> <p>Topic 2: Compatibility with existing software</p> <p>Topic 3: Benefits of using digital medical devices for health professionals and patients (e.g., remote auditing)</p> <p>Topic 4: Challenges of using digital medical devices (for health professionals and patients)</p> <p>Unit 3: Risk and Safety for using Medical Devices</p> <p>Topic 1: Regulatory overview for digital medical devices</p>
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	<p>Topic 2: Risk management for digital medical devices</p> <p>Topic 3: Digital medical devices and patient safety</p> <p>Uni 4: Available trainings for digital medical devices and other resources</p> <p>Topic 1: List of online training courses for digital medical devices (for various health specialties all partner countries will contribute)</p> <p>Topic 3: Other resources</p>
Duration	10 hours online
Learning outcomes	<p>By the end of this Module participants will be able to:</p> <ul style="list-style-type: none"> • Fundamental of Medical Devices: The learner will know what is meant by a medical device, the difference with a digital medical device, how to use the basic elements of digital medical devices and emerging digital devices technology. • Medical Devices and practical applications: The learner will know how to apply good practices and insights from the program to their day-to-day work and business. The learner will also comprehend the basic compatibility concerns with existing medical software. The learner will identify the benefits of digital medical devices and contributions to healthcare as well as challenges for patients and staff. • Risk and Safety for using Medical Devices: The learner will know how medical devices are regulated and how to evaluate and manage risks relevant to using medical devices. The learner will also acquire basic skills on accessing, storing, and managing patient data in line with the European ethical and regulatory guidelines. • Available training for digital medical devices and other resources: The learner will become aware of the current training opportunities on digital medical devices, relevant to patient and healthcare professionals' needs and priorities.
Training methodology	The teaching methods will consist of practice exercises, presentations, video tutorials, group work activities, case studies, simulation scenarios and role play games.
Training tools	Personal computers, tablets, and smartphones. An internet connection.
Learning materials	PPT presentations, links, and videos. Also, a real-life case scenario is provided including a narrative that explains a situation in the work environment where the concepts explained in the module would come into use.
Assessment methodology	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

MODULE 5	MODULE TITLE: MOBILE APPLICATIONS, CLOUD STORAGE, INTERNET USABILITY-FUNCTIONALITY
AUTHOR:	FUNDACIÓN AYESA
Objectives	<i>This module aims to provide basic knowledge of how to use essential tools on phones and computers. We will explore basic functionalities of many common free apps and tools. This will give the learner a series of skills that will help make working with computers and smartphones a lot easier in the professional environment.</i>

Contents

We will cover tools that will facilitate working in the digital environment.

A) Web browsers

In this unit we will learn basic functionalities that all common web browsers have. We will learn how to save websites in your bookmarks, how to check your browsing history, how to edit your homepage, how to open new tabs and how to clean your cookies and cache.

B) Cloud storage services

We will learn how to use the main cloud storage services like Google Drive, Microsoft OneDrive and Dropbox. This is very useful since you will be able to have all your files stored on the internet and access them from any device that is connected to the web. This makes life easier since you won't have to store your files on local storage devices and will protect you against losing them. It will also allow you to easily share them with your work colleagues and let them view and edit them. You will also be able to work on documents with other people simultaneously.

C) Video Call services

It is imperative these days to be able to communicate remotely with other workers and colleagues. Therefore, we will learn to use the main tools that are available for this. By learning to use Google Meet, Zoom and Teams you will be well prepared to interact with other professionals or clients through the internet. This will allow you to connect to high-quality real-time video calls. You will also learn to broadcast your screen to the other people on the call. This is very useful when working with other people on a particular subject and gives everyone on the call an extra visual reference that is very effective.

D) Remote desktop tools

It is very useful to be able to have remote control of a computer or to let someone else control your computer. In this unit we will learn to use Google Remote Desktop and TeamViewer which will allow you to remotely access a PC or give someone else access to your PC so they can assist you.

E) Phone utility apps

In this unit we will learn how to use common apps like Gmail, and Microsoft Outlook. We will also learn how to link WhatsApp to your desktop so you can chat from your PC.

F) Cybersecurity

In this unit we will learn common safety practices that will help keep your information safe from cyber-attacks. We will learn about common cyber-attacks and we will look at tools that will guarantee a higher level of internet security.

<p>Units</p>	<p>Unit 1: Web browsers</p> <ul style="list-style-type: none"> · Google Chrome · Mozilla Firefox · Opera <p>Unit 2: Cloud storage services</p> <ul style="list-style-type: none"> · Google Drive · Microsoft OneDrive · Dropbox <p>Unit 3: Video Call services</p> <ul style="list-style-type: none"> · Google Meet · Zoom · Microsoft Teams <p>Unit 4: Remote desktop tools</p> <ul style="list-style-type: none"> · Google Remote Desktop · TeamViewer <p>Unit 5: Phone utility apps</p> <ul style="list-style-type: none"> · Gmail · Microsoft Outlook · WhatsApp <p>Unit 6: Cybersecurity</p> <ul style="list-style-type: none"> · Strong Passwords · KeeWeb · Google Authenticator · Social Engineering
<p>Duration</p>	<p>10 hours of online learning including screen captures..</p>
<p>Learning outcomes</p>	<p>By the end of the course the learners will have acquired the following skills:</p> <ul style="list-style-type: none"> • Use of cloud storage services: the learner will know how to set up an account in each of the cloud services, how to create new documents, how to open, edit and save documents, how to convert documents from one format to another. The learner will also know how to share online files with other users and how to organize files and folders. We will also learn how to download files to a local PC. • Video calls: the learner will know how to use Google meet, Zoom and Teams. We will learn how to connect to meetings, how to set up audio devices, how to mute your microphone during a conversation, how to send messages in the built-in chat, how to create a meeting and how to share your screen so you can display a presentation or broadcast your screen to other participants for any other functionality.

	<ul style="list-style-type: none"> • Remote desktop tools: we will learn how to set up a remote session using Google remote desktop, Teamviewer and VNC. You will be able to set up your computer so you can access it from any other device, and you will also learn how to access another computer remotely. You will learn how to transfer files from a remote pc to yours and vice versa. • Phone utility apps: The learner will be able to install and use apps like Google Maps, Gmail, Outlook, and web apps like WhatsApp web. <ul style="list-style-type: none"> ➤ Google Maps <ul style="list-style-type: none"> ● Searching for an address ● Starting turn by turn navigation ● Saving a location ● Sharing a location ➤ Gmail <ul style="list-style-type: none"> ● Configuring a Gmail account ● Configuring a POP or IMAP account ● Composing and sending emails ● Organizing email folders ➤ Outlook <ul style="list-style-type: none"> ● Configuring a POP or IMAP account ● Composing and sending emails ● Organizing email folders ● WhatsApp web ➤ Linking your mobile device to your PC and sending messages • Web browsers: The learner will know how to use all popular web browsers, how to navigate to a site, how to use tabs, how to bookmark websites, how to use and search your browsing history, how to clean cache and cookies and how to edit your homepage. • Cybersecurity: We will learn about the most common vulnerabilities that most PC users are exposed to, tools and best practices to follow in order to minimise the chances of becoming the victim of a cyber-attack.
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Training methodology	<ul style="list-style-type: none"> • <i>Step by step tutorials</i> • <i>Screen captures illustrating each step</i> • <i>Practice exercises</i>
Training tools	<i>Personal computers and smartphones. An internet connection.</i>
Learning materials	<ul style="list-style-type: none"> • <i>PPT presentations with key points</i> • <i>Detailed documents with step-by-step guides</i> • <i>Task sheets with exercises</i>
Assessment methodology	Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.

MODULE 6	MODULE TITLE: UNIVERSAL DIGITAL HEALTH COVERAGE
AUTHOR	XWHY
Objectives	The aim of this module is to develop and enhance learners' knowledge of the various digital health system coverage tools, including software, hardware and services that are relevant in the digital health transformation phase.

We will cover tools that will facilitate working in the digital environment.

A. mHealth

We will introduce you to the basics of mHealth and wearable devices. We will also introduce the categories of mHealth. In addition, there will be an opportunity to learn about the benefits of mobile health applications and trends ranging from artificial intelligence and chatbots to virtual reality and blockchain. Finally, we will take some time to introduce mHealth phenomena and risks and opportunities.

B. eHealth

We will introduce you to the electronic health record (EHR), which is a real-time document that can be easily modified. We will also introduce the basic principles of the electronic medical record (EMR), as knowledge about a patient's EMR collected by doctors in a particular office, clinic or hospital is equally important, especially when it is used by providers for diagnosis and treatment. By presenting both EHRs and EMRs, we will also help to answer questions related to their usefulness and relevance, as well as provide an overview of the differences and similarities. Moreover, the Unit will present case studies as good foreign examples and the top 3 Electronic Health Records (EHRs) with their specificities.

C. Telehealth

The ability to use telehealth services is important to keep in touch with patients over long distances and to provide the care and treatment they need. Among other things, it is a convenient way for health professionals to reach patients who have mobility restrictions or live in remote rural areas. Therefore, during this unit we will learn the basic principles of telehealth and instruments to ensure quality patient care.

D. Artificial Intelligence (AI) & Machine Learning (ML)

Artificial intelligence (AI) and machine learning (ML) brings a paradigm shift in the healthcare industry. These technologies enable computers to analyse large amounts of data and learn from it, which helps healthcare providers make more informed decisions about a person's care. This unit will provide basic knowledge about artificial intelligence (AI), machine learning (ML) for healthcare workers to be aware of technological advancements and provide information on usage cases as well as existing products and services they can implement in their practice right away.

Contents

<p>Units</p>	<p>Unit 1: mHealth</p> <ul style="list-style-type: none"> • Introducing mHealth and Wearable Devices • Categories of mHealth • Benefits of Mobile Health Applications • mHealth Trends • mHealth Phenomena • Practical Case
	<p>Unit 2: eHealth</p> <ul style="list-style-type: none"> • Defining Electronic Health Records (EHRs) and Electronic Medical Records (EMRs) • eHealth Good Practices • Top 3 Electronic Health Records (EHRs) • Practical Case
	<p>Unit 3: Telehealth</p> <ul style="list-style-type: none"> • Defining Telehealth and Telemedicine • Guidelines on Video Consultations • Telehealth Mobile Applications • Practical Case
	<p>Unit 4: Artificial Intelligence (AI) & Machine Learning (ML)</p> <ul style="list-style-type: none"> • Introducing Artificial Intelligence (AI) and Machine Learning (ML) Applications • Defining Artificial Intelligence (AI) and Machine Learning (ML) • Areas of Artificial Intelligence (AI) and Machine Learning (ML) Application • Critique on Artificial Intelligence (AI) and Machine Learning (ML) • Application of Artificial Intelligence (AI) and Machine Learning (ML) in Products and Services on the Market • Chatbots and Available Chatbot Production • Practical Case

Duration 10 hours online (screen captures included).

Learning outcomes

By the end of the course the learners will have acquired the following skills:

- **mHealth:** The learner will learn what mhealth is, what categories is it divided into, its benefits both for medical professionals and patients. Moreover, they will learn about the tendencies, future outcomes, risk and opportunities in mhealth sector.
- **eHealth:** The learner will learn why electronic health records (EHRs) and electronic medical records (EMRs) exist and are relevant, and case studies will be presented. In addition, the learner will learn the basic principles of EHR and

	<p>EMR. The learner will learn the main differences and similarities between EHRs and EMRs. The learner will also learn about the top 3 Electronic Health Records (EHRs) and their specificities.</p> <ul style="list-style-type: none"> • Telehealth: The learner will learn how to perform digital transmission of medical images to the patient. In addition, the learner will acquire the skills needed to perform remote medical diagnosis and evaluations. The learner will know how to conduct remote consultations via camera with patients and other professionals. • Artificial Intelligence (AI) & Machine learning (ML): The learner will have a basic understanding of technology. This knowledge will help them to identify products and services which are worth implementing in their practice. They will see artificial intelligence (AI) and machine learning (ML) as tools which help to be more effective, provide better services and hopefully technological progress won't frighten them. It also introduces healthcare professionals to products and services on the market which utilises artificial intelligence (AI) and machine learning (ML).
<p>Training methodology</p>	<ul style="list-style-type: none"> • Step by step tutorials • Practice exercises • Practical cases • Video tutorials
<p>Training tools</p>	<p>Personal computers, tablets and smartphones. An internet connection.</p>
<p>Learning materials</p>	<ul style="list-style-type: none"> • PPT presentations with key points • Detailed documents with step-by-step guides • Links
<p>Assessment methodology</p>	<p>Self-assessment questionnaire with mainly multiple-choice answers and several open questions based on a case study.</p>

Annex 1: TRAINING CURRICULUM TEMPLATE

MODULE N° XXX EXAMPLE: 1	MODULE TITLE FRAMEWORK SKILLS AND APTITUDES FOR DIGITAL COMMUNICATION
Objectives (max. 100 words)	<i>eg. The aim of this module is to build and strengthen learners' knowledge of xxx</i>
Contents (Short description of the Module contents) (max. 100 words)	
Units (please limit the number of units between 3 and 6 per module) (max. 100 words)	1.1 . 1.2 ... 1.3 ...
Duration (total duration of each module = approx. 10 hours) (max. 50 words)	<i>eg. 3 hours online + 7 hours face-to-face</i>
Learning outcomes (for the whole module) (max. 200 words)	<i>By the end of the training participants will be able to:</i> <u>Knowledge</u> <u>Skills</u> <u>Responsibility/Autonomy</u>
Training methodology (including information on the Video tutorials) (max. 50 words)	<i>eg. flipped classroom approach, Video tutorials, group work, role play, etc.</i>
Training tools (for innovative training delivery) (max. 100 words)	<i>eg. Mentimeter / Padlet for the online part</i>
Learning materials (list of resources needed to implement the training activities) (max. 50 words)	<i>eg. tools, materials, handouts, PPT presentations, links, etc.</i>
Assessment methodology	<i>eg. questionnaire with multiple choice answers, open questions based on case study, quiz</i>

(max. 100 words)

OR

It can be a practical "demonstration activity" to show that participants have acquired the skills foreseen. Eg. in Module 2 participants can create a promotional videoclip (and this can be part of the training hours)