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# CURRICULUM

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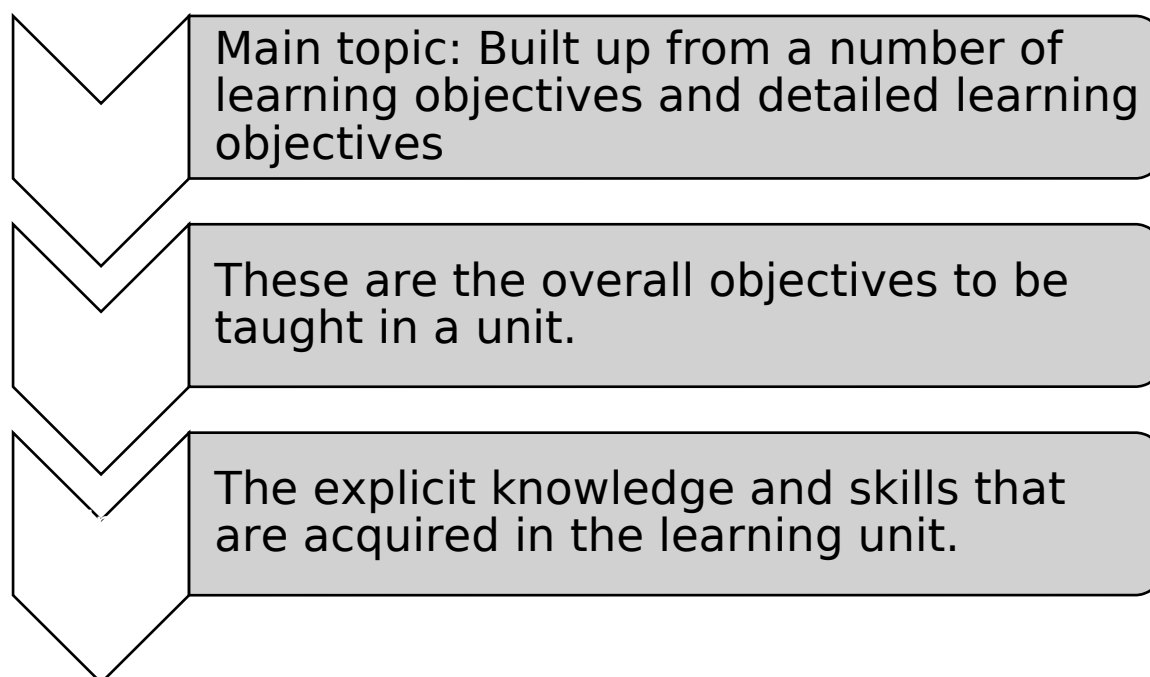*Project number: 2021-2-PL01-KA220-YOU-000049755*

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# 1 Introduction

This curriculum has been developed within the Erasmus+ project "#NEXT Generation Shapes the EU's Digital Society" (2022-2024). It serves to provide the framework for the associated learning material.

The curriculum is divided into 6 thematic learning units and has the following structure:

Main topic: Built up from a number of learning objectives and detailed learning objectives

These are the overall objectives to be taught in a unit.

The explicit knowledge and skills that are acquired in the learning unit.

The focus of this curriculum and learning material is on innovative ideas about ideas on how and why to trust AI and how to teach soft skills. The curriculum is designed to empower young people to teach 17–30-year-olds how to engage, why to engage, how to build trust, how to participate in shaping AI norms and legal structures, and how to recognise the importance of AI. However, the modules can be adapted or modified for other areas.

# 2 Curriculum

## Learning Unit 1: Basic information on AI (RO)

| Chapter | Learning objective | Fine Learning Objective |
|---|---|---|
| **AI, Definition, History and Current Trends** | To provide a clear definition of the concept of AI. | You learn and understand the definition and characteristics of AI. |
| | | You understand how the presence of AI can have a substantial impact on your life and others, given this digitalized era. |
| | | You become familiarized with the current trends surrounding AI. |
| **The role of AI for digital transformation and adaptation** | To define digital transformation and adaptation. | You learn what digital transformation and adaptation are and what these two concepts entail. |
| | | You understand how AI has contributed so far and will contribute to the digital transformation and adaptation of society. |
| | | You are able to understand how AI can improve society by accelerating digital transformation and adaptation and explain to others at your turn. |
| **AI, digital education, and social innovation** | To explore the areas of life that can benefit from AI's influence and can be innovated. | You become aware of the benefits that AI can bring to education, as one of the defining areas of life. |
| | | You have a more complex view about the relationship between AI and the generation of social innovation. |
| | | You learn about society can use social intelligence to have a solid social impact upon citizens. |

## Learning Unit 2: Engagement in AI (PL)

| Chapter | Learning objective | Fine Learning Objective |
|---|---|---|
| **The concept of Artificial Intelligence** | To familiarise learners with the general concept of artificial intelligence and its subfields. | You will learn and understand the concept of artificial intelligence and find out what its subfields are and what they contain. |
| | | You will learn the elements of the technical architecture of an artificial intelligence system and understand their importance. |
| | | You will learn the different stages of the workflow when preparing an artificial intelligence system. |
| **Types of artificial intelligence systems** | To familiarise learners with types of artificial intelligence systems. | You will become familiar with different types of artificial intelligence systems. |
| | | You will learn about the advantages and disadvantages of the various artificial intelligence systems, as well as their possible applications. |
| **Artificial intelligence tools and platforms for companies and individuals** | To expose learners to examples of artificial intelligence tools and platforms. | You will learn about popular artificial intelligence tools and platforms for companies and individuals. |
| | | You will learn a specific example of how one of the artificial intelligence tools can be used in practice. |
| **Implications for AI implementation** | To familiarise learners with the social, ethical and privacy implications of implementing artificial intelligence. | You will become familiar with the social, ethical and privacy considerations of artificial intelligence when it comes to its implementation. |

## Learning Unit 3: Process aspects (CZ)

| Chapter | Learning objective | Fine Learning Objective |
|---|---|---|
| **Obstacles and how to overcome them** | Motivation to implement artificial intelligence. | You will understand the basic benefits of implementing AI. |
| | | Understand the risks and concerns that AI brings and see real examples. |
| | | The student understands the importance of AI for his/her future and can name individual reasons to use AI. |
| **Legal aspects and ethics question of AI Introduction** | The chapter is devoted to ethics AI issues. | Student Understands the Pitfalls of AI. |
| | | The student is familiar with the basic issues of AI and its legal aspects. |

# Learning Unit 4: Teaching framework for soft skills training (AT)

| Chapter | Learning objective | Fine Learning Objective |
|---|---|---|
| **Soft skills and their importance** | Knowing what soft skills are and why they are important. | You know the limitations of AI and that machines cannot learn emotional intelligence. |
| | | You know that in addition to professional competence, soft skills are also enormously important in order to be able to work well together. |
| | | You know that soft skills are changeable and that you can still learn new things. |
| | | You know how AI and soft skills complement each other. |
| **Important soft skills for the AI profession** | Knowing the important soft skills that are necessary for dealing with AI. | You can describe why critical thinking is important for innovative approaches. |
| | | You can explain to what extent problem-solving skills need to be done by humans and cannot be done by AI. |
| | | You are able to explain why decision-making is particularly important for AI. |
| | | You are able to explain creativity in the context of AI. |
| **Methods of teaching soft skills to young people** | Knowing the teaching methods to bring soft skills closer to learners. | You know what possibilities there are to teach soft skills to learners. |
| | | You know an exercise to strengthen soft skills. |
| | | You know how to promote the learners' ability to work in a team. |
| | | You know methods to promote the creativity of the learners. |

## Learning Unit 5: Case studies to be used in teaching AI (TR)

| Chapter | Learning objective | Fine Learning Objective |
|---|---|---|
| **Smart tutoring systems and personalized learning** | Getting to know the possibilities of AI applications for various educational purposes. | To make the target audience realize that they can use AI applications in different ways in their own classrooms by presenting some examples of applications that can be used to make lessons more efficient with the development of technology and the use of artificial intelligence in different educational applications. |
| | | Sometimes the learning resources on certain topics may not be available in English or the Learners' native languages. In these case using AI translation may help to get the information to be familiar with the subject. |
| **Use of AI tools to make studying easier** | Getting familiar with artificial intelligence applications in special education. | By providing highly tailored instruction that takes into account each student's learning style and rate, AI and machine learning can significantly improve education. |
| | | Several AI interfaces which are used in studying as an eco-friendly tool across multiple smart devices, hence making way for illustrative videos, audios online assistance programs and more as an e-learning tool. |
| **Kids making AI** | Integrating Gamification, and Social Context in STEM Education. | Agricultural based AI challenge for fostered students to learn the process of creating machine learning models in the form of a game with the emphasis on the Four P's of Creative Learning (Projects, Passion, Play, and Peers). Providing an innovative education model that encourages the students to connect the emerging technological solutions such as AI with the pressing real-world problems in the playful environment. |
| **Optimizing classrooms for learning outcomes with AI** | Using AI for Classroom/Behavior Management. | ViewSonic's myViewBoard Sens makes it possible for teachers to receive real-time feedback about the behavior of students, such as participation and engagement levels. The AI-powered technology can also detect facial expressions — by safely creating an image that shows no features — or the posture and body language of students, and then interpret the mood within the classroom. As a result, at any given time, teachers can know the percentage of students in the classroom that appear to be happy, the percentage of students in the classroom that appear to be confused, and the |

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| | | percentage of students in the classroom who seem bored, or otherwise disinterested in the material that is being taught at that time.It also provides information about levels of wellness and engagement in the classroom. |
| | | Using AI systems for the ideal classroom conditions and automatically making adjustments to heating, air conditioning, lights, and electronic blinds. Optimizing learning outcomes by continually analyzing other classroom conditions. |
| **International Case Studies** | Knowing the different international applications of AI. | Using the platform Century in the classroom. The platform uses artificial intelligence, neuroscience and learning science to create personalized educational pathways for students. By using Artificial Intelligence, the platform learns how each student is learning and is providing them with nuggets of knowledge either to fill in the gaps or to challenge them in learning more. |
| | | Show the example of Chat GPT as a practical example of AI to teachers and learners in order to critically question it. They should have the opportunity to try out Chat GPT themselves and to question where the information comes from and whether what is written is actually valid. |
| | | The Mandarin Project combines cognitive, immersive technologies with game-playing elements to enable students to experience a cultural environment, practice daily tasks, and get help from intelligent agents. |
| | | Vertex Intelligence, a data science company, was able to help one of Indiana's top school districts develop a school schedule in response to the pandemic. The goal was to identify which strategies would minimize connectivity between students. Vertex Intelligence developed a system to mine district-wide class schedules to create a highly-accurate reconstruction of probable extended close contact networks of teachers and students within the school day |

This case study reports on a three-phase action research process in which information technology teachers delivered after-school activities focused on artificial intelligence during the COVID-19 transition to remote learning. Results suggest that teachers need to build collaborative environments to facilitate social engagement and help students balance academic and non-academic life.

# Learning Unit 6: Information on how to inform the public about AI (GR)

| Chapter | Learning objective | Fine Learning Objective |
|---|---|---|
| **Embracing AI in real life** | How AI is changing the world, impacting societies, organizations, work, and education. | AI applications such as reviewing and grading students' assignments are seen as useful and accurate. New technological systems have leveraged machine learning and adaptability, and curriculum and contents can be customized and personalized in line with students' needs. AI has taken big steps in education and learning with a new method of computing and advanced technology for using and integrating multimodal data.. |
| | | AI is influencing almost all areas of human life, but humans still hesitate to develop, deploy, and use it due to lack of trust. "Trustworthy AI" is a research area merging structuration theory and literature on institutional trust to improve user trust in AI systems, allowing humans to use them without fear. Some newspapers provide a survey on concepts of trustworthy AI and present trustworthy AI development guidelines to enhance the interactions between AI systems and humans during the AI system life cycle. |
| **The Impact of AI on Public Relations** | AI is becoming increasingly popular for Public Relations professionals, allowing them to create data-driven campaigns, automate tasks, analyse conversations, predict crises, and produce content. | AI is revolutionizing the Public Relations industry by providing human touch, face-to-face client interactions, networking, and insights. It also helps create campaigns that align with the interests and agendas of the target audience, boost efficiency, and increase productivity. |
| **AI in Media and Society** | Understanding of AI in all walks of life, with four strategic areas for research, education, and outreach: diversity and inclusion, AI literacy, AI workforce training, and AI-supported learning. | RAISE is an initiative to promote understanding of AI in all walks of life, and has identified four strategic areas for research, education, and outreach: diversity and inclusion, AI literacy in pre-K–12 education, AI workforce training, and AI-supported learning. To achieve AI literacy, there is a need to teach and explain to students at all levels what computers can and cannot do, how they are programmed, and how AI is different from writing a game program that plays tic-tac-toe. |

AI is used in many areas of our lives, such as social media, digital assistants, self-driving and parking vehicles, email communications, web searching, stores and services, and offline experiences. Smart Replies offer users a way to respond to emails with simple phrases like "Yes, I'm working on it." AI helps organize emails into categories, calculate traffic and construction, and find the quickest route to a destination.

Generative AI is the use of artificial intelligence models to generate new data from existing data, which requires educating ourselves, modelling effective usage, teaching potential benefits and pitfalls, and refining practice. To increase the sophistication of conversation with students, prioritize human skills, evolve signature CCGS experiences, and update policy.