Qualifications Reference Framework for Bachelor's degrees in ICT (EQF Level 6)

Dimension 1: Knowledge and understanding			
(Sub)descriptor	*Knowledge*	*Skills*	*Autonomy and Responsibility (Wider Competences)*
L6_1. Level descriptor Knowledge and understanding	*Demonstrate current understanding of core knowledge related to ICT.*	*Evidence the ability to contextualise, integrate and compare knowledge which is fundamental for ICT correctly applying the related terminology.*	*Manifest the ability to use, share and contribute to ICT-related knowledge and understanding in professional and societal settings.*
Subset 1 L6_1.1 STEM	Demonstrate knowledge in mathematics, physics and other STEM fields which are core to ICT.	Evidence the ability to contextualise, integrate and compare STEM knowledge in solving ICT-specific problems.	Manifest the ability to identify, describe and aggregate STEM methodological knowledge required to solve problems in the ICT field.
Subset 2 L6_1.2 ICT-related methodological-operational knowledge	Demonstrate specialised methodological-operational knowledge in ICT systems in order to be able to design, develop and implement them.	Evidence the ability to contextualise, integrate and compare knowledge in order to design, implement and operate computer systems and networks.	Manifest the ability to acquire, prepare and critically assess specific methodological-operational knowledge in ICT to identify, formulate and solve application problems, configure and manage ICT systems of different complexity.
Subset 3 L6_1.3 Legal aspects and organisational frameworks	Demonstrate understanding of legal aspects and institutional frameworks of diverse types of organisations, alongside ICT-related regulations.	Evidence the ability to apply knowledge of business processes and corresponding IS in ICT professional contexts.	Manifest the ability to implement a digital strategy for a project or an organisation, being capable of starting an operation in an inclusive and sustainable manner.

Dimension 2: Design, Development and Management of ICT Systems and related processes			
(Sub)descriptor	Knowledge	Skills	Autonomy and Responsibility (Wider Competences)
L6_2. Level descriptor Design, development and management of ICT systems and related processes	*Demonstrate current knowledge and understanding of the generic and ICT-related skills required to operate successfully in diversified contexts.*	*Evidence the ability to apply ICT-related and generic skills, which facilitate the development of critical thinking and evidence-based arguments and solving ICT related and societal problems.*	*Manifest an evidence-informed approach to managing technical/professional projects and activities, applying effectively ICT and societal related knowledge and skills, taking initiative, showing responsibility and leadership.*
Subset 1 L6_2.1 Methods and techniques in ICT	Demonstrate knowledge and understanding of design and implementation of ICT systems, considering the ethical use of data and information technologies.	Evidence the ability to apply knowledge for analysing, designing, implementing, testing, maintaining and integrating ICT systems in companies and other organisations.	Manifest the ability to use appropriate methods and techniques in a target-oriented way to effectively address ICT problems.
Subset 2 L6_2.2 Management of ICT processes	Demonstrate knowledge of the different aspects involved in processes of ICT systems and applications development.	Evidence the ability to manage ICT processes and solve related problems.	Manifest the ability to manage ICT solutions autonomously and responsibly.

Dimension 2: Design, Development and Management of ICT Systems and related processes

Subset 3 L6_2.3 Transformational impact of ICT	Demonstrate understanding of the transformational impact and implications of ICT in society, communities and work environments.	Evidence the ability to design and manage ICT solutions and systems which contribute to the needs and expectations of societies, communities, work environments, and individuals.	Manifest the ability to exercise initiative and acknowledge accountability for the executed ICT tasks.

Dimension 3: Informed Decision making and Work Ethics

(Sub)descriptor	Knowledge	Skills	Autonomy and Responsibility (Wider Competences)
L6_3. Level descriptor Informed decision making and work ethics	Demonstrate current knowledge and understanding of relevant theoretical frameworks, concepts and methodologies and/or practices to gather, evaluate and interpret ICT related and societal information, in an ethical, inclusive and sustainable manner.	Evidence the ability to apply appropriate theories, concepts, methodologies and/or practices and ICT related and generic skills and competences to analyse, synthesise, and make informed judgments while considering relevant social, cultural, scientific and ethical issues and challenges.	Manifest the ability to evaluate ICT and societal challenges and problems and to reflect on relevant knowledge in order to contribute to ethical decision-making, finding individual and collaborative ways to move forward, ensuring participation and inclusion.

Dimension 3: Informed Decision making and Work Ethics

Subset 1 L6_3.1 Reciprocal interactions between ICT and society	Demonstrate comprehensive understanding of the reciprocal interactions between ICT and society.	Evidence the ability to apply comprehensive understanding of the reciprocal interactions between ICT and society to planning and managing of ICT projects.	Manifest the ability to identify appropriate and relevant inclusive, sustainable and ethical approaches to responsively manage work contexts in the ICT subject area and interdisciplinary contexts.
Subset 2 L6_3.2 Professional, ethical and social responsibilities	Demonstrate awareness of the key aspects of professional, ethical and social responsibilities linked to management of ICT activities, in particular decision-making and judgement formulation, namely the roles and dynamics of collaboration.	Evidence the ability to make decisions and informed judgements on issues related to ICT, exercising professional, ethical and social responsibilities.	Demonstrate knowledge of the norms, regulations and codes of ICT practice, and reflect on professional, ethical and social responsibilities in taking decisions and formulating judgments, valuing diversity.
Subset 3 L6_3.3 Methodologies for ethically collecting and interpreting data	Demonstrate comprehensive understanding of methodologies for gathering, evaluating and interpreting data.	Evidence the ability to apply ethical principles of good practice to the retrieval, storage, analysis, management and transformation of data.	Manifest the ability to identify collaborative and proficient ways to interpret and transform data for addressing relevant societal and community challenges.

Dimension 4: Communication and Collaboration			
(Sub)descriptor	*Knowledge*	*Skills*	*Autonomy and Responsibility (Wider Competences)*
L6_4. Level descriptor Communication and collaboration	*Demonstrate current knowledge and understanding of the appropriate means, skills, attitudes, approaches and strategies to effectively communicate and collaborate, sharing ideas, challenges and solutions related to ICT for a variety of audiences.*	*Evidence effective communication of different types of information, expressing ideas, problems, challenges and possible solutions by applying technical and non-technical strategies, means and skills tailoring them to a variety of audiences including ICT specialists.*	*Manifest the ability to communicate effectively in predictable and unpredictable workplace and/or societal situations by listening to others and making convincing arguments in order to reach a common understanding of topics and activities involved.*
Subset 1 L6_4.1 Communication methods, tools and strategies	Demonstrate current knowledge and understanding of existing and emerging innovative communication methods, tools, strategies, and their limitations.	Evidence the ability to communicate information and express ideas, problems and solutions effectively, clearly and unambiguously, orally and in writing, including English or another relevant foreign language.	Manifest the ability to identify and justify appropriate and relevant communication and collaboration methods, tools, and strategies, both established and innovative ones.
Subset 2 L6_4.2 ICT-related terminology	Demonstrate current knowledge of the scientific and discipline-specific technical terminology in the ICT field, namely in international contexts.	Evidence the ability to describe activities and communicate their results to ICT specialist and non-specialist audiences in national and international contexts using appropriate communication, strategies, methods and tools.	Manifest the ability to communicate effectively in multicultural and multilingual environments, using evidence, to non-experts, peers and professionals about the application of ICT and its ethical and social impact.

Dimension 4: Communication and Collaboration			
Subset 3 L6_4.3 Team Management	Demonstrate current knowledge and understanding of responsibilities and methods to manage teams that may be composed of different disciplines and levels.	Evidence the ability to collaborate or cooperate effectively in national and international work contexts as leader or member of teams that may be composed of different disciplines and levels, contributing to meet deliverable, schedule and budget requirements.	Manifest the ability to identify and implement an appropriate strategy to lead a small or medium complexity project in the ICT-related field, applying inclusive and ethical principles of conduct.

Dimension 5: Professional Lifelong Learning and Continuous Personal Development			
(Sub)descriptor	*Knowledge*	*Skills*	*Autonomy and Responsibility (Wider Competences)*
L6_5. Level descriptor Professional lifelong learning and continuous personal development	*Demonstrate knowledge and understanding of the learning process and methods required for self-directed continuous learning and development in a variety of formats and settings.*	*Evidence learning skills and appropriate strategies to advance the continuous learning and development of self and others in order to reflect on, update, and upgrade knowledge, skill and competencies in ICT, and societal developments.*	*Manifest motivation and initiative to organise, manage, and evaluate learning and development activities for oneself and others in order to continually update and upgrade ICT related knowledge, skills, competences, taking into account societal developments.*

Dimension 5: Professional Lifelong Learning and Continuous Personal Development

Subset 1 L6_5.1 Professional self-assessment	Demonstrate knowledge and understanding of self-assessment methods needed for personal development.	Evidence the ability to continuously evaluate personal knowledge and skills.	Manifest the ability to conduct continuous self-assessing of own professional competences.
Subset 2 L6_5.2 Autonomous learning	Demonstrate knowledge and understanding of learning methods needed for personal development.	Evidence the ability to organise one's own study and/or learning process, using different kinds of learning methods and materials.	Manifest the ability to identify and justify appropriate learning strategies and methods in independent lifelong learning.
Subset 3 L6_5.3 Continuous personal development	Demonstrate advanced knowledge and understanding of learning methods necessary to follow developments in ICT subject area and within broader or multidisciplinary and societal contexts.	Evidence the ability to follow new developments in the ICT-related field, search for relevant information and seek appropriate support.	Manifest the ability to undertake further studies in emerging technologies in ICT also within trans- or multidisciplinary contexts.