European Software
Skills Alliance.

Subject-Specific Criteria for the Accreditation of Learning Programme for Software Professionals

ESSA BOOKLET

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About ESSA

The European Software Skills Alliance (ESSA) is a four-year transnational project funded under the EU's Erasmus+ programme. It ensures the skills needs of the rapidly evolving Software sector can be met — today and tomorrow.

ESSA provides current and future software professionals, learning providers and organisations with software needs with the educational and training instruments they need to meet the demand for software skills in Europe.

ESSA will develop a European Software Skills Strategy and learning programmes for Europe. It will address skill mismatches and shortages by analysing the sector in depth and delivering future-proof curricula and mobility solutions; tailored to the European software sector's reality and needs.

Project partners

The ESSA consortium is led by DIGITALEUROPE. It is composed of academic and non-academic partners from the education, training, and software sectors.

View all project partners: ESSA Partners | ESSA Associated Partners

Table of Contents

1 Background 6
2 Function 6
3 Application 7
4 PLOs of learning programmes for software professionals at EQF levels 4/5–7 8
4.1 PLOs for Software Developers (EQF levels 4/5–7) 8
4.1.1 Qualification Profile 8
4.1.2 PLOs for Software Developers 9
4.2 PLOs for DevOps Experts (EQF levels 6–7) 11
4.2.1 Qualification Profile 11
4.2.2 PLOs for DevOps Experts 12
4.3 PLOs for Solution Designers (EQF levels 6–7) 13
4.3.1 Qualification Profile 13
4.3.2 PLOs for Solution Designers 14
4.4 PLOs for Technical (Software) Specialists (EQF level 4/5) 15
4.4.1 Qualification Profile 15
4.4.2 PLOs for Technical (Software) Specialists 16
4.5 PLOs for Test Specialists (EQF level 4/5) 17
4.5.1 Qualification Profile 17
4.5.2 PLOs for Test Specialists 17

List of abbreviations and acronyms

Abbreviation	Term
e-CF	e-Competence Framework
EQA	External quality assurance
EQF	European Qualifications Framework for Lifelong Learning
ESSA	European Software Skills Alliance
HEI	Higher Education Institution
ICT	Information and Communication Technology
LO	Learning Outcome
PLO	Programme Learning Outcome
SSC	Subject-Specific Criteria

Subject-Specific Criteria

For the Accreditation of Learning Programmes for Software Professionals
(Adopted: 26/01/2022)

1 Background

ESSA is a four-year project funded by the European Commission under the Erasmus+ Programme. ESSA aims to skill, upskill, and reskill individuals into high-demand software roles across Europe. It delivers a European software skills strategy to address skill mismatches and shortages in the software sector and future-focused training, qualifications and mobility solutions geared towards the realities and needs of the sector.

ESSA leverages the European e-Competence Framework (e-CF), a widely recognised standard for IT professionals, as a common reference point to identify the most relevant e-competences for software professionals, the most needed software role profiles (i.e.., Software Developer, DevOps Expert, Test Specialist, Technical (software) Specialist, and Solution Designer) and link them to the European Qualification Framework (EQF).

In the frame of ESSA, learning programmes will be developed and accredited. The accreditation will be based on the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and will take into consideration the learning outcomes and educational profiles defined by the partners of the ESSA project. For this purpose, ASIIN Consult together with the ESSA partners developed the following Subject-Specific Criteria (SSC) for the external evaluation and accreditation of training programmes of EQF levels 4/5–7.

2 Function

The SSC are based on the premise that the intended learning outcomes and respective training profiles are formulated by educational providers in their own responsibility. They form the central yardstick for the assessment of the education programmes submitted for accreditation.

The SSC are to be understood as best practice in higher education and/or vocational education of specific Information and Communications Technology (ICT) roles in the professional community. The roles have been developed in cooperation between academia and professional practice and take into account the labour market demand to ensure future-oriented training quality. The expectations outlined in the SSC for the achievement of learning outcomes and competency profiles are not static. Rather, they are subject to a constant examination in close cooperation with organisations of the specialised Community, including professional associations and federations of professional practice.

In their function in the accreditation procedure, the SSC also represent a professionally elaborated basis for discussion of experts and educational institutions. They thus make an

important contribution to the comparability of learning programmes in the field at EQF levels 4/5–7 and related external quality assurance (EQA) procedures, since it should not be left to the opinion of individual experts, which quality parameters are to be considered standard in the assessment of learning programmes. Instead, the SSC name those abilities, skills and competences, which may typically be considered "state of the art" in a subject area, but which can always be exceeded or varied depending on the objectives of an educational institution.

3 Application

The SSC are aligned to the European e-Competence Framework (e-CF) and the European Qualifications Framework for Lifelong Learning (EQF) in terms of competences and proficiency levels. They are to be used for the assessment of learning programmes in selected ICT fields and professions. In combination with the accompanying "General accreditation criteria" elaborated in the ESSA project framework, they provide the basis for an informed accreditation decision of the educational programme(s) under review.

The core of this document consists in the definition of the major programme learning outcomes (PLO) for each of the selected ICT professional roles. These PLO are to be achieved by learners in learning programmes on EQF levels 4/5-7 in order for these programmes to be eligible for accreditation by a competent body validating their quality in terms of teaching and learning. Consequently, the SSC make use of the respective educational profiles developed and recognised for selected ICT roles by a broad alliance of academic and professional institutions within the ESSA project framework. Reference is made to the PLO characteristic for each profile and differentiated according to the relevant proficiency level.

It falls under the responsibility/autonomy of each educational provider to specify the learning outcomes on unit level and the corresponding content it deems adequate for their achievement. Likewise, it is up to the responsible lecturers/trainers to decide on the educational methods for delivering the teaching as well as the types of assessment for monitoring the study progress. This fundamental principle of academic freedom applies as far as content, didactical methods, and assessment forms overall contribute to the achievement of the defined PLO. In that sense, the list of *unit* learning outcomes and unit-related assessment forms (defined and listed in the ESSA educational profiles) are considered as points of reference, which programme coordinators and expert groups alike will use in an accreditation procedure and as an additional information source for their assessment in the auditing process.

4 PLOs of learning programmes for software professionals at EQF levels 4/5–7

Following an outcome-oriented approach, this section entails the requirements for software professionals from the perspective of working life. The focus of these SSC is clearly on the description of the core competences that are to be acquired in specified roles, in which software professionals with different qualification profiles are looked for. Within this framework, the SSC aim to exemplary lay out the characteristic competence profile of some major types of software specialists, namely:

Role profile	EQF level	Quick link
Software Developer	4/5-7	Section 4.1
DevOps Expert	6-7	Section 4.2
Solution Designer	6-7	Section 4.3
Technical (Software) Specialist	4/5	Section 4.4
Test Specialist	4/5	Section 4.5

4.1 PLOs for Software Developers (EQF levels 4/5–7)

4.1.1 Qualification Profile

The present profile description refers to the educational profiles as defined within the ESSA framework by the consortium partners.

Software developers accordingly build and create computer programmes, including mobile applications, desktop applications, hybrid applications, or even sometimes operating systems. They may also be involved in other aspects of software development, including identifying user needs, software design, testing new software, software implementation, and making changes to the system. Software developers play a critical role in many different professional fields such as computer systems, manufacturing, finance, and software publishing. Referencing the competence profile to the different qualification levels, the following specifications are being made:

Junior developers (EQF 4/5) support all aspects of software development processes: development, testing, implementing, and maintaining of basic software solutions. They master the codebase, attend design meetings, write basic code, and fix bugs. They have an inquiring attitude, oversee the coherence, and work in a structured manner within clear boundaries.

Software developers at Bachelor level (EQF 6) develop, test, implement, and maintain basic software solutions in accordance with customer needs. They may be also involved in the design of these applications. They account for development activities of others.

Software developers at Master level (EQF 7) develop, test, implement, and maintain advanced/ innovative software solutions in accordance with customer needs. They may be also involved in the design of these applications. Developers at Master level have a deeper knowledge of one or more technologies, e.g., mobile computing, cloud technologies, Internet of Things, artificial intelligence, and blockchain. They also oversee development and integration processes and projects and may initiate, plan, and coordinate these processes and projects.

4.1.2 PLOs for Software Developers

Competence [e-CF][1]	**Programme Learning Outcomes (EQF / e-CF levels)**		
	Junior Developer (EQF 4/5 / e-2)	***Software Developer (EQF 6 / e-3)***	***Software Developer (EQF 7 / e-4)***
1. Application Design [A.6.]	**Learners are able** → to interpret a design for a software application or component.	**Learners are able** → to specify a design for a software application or component that meets requirements; → to organise the planning of the design of an application or software component.	**Learners are able** → to specify a design for an advanced/ innovative solution, software application or component.
2. Application Development [B.1.]	**Learners are able** → to systematically develop a simple software application or component; → to propose modifications to an existing solution; → to document the development activities.	**Learners are able** →to creatively develop software applications and components, by interpreting the software design; → to optimise the application development.	**Learners are able** → to creatively develop and validate an advanced/ innovative solution, software application or component.
3. Component Integration [B.2.]	**Learners are able** → to systematically identify the compatibility of software specifications; → to integrate efficiently a software application or component into an existing system; → to document the installation activities.		**Learners are able** → to provide expert guidance or advice on integration of an advanced/ innovative solution, software application or component.

[1] The framework references 41 competences in altogether five competence areas as applied at the Information and Communication Technology (ICT) workplace: *Plan* (A.1.–A.10.), *Build* (B.1—B.6.), *Run* (C.1.–C.5.), *Enable* (D.1.-D.11.) and *Manage* (E.1.–E.8.).

4. Testing [B.3.]	**Learners are able** →to test a software application or component through organizing test programmes and building scripts to identify potential vulnerabilities; →to document test outcomes.		**Learners are able** →to exploit wide ranging specialist knowledge to create a process for the entire testing activity, including the establishment of internal standard of practices; →to provide expert guidance or advice on testing an advanced/ innovative solution, software application or component.
5. Documentation Production [B.5.]	**Learners are able** →to draft technical documentation and ensure that it is complete, correct and provided in a suitable place and format.	**Learners are able** →to produce different technical documents, taking into account the needs of different populations and legal requirements.	
6. Problem management [C.4]	**Learners are able** →to act systematically in handling incidents and problems through identifying and classifying incident types and service interruptions; →to record incidents cataloguing them by symptom and resolution.	**Learners are able [capability]** →to systematically resolve incidents and problems; →to optimise system performance; →to appraise the impact of a failure on the business.	**Learners are able** →to provide leadership and take over accountability for the entire problem management process; →to schedule and ensure well trained human resources, tools, and diagnostic equipment are available to meet emergency incidents.
7. New Technology	**Learners are able** →to apply basic methods, techniques and tools related to a new technology.	**Learners are able [capability]** →to consider and apply methods, techniques and tools related to a new technology; →to consider possible societal, environmental, and ethical issues related to the application of a new technology.	**Learners are able** →to give advice on the application of a new technology; →to critically analyse a new technology.
8. Profession related competences	**Learners are able** →to work in project settings and apply project management methods and tools; →to apply and report on measures, methods, tools and techniques related to security; →to consider basic ethical issues.	**Learners are able [capability]** →to manage a project and select appropriate project management methods and tools; →to consider ethical issues and apply their considerations in professional contexts and activities; →to build and communicate an opinion based on considerations of relevant social, professional, scientific and ethical aspects.	**Learners are able** →to lead a project; →to continuously consider ethical issues and apply these considerations in professional contexts and activities; →to build and communicate an opinion based on incomplete and or limited information taking into account social, scientific and ethical responsibilities related to the application of own knowledge and opinions.
9. Interpersonal and personal soft competences	**Learners are able** →to work together with others in a team; →to communicate with peers, colleagues, supervisors and/or relevant others, appropriately to the context; →to master the English language at level B2; →to understand the main ideas of complex text on both concrete and abstract topics, including technical	**Learners are able** →to manage teamwork processes and facilitate collaboration to reach common objectives; →to communicate with peers, colleagues, supervisors and/or relevant others, specialists and non-specialists, clients, as well as to the scientific and professional community; →to master the English language at level B2 and understand the main ideas of complex text on both concrete and abstract topics, including	**Learners are able** →to critically apply / translate / interpret results of research (possibly executed by others) to the own context (the occupation and/or knowledge domain); →to execute detailed scientific research; →to realise personal development, mostly autonomous and based on intrinsic motivation.

	discussions in his/her field of specialisation; →to realise personal development on request, where necessary with support.	technical discussions in his/her field of specialisation; →to realise personal development on one's own initiative.	
10. Functioning in organisations	**Learners are able** →to work in an organisational context under specific direction with limited autonomy and responsibility.	**Learners are able** →to work in an organisational context under specific direction with limited autonomy and responsibility.	**Learners are able** →to work in an organisational context under broad direction, performing coordinating activities, with at least three years of working experience at an intermediate or senior level.

4.2 PLOs for DevOps Experts (EQF levels 6–7)

4.2.1 Qualification Profile

The present profile description refers to the respective educational profiles as defined within the ESSA framework by the consortium partners.

DevOps experts create an efficient cooperation and workflow between software development and IT operations to accelerate delivery and enhance quality of solutions and services. In this way, time is reduced between committing a change to a system and the change being placed into the production environment. DevOps experts strive for a continuous deployment and apply specific methods, practices, and tools, such as agile ways of working, shared ownership, and workflow automation.

Referencing the competence profile to the different qualification levels, the following specifications are being made:

DevOps experts at Bachelor level (EQF 6) develop, test, and deploy solutions in close collaboration with the operations team and take into account the multi-disciplinarity of the context. They account for others' development activities.

DevOps experts at Master level (EQF 7) create and manage the integration and testing lifecycle of hardware, software, or sub-system components into an existing or a new system.

4.2.2 PLOs for DevOps Experts

Competence [e-CF]	Programme Learning Outcomes (EQF / e-CF levels)	
	Junior DevOps expert (EQF 6 / e-3)	***DevOps Expert (EQF 7 / e-4)***
1. Application Development [B.1.]	**Learners are able** →to creatively develop software applications and components, by interpreting the software design; →to optimise the application development, maintenance and performance by employing design patterns and by reusing proved solutions.	
2. Component Integration [B.2]	**Learners are able** →to integrate efficiently a software application or component into an existing system, compliant with standards and procedures; →to document the installation activities	**Learners are able** →to provide expert guidance or advice on integration of an advanced / innovative solution, software application or component.
3. Testing [B.3.]	**Learners are able** →to construct and execute tests for solutions, software applications or components; →to document test outcomes to provide input to subsequent process owners such as designers, users or maintainers.	**Learners are able** →to exploit wide ranging specialist knowledge to create a process for the entire testing activity, including the establishment of internal standard of practices; →to provide expert guidance or advice on testing of an advanced / innovative solution, software application or component.
4. Solution Deployment [B.4.]	**Learners are able** →to implement solutions and services on the basis of comprehensive communication with stakeholders; →to complete release documentation.	
5. ICT Systems Engineering [B.6.]	**Learners are able** →to create a system infrastructure that meets requirements; →to ensure interoperability of system components.	**Learners are able** →to propose and design a cohesive and efficient system infrastructure.
6. Change Support [C.2.]	**Learners are able** →to oversee and control system changes (e.g., functional updates, software or hardware additions and maintenance activities) in order to ensure the integrity of the system; →to take into account procedures, requirements and restrictions.	
7. New Technology	**Learners are able** →to apply methods, techniques and tools related to a new technology.	**Learners are able** →to give advice on the application of a new technology; →to critically analyse a new technology.
8. Profession related competences	**Learners are able** →to manage a project and select appropriate project management methods and tools; →to consider ethical issues and apply their considerations in professional contexts and activities; →to build and communicate an opinion based on considerations of relevant social, professional, scientific and ethical aspects.	**Learners are able** →to lead a project; →to continuously consider ethical issues and apply these considerations in professional contexts and activities; →to build and communicate an opinion based on incomplete and or limited information taking into account social, scientific and ethical responsibilities related to the application of own knowledge and opinions.
9. Interpersonal and personal soft competences	**Learners are able** →to manage teamwork processes and facilitate collaboration to reach common objectives;	**Learners are able** →to critically apply / translate / interpret results of research (possibly executed by others) to the own context (the occupation and/or knowledge domain); →to execute detailed scientific research;

	→to communicate with peers, colleagues, supervisors and/or relevant others, specialists and non-specialists, clients, as well as to the scientific and professional community; →to master the English language at level B2 and understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation; →to realise personal development on one's own initiative.	→to realise personal development, mostly autonomous and based on intrinsic motivation.
10. Functioning in organisations	**Learners are able** →to work in an organisational context under specific direction with limited autonomy and responsibility.	**Learners are able** →to work in an organisational context under broad direction, performing coordinating activities, with at adequate working experience at an intermediate or senior level (three years at a minimum).

4.3 PLOs for Solution Designers (EQF levels 6–7)

4.3.1 Qualification Profile

The following profile description refers to the respective educational profiles as defined within the ESSA framework by the consortium partners.

Solution designers specify appropriate IT solutions for a specific business or organisation context, based on a thorough understanding of the business, processes, technology, and needs and requirements of the customer, thus providing the translation of business requirements into IT solutions. Solution designers do this in such a way that these solutions fit well in the landscape of the business (in line with e.g., strategy, mission, organisation, needs, requirements) as well as ICT. Solution designers are well-informed about the latest developments and trends in the IT field, as well as the services the market offers. They operate in between business and IT. Referencing the competence profile to the different qualification levels, the following specifications are being made:

Solution designers at Bachelor level (EQF 6) are aware of the interests and needs of different stakeholders and carefully balance these in the proposal for an IT solution. They communicate and cooperate with customers, users, and specialists, supporting them and guarding the IT solution in the different stages of development and implementation.

Solution designers at Master level (EQF 7) oversee the bigger picture of business, market and technology. They creatively develop innovative solutions, incorporating latest trends and technologies if necessary and applicable. They combine a strategic vision with optimisation of resources. They have an overview of different processes and projects and may initiate, plan and coordinate these processes and projects.

4.3.2 PLOs for Solution Designers

Competence [e-CF]	Programme Learning Outcomes (EQF / e-CF levels)	
	Junior Solution Designer (EQF 6 / e-3)	***Solution Designer (EQF 7 / e-4)***
1. Needs identification [D.11.]	**Learners are able** →to translate customer needs into requirements; →to propose different ICT solutions.	**Learners are able** →to exploit a wide-ranging specialist knowledge of the customers' business; →to propose different creative solutions for complex problems and →to advise the customer.
2. Architecture Design [A.5.]	**Learners are able** →to identify and align relevant ICT technology and specifications.	**Learners are able** →to propose a coherent architecture design; →to specify a structured approach to implement an ICT solution.
3. Application Design [A.6.]	**Learners are able** →to specify a design for a software application or component that meets requirements (customer needs); →to organize the planning of the design of an application or software component; →to ensure the application is correctly integrated within a complex environment.	
4. Innovating [A.9.]	**Learners are able** →to propose ideas on the application of novel technologies in a practical context; →to document the idea generation process.	**Learners are able** →to propose and evaluate creative ideas on the application of novel technologies; →to develop a product innovation plan; →to design a Proof of Concept.
5. Risk management [E.3.]	**Learners are able** →to apply risk management principles; →to perform common risk analysis of ICT solutions and services; →to propose actions to handle risks.	
6. Sustainability management [A.8.]	Learners are able →to analyse different IT solutions in terms of sustainability; →to recommend sustainable options.	
7. Information and knowledge management [D.10.]	**Learners are able** →to identify and analyse relevant business processes and collect related information and knowledge; →to propose practices and means for an effective use of this information and knowledge.	
8. New Technology	**Learners are able** →to apply methods, techniques and tools related to a new technology.	**Learners are able** →to give advice on the application of a new technology; →to critically analyse a new technology.

9. Profession related competences	**Learners are able** →to manage a project and select appropriate project management methods and tools; →to consider ethical issues and apply their considerations in professional contexts and activities; →to build and communicate an opinion based on considerations of relevant social, professional, scientific and ethical aspects.	**Learners are able** →to lead a project; →to continuously consider ethical issues and apply these considerations in professional contexts and activities; →to build and communicate an opinion based on incomplete and or limited information taking into account social, scientific and ethical responsibilities related to the application of own knowledge and opinions.
10. Interpersonal and personal soft competences	**Learners are able** →to manage teamwork processes and facilitate collaboration to reach common objectives; →to communicate with peers, colleagues, supervisors and/or relevant others, specialists and non-specialists, clients, as well as to the scientific and professional community; →to master the English language at level B2 and understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation; →to realise personal development on one's own initiative.	**Learners are able** →to critically apply / translate / interpret results of research (possibly executed by others) to the own context (the occupation and/or knowledge domain); →to execute detailed scientific research; →to realise personal development, mostly autonomous and based on intrinsic motivation.
11. Functioning in organisations	**Learners are able** →to work in an organisational context under specific direction with limited autonomy and responsibility.	**Learners are able** →to work in an organisational context under broad direction, performing coordinating activities, with at least three years of working experience at an intermediate or senior level.

4.4 PLOs for Technical (Software) Specialists (EQF level 4/5)

4.4.1 Qualification Profile

The following profile description refers to the respective educational profiles as defined within the ESSA framework by the consortium partners.

Technical specialists deploy, support, maintain and repair software (mobile, desktop or hybrid applications) and corresponding infrastructure in a timely and effective way to ensure optimal system performance and superior customer satisfaction. They are an important link between end users, software developers and infrastructure admins in systems deployment, incident, and problem management.

Technical (software) specialists at entry-level (EQF 4/5) assist software systems users and software and hardware deployers with all aspects of software application implementation, support, and maintenance. Primarily, they provide user support and incident management for the software system and corresponding technology environment. They have an inquiring attitude, oversee the coherence, and work in a structured manner within clear boundaries.

4.4.2 PLOs for Technical (Software) Specialists

Competence [e-CF]	Programme Learning Outcomes (EQF / e-CF level)
	Technical Software Specialists (EQF 5 / e-2)
1. Problem Management [C.4.]	**Learners are able** →to act systematically in handling incidents and problems through identifying and classifying incident types and service interruptions; →to record incidents cataloguing them by symptom and resolution.
2. Systems Management [C.5.]	**Learners are able** →to fulfil the organisation's operational needs related to the IT system and services; →to ensure a proper and secure operation.
3. Service Delivery [C.3.]	**Learners are able** →to monitor and analyse service delivery; →to notify potential service level failures and security risks; →to recommend actions to improve the service reliability.
4. Solution Deployment [B.4.]	**Learners are able** →to implement (parts of) a solution or software application or component; →to provide (part of) release documentation.
5. User Support [C.1.]	**Learners are able** →to address user problems.
6. Change Support [C.2.]	**Learners are able** →to act systematically to minimise the impact of changes to a service or software application or component.
7. Risk Management [E.3.]	**Learners are able** →to apply risk management principles; →to perform a common risk analysis of ICT solutions and services; →to propose actions to handle risks.
8. ICT Quality Management [E.6.]	**Learners are able** →to monitor compliance with quality measures (the organizations quality policy).
9. New Technology	**Learners are able** →to apply basic methods, techniques and tools related to a new technology.
10. Profession related competences	**Learners are able** →to work in project settings and apply project management methods and tools; →to apply and report on measures, methods, tools and techniques related to security; →to consider basic ethical issues.
11. Interpersonal and personal soft competences	**Learners are able** →to work together with others in a team; →to communicate with peers, colleagues, supervisors and/or relevant others, appropriately to the context; →to master the English language at level B2 and understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation; →to realise personal development on request, where necessary with support.
12. Functioning in organisations	**Learners are able** →to work in an organisational context under specific direction with limited autonomy and responsibility.

4.5 PLOs for Test Specialists (EQF level 4/5)

4.5.1 Qualification Profile

The following profile description refers to the respective educational profiles as defined within the ESSA framework by the consortium partners.

Test specialists ensure that software applications and solutions comply with technical, and user needs and specifications. They design, execute, and record tests for software applications or services and report the results in a well-structured manner. They also interact with different stakeholders (e.g., developers, and users) and knows how to communicate their findings effectively.

Test specialists at entry-level (EQF 4/5) make test scenarios for testing the software. They choose an appropriate test form, such as a unit test, integration test, acceptance test, as well as an appropriate test methodology. They determine what is needed for testing, such as the test environment, resources, and test data. They also perform the test(s), interpret the findings, and draw conclusions. During the process, they proactively communicate with the parties involved. They have an inquiring attitude, oversee the coherence, and work in a structured manner within clear boundaries.

4.5.2 PLOs for Test Specialists

Competence [e-CF]	**Programme Learning Outcomes (EQF / e-CF levels)**
	Test Specialists (EQF 5 / e-2)
1. Component Integration [B.2.]	**Learners are able** → to systematically identify the compatibility of software specifications; → to integrate efficiently a software application or component into an existing system; → to document the installation activities.
2. Testing [B.3.]	**Learners are able** → to test a software application or component through organizing test programmes and building scripts to identify potential vulnerabilities; → to document test outcomes.
3. Solution Deployment [B.4.]	**Learners are able** → to identify failing components and carry out a failure analysis; → to implement (parts of) a solution or software application or component; → to provide (part of) release documentation.
4. Documentation Production [B.5.]	**Learners are able** → to draft technical documentation and ensure that it is complete, correct and provided in a suitable place and format.
5. Risk Management [E.3.]	**Learners are able**

	→to apply risk management principles to perform common risk analysis of ICT solutions and services; →to propose actions to handle risks.
6. New Technology	**Learners are able** →to apply basic methods, techniques and tools related to a new technology.
7. Profession related competences	**Learners are able** →to work in project settings and apply project management methods and tools; →to apply and report on measures, methods, tools and techniques related to security; →to consider basic ethical issues.
8. Interpersonal and personal soft competences	**Learners are able** →to work together with others in a team; →to communicate with peers, colleagues, supervisors and/or relevant others, appropriately to the context; →to master the English language at level B2 and understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation; →to realise personal development on request, where necessary with support.
9. Functioning in organisations	**Learners are able** →to work in an organisational context under specific direction with limited autonomy and responsibility.

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