

Joint action plan for micro-credentials

Task T6.1 HEROES Work Package 6
"Joint lifelong learning programme and employability (HEROES4EVER)"

HEROES

Higher Education for Resilience-Oriented and Empowered Societies
ERASM US-EDU- 2024-EUR-UNIV Partnerships for Excellence – European Universities



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This publication is a deliverable in the HEROES project and the aim is to develop a joint action plan for micro-credentials to guide implementation of micro-credentials aligned with the European Alliance in the HEROES Alliance related to WP6.

As part of the Joint Action Plan for Micro-Credentials (Deliverable D6.1) in the HEROES project, we have structured our submission into three key documents to ensure clarity, accessibility, and practical implementation. These documents serve distinct but interconnected purposes, providing both strategic direction and hands-on guidance for different stakeholder groups, including educators, professional staff, and administrative personnel. The actions plan as a HEROES delivery D6.1 consists of the following documents:

1. Joint action plan for micro-credentials

A comprehensive document that outlines the framework, policies, and strategic considerations for implementing micro-credentials within the HEROES Alliance.

2. Interactive flow chart

A visual guide to the micro-credential process, from enrolment to issuance. Designed to serve as a guidance for educators, professional staff, and administrators.

3. Template for development, planning and execution of micro-credentials and standalone courses within the HEROES alliance

A practical tool designed to assist partner institutions in structuring, documenting, and standardizing micro-credential offerings.

Together, these three components create a comprehensive, structured, and accessible action plan for implementation of micro-credentials within the HEROES alliance.

The action plan is designed with the understanding that the implementation of micro-credentials complies with the different national legislation and regulatory frameworks of the organizing institutions. In addition, quality assurance, consistent with the HEROES action plan, is ensured through the internal quality processes of each institution, as enrolment, assessment and issuing of certificates takes place within a partner institution that applies its own established national and institutional quality standards as an accredited institution.

This approach reflects the principle of mutual trust that the HEROES alliance is built, grounded in a shared understanding of each partner's internal QA systems and in the recognition of each institution's autonomy and quality assurance mechanisms.

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1. Introduction: A shared framework in the HEROES alliance

This action plan has been developed as a collective manual to support the design and delivery of high-quality micro-credentials across the HEROES Alliance. It is the product of ongoing collaboration and inter-institutional dialogue, where academic staff, administrators, and educational designers from all the partner institutions have worked together to define shared principles, clarify requirements, and create practical tools for implementation.

The manual is grounded in two core ambitions of the HEROES Alliance:

- To foster lifelong learning through internationally recognized, flexible learning opportunities

and;

- To support stackability and flexibility for the learner by making all course elements interoperable and transparent across institutional and national boundaries.

To achieve this, HEROES distinguishes between different learning offerings:

Standalone courses: A standalone course is a self-contained unit of learning within the HEROES ecosystem. It consists of structured content and learning resources but does not include a formal assessment. Standalone courses can be taken independently for personal learning or as part of a learning pathway - which may consist of one or more standalone courses - designed to prepare the learner for an assessment leading to a micro-credential.

When completed without assessment, standalone courses remain non-credit-bearing and are recognised through a digital participation or progression badge. They provide educational offerings in HEROES that can be completed without progressing to formal certification.

Learning pathway: A learning pathway is a curated route - which may consist of one or more standalone courses - intended to prepare learners for the assessment leading to a single micro-credential.

Micro-credential: A micro-credential is the verified learning achievement or competence obtained through successful completion of a validated assessment that meets defined standards. It documents specific competences aligned with learning outcomes and quality assurance requirements.

A micro-credential, in the HEROES Alliance, is issued as a credit-bearing certificate (paper or digital) that meets regulatory requirements for formal recognition.

In the HEROES Alliance, learners are not required to follow the recommended learning pathway or complete the associated standalone course content before attempting the assessment. They may proceed directly if they already possess the relevant competences. However, in specific cases there may be a strong pedagogical or quality assurance argument for requiring prior learning, which can justify the definition of a fixed learning pathway. Recognition is based on evidence of learning, not participation in a predefined path. In general, a micro-credential may carry academic or professional weight and can contribute to formal progression (e.g., credit transfer).

Micro-credential pathway: A micro-credential pathway is a planned and progressive route through multiple micro-credentials, designed to build broader learning outcomes, professional qualifications, or targeted skill sets. This modular structure allows learners to combine several micro-credentials toward a larger qualification, supporting flexible and stackable learning progression. In HEROES, a micro-credential pathway enables learners to combine, or “stack”, previously earned micro-credentials to progress toward broader qualifications, professional certifications, or targeted skill sets.

Definitions on badges and certificates

Badges and certificates are formats used to represent and communicate achievements. In HEROES, we have the following distinction:

Badge: Always digital. Contains embedded metadata for automated verification within the heroes.eu. In HEROES, badges represent **non-credit** achievements such as completion of a standalone course without assessment, which are recognised through participation/progression badges.

Certificate: A certificate can be physical (paper) or digital (usually a static PDF). It serves as formal proof of a credit-bearing achievement. Standard certificates (e.g. PDF) do not contain embedded metadata, which means they cannot be automatically verified or machine-read across systems; their authenticity and validity rely on manual verification by the issuing institution. With emerging technical solutions (e.g., eIDAS seals or Europass/EDC), certificates can also be issued in enhanced digital formats that include metadata and enable automated verification, although this is not yet the common practice.

In HEROES, a certificate is simply the format used to represent and communicate a credential, like the difference between having a driving license (the right to drive = the credential) and the physical plastic card (the representation of that credential).

Learners who follow the learning pathway - by completing a standalone course and then, passing the related assessment - will first receive a non-credit participation/progression badge for the standalone course, and then, after successful completion of the assessment, a credit-bearing certificate for the awarded micro-credential.

Learners who go directly to the assessment will only receive the credit-bearing certificate if they pass.

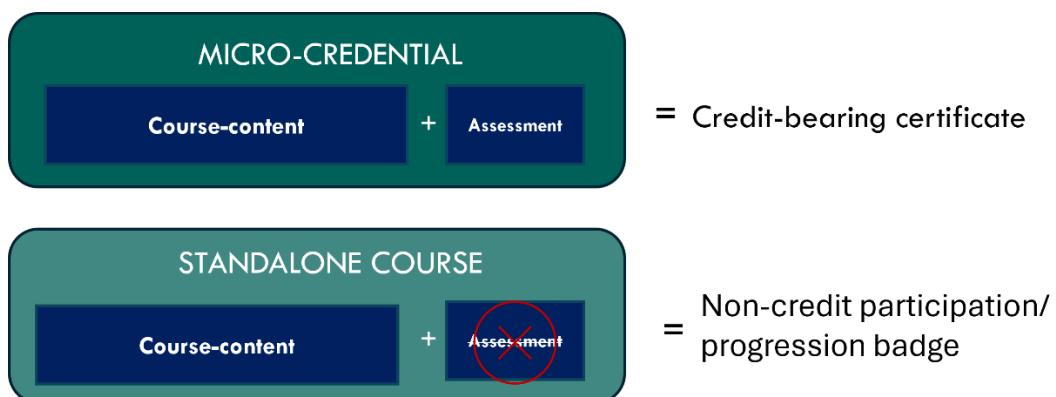


Figure 1: Illustration of credit-bearing certificate vs. non-credit participation/progression badge

1.1. Defining a micro-credential

The European Commission defines a micro-credential as:

"(...) a proof of the learning outcomes that a learner has acquired following a short learning experience. These learning outcomes have been assessed against transparent standards." (The Council of the European Union, 2022, s. 5).

Furthermore: "The proof is contained in a certified document that lists the name of the holder, the achieved learning outcomes, the assessment method, the awarding body and, where applicable, the qualifications

framework level and the credits gained. Micro-credentials are owned by the learner, can be shared, are portable and may be combined into larger credentials or qualifications. They are underpinned by quality assurance following agreed standards." (The Council of the European Union, 2022, s. 5) .

While the EU's definition outlines the core elements of a micro-credential, it does not prescribe a fixed ECTS value. In practice, however, micro-credentials are rarely described as being below 1 ECTS, and their upper boundary is commonly referred to as "*less than a full degree*" (The Council of the European Union, 2022, s. 10). The larger a micro-credential becomes, the less flexible it typically is - making size and scope a critical design consideration.

An analysis of regulatory frameworks across the HEROES partner institutions indicates that micro-credentials between 3 and 20 ECTS are broadly compatible with all participating universities' national legislation. Designing MCs within this range ensures that they can be formally recognised and integrated across the alliance.

That said, HEROES also encourages the development of smaller micro-credentials in the range of 1–3 ECTS. These shorter units play a key role in building a rich ecosystem of modular, high-quality learning content that can later be stacked into larger micro-credentials - particularly those falling within the 3–20 ECTS band that is widely accepted across institutions. When designing micro-credentials that fall outside this range (either below 3 ECTS or above 20), course developers should be aware that recognition may vary depending on national and institutional frameworks.

It has been agreed within the HEROES Alliance that a micro-credential can never be less than 1.0 ECTS. In addition, it has been agreed that the ECTS calculation for a micro-credential must always be dividable into whole or half points (i.e. .0 or .5). It is recommended to offer Micro-credentials in whole-number ECTS credits (e.g., 1.0, 2.0), as this facilitates portability across the alliance.

All standalone courses and assessments (leading to a micro-credentials) co-developed within the HEROES framework and its associated funding must be delivered in English.

	Legislation (YES/NO) regarding ECTS for micro-credentials	Min / Max ECTS for micro-credentials within the institution
VIKO	NO	Min: 1 ECTS / Max: 5 ECTS
TH Deggendorf	Yes	Min: 1 ECTS
Fontys	Yes	3 – 30 ECTS (also: issuing to working professionals)
Halmstad	NO	1 – 30 ECTS
SEAMK	NO	Min: 1 ECTS / Max: 59 ECTS (based on national framework for micro-credentials)
Thomas More	NO	Min: 1 ECTS (Max 59 ECTS)
UCN	NO	Min: 1.5 ECTS / Max: 5 ECTS
Beja	NO	Min: 1 ECTS
Mendel	NO	Min: 2 ECTS / Max: 60 ECTS (based on the institutional methodical directive)

Table 1: Overview of national and institutional frameworks for micro-credentials across HEROES partner institutions. The table highlights existing legislation and internal standards concerning ECTS values, revealing considerable variation - but also a shared acceptance of micro-credentials within the range of 3 to 20 ECTS.

According to the Council recommendation on a European approach to micro-credentials for lifelong learning and employability, “*micro-credentials could help certify the outcomes of small, tailored learning experiences. They make possible the target, flexible acquisition of knowledge, skills and competences to meet new and emerging needs in society and labour market and make it possible for individuals to fill the skill gaps they need to succeed in a fast-changing environment, while not replacing qualifications.*” (The Council of the European Union, 2022, s. 11) Within the HEROES, the nine partners have agreed on the definition as stated in the Council recommendations to recognize micro-credentials as learning outcomes that are acquired of a small volume of learning, and assessed by transparency and clear definitions. This also means that all micro-credentials issued within the HEROES must comply with a set of European standards to ensure portability, recognition, and quality across the alliance and beyond.

The following section outlines the 11 mandatory elements that must be included in any micro-credential offered through the HEROES framework. After this introductory chapter of the action plan, the accompanying comprehensive guide can be used to quality assure each of these mandatory components.

1.2. The European standard elements to describe a micro-credential

1. Identification of the learner
2. Title of the micro-credential
3. Country(ies)/region(s) of the issuer
4. Awarding institution(s)
5. Date of issuing
6. Learning outcomes
7. Notional workload needed to achieve the learning outcomes (in ECTS, wherever possible)
8. Level (and cycle, if applicable) of the learning experience (European Qualifications Framework, or the Qualifications Framework in the European Higher Education Area)
9. Type of assessment
10. Form of participation in the learning activity
11. Type of quality assurance used to underpin the micro-credential

Please note that these points will be revisited later in this guide, as well as in the supporting template for the development and coordination of micro-credentials across the alliance.

1.3. The HEROES Approach

This section outlines the distinctive features of the HEROES Alliance’s work, focusing on how we design, deliver, and recognise learning across institutions. It describes the principles that guide our development of standalone courses, micro-credentials, and learning pathways, as well as the mechanisms for ensuring accessibility, flexibility, and stackability. The section also explains how our business model, enrolment procedures, and credit allocation support a shared framework that enables cross-institutional collaboration while maintaining institutional autonomy.

1.3.1. Learner accessibility to standalone courses and micro-credentials

On Heroes.eu users can find standalone courses and micro-credentials that have been developed by the partner institutions independently (either before HEROES alliance or after) or in collaboration with one or more

of the HEROES alliance partners. These standalone courses are listed in a catalogue format and do not necessarily provide open access to course materials. They may also be subject to different enrolment rules and hosted on local LMS platforms, where open access is not guaranteed. While the primary objective of the Alliance is the joint development of new standalone courses and micro-credentials, we utilize the heroes.eu platform to promote each institution's broader educational offerings.

There is no participation fee for accessing HEROES-developed standalone courses that are funded within the project. The standalone course and micro-credential level will be communicated in reference to the EQF (see section 6.4 for more). There are no formal qualification requirements for learners to access standalone courses or micro-credentials. This approach highlights the flexibility, as it is the learner's demonstrated ability and performance that becomes the focus, rather than formal prerequisites. There may be requirements for prior learning and participation as demonstrated by earned progression badges, which grant access to the assessment of a specific micro-credential.

This meets the EU-commission's vision and potential of micro-credentials by using micro-credentials to improve access to education and training for all learners, including disadvantaged and vulnerable groups such as people with disabilities, the elderly, low-qualified/skilled people, minorities, people with a migrant background, refugees and people with fewer opportunities because of their geographical location and/or their socio-economically disadvantaged situation (The Council of the European Union, 2022).

1.3.2. Dual ECTS calculation for flexibility

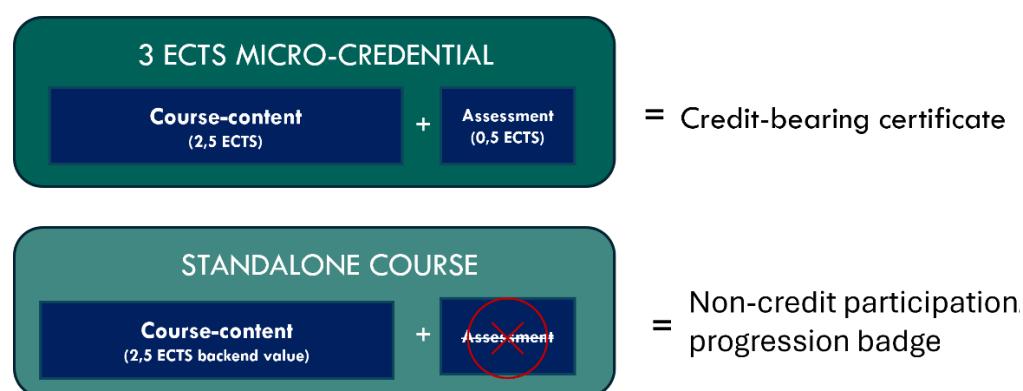
A unique feature of HEROES is that the ECTS load of a micro-credential is divided between the course content and the assessment activity. This enables a modular and transparent system where learners can potentially substitute alternative courses - offered elsewhere in the HEROES ecosystem - for the course element of a micro-credential, provided alignment in content and level is ensured. This allows for highly flexible and personalised learning pathways and supports the recognition of prior learning and asynchronous progression.

The dual ECTS element is used exclusively on the back end by course designers and administrative staff. Learners will never see ECTS information on standalone courses; it is only visible in connection with micro-credentials. For course developers, access to the relative weighting of assessment and learning activities in the ECTS load is a critical factor in enabling further stackability and alignment across components. Note that a micro-credential can never be less than 1.0 ECTS. However, the internal ECTS calculation for a standalone course may be below 1.0, as several smaller standalone course elements can potentially be stacked into larger micro-credentials.

Moreover, the HEROES approach allows content developed for micro-credentials to stand on its own as a reusable resource. Over time, course elements can be used to build new micro-credentials, support experimentation with emerging learning needs, or even be integrated into national curricula at bachelor or master level. This means that learners could begin their HEROES journey while still enrolled in their full degree programme, gradually accumulating badges that may later stack into full micro-credentials.

Figure 2: Structural difference between a 3 ECTS Micro-Credential and a Standalone Course with a backend calculation of 2,5 ECTS.

A micro-credential includes both course content and formal assessment, totaling 3 ECTS (2.5 ECTS for learning activities + 0.5 ECTS for assessment). In contrast, a standalone course includes only the course content (Backend value of 2.5 ECTS) and does not offer assessment or lead to credentialing.



1.3.3. Enrolment and issuance procedures

To access the Heroes offerings, learners create a profile on the platform heroes.eu. This platform registration does not constitute formal enrolment at any institution.

A learner may choose to enrol directly in a micro-credential assessment or to do so after completing the relevant standalone course as a learning pathway. Formal institutional enrolment takes place when the learners registers for the assessment leading to a micro-credential.

At this point, the learner is officially enrolled at the partner institution responsible for assessment. This institution is referred to as the *Assessing Partner Institution*. The assessing partner institution is responsible for conducting the final assessment and awarding the micro-credential, ensuring that both academic and legal standards are met. The assessing partner institution must ensure that the learner is evaluated according to the defined learning outcomes for the specific micro-credential.

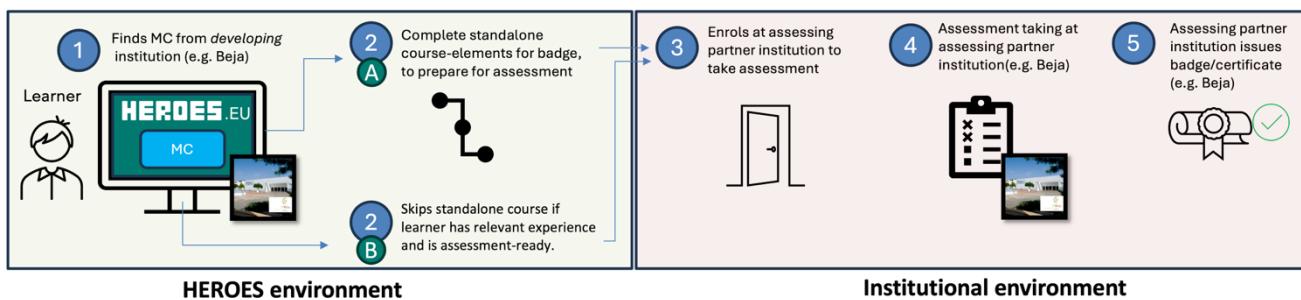


Figure 3: HEROES micro-credential pathway from course selection to assessment and issuance of badge or certificate.

To guide this process and ensure consistent quality, this document provides a detailed template and guideline for the design of micro-credentials within the HEROES Alliance. The template serves as a shared reference point for all partners, promoting transparency and alignment across institutions.

Enrolment at an assessing partner institution takes place under the terms and conditions defined by each individual institution. Once the assessment has been successfully completed, the certification is also linked back to the learner's HEROES profile on heroes.eu. This allows for future stackability, enabling learners to build towards larger qualifications or career goals. Procedures are described more in section 7.

1.3.4. Distinction between Heroes activities

Within the HEROES Alliance, learning activities are categorised into two types to clarify their origin, development process, and alignment with alliance objectives. This distinction ensures transparency regarding ownership, collaboration, and the degree of integration into the HEROES project.

- **HEROES-Developed activities:** Learning activities, such as standalone courses, micro-credentials, or other offers, created within the scope of the HEROES project by a minimum of two partner institutions. These activities are jointly designed, developed, and aligned with the objectives of the HEROES application. The course material and content remain the property of the developing institutions and must not be reused or repurposed by other partners without a formal agreement.
- **HEROES-Approved activities:** Learning activities, such as standalone courses, micro-credentials, or other offers, developed by a single partner institution. These activities align with HEROES Alliance standards and are made available through the platform as supplementary contributions to the alliance's educational offerings. HEROES Approved activities offered through heroes.eu should always be available in English, with other languages serving only as an additional option. If offered in other languages, they must correspond to the same course or activity that is also available in English. The

course material and content remain the property of the developing institution and must not be reused or repurposed by other partners without a formal agreement.

Any partner institution within the HEROES Alliance can apply the template to systematically adapt and convert any of their current offerings into standalone courses and micro-credentials, in doing so, the alliance ensures that the collective expertise and resources of its members are effectively harnessed and translated into high-quality, consistent learning opportunities using the template

1.3.5. Business model and pricing

Within the HEROES framework, access to jointly developed learning content can be either free of charge or subject to a course access fee. All standalone courses and micro-credentials developed with project funding will always be free of charge within the project period.

For HEROES-Approved activities, pricing is determined entirely by the institution that owns the activity and may follow any of the alliance's approved pricing models.

For HEROES-Developed activities, the involved partners agree on the pricing model, which may include fees for course access and/or assessment. Internal cost-sharing and billing processes are proposed by the developing partners. In line with the values of the European Education Area, partners are encouraged to prioritise accessibility, including low-cost or free options, particularly when local HEROES funding has been used to support development.

For jointly developed, project-funded courses, the standalone learning content will be freely accessible without institutional enrolment via heroes.eu. Any user with a HEROES profile will be able to access these materials and earn progression badges. A participation fee may only be introduced if the learner formally enrols in a micro-credential certification.

All HEROES-Developed activities funded by the project budget must be offered free of charge, including:

- MOOCs newly co-created for credits (Task 6.2)
- A minimum of 20 micro-credentials (Task 6.3)
- Physical staff trainings (Task 6.4)
- BIPs for staff (Task 6.4)
- Joint conferences (Task 6.4)
- Hybrid panel sessions and debates (Task 6.4)
- Short online open trainings (Task 6.4)

Joined pricing framework

To ensure transparency and consistency across the alliance, a joined pricing framework applies to all micro-credentials. During the development process, the institution responsible selects one of two models:

1. Costing template per micro-credential/per learner: price based on the partner institution's own cost calculation method. Each institution applies its internal pricing logic to determine the fee.
2. Open access/no fee: for project-funded or otherwise fully subsidized activities.

In addition, the alliance is exploring the development of a fixed price model as a potential future option. This is not yet implemented but may provide a standardized approach once further defined.

It is also recognized that individual institutional and national regulatory considerations may determine whether fees can be applied or not, and these differences must be respected within the framework.

This approach ensures clarity for partners and learners, supports consistent decision-making, and maintains alignment with HEROES' principles of accessibility and quality, while allowing flexibility for future funding opportunities or market needs.

1.4. How to use the action plan

To guide the creation of such flexible, high-quality offerings, this manual is structured around a comprehensive framework of mandatory and recommended design items, presented as a roadmap for action. These items represent all the necessary dimensions to be considered when developing a HEROES-aligned micro-credential or standalone course. From learning outcomes and content structure to assessment governance and metadata standards, each item ensures coherence with HEROES values and European frameworks such as the EQF and ECTS.

A visual step-by-step roadmap has been developed to accompany this manual. It provides a clear overview of the development journey, outlining what course designers, educational developers, and those responsible for the administrative process need to consider at each stage of the process.

In addition, the manual explains how to use the supporting tools and templates created within the HEROES project. These resources have been developed specifically to strengthen the quality, consistency, and recognition of HEROES micro-credentials and to reduce friction in cross-institutional development.

Finally, a central objective in the creation of this manual has been to ensure that the design principles presented here are aligned with the core values of the alliance, while also being flexible enough to respect national regulatory contexts. The manual does not override institutional or legal requirements - it is a shared reference for quality, not a one-size-fits-all rulebook.

While the primary aim of this manual is to guide the development of new micro-credentials, the design logic and quality principles outlined here can be applied even when developing standalone courses that are not initially tied to a specific micro-credential. This ensures long-term compatibility with the HEROES framework and supports future reuse, scaling, and recognition.

2. Flow Chart

This flowchart is a visual guide to the micro-credential process, from enrolment to issuance. It is intended to support educators, professional staff, and those responsible for the administrative and technical process, and can also be used for developing standalone courses. It illustrates all steps following approval to begin development. The process aligns with and is supported by the actual template design forms for standalone courses and micro-credentials within the HEROES framework. It can be used to design HEROES-developed activities and to convert the partner institutions' existing MCs into HEROES-approved activities.

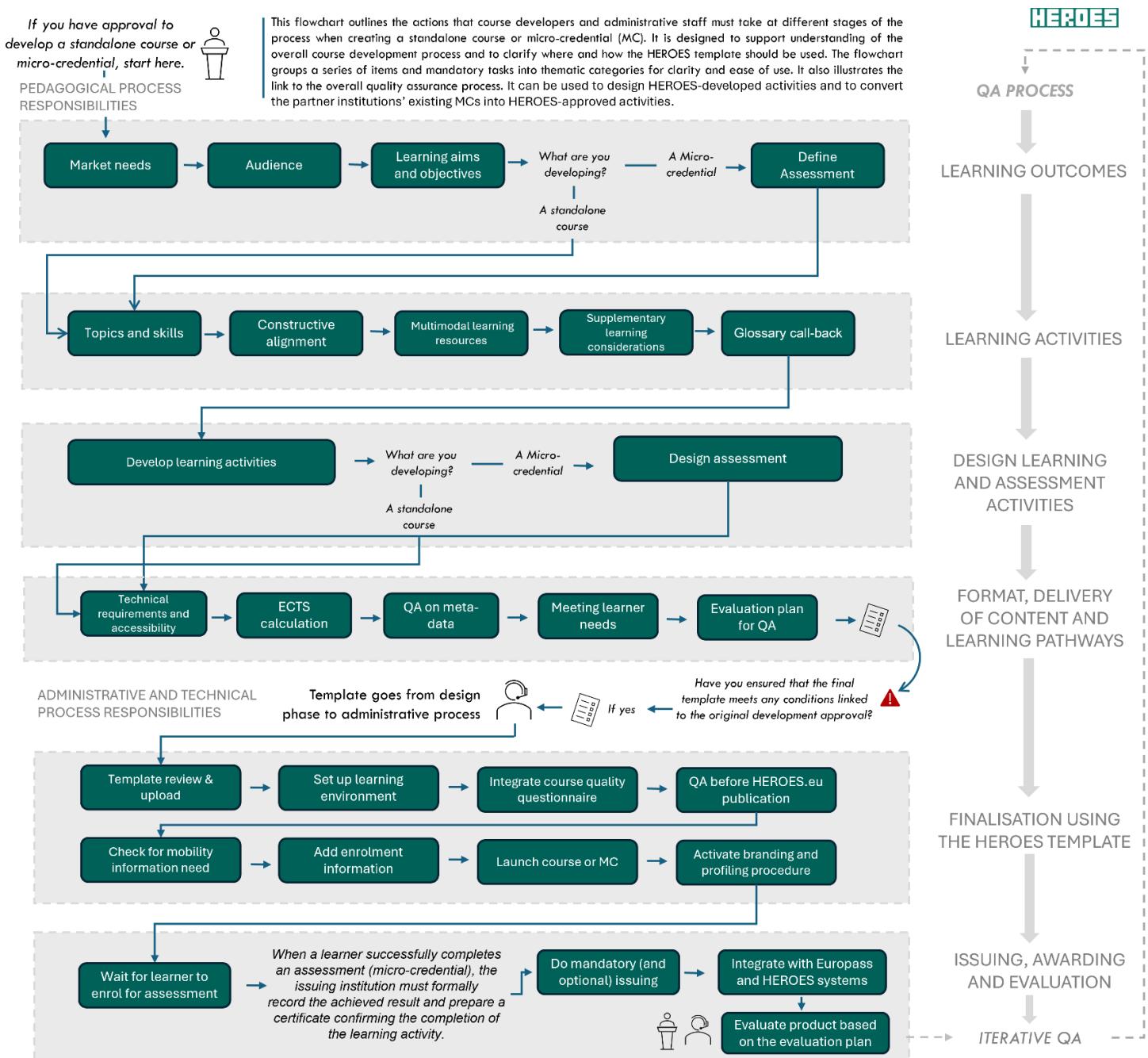


Figure 4: Visual guide to the HEROES process from approval to issuance. Supports development of both standalone courses and micro-credentials.

2.1. Design items

When ready to use the full design manual and action plan to guide the development of high-quality micro-credentials and standalone courses, the following chapters will guide you through each stage of the process and cover all required elements for compliance and consistency across the HEROES alliance.

Throughout this manual, there are two key categories used to structure the guidance: Mandatory and Consideration.

- Mandatory means that course developers must address and define the element in question. It is a required part of the standalone course or micro-credential design and must be implemented.
- Consideration means that course developers may reflect on the element and make an informed decision. However, it is not required that the element be included in the final standalone course if deemed irrelevant or unsuitable.

This distinction ensures both a common quality baseline and flexibility for context-specific design decisions.

3. Define learning outcomes and target audience

A fundamental principle in the design of high-quality micro-credentials is the clear and transparent definition of learning outcomes that are aligned with labour market needs and the specific audience they are intended to serve. This section guides course designers through the essential first steps of the development process: identifying what learners are expected to achieve, why these outcomes are relevant, and for whom they are designed.

Micro-credentials are not developed in a vacuum; their value lies in their ability to respond to concrete societal, professional, and labour market needs. As highlighted in the European Approach to Micro-credentials (2021), micro-credentials must be “(...) *designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs*” (European Commission, 2021, s. 1). Therefore, the starting point of any micro-credential is a dialogue with or an orientation towards relevant sectors and stakeholders to ensure alignment with real-world demands.

In addition to identifying market needs, it is crucial to define a clear learner profile. According to Carbaugh (Carbaugh, McCullough, Linaburg, & Raftery, 2022), the success of micro-credentials relies on a strong connection between the skills being taught and the learners' career trajectories. Without understanding who the learners are and what competences they require, course designers risk creating irrelevant or ineffective learning experiences.

This section also emphasizes the importance of measurable and transparent learning outcomes, grounded in recognized pedagogical frameworks such as Bloom's Taxonomy (Krathwohl & Anderson, 2001). Clear learning outcomes not only guide course structure and content development but also ensure that assessment strategies are fair, transparent, and aligned with what learners are expected to know and do upon completion.

Furthermore, a well-structured definition of learning outcomes is the foundation for quality assurance processes (The Council of the European Union, 2022). Learning outcomes should lead the design of assessment methods that measure authentic, field-relevant competences - whether through projects, portfolios, or reflective tasks - and provide learners with clear expectations and criteria for success, meeting the need for constructive alignment.

By systematically addressing the items in this section, course designers will ensure that each micro-credential within the HEROES framework is learner-centred, relevant, and supports the overarching goal of empowering individuals and regions through competence-based, challenge-driven education.

3.1. (Mandatory) Identify needs of market

Identifying the current and emerging needs of the labour market is a crucial first step in the development of a micro-credential. Micro-credentials are intended to address specific skill gaps and evolving professional requirements; therefore, they must be directly informed by input from the relevant sector, industry representatives, or professional organisations. Without this alignment, the course risks being irrelevant, outdated, or disconnected from actual workforce needs (Carbaugh, McCullough, Linaburg, & Raftery, 2022) (The Council of the European Union, 2022).

Engaging with the sector early in the design process ensures that the learning outcomes are demand-driven and career-relevant and increases the credibility and recognition of the credential among employers. This step also helps foster partnerships with industry, which may support course development, provide real-life cases, or offer opportunities for learners' practical engagement (Flynn, Cullinane, Murphy, & Wylie, 2023).

Recommended approach

A recommended approach is to establish formal or informal advisory groups with sector representatives or conduct structured needs assessments through surveys, interviews, or focus groups. Some institutions also use

labor market intelligence platforms or regional skills analyses to gather data. It is considered best practice to revisit market needs regularly, as industry requirements may shift over time. While this may be relevant for larger course entities, it is not feasible for smaller formats such as 3 ECTS courses. These are often embedded in existing curricula, where the need has already been identified. Therefore, this should be framed as a recommended procedure primarily for the design of new, larger learning units (European Training Foundation , 2022).

Strategic questions to guide the process

- What specific skills, knowledge, or competences does the sector currently demand?
- Are there documented skills gaps or shortages in the sector that this standalone course can address?
- Which new trends, technologies, or regulations are shaping the sector's skills needs?
- What are employers' expectations regarding certification, validation, and proof of skills?
- What roles or job profiles will benefit directly from the competences offered by this micro-credential?
- How can industry representatives be actively involved in shaping the content and assessment criteria of the standalone course?
- Are there existing sectoral frameworks, professional standards, or qualifications that the micro-credential should align with?
- How frequently should the standalone course content be reviewed and updated to ensure ongoing market relevance?

3.2. (Mandatory) Understand market and career relevance

While 3.1 focuses on identifying specific market demand and immediate skills gaps, this item requires a broader understanding of the overall labour market profile within the targeted sector or region. Where market demand analysis answers the question "*What do employers need right now?*", labour market profiling seeks to understand the structure, trends, and dynamics of the workforce to ensure that the micro-credential supports sustainable career relevance over time.

This step provides essential context for course design. It moves beyond short-term skills needs and considers long-term employability factors such as job roles, career pathways, qualification frameworks, and anticipated changes in the sector. Micro-credentials should be embedded in a broader skills ecosystem to effectively support learners' career development (The Council of the European Union, 2022). Carbaugh further stresses that career relevance is central to the success and recognition of micro-credentials (Carbaugh, McCullough, Linaburg, & Raftery, 2022).

Recommended approach

Course designers should collect relevant data on job roles, qualifications, and skills requirements within the targeted sector and region. This can include reviewing national or regional labour market reports, sector skills strategies, and employer surveys. Engaging with employer networks, chambers of commerce, or public employment services can provide valuable insights. It is recommended to analyse not only current profiles but also emerging trends and future skills forecasts to ensure that the course remains relevant in the medium to long term (The Council of the European Union, 2022) (Flynn, Cullinane, Murphy, & Wylie, 2023).

Strategic questions to guide the process:

- What are the key job roles and career pathways in the sector this micro-credential targets?
- What are the typical qualifications, skills, and competences required in these roles?
- Are there specific skills shortages, mismatches, or high-demand occupations within this labour market?
- What are the regional, national, or international trends affecting the sector's workforce profile?
- How can this micro-credential help learners advance or transition within the sector?

- Are there opportunities to involve local employers or employment services in identifying relevant labour market profiles?
- How does the labour market profile inform the definition of learning outcomes and course content?
- What future developments (e.g. digitalisation, green transition) are likely to impact career relevance in this sector?

3.3. (Mandatory) Skills and competences

This step builds directly on the insights gathered in 3.1 and 3.2. Whereas 3.1 focuses on identifying current market needs and 3.2 provides an understanding of the broader labour market profile, this item ensures that the actual content of the micro-credential - the skills and competencies taught clearly and intentionally aligns with those needs and profiles. The reflections regarding the market needs will later be combined to the European Skills, Competences, Qualifications and Occupations (European Comission, 2025) framework in section 6.7.

It is not enough to know what the sector requires; course designers must translate this knowledge into a precise set of learning outcomes and competences that learners will acquire. Without this alignment, the micro-credential risks being too generic, too theoretical, or disconnected from what employers are looking for. As stated in the European Approach to Micro-credentials, micro-credentials should make explicit the connection between learning outcomes and societal, personal, cultural, or labour market needs (The Council of the European Union, 2022). Carbaugh similarly stresses the importance of ensuring that what is taught is directly applicable to professional contexts (The Council of the European Union, 2022).

Recommended approach

Course designers should map the identified market needs and labour market profiles to concrete, measurable skills and competences in the course design process. This may involve using sectoral competence frameworks, European qualification frameworks, or co-creating competency lists with industry stakeholders. Validation of this alignment can be enhanced by sector feedback, ensuring that what is promised in the course is what the market values.

Strategic questions to guide the process:

- How do the intended skills and competences of the course respond to the market needs identified in 3.1?
- Do the course competences reflect the qualifications, job profiles, or career pathways described in the labour market profile (3.2)?
- Have relevant sectoral competence frameworks or qualification standards been used to inform course content?
- Have industry stakeholders validated that the proposed competences match real-world needs?
- How can the alignment between course content and market demand be made transparent to learners and employers?
- Will learners be able to clearly demonstrate these competences upon completion of the course?

3.4. (Mandatory) Identify primary learners

Clearly defining the primary learners for the micro-credential ensures that the course content, learning outcomes, and assessment methods are tailored to the learners' prior knowledge, learning needs, and professional goals. A micro-credential is most impactful when it is designed with a specific learner profile in mind, whether that be early-career professionals, experienced practitioners seeking upskilling, career changers, or learners supplementing formal qualifications.

While previous steps (3.1–3.3) focus on the external relevance of the course to the labour market, this step shifts the attention to the learners themselves. Understanding who the learners are will allow course designers to make informed pedagogical and structural decisions, ensuring accessibility, relevance, and appropriate challenge level. As highlighted in the *Guide to Design, Issue and Recognise Micro-credentials*, micro-credentials should be learner-centred and flexible, supporting diverse learning pathways and career development (The Council of the European Union, 2022).

Recommended approach

Course designers should define the learner profile early in the development process and document key characteristics such as prior educational background, professional experience, learning motivations, and possible barriers to participation. This can be informed by consultation with sector partners, alumni feedback, or prospective learner surveys. It is also recommended to reflect on the learners' digital readiness and time availability, as micro-credentials often target working professionals or lifelong learners (Carbaugh, McCullough, Linaburg, & Raftery, 2022).

Strategic questions to guide the process:

- Who is the intended learner for this micro-credential (e.g. learners, early-career professionals, experienced practitioners)?
- What are the typical educational backgrounds and professional experiences of the target learners?
- What are the learners' motivations and learning needs?
- Are there specific groups of learners (e.g. underrepresented groups, career changers) the course aims to support?
- What prior knowledge, skills, or competences are expected from learners before starting the course?
- What potential barriers to participation (e.g. time, cost, digital access) should be considered in course design?
- How can the course structure and content be adapted to support the needs and expectations of the primary audience?

3.5. (Consider) Incorporate interdisciplinary or cross-sector perspectives

Micro-credentials offer an opportunity to connect learning to complex, real-world contexts, which often do not fit neatly within a single disciplinary or sectoral boundary. By incorporating interdisciplinary or cross-sector perspectives, course designers can help learners understand how different fields, professions, or sectors intersect and how knowledge and skills can be applied across contexts. For example, a micro-credential in digital marketing could include ethical and legal perspectives from business law or incorporate sustainability considerations from environmental studies to reflect the broader professional context.

This approach can increase the relevance and transferability of the micro-credential, particularly in fields where collaboration between sectors is common or where societal challenges require integrated solutions.

Interdisciplinary elements may also stimulate learners' curiosity, critical thinking, and ability to navigate complexity (Ferguson & Whitelock, 2024) (Flynn, Cullinane, Murphy, & Wylie, 2023).

Recommended approach

Course designers may consider including examples, case studies, or learning activities that draw on knowledge and practices from multiple disciplines or sectors. They may also involve external stakeholders from different fields to contribute to course content or assessment. When applied thoughtfully, this can enrich the learning experience and better prepare learners for professional contexts that require cross-sector collaboration.

Strategic questions to guide the process

- Are there relevant perspectives from other disciplines or sectors that could enhance the learning experience?
- How might integrating interdisciplinary content increase the practical relevance of the micro-credential?
- Could collaboration with experts from other fields provide valuable input to course content or learning activities?
- Are there real-world challenges or cases where knowledge from multiple sectors needs to be combined?
- How can interdisciplinary perspectives help learners develop transferable skills and broader professional insights?

3.6. (Mandatory) Define course aim and objectives

A clear course aim and well-defined objectives provide the essential pedagogical foundation for any micro-credential. They articulate the overall purpose of the course and clarify what learners are expected to achieve by the end of the learning process. Without a clearly formulated aim and set of objectives, it becomes difficult to ensure internal consistency between course content, learning activities, and assessment.

While the previous items in this section have focused on external relevance (market demand and learner profiles), this step translates that relevance into an explicit educational purpose. Defining a course aim and objectives supports transparency, facilitates quality assurance, and provides learners with a clear understanding of what they can expect to gain from the course. As outlined in Biggs & Tang (2011), constructive alignment between objectives, teaching methods, and assessment is a cornerstone of effective course design (Biggs & Tang, 2011). This is particularly important in micro-credentials, which are typically short, focused, and skill-based.

Recommended approach

Course designers should formulate a concise, overarching course aim that summarises the intended learning impact. This should be followed by a set of specific course objectives that break down the aim into concrete areas of knowledge, skills, or competences to be developed. It is recommended to ensure that objectives are learner-centred, achievable within the course duration, and clearly linked to the broader learning outcomes (Carbaugh, McCullough, Linaburg, & Raftery, 2022) (The Council of the European Union, 2022).

Strategic questions to guide the process

- What is the overall purpose of this micro-credential?
- How does the course aim reflect the identified labour market needs and learner profiles?
- What specific objectives will help achieve the course aim?
- Are the objectives clear, specific, and achievable within the course duration?
- Do the objectives support the development of both technical skills and broader competences?
- How will the course objectives guide the choice of teaching methods and learning activities?
- How will the course objectives inform the design of assessment tasks?
- Have stakeholders (sector representatives, learners) been consulted in defining the course aim and objectives?

3.7. (Mandatory) Define learning outcomes

Clearly defined learning outcomes are at the core of effective micro-credential design. They describe in concrete terms what the learner will know, understand, and be able to do upon successful completion of the course. Unlike the broader course objectives described in 3.6, learning outcomes focus specifically on the measurable knowledge, skills, and competences that learners are expected to acquire.

This step is crucial because learning outcomes not only guide the design of teaching and learning activities but also form the basis for assessment and quality assurance. Furthermore, clearly formulated learning outcomes increase transparency for learners, employers, and other stakeholders, making it easier to understand the value and relevance of the micro-credential (Oliver, 2019) (The Council of the European Union, 2022).

To ensure clarity and consistency, it is recommended to use established pedagogical frameworks such as Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001). This taxonomy provides a structured way to formulate outcomes across cognitive levels, from basic knowledge and understanding to complex problem-solving and evaluation, which is particularly useful when designing competency-based courses like micro-credentials.

In addition to Bloom's Taxonomy, course designers are encouraged to apply the Tuning system for formulating learning outcomes. This framework provides a schematic structure that promotes comparability and collaboration across institutions and programs. According to the model, described in the publication *A Tuning Guide to Formulation Degree Programme Profiles*, the following elements should be addressed in the order stated (Lokhoff, et al., 2010):

1. First, an active verb must be chosen, which indicates what the learner should know. A taxonomy can be used for this.
2. Next, specify which type or kind of learning outcome the learning outcome contributes to. Then, describe which skills and competencies from the Body of Knowledge and Skills it concerns.
3. In addition, determine the subject of the learning outcome. This refers to the area of expertise to which the learning outcome is applied.
4. Next, describe which standard you are applying: Which guidelines, standards, methodologies, and approaches must or may someone use?
5. Finally, describe the context: In what context does someone demonstrate something?

The structure of a learning outcome therefore follows from these components: Active verb + Type + Subject + Standard + Context.

A detailed description of this approach can be found in *A Tuning Guide to Formulation Degree Programme Profiles* (Lokhoff, et al., 2010).

Recommended approach

Course designers should formulate learning outcomes that are specific, measurable, and achievable within the scope of the micro-credential. Outcomes should be written in active, learner-centred language and focus on what the learner will be able to demonstrate. It is recommended to use Bloom's Taxonomy action verbs to ensure clarity and avoid vague or overly ambitious statements. Involving stakeholders, such as employers or professional bodies, in reviewing the learning outcomes can help ensure their relevance and applicability (Biggs & Tang, 2011) (Flynn, Cullinane, Murphy, & Wylie, 2023).

Strategic questions to guide the process

- What specific knowledge, skills, and competences should learners acquire upon completion of the course?
- Are the learning outcomes formulated clearly and unambiguously?
- Are the outcomes achievable within the timeframe and scope of the micro-credential?
- Do the outcomes reflect the course objectives defined in 3.6?
- Are the outcomes aligned with the market needs and learner profiles identified in 3.1 to 3.4?
- Have Bloom's Taxonomy levels been used to ensure clarity and progression in the outcomes?
- Are the outcomes written in learner-centred language and based on observable behaviours?
- Have stakeholders validated the learning outcomes for relevance and applicability?

3.8. (Mandatory) Ensure measurable and transparent, learning outcomes

Learning outcomes must be formulated so they can be clearly assessed and understood by both learners and stakeholders. Vague, overly complex, or abstract outcomes weaken the quality and credibility of a micro-credential. It is essential that each outcome is specific, observable, and explicitly connected to the skills and competences required in the relevant professional field.

This item ensures that the learning outcomes defined in 3.7 are not only pedagogically sound but also practically applicable and verifiable. Transparent and measurable outcomes are central to ensuring quality, supporting assessment design, and enhancing the value of the credential for learners and employers (The Council of the European Union, 2022) (Ferguson & Whitelock, 2024).

Recommended approach

Course designers should apply clear, concise, and action-oriented language when finalising learning outcomes. Each outcome should describe what the learner will be able to do and how this will be demonstrated. It is recommended to review all outcomes systematically to ensure measurability, field relevance, and clarity. Consulting external stakeholders can help verify whether the outcomes accurately reflect professional expectations.

Strategic questions to guide the process

- Can each learning outcome be measured through concrete evidence of learning?
- Are the outcomes formulated in clear, specific, and understandable language?
- Do the outcomes explicitly reflect the skills and competences valued in the relevant field?
- Have the outcomes been reviewed for consistency with the course objectives defined in 3.6?
- Is it clear to learners how each outcome will be assessed?
- Have stakeholders been involved in validating the relevance and clarity of the outcomes?

3.9. (Mandatory) Ensure guide for learning outcomes assessment,

Learning outcomes are only meaningful if they directly inform how learners are assessed. Assessment must be clearly and explicitly aligned with the defined outcomes to ensure that learners understand what is expected of them, how their performance will be measured, and when they have successfully demonstrated the required competences.

This item builds a direct link between course design and assessment practice. It operationalises the outcomes defined in 3.7 and refined in 3.8 by ensuring that assessment criteria are transparent, relevant, and fair. Misalignment between outcomes and assessment risks confusing learners and undermining the validity of the micro-credential (The Council of the European Union, 2022) (Trepulé, et al., 2021).

Recommended approach

Course designers should adopt an outcome-based assessment strategy, ensuring that all assessments are directly derived from the defined learning outcomes. For each outcome, it should be clear how learners will demonstrate achievement and what constitutes satisfactory performance. It is recommended to involve external stakeholders, such as employers or academic peers, in reviewing the assessment strategy to ensure relevance, fairness, and transparency (Biggs & Tang, 2011) (Trepulé, et al., 2021).

Strategic questions to guide the process

- Are all learning outcomes covered by clear and appropriate assessment methods?
- Is it transparent to learners how their achievement of each outcome will be assessed?
- Do the assessment criteria reflect the knowledge, skills, and competences described in the learning outcomes?
- Is it clear when a learner's performance is considered satisfactory?
- How is the quality and fairness of the assessment process ensured?
- Have external stakeholders or quality assurance bodies reviewed the alignment between learning outcomes and assessment?

3.10. (Mandatory) Define assessment types

Selecting the appropriate assessment types is essential to ensure that learners can demonstrate the specific competences defined in the learning outcomes. The assessment method should match the nature of the competences being assessed and provide valid, authentic evidence of the learner's ability to apply their knowledge and skills in practice.

This item builds on 3.9 by focusing specifically on the form and format of assessment. Where 3.9 addresses the alignment between outcomes and assessment criteria, this step requires course designers to choose assessment types that effectively capture and measure the intended learning outcomes. As emphasised in Operational guidelines on planning and designing micro-credentials (ProcToGo, 2020) authentic and performance-based assessment methods are particularly relevant in micro-credentials, where the demonstration of practical competence is often the primary objective.

Recommended approach

Course designers should select assessment types that enable learners to provide tangible, authentic evidence of their competences. This may include project-based tasks, portfolios, case studies, reflective assignments, or real-life problem-solving exercises. It is recommended to consider a variety of assessment formats to capture different aspects of competence and to ensure that the assessments are feasible, fair, and accessible to all learners (Carbaugh, McCullough, Linaburg, & Raftery, 2022) (Ferguson & Whitelock, 2024).

Strategic questions to guide the process

- Which assessment types best reflect the competences described in the learning outcomes?
- Do the selected assessment formats allow learners to demonstrate their skills in authentic, real-world contexts?
- Is there a variety of assessment methods to capture different dimensions of competence?
- Are the assessment types feasible and accessible for the target learner group?
- How will the assessment methods support learners' reflective practice and self-evaluation?
- Have stakeholders reviewed the proposed assessment types to ensure relevance and validity?

3.11. (Mandatory) Ensure alignment between assessments and learning outcomes

Assessment is a critical component of the learning process and a key quality criterion in micro-credential design. To ensure that assessments effectively support learning and credential value, they must be explicitly aligned with the defined learning outcomes, conducted transparently, and applied fairly across all learners.

This item brings together and operationalises the principles addressed in 3.9 and 3.10 by focusing on the overall coherence and integrity of the assessment strategy. Misalignment between learning outcomes and assessment practices risks compromising both the learning experience and the credibility of the micro-credential. In addition, fairness and transparency are essential to ensure that all learners understand the expectations and that assessment decisions are consistent, justified, and free from bias (The Council of the European Union, 2022) (Trepulé, et al., 2021).

Recommended approach

Course designers should conduct a systematic review of the assessment plan to ensure alignment with the learning outcomes and objectives defined in 3.6 and 3.7. Assessment criteria and processes should be made explicit and accessible to learners at the outset of the course. It is recommended to apply clear rubrics, grading schemes, or feedback mechanisms that ensure transparency and consistency. Involving external reviewers or applying recognised quality assurance standards can further strengthen the fairness and credibility of the assessment strategy (Biggs & Tang, 2011) (Trepulé, et al., 2021).

Strategic questions to guide the process

- Are all assessments clearly linked to the defined learning outcomes?
- Is it transparent to learners how their performance will be assessed and what criteria will be applied?
- Do the assessment methods and criteria ensure fairness and equal treatment of all learners?
- Have clear grading schemes, rubrics, or feedback processes been developed and communicated (if used)?
- Has the assessment strategy been reviewed for consistency with the course objectives and learning outcomes?
- Are appropriate quality assurance measures in place to uphold transparency and fairness in assessment?

4. Structure content and learning activities

Once the learning outcomes and target audience have been defined, the next step is to structure the course content and design learning activities that enable learners to achieve the intended competences. This section guides course designers in organising content and activities in a clear, coherent, and engaging way.

Micro-credentials are typically short, focused learning offers. Their impact depends on how effectively the content is structured and how well the learning activities support active knowledge construction, skills development, and reflective practice. As emphasised in (Biggs & Tang, 2011), the connection between learning outcomes, teaching activities, and assessment is essential for effective learning.

In micro-credentials, content must be carefully selected and organised to optimise learning within a limited timeframe. The course should offer a balance between knowledge, practical skills, and professional attitudes, supporting learners in applying what they learn in real-world contexts. This requires a deliberate choice of learning activities that encourage engagement, collaboration, and reflection (Technical Assistance for Civil Society Organisations (TACSO), 2013) (Flynn, Cullinane, Murphy, & Wylie, 2023).

The items in this section help course designers to structure content around relevant topics, apply the Body of Knowledge, Skills, and Attitude (BoKSA) framework, and ensure alignment between content, activities, and assessment. The section also encourages the use of diverse learning resources, challenge-based tasks, and reflective activities to foster deep learning and professional relevance.

By following the guidance in this section, course designers can create a structured and meaningful learning experience that supports learners in achieving the defined competences and applying them in practice.

4.1. (Mandatory) Develop a list of major topics or themes

The starting point for structuring course content is to identify the key topics or themes that will organise and frame the learning experience. These topics should reflect the knowledge, skills, and attitudes defined in the learning outcomes and ensure that content is presented in a logical and coherent sequence.

A clear thematic structure helps learners understand how the course content relates to the competences they are expected to develop. It also enables course designers to distribute content evenly, avoid unnecessary complexity, and maintain a clear focus throughout the course. This approach aligns with recommendations in the E-learning Guidelines (Technical Assistance for Civil Society Organisations (TACSO), 2013) and supports transparency and learner autonomy.

Recommended approach

Course designers should create a list of major topics or themes, ensuring that each is clearly linked to specific learning outcomes. It is recommended to sequence topics in a way that supports progressive learning, moving from foundational knowledge to more complex skills and real-world application. Involving stakeholders in reviewing the list of topics can help ensure relevance and completeness (Biggs & Tang, 2011).

Strategic questions to guide the process

- Which topics or themes best reflect the learning outcomes defined in section 3?
- How can the content be organised to support a logical and progressive learning experience?
- Are the topics clearly connected to the skills and competences learners are expected to develop?
- Have stakeholders reviewed the proposed course structure for relevance and clarity?
- Does the structure allow sufficient time and space for practical application and reflection?

4.2. (Mandatory) Apply Body of Knowledge, Skills, and Attitude (BoKSA) framework

The Body of Knowledge, Skills, and Attitude (BoKSA) framework provides a structured approach to defining what learners should know, be able to do, and how they should behave professionally upon completion of the micro-credential. It helps course designers to ensure that the course content addresses not only cognitive knowledge but also practical skills and professional attitudes relevant to the field.

The BoKSA framework is grounded in the idea that professional competence is more than theoretical knowledge; it is a combination of what learners know, how they can apply it, and how they approach their work and professional environment. This way of organising content and learning goals draws on the “Triangle of Success” (Wooden, n.d.), which emphasises that sustainable success requires a balance between knowledge, skills, and attitude. It can be presented descriptively, visually e.g. as in the *Suggested Body of Knowledge, Skills and Attitudes Framework for International Business*, or through a tailored model adapted to the specific course context.

Depending on the learning path and the target audience, certain aspects of the BoKSA may be emphasised more heavily. For example, some learners may need to deepen specific skills or attitudes to match sector demands. The BoKSA framework is dynamic and can be regularly updated based on feedback from industry stakeholders and evolving professional requirements.

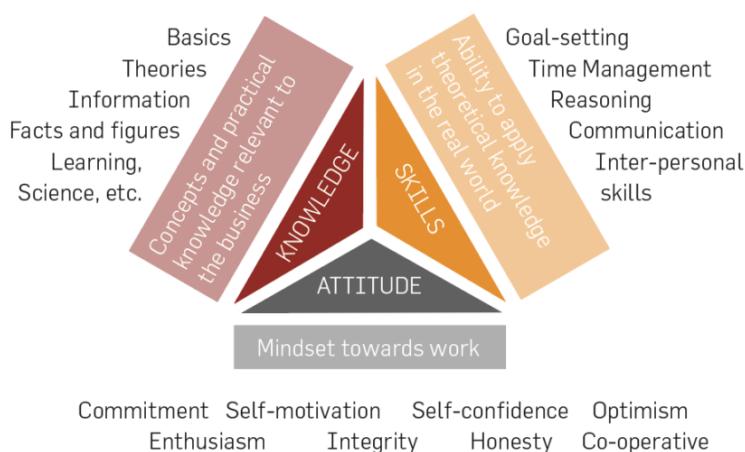
Recommended approach

Course designers should map the content and learning activities against the three BoKSA dimensions: knowledge, skills, and attitude. It is recommended to review the balance across these dimensions and adjust the course content accordingly. Using an explicit BoKSA framework also helps learners to understand the broader competence profile they are developing. Visual tools, such as the BoKSA model, can be helpful in communicating this structure to learners. Inspiration on the importance of attitude as a driver of success can also be found in the concept “Attitude at Altitude” (Eaton, 2021).

Strategic questions to guide the process

- How are knowledge, skills, and attitudes represented and balanced in the course content?
- Which knowledge areas are essential for learners to achieve the intended outcomes?
- Which practical skills will learners need to apply their knowledge effectively in professional contexts?
- Which professional attitudes or mindsets are relevant and valuable in the targeted field?
- Does the course structure make the BoKSA dimensions visible and understandable to learners?
- How can feedback from industry stakeholders help to refine the BoKSA balance in the course?

Figure 4: The Knowledge-Skills-Attitude model. This model shows how knowledge, skills, and attitude together shape professional competence. Knowledge refers to theoretical understanding, skills to practical application, and attitude to mindset and work values (Eaton, 2021).



4.3. (Mandatory) Ensure constructive alignments

Constructive alignment is a fundamental principle in course design that ensures coherence between what learners are expected to achieve (learning outcomes), how they are taught (teaching methods), and how their learning is assessed (assessment tasks). In micro-credentials, where learning is focused, time-limited, and outcome-driven, maintaining this alignment is essential to ensure that the learning experience is meaningful, transparent, and of high quality.

This item builds directly on section 3, where learning outcomes are defined. In this step, course designers must ensure that all teaching methods and assessment tasks are purposefully selected to support the achievement of those learning outcomes. When alignment is weak or inconsistent, learners may struggle to see the relevance of activities and assessments, and the course risks losing focus (Biggs & Tang, 2011).

Recommended approach

Course designers may find it helpful to use an overview table to map the relationship between learning outcomes, learning activities, and assessment tasks. This table should list each learning outcome alongside the teaching methods and assessment forms that correspond to it. By making these links explicit, designers can identify potential gaps or misalignments and ensure a clear and logical structure. Involving peers or external reviewers in reviewing the table can further support the coherence and quality of the course design.

Strategic questions to guide the process

- How are the learning outcomes reflected in the selected teaching methods and learning activities?
- Do the assessment tasks provide valid evidence of learners' achievement of the learning outcomes?
- Is there a clear, logical connection between what learners are expected to learn, how they will learn it, and how they will be assessed?
- Are teaching methods appropriate to the level and nature of the intended competences?
- How will learners be informed about the connection between learning activities, outcomes, and assessment?
- Have course designers reviewed the course structure to identify and address any misalignments?

4.4. (Mandatory) Use multimodal learning resources

The choice of learning resources has a significant impact on how effectively learners engage with and absorb course content. Using a variety of resource types - text-based, visual, auditory, and interactive - helps address the diverse learning preferences and needs of the target audience. In micro-credentials, where learners often come from different backgrounds and may have varying levels of experience with online learning, providing multimodal resources increases accessibility, motivation, and learning effectiveness.

Multimodality also supports principles of Universal Design for Learning (UDL), which emphasises offering multiple means of engagement, representation, and action (UDL Consortium, 2016). Several guidelines for online and micro-credential learning recommend integrating a variety of resource types to foster deeper engagement and support self-directed learning (Flynn, Cullinane, Murphy, & Wylie, 2023).

Recommended approach

Course designers should combine different types of learning materials, including videos, readings, podcasts, infographics, interactive exercises, and case studies. It is recommended to ensure that all resources are accessible, relevant, and clearly connected to the learning outcomes defined in section 3. Providing alternative formats and self-paced learning materials can further support learner autonomy and inclusion (Ghirardini, 2021).

Strategic questions to guide the process

- Which types of learning resources best support the learning outcomes and target audience?
- How can the course offer a balance of visual, auditory, textual, and interactive materials?
- Are all learning resources accessible to learners with different needs and preferences?
- How will learners be guided to use and navigate the various resource types effectively?
- Have stakeholders or learners provided input on preferred or effective resource formats?
- How can multimodal resources support self-directed and flexible learning?

4.5. (Consider) Include thematic reflection questions

Reflection is a key element in meaningful learning, particularly in competency-based education such as micro-credentials. Encouraging learners to reflect on course content, their own learning process, and the relevance of the material to their personal and professional contexts can deepen engagement and support the development of critical and self-directed learning skills.

Thematic reflection questions guide learners to actively connect new knowledge and skills to their prior experiences, values, and future goals. This can strengthen learners' ability to transfer competences to real-world situations and foster a deeper understanding of complex topics (Horn, Jensen, & Kjærgaard, 2021) (Carbaugh, McCullough, Linaburg, & Raftery, 2022).

Recommended approach

Course designers may consider integrating reflection prompts or thematic questions at key points in the course - before, during, or after learning activities. These can be presented as discussion starters, individual journaling tasks, or part of assessment activities. Reflection questions should invite learners to think critically about what they have learned, how it applies to their context, and how it may influence their professional practice.

Strategic questions to guide the process

- Which key themes or topics in the course would benefit from learner reflection?
- How can reflection questions encourage learners to connect course content to their own experiences and professional goals?
- At which points in the course structure would it be most meaningful to include reflection prompts?
- What formats (e.g. written reflection, group discussion, self-assessment) are most suitable for encouraging reflection?
- How can reflection activities support learners' ability to transfer their knowledge and skills to practice?

4.6. (Consider) Apply a challenge-based learning approach

Challenge-Based Learning (CBL) is a pedagogical approach that places learners at the centre of authentic, real-world problem-solving. It encourages learners to engage actively with complex challenges, collaborate with others, and apply their knowledge and skills in meaningful contexts. In micro-credentials, CBL can foster deeper engagement, critical thinking, and the ability to transfer learning to professional practice.

Within the HEROES framework, Challenge-Based Learning is a core principle and has been further developed and elaborated by the project's WP4. The use of CBL reflects HEROES' ambition to empower learners through active, learner-driven education that is directly connected to societal and professional challenges. Applying this

approach in micro-credential design supports consistency across HEROES initiatives and aligns with the alliance's broader educational mission.

Within HEROES, a *Joint Guideline for Challenge-Based Education* has been developed. Use of this publication is recommended, as it's highly relevant to this context (The HEROES Alliance, 2025).

Recommended approach

Course designers may consider integrating challenge-based activities, cases, or projects into the course structure. This can involve presenting learners with real-world problems, encouraging them to investigate possible solutions, and guiding them to reflect on the process and outcomes. CBL activities can be individual or collaborative and should be clearly connected to the learning outcomes and assessment criteria.

Strategic questions to guide the process

- Which real-world challenges or problems are relevant to the course content and learner profile?
- How can learners be actively involved in defining, investigating, and addressing these challenges?
- In what ways can challenge-based tasks promote critical thinking and problem-solving skills?
- How can the course structure support learners in collaborating and reflecting during the challenge process?

4.7. (Consider) Integrate learning activities in professional contexts

Micro-credentials aim to equip learners with competences that can be applied directly in real-world settings. Learning becomes more meaningful and transferable when learners can apply newly acquired knowledge, skills, and attitudes in professional or practice-based contexts. This supports the development of practical problem-solving abilities and increases the perceived value of the learning experience.

Incorporating applied learning activities helps bridge the gap between theory and practice and can strengthen learners' confidence in using their competences outside the course environment. This approach is consistent with the HEROES framework's focus on career relevance and real-world impact (The Council of the European Union, 2022) (Carbaugh, McCullough, Linaburg, & Raftery, 2022).

Recommended approach

Course designers may consider including practice-oriented learning activities such as case studies, simulations, role plays, small-scale projects, or workplace-related tasks. These activities should clearly relate to the learning outcomes and provide learners with opportunities to apply, test, and reflect on their competences in realistic contexts. Collaboration with external stakeholders can further enhance the authenticity and relevance of these activities.

Strategic questions to guide the process

- Which professional contexts are most relevant for learners to apply to the standalone course content?
- What types of learning activities can simulate or reflect real-world professional practice?
- How can applied learning activities help learners transfer knowledge and skills to their work environment?
- Are there opportunities to collaborate with industry partners or professional organisations to enhance authenticity?
- How can learners be supported in reflecting on their application of knowledge in practice?

4.8. (Consider) Encourage collaborative learning

Collaborative learning enables learners to learn with and from each other by engaging in shared tasks, discussions, and problem-solving activities. In the context of micro-credentials, encouraging collaboration can enhance learner engagement, promote critical dialogue, and help develop interpersonal and teamwork skills that are highly valued in professional contexts.

Collaboration also supports deeper learning by exposing learners to diverse perspectives and fostering a sense of community, especially in online or blended learning environments. It aligns with the HEROES framework's ambition to promote social and challenge-based learning experiences across institutional and disciplinary boundaries (Ferguson & Whitelock, 2024) (The Council of the European Union, 2022).

Recommended approach

Course designers may consider including learning activities that require learners to collaborate, such as group projects, peer review tasks, or discussion forums. It is recommended to provide clear instructions, roles, and objectives for collaborative tasks to ensure meaningful participation and avoid superficial engagement. Facilitating peer interaction can also be supported by appropriate digital tools and platforms.

Strategic questions to guide the process

- Which learning activities could benefit from peer collaboration and dialogue?
- How can collaboration support learners in achieving the intended learning outcomes?
- What structures or guidelines will help learners engage effectively in collaborative tasks?
- How can digital tools be used to support collaboration, particularly in online learning environments?
- How can collaboration be assessed or recognised as part of the learning process?

4.9. (Consider) Explore and experience together

Learning is not only about acquiring knowledge individually but also about sharing experiences, perspectives, and reflections in a social context. Creating space for shared exploration can strengthen learner engagement, foster a sense of belonging, and encourage co-construction of knowledge. In this context, belonging refers to learners' feeling of being part of a learning community, where they are recognised, valued, and supported in their learning journey. This is a key principle of Universal Design for Learning, which emphasises providing learners with multiple means of engagement, representation, and expression to support diverse learning needs and preferences. This is also a value explicitly highlighted by several of the alliance's partner institutions. For instance, at Fontys where the *Talent-oriented Education Framework* underscores the importance of fostering learners' sense of ownership, identity, and recognition within shared educational experiences.

Unlike collaborative learning activities in 4.9, which focus on completing specific tasks or projects together, this item emphasises the value of shared learning journeys, dialogue, and collective sense-making without necessarily having a predefined outcome.

Such experiences are particularly relevant in the HEROES framework, where cross-institutional and intercultural collaboration is central. Encouraging learners to explore topics together and reflect on their learning as a group supports community building, critical reflection, and deeper engagement with the learning material (Ferguson & Whitelock, 2024; Flynn, 2023).

Recommended approach

Course designers may consider including activities that allow learners to share insights, experiences, and reflections as part of their learning journey. This could take the form of discussion spaces, synchronous sessions focused on open exploration, co-created knowledge resources, or reflective forums. The emphasis

should be on creating a safe and inclusive environment where learners can experience learning as a shared, social process.

Strategic questions to guide the process

- How can learners be encouraged to share experiences and insights as part of the learning process?
- In what ways can the course create space for open exploration and dialogue without predefined tasks?
- How can shared learning experiences foster a sense of community and belonging among learners?
- What tools or platforms can support meaningful interaction and reflection?
- How can shared experiences support intercultural learning and co-creation of knowledge?

4.10. (Consider) Integrate feedback literacy

Feedback literacy is crucial for fostering a culture of continuous improvement and self-reflection. When learners understand how to effectively give, receive, and process feedback, they become more engaged in the learning process, using feedback as a tool for growth rather than merely a final judgment. Integrating feedback literacy into the course empowers learners to take ownership of their learning, reflect on their progress, and improve their work based on constructive criticism.

Inspiration

Course designers can integrate feedback literacy into the standalone course by providing structured opportunities for learners to engage with feedback at various stages of their learning journey. Some ideas for fostering feedback literacy include:

- **Giving feedback:** Encourage learners to provide constructive feedback to peers. This can be done through peer review sessions, group discussions, or collaborative projects. Provide learners with guidelines on how to give actionable and respectful feedback, focusing on both strengths and areas for improvement.
- **Receiving feedback:** Teach learners how to receive feedback constructively by encouraging a growth mindset. Provide guidance on how to interpret feedback without taking it personally, and how to use it to improve their performance.
- **Processing feedback:** Encourage learners to reflect on the feedback they receive, identifying areas of strength and opportunities for growth. This can be done through reflection journals, follow-up tasks, or revision activities that require learners to demonstrate how they have acted on the feedback.

By incorporating feedback literacy, course designers can help learners develop essential skills that will not only improve their performance in the course but also enhance their ability to learn throughout their academic and professional careers.

Strategic questions to guide the process

- How can learners be taught to provide clear, constructive, and actionable feedback to peers?
- What strategies can be used to help learners process feedback and integrate it into their learning?
- How can feedback literacy be embedded into assessment activities to encourage self-reflection and continuous improvement?
- What resources or support can be provided to learners to help them effectively interpret and act on feedback?
- How can feedback literacy contribute to fostering a positive and growth-oriented learning environment?

4.11. (Mandatory) Ensure the inclusion of glossary

A glossary helps ensure learners have a consistent understanding of key terms, particularly when dealing with specialised or technical concepts. It enhances accessibility, ensuring all learners are aligned in their understanding, and supports clarity throughout the course.

Recommended approach

Include a glossary of essential terms and concepts, ensuring that it is easy to navigate and updated regularly. Definitions should be clear and accessible, using simple language where possible.

Strategic questions to guide the process:

- Which terms or concepts need to be defined to ensure clarity throughout the course?
- How can the glossary be organised for easy access by learners, considering automated options in platforms like Moodle?
- Have learners been informed about the glossary and its use from the start of the course?

5. Design learning and assessment activities

This section focuses on the design of both learning activities and assessment tasks essential for achieving the learning outcomes. The learning process and the way learners demonstrate their learning are closely linked. Therefore, this section is divided into items related to learning activities and assessment, as these two elements are deeply interconnected in effective course design.

The items related to learning activities cover topics such as the structure of activities, delivery modes, and presentation formats, ensuring they align with the overall course structure and support diverse learner needs. As highlighted throughout the HEROES framework, flexibility and adaptability in learning activities are key to catering to different learning styles and providing opportunities for deep engagement (Biggs & Tang, 2011).

On the other hand, the assessment items focus on how learners will demonstrate their achievement of the defined learning outcomes. This includes designing assessments that are authentic, fair, and varied in format, as well as ensuring they provide useful feedback to support continuous learning. As part of this section, we will explore the importance of alignment between learning activities and assessments to ensure consistency and coherence in the learner experience (The Council of the European Union, 2022).

By addressing both learning and assessment activities, this section provides course designers with the tools to create a well-integrated learning experience that supports both knowledge acquisition and practical competence development.

5.1. (Mandatory) Develop a list of activities and assignments

To ensure that learners meet the defined learning outcomes, it is important to develop a clear and structured list of activities and assignments. These activities should be designed to engage learners with the content, promote critical thinking, and allow them to demonstrate their newly acquired competences.

The list of activities and assignments should be varied and cater to different learning preferences, as this supports a more inclusive learning environment. It is also important to align these activities with both the learning outcomes and the assessment criteria, ensuring coherence throughout the course (The Council of the European Union, 2022). Additionally, these activities should be appropriately spaced throughout the course to maintain learner engagement and to support progressive learning.

Inspiration

Course designers can draw from a variety of ideas when mapping out activities and assignments. For instance, you might:

- Include individual tasks, such as quizzes, reflection journals, or written reports that help learners demonstrate their understanding and apply knowledge.
- Incorporate group tasks, like collaborative projects, discussion forums, or peer reviews, to encourage teamwork and deeper engagement.
- Use practical exercises such as case studies, role plays, or real-world problem-solving activities to allow learners to apply their knowledge in realistic contexts.
- Provide opportunities for reflection, with guided prompts after each module to help learners assess their progress and link new knowledge to their experiences.

Consider offering learners a timeline or schedule of tasks, perhaps using tools like Moodle's activity planner, to help them stay organised and track their learning progress.

Strategic questions to guide the process

- What types of activities and assignments best support the achievement of the learning outcomes?
- How can activities be structured to promote engagement and support different learning styles?
- Are the activities appropriately spaced to maintain learner motivation and prevent overload?

5.2. (Mandatory) Decide on the presentation format and delivery mode

When designing a course, it's important to define both the presentation format and the delivery mode, as they shape the learning experience and ensure the course aligns with its objectives. These two elements are closely related but refer to different aspects of the course design.

Presentation format concerns how the course content is structured and delivered to learners. It defines whether content is presented online, through blended learning, or via interactive workshops, influencing how learners interact with the material. For instance, online modules provide a self-paced learning experience, while interactive workshops allow real-time engagement.

Delivery mode, on the other hand, defines where and how the course is taught and how learners will engage with the content, instructors, and peers. This includes whether the course is delivered face-to-face, online, or in a hybrid format, and determines the level of physical presence and interaction. The delivery mode and presentation format need to complement each other to create a cohesive learning experience.

Reflections on number of participants

While HEROES supports the development of a wide range of course types, it is important to reflect early on whether the execution of the course depends on a certain number of participants. These considerations help guide decisions around resource allocation, assessment planning, and scheduling. Specifically, course developers should ask:

- Will the course be delivered without a participant cap (e.g., a fully asynchronous, self-paced online course)?
- Is there a minimum number of participants required before the course can be launched?
- Should a maximum number of enrolments be set to ensure effective facilitation or peer interaction?

Although specific participant thresholds are not required at the initial stage. Nevertheless, designers should keep these questions in mind from the outset to ensure alignment between pedagogical goals, technological setup, and practical delivery constraints.

Presentation formats

The presentation format outlines how content is delivered. Some options include:

- **Online modules:** Self-paced, structured content with assessments to check understanding.
- **Blended learning:** A mix of online content and in-person or live group activities.
- **Interactive workshops:** Real-time engagement through hands-on activities, group discussions, or problem-solving.
- **Self-paced learning:** Learners progress independently through the content, at their own pace.
- **Collaborative virtual sessions:** Webinars or online meetups that encourage group interaction and discussion.

Delivery mode

The delivery mode outlines how the course is taught and how learners interact with the course and instructors:

- **Face-to-face:** Direct interaction, hands-on activities, and real-time feedback.
- **Hybrid:** A combination of online content and in-person sessions for collaborative learning and engagement.
- **Fully online:** Learners access content remotely, using digital tools to facilitate engagement and assessments.
- **Blended synchronous:** Live online sessions combined with independent online learning, allowing real-time interaction without physical presence.
- **Asynchronous online:** Self-paced learning, where learners access pre-recorded materials and complete assessments independently.

Inspiration

When selecting both the presentation format and delivery mode, course designers should consider how each format supports the course's objectives and desired level of interaction. For example, online modules may work best with a fully online delivery mode, while interactive workshops may be more effective in face-to-face or hybrid formats. The key is to align both elements with the learning outcomes and the needs of the learners.

Strategic questions to guide the process

- Which presentation format and delivery mode best support the learning outcomes and learner engagement?
- How can the chosen formats accommodate different learning styles and preferences?
- How do the presentation format and delivery mode ensure accessibility and inclusion, in line with UDL principles?
- How do the chosen formats foster both independent and collaborative learning?
- How will the chosen presentation format and delivery mode affect learner motivation and engagement throughout the course?

5.3. (Consider) Asynchronous vs synchronous learning

Asynchronous and synchronous learning both offer distinct benefits that can be used to optimize engagement, depending on course objectives and learner needs. Asynchronous learning allows learners to engage with content at their own pace, providing flexibility for learners with varying schedules. However, it can sometimes lack the immediate interaction that some learners find motivating. Synchronous learning, in contrast, offers real-time interaction, enabling learners to collaborate directly, ask questions, and receive immediate feedback. This is particularly beneficial for activities such as debates, group problem-solving, and discussions, fostering a sense of community and connection among learners (Ghirardini, 2021).

Recommended approach

When designing a course, it's important to balance both asynchronous and synchronous learning to create an optimal learning environment. Asynchronous learning is ideal for content delivery and independent study, while synchronous learning should be used for activities that require interaction, such as group work or live Q&A sessions. By combining both modes, course designers can address diverse learning preferences and engagement levels.

In the context of the HEROES framework, both asynchronous and synchronous elements are essential for fostering interaction across different institutions, providing flexible and learner-centred educational opportunities (The Council of the European Union, 2022).

Strategic questions to guide the process

- Which learning activities are best suited for asynchronous learning, and which would benefit more from synchronous interaction?
- How can a mix of asynchronous and synchronous formats support different learning preferences and engagement levels?
- How can both modes of learning contribute to collaboration and learner motivation throughout the course?
- Have you avoided using specific time or place references that could make the content appear outdated?

5.4. (Mandatory) Include a variety of content formats

Incorporating a variety of content formats is essential for engaging diverse learners and ensuring accessibility. Universal Design for Learning emphasizes providing multiple means of representation, engagement, and expression, which can enhance the learning experience for all learners. By offering content in different formats, learners can engage with material in ways that align with their preferred learning styles, leading to better understanding and retention.

Inspiration

When selecting content formats, course designers can consider a combination of the following to support various learning preferences:

- **Text-based content:** Use for foundational material, readings, and written explanations, which allow learners to engage with content at their own pace.
- **Videos:** Present dynamic visual and auditory content, such as demonstrations or real-world applications of concepts, to enhance understanding for visual and auditory learners.
- **Interactive elements:** Incorporate quizzes, simulations, or interactive exercises that require learners to actively engage with the content, providing immediate feedback and reinforcing learning.
- **Infographics or images:** Use visuals to simplify complex ideas, making them more accessible, particularly for visual learners.
- **Podcasts or audio content:** Offer learners the flexibility to consume material through listening, which may suit auditory learners or those who prefer learning on the go.

In addition to these, consider incorporating collaborative content, where learners can work together on shared tasks or peer-reviewed content, further enhancing engagement. Gamified elements or interactive media may be explored, such as videos with embedded quizzes or decision-making scenarios, to make learning more engaging and immersive.

By using a mix of these content types, course designers can ensure a flexible, engaging experience that supports various learning preferences and promotes a deeper understanding of the material.

When developing courses, the aim should be to make the learning content sustainable over time by avoiding references to specific places or time-related elements that could later make the content appear outdated.

Strategic questions to guide the process

- Which content formats best align with the course's learning outcomes and objectives?
- How can a variety of content formats help maintain engagement and support different learning styles?
- How can interactive content be integrated to encourage active learning and immediate feedback?
- How can collaborative content be incorporated to support peer interaction and group learning?
- How can gamified elements or interactive media enhance the learning experience?

5.5. (Mandatory) Define the assessment process

The assessment process is essential for evaluating learners' progress and determining if the course's learning outcomes have been met. Clear definition of assessment types and evaluation criteria ensures transparency and consistency, which are vital for maintaining fairness and credibility throughout the course.

Recommended approach

Course designers should carefully select assessment types that align with the learning outcomes and course objectives. Some common types of assessments include:

- **Exams:** Useful for testing individual knowledge and understanding of key concepts. Exams can take different forms, such as multiple-choice, short-answer, or essay questions.
- **Presentations:** Assess learners' ability to communicate ideas clearly, critically engage with the material, and apply concepts in a practical context. Presentations also provide an opportunity for learners to develop public speaking and presentation skills.
- **Portfolios:** Allow learners to demonstrate their learning journey by collecting evidence of their work and reflecting on their development over time. Portfolios can include a variety of materials, such as assignments, projects, and reflective writings.

In addition to selecting assessment types, it's important to define evaluation criteria that are clear, measurable, and aligned with the learning outcomes, giving learners a clear understanding of what is expected and providing instructors with consistent benchmarks for grading.

Examples of evaluation criteria

- **Clarity and coherence:** How clearly and logically is the information presented? Does the learner communicate their ideas in a structured and coherent manner?
- **Critical thinking and analysis:** How well does the learner demonstrate the ability to analyse, synthesize, and evaluate information?
- **Application of knowledge:** Does the learner effectively apply theoretical knowledge to practical or real-world situations?
- **Creativity and innovation:** How original are the learner's ideas and solutions? Does the learner demonstrate creativity in applying knowledge?
- **Engagement and participation:** How actively does the learner participate in discussions or group work? Does the learner demonstrate engagement with both the material and peers in the course?

Strategic questions to guide the process

- Which assessment types are most appropriate for evaluating the learning outcomes and key competences of the course?
- How can you ensure the evaluation criteria are clear, measurable, and transparent for learners?
- What strategies can be used to provide constructive feedback during or after assessments?
- How can assessments be designed to reflect both individual performance and collaborative skills?
- How will you ensure that assessments are fair, valid, and reliable across all learners?

5.6. (Mandatory) Use an assessment quality framework

An assessment quality framework ensures consistency, fairness, and alignment of assessments with the intended learning outcomes across all programmes. By using a structured framework, institutions can ensure that assessments are valid (measuring the intended competences), reliable (producing consistent results), and equitable (offering all learners a fair opportunity to succeed). This is particularly crucial in a transnational alliance like HEROES, where quality must be maintained across institutional and national contexts.

Operational principles of a robust assessment framework include

- **Alignment with intended learning outcomes:** Assessments should directly measure the skills and knowledge that the programme intends to impart.
- **Use of standardised rubrics and grading criteria:** Implementing consistent evaluation tools ensures fairness and transparency in grading.
- **Moderation and peer review of assessment tools:** Regular reviews help maintain the reliability and validity of assessment instruments.
- **Authentic and meaningful assessment tasks:** Design assessments that reflect real-world applications to enhance relevance and engagement.
- **Transparent communication of assessment standards to learners:** Clearly articulate expectations and criteria to learners to guide their learning process.

Tools to support implementation

To facilitate the application of these principles, course developers may consider the following internationally recognised and quality-assured frameworks:

- **Australian qualifications framework (AQF):** Provides a comprehensive qualifications education and training system, ensuring that assessments are valid, reliable, and fair. The AQF outlines the essential characteristics and learning outcomes for different qualification levels.
- **UK quality code for higher education:** This framework sets the expectations and guidance for assessment practices in higher education, emphasising transparency, alignment with learning outcomes, and quality assurance through external review and calibration.
- **E-xcellence framework (EADTU) (assessment chapter):** Offered by the *European Association of Distance Teaching Universities*, this framework focuses on quality in online and blended learning, providing benchmarks and guidelines to ensure effective and learner-centred assessment practices.

Integrating principles from these frameworks can support both academic integrity and learner development in a consistent, scalable manner.

Strategic Questions to Guide the Process Which reference frameworks best align with our institutional or alliance-wide assessment needs?

- How can we ensure that all assessment tasks explicitly reflect the intended learning outcomes?
- What processes ensure fairness and transparency across different institutions and academic cultures?
- How can moderation and calibration support consistent interpretation of assessment criteria?
- How will the framework be maintained, reviewed, and adapted over time?

5.7. (Mandatory) Establish resit opportunities for learners

Offering resit opportunities allows learners who did not meet the required criteria in the initial assessment to improve their performance and demonstrate mastery of the learning outcomes. Resits ensure that all learners have the chance to succeed and meet the objectives of the micro-credential, regardless of any challenges faced during the first attempt. Establishing clear resit opportunities is a key part of fostering an inclusive learning environment that supports learner success.

Recommended approach

Course designers should create clear policies regarding resits, including when and how they will be offered. Some key aspects to consider include:

- **Clear criteria for resits:** Clearly outline the conditions under which resits will be available. Ensure learners understand what they need to demonstrate in the resit and how it will be assessed.
- **Opportunities for feedback:** Before resitting, offer learners the chance to receive constructive feedback on their previous performance, helping them identify areas for improvement.
- **Fairness and consistency:** Ensure that the resit opportunities are designed to be equitable and fair, offering learners the same chance to demonstrate their learning, regardless of their initial performance.
- **Additional support:** Consider offering additional support, such as tutoring or study materials, to help learners prepare for their resit assessments.

By providing resit opportunities, course designers can promote a growth mindset, allowing learners to take responsibility for their learning and showing that failure is a part of the learning process.

Strategic questions to guide the process

- How will you ensure that resit opportunities are clearly communicated to learners and available under fair conditions?
- What feedback and support will be provided to learners before and after resit assessments?
- How will resits be aligned with the learning outcomes and assessment criteria to ensure fairness?
- How can resit opportunities encourage learners to reflect on their mistakes and improve their performance?

5.8. (Mandatory) Choose assessing institution

Standalone courses co-developed within the HEROES Alliance do not, by default, require formal enrolment at a specific institution to participate. Learners can access and complete the standalone course content freely as part of an open and modular approach to lifelong learning, if the development has been funded within the HEROES Alliance. However, if a learner wishes to obtain a micro-credential, formal enrolment at an assessment institution is required. This is necessary to ensure proper assessment, quality assurance, and official credential issuance.

Recommended approach

To facilitate this, partner institutions who co-create a micro-credential must agree on one of the following two models:

- **Single assessment institution (preferred model):**

The strongly recommended solution is for all partners involved in developing the micro-credential to agree on a primary institution responsible for conducting the assessment and issuing the micro-

credential. This provides a clear quality framework and eases administrative coordination, ensuring a consistent learner experience and streamlined recognition process.

- **Multiple micro-credentials from separate institutions:**

In cases where partners cannot agree on a single assessment institution, the micro-credential may result in two (or more) distinct micro-credentials issued by different institutions, each based on the shared content but assessed separately. In this model, the learner selects the preferred micro-credential on the same topics but different assessment and institution.

It is always possible for institutions to collaborate solely on the development of standalone course content without committing to joint credential issuance. In such cases, each institution may independently adapt the shared course design and implement its own micro-credential and assessment type as desired. Institutions are encouraged to use the HEROES course design template as a shared foundation and later extend it individually with micro-credential components. This allows each institution to align the offering with local market needs and strategies while maintaining a degree of coherence in learning design across the alliance by turning a co-developed standalone course into a distinct institutional micro-credential offer.

In HEROES, there will always be only one issuing and certifying institution per micro-credential, determined by the credential pathway the learner chooses. However, all certificates developed within the HEROES framework will carry a HEROES-approved credential mark. The procedure for issuing is explained in section 7.2.

5.9. (Consider) Authentic-case assessment

Authentic-case assessments provide learners with opportunities to apply their knowledge to real-world scenarios, bridging the gap between theory and practice. By using real-world cases, learners can develop practical problem-solving skills and gain experience in handling the types of challenges they may encounter in their future careers. This also supports the HEROES alliance's focus on challenge-based learning (The HEROES Alliance, 2025). This approach enhances the relevance of the learning experience and prepares learners to work in dynamic, real-life environments.

According to Oliver (2019), integrating authentic-case assessments can help micro-credentials align with industry needs and ensure that learners are equipped with applicable, job-ready skills. By providing learners with tasks that mirror challenges they may face in the workplace, these assessments support the development of critical thinking and decision-making capabilities, essential for professional success.

Inspiration

Course designers can incorporate authentic-case assessments to provide learners with meaningful opportunities to demonstrate their knowledge and skills. Some examples of how to integrate authentic-case assessments include:

- **Real-world scenarios:** Use case studies, industry-specific problems, or simulations based on actual events or challenges. This allows learners to apply their theoretical knowledge in a practical context, promoting critical thinking and decision-making skills.
- **Collaborative problem-solving:** Encourage group-based case studies where learners work together to solve complex, real-world problems. This promotes teamwork, communication, and collective problem-solving, which are valuable skills in the workplace.
- **Industry partnerships:** Collaborate with industry professionals or organizations to develop authentic case studies that are directly relevant to current trends and challenges in the field. This ensures the assessment is up-to-date and aligned with industry needs.

- **Project-based assessments:** Involve learners in projects that require them to create tangible solutions or products that could be used in the real world. For example, learners could work on creating a business plan, designing a marketing campaign, or developing a technical prototype.

Incorporating authentic-case assessments encourages learners to think critically about the practical applications of their knowledge and provides them with valuable skills for their future careers.

Strategic questions to guide the process

- How can authentic-case assessments be designed to reflect real-world challenges and industry needs?
- What resources or industry partnerships are needed to create relevant and current case studies?
- How can authentic-case assessments be used to develop critical thinking, problem-solving, and teamwork skills?
- What feedback strategies will ensure learners gain meaningful insights from their performance in authentic-case assessments?
- How can authentic-case assessments be used to measure both individual learning and collaborative outcomes?

5.10. (Mandatory) Define success criteria for assessments

Clear definition of success criteria ensures that learners understand what is expected of them in terms of performance and outcomes. Well-defined success criteria help guide learners toward achieving the desired standards and provide instructors with clear benchmarks for evaluating learner progress. One effective way to define success criteria is using rubrics, specifically a single-point rubric, which provides a clear, measurable set of expectations.

Inspiration

When designing success criteria, course designers can use the single-point rubric to clearly define what is expected from learners. The single-point rubric highlights a single level of performance (the desired standard) and leaves space for feedback. This allows instructors to provide specific, actionable insights, while also giving learners a clear understanding of what constitutes successful work. Key features of a single-point rubric include:

- **Criteria:** The rubric should outline specific competences or elements that the learner is expected to demonstrate, such as analytical skills, creativity, or application of knowledge.
- **Proficiency level:** A clear and simple description of the desired level of performance. This helps learners understand what is expected from them and helps instructors stay consistent in grading.
- **Feedback section:** A dedicated space for instructors to provide feedback, focusing on strengths and areas for improvement, which helps learners understand how they can refine their work.

This approach ensures that learners can focus on meeting the established expectations, while instructors provide meaningful and constructive feedback that promotes continuous improvement.

Strategic questions to guide the process

- What specific criteria should be included in the rubric to align with the key learning outcomes?
- How can you ensure that the proficiency level is clearly communicated and actionable for learners?
- How will you ensure that feedback is specific and constructive, helping learners improve their work?
- How can the rubric be adapted for various assessment types while maintaining consistency and clarity?
- How can success criteria and feedback be communicated to learners in a way that supports their learning and growth?

5.11. (Mandatory) Ensure calibration of assessments

To ensure that assessments are fair, consistent, and aligned across different instructors and learners, it is essential to calibrate assessments. Calibration is the process of ensuring that all assessors have a shared understanding of the criteria and standards used to evaluate learner performance. This practice promotes reliability and standardisation in assessment, ensuring that all learners are evaluated according to the same expectations, regardless of who is conducting the assessment.

Calibration becomes especially relevant if, in the future, HEROES involves joint degrees or shared micro-credentials across multiple institutions, where the assessor is not necessarily a course developer or owner. In such cases, ensuring that all assessors have a consistent understanding of the assessment criteria is crucial for maintaining fairness and reliability. This approach helps mitigate any potential inconsistencies in how assessments are applied, especially when standalone courses and micro-credentials are being evaluated by those who may not have been involved in their initial development (Andriessen, 2015).

Inspiration

Course designers can take several steps to ensure proper calibration of assessments:

- **Regular discussions and training:** Regular meetings between instructors and assessors to discuss assessment criteria, grading rubrics, and expected learner performance can help ensure alignment. Training sessions can also be useful in ensuring that all assessors understand how to apply the rubrics and assessment criteria consistently. This can serve as inspiration for staff training within the HEROES alliance, helping to align assessors across institutions and creating a consistent approach to assessment within the partnership.
- **Sample assessments:** Before grading actual learner work, instructors can review sample assessments together and discuss how to apply the rubric to ensure consistency in grading. This process can help identify any discrepancies in how the rubric is interpreted.
- **Moderation of assessments:** Implementing a moderation process where multiple assessors independently grade the same set of assignments or exams helps to identify any inconsistencies in the application of assessment criteria. Feedback and discussion can then be used to ensure all assessors are grading to the same standards.
- **Use of anchor papers:** Anchor papers are examples of learner work that are considered to meet specific levels of performance. These papers are used as references to guide grading and ensure that all assessors have the same reference point for different levels of achievement.
- **Continuous review:** Regularly reviewing the assessment process and grading results is key to identifying any areas where standardisation may need improvement. Feedback from learners, as well as from other instructors, can be used to fine-tune assessment practices.

By implementing these strategies, institutions can maintain the reliability and standardisation of assessments, ensuring fairness and consistency across all learning environments.

Strategic questions to guide the process

- How will you ensure that all assessors are aligned with the assessment criteria and standards before grading?
- What strategies can be implemented to regularly moderate and review assessments to ensure consistency?
- How can sample assessments and anchor papers be used to support calibration across instructors?
- What steps can be taken to involve learners in the calibration process to improve transparency and understanding?
- How will the calibration process be reviewed and adjusted over time to ensure continued reliability?

5.12. (Consider) Use the four-eye principle

The four-eye principle involves having multiple assessors review assessments to ensure fairness and mitigate bias. This principle is particularly important in collaborative or multi-institutional settings, such as within the HEROES alliance, where joint degrees or micro-credentials may require assessments to be reviewed across different institutions.

Inspiration

To implement the four-eye principle effectively:

- **Collaborative grading:** Pair assessors to independently evaluate the same assessments and then compare their evaluations. This process helps ensure consistency and fairness.
- **Moderation meetings:** Hold meetings between assessors to review grading decisions and ensure alignment.

By using the four-eye principle, institutions can ensure that assessments are fair, consistent, and aligned across different assessors and institutions (Kinnear, Warm, & Hauer, 2018).

Strategic questions to guide the process

- Has it been considered to implement the four-eye principle to maintain fairness and consistency in assessment design?

6. Format, delivery of content, and learning pathways

In the HEROES project, the emphasis on Universal Design for Learning (UDL) is critical for ensuring that educational opportunities are accessible, inclusive, and engaging for all learners, regardless of their backgrounds, learning styles, or abilities. UDL promotes flexible learning environments that accommodate a wide variety of learner needs, ensuring that all learners have an equitable opportunity to succeed (UDLL Consortium, 2016).

By integrating UDL principles, HEROES aims to break down barriers that often hinder learning, especially for diverse learners in higher education. UDL offers a framework that allows course designers to consider the variability in how learners perceive, engage with, and express their understanding of content. This results in designing standalone courses that offer multiple means of representation (to cater to diverse learning styles), multiple ways of engaging with content (to maintain motivation and relevance), and multiple options for expression (to enable learners to demonstrate their knowledge in ways that best suit their strengths).

In HEROES, it's particularly important to ensure that all micro-credentials and learning pathways are designed with UDL principles because the project involves a diverse range of learners across multiple institutions and disciplines. By adhering to UDL, HEROES ensures that content is accessible to all learners, increases learner engagement through personalized and flexible pathways, and promotes scalability without sacrificing quality or inclusivity.

Thus, UDL serves as the foundation for developing formats, content delivery, and learning pathways that are not only effective for diverse learners but also align with the goals of scalability and inclusivity that HEROES strives for in its cross-institutional educational framework.

6.1. (Mandatory) Address technical requirements and platform compatibility

Ensure that the technical requirements and platform compatibility are met for the standalone course delivery. This involves confirming that the chosen platform supports the necessary features for content delivery, assessments, and learner interactions, while being accessible across various devices and operating systems.

Recommended approach

- Confirm platform compatibility with common devices (desktop, mobile) and browsers.
- Ensure the platform supports all required content formats (videos, interactive materials, quizzes).
- Check integration with necessary tools (e.g., video conferencing, grade tracking, plagiarism detection).
- Provide clear technical support for users, including guides and troubleshooting resources.

Strategic questions to guide the process

- Does the platform support all content formats required for the standalone course?
- Is the platform accessible across multiple devices and browsers?

6.2. (Mandatory) Ensure the format supports accessibility, engagement, and scalability

The standalone course format should be designed to ensure accessibility for all learners, maintain high levels of engagement, and be scalable to accommodate a growing number of learners. This is essential in creating a learning experience that is flexible, inclusive, and sustainable within the HEROES framework.

Recommended actions

- Make sure that the standalone course is designed to be accessible to learners with disabilities, following WCAG guidelines. See more on <https://www.wcag.com/resource/what-is-wcag>
- Ensure the format can be scaled easily to support an increasing number of learners without compromising quality or engagement.
- Test the format across multiple devices and platforms to ensure consistent access and functionality.

Strategic questions to guide the process

- Does the standalone course format ensure accessibility for all learners, including those with disabilities?
- Can/or how can the standalone course format maintain learner engagement as it scales to accommodate more learners?

6.3. (Mandatory) Ensure standalone courses have standardised metadata for ECTS level

Within HEROES we use the ECTS (European Credit Transfer and Accumulation System) standard defined by the European Commission. ECTS is a learner-centred system for credit accumulation and transfer, based on the principle of transparency of the learning, teaching and assessment processes. Its objective is to facilitate the planning, delivery and evaluation of study programmes and learner mobility by recognising learning achievements and qualifications and periods of learning (European Commission, 2015).

When calculating ECTS, it is important to remember that the alliance works with assigning ECTS to both the standalone course elements and the assessment component separately. This approach enables the flexible reuse of standalone course components in other contexts, or simply for badging. Therefore, it is mandatory to ensure that standalone courses and micro-credentials have standardized ECTS declaration. This metadata function as a fundamental requirement within the HEROES framework for supporting the scalability of micro-credentials, ensuring their transferability across institutions, and creating flexible pathways for lifelong learning.

Workload is an estimation of the time the individual typically needs to complete all learning activities such as lectures, seminars, projects, practical work, work placements and individual study required to achieve the defined learning outcomes in formal learning environments. One ECTS corresponds to 25 to 30 hours of work (European Commission, 2015).

An ECTS calculator has been developed as part of the design template to present the workload for both a standalone course and as part of a micro-credential including an assessment. Only the total ECTS allocation for the full micro-credential will be visible to the learner. The ECTS calculation for the standalone course element is for internal use only.

Strategic questions to guide the process

- Has the course been assigned an ECTS value that accurately reflects the total learner workload, including both learning activities and assessment?
- Does the course include standardized ECTS metadata to support transparency, transferability, and recognition across institutions?
- Can the ECTS allocation facilitate the reuse of course components in different contexts, such as micro-credentials or badging systems?

6.4. (Mandatory) Ensure courses have standardised metadata for EQF level

Within HEROES we use EQF level (European Qualifications Framework for Lifelong Learning) to make qualifications more understandable and comparable across the alliance, aiding in the recognition and comparison of qualifications. The EQF is a common European reference framework that helps compare learning levels across different education systems. It has 8 levels, each defined by descriptors related to knowledge, skills, and responsibility/autonomy. The purpose of EQF is to make qualifications more understandable and comparable across Europe, aiding in the recognition and comparison of qualifications. It also supports lifelong learning and mobility, allowing learners to move more easily between different countries and educational contexts, and helps learners and employers understand the level and value of a micro-credential by making qualifications more readable and understandable across different countries and systems in the European Union.

According to the publication *Explaining the European Qualifications Framework for Lifelong Learning*, by the European Commission (2008), there will never be a perfect or absolute fit to EQF levels due to the diversity of qualifications at national and sectoral level. Instead, the principle of “best fit” should be applied (p. 6). This means that, based on the knowledge, skills and competences being assessed, course developers should judge overall which EQF level the qualification best corresponds to.

Strategic questions to guide the process

- Has the course been assigned an EQF level based on the relevant descriptors for knowledge, skills, and responsibility/autonomy?
- Will the assigned EQF level support learner mobility and facilitate recognition across institutions and national systems?
- Is the EQF metadata integrated in a way that supports the comparability of qualifications within and beyond the alliance?

6.5. (Mandatory) Inform learners about expected actions

To support learner success and transparency, it is mandatory for course developers to clearly communicate what is expected of learners before they begin a course or micro-credential.

Unlike formal study programmes, HEROES learning opportunities do not require learners to meet formal entry requirements (e.g. degrees, diplomas, or certificates). However, learners must be clearly informed of the recommended prior knowledge, skills, or experience that will help them fully engage with the course content and complete the tasks and assessments. Learners are still expected to actively participate in the course and meet any defined progression (badges) or completion requirements to be eligible for final assessment and to receive a credential.

Course developers must

- Provide a clear and accessible description of the knowledge or skills learners are expected to have prior to starting the course.
- This may include, for example, basic subject knowledge, digital literacy, or the ability to follow instruction in each language.
- Ensure that expectations are consistent with the course’s level and scope (e.g. EQF level).
- Include this information in the course description, registration interface, and course introduction.

This requirement ensures transparency, learner self-assessment, and appropriate alignment of expectations across the HEROES Alliance.

Strategic questions to guide the process

- Have the expected prior knowledge, skills, or experience been clearly described in a way that is accessible and easy to understand for prospective learners?
- Can learners self-assess their readiness to participate based on the stated starting points?
- Has this information been visibly included in all relevant places, such as the course description, registration interface, and course introduction?

6.6. (Mandatory) Ensure documentation of the course

Clear and accurate documentation of course metadata is essential for ensuring transparency and consistency. This includes making sure that the course title, description, sequence, and the issuing institution's name are well-defined and easily accessible. Proper documentation supports the recognition and transferability of the course, ensuring that all learners and institutions can understand and validate the content and its origin.

Mandatory actions

- **Course title:** Clearly state the title of the course, ensuring it accurately reflects the content and purpose of the course.
- **Course description:** Provide a concise description that outlines the key objectives, content, and learning outcomes of the course. This description will be used as a presentation and highlight for the course via HEROES.eu, serving as an introductory overview to potential learners and partners.
- **Suggested learning path:** Clearly define the sequence of topics, learning content, or courses to ensure learners understand the optimal learning flow. Within the HEROES framework, this is conceptualised as the suggested learning path, which helps learners navigate their educational journey effectively. Make sure that the learning path is aligned with assessment and teaching activities.
- **Issuing institution:** Clearly state the name of the institution issuing the course or micro-credential to ensure credibility and proper recognition.

Strategic questions to guide the process

- Is the course title clear and representative of the course content?
- How can the course sequence be organised to provide a logical learning progression for learners?

6.7. (Mandatory) Ensure skill tagging

To ensure that HEROES standalone courses and micro-credentials are clearly linked to relevant labour market needs, all standalone courses and micro-credentials must be skill tagged. To support this mandatory element, it could be beneficial to look back on section 3.1, 3.2 and 3.3.

Skill tagging means linking the standalone course and its learning outcomes to specific skills, using a recognized and standardized framework. This helps both learners and employers understand which competences are acquired and how these relate to job roles across Europe.

In the HEROES alliance, we apply the ESCO (European Skills, Competences, Qualifications and Occupations) framework to ensure clarity and compatibility across partners (European Comission, 2025).

The course developer is responsible for tagging the course with relevant skills. These should reflect what the learner is able to do after completing the course – not just the subject covered, but the actual competences acquired through participation in the learning activities.

Skill tagging also strengthens the role of the HEROES virtual campus (HEROES.eu) by improving search functionality through skill-based filters, increasing labour market relevance by aligning courses with local needs and job profiles, and enabling integration with digital CVs and job platforms through the widely recognised ESCO framework.

What is expected

- Tag each course and micro-credential with relevant skills using the ESCO framework (European Skills, Competences, Qualifications and Occupations).
- Ensure that the selected skills are clearly aligned with the course's intended learning outcomes and competences.
- Please note that we offer a step-by-step guide on how to skill tag a course or micro-credential using our template

Strategic questions to guide the process

- Have the course learning outcomes been tagged with specific, relevant skills using a recognized framework, such as ESCO?
- Do the tagged skills accurately reflect what the learner will be able to do after completing the course, rather than just the subject matter?
- Are the selected skills aligned with current labor market needs and relevant job profiles across Europe?

6.8. (Mandatory) Ensure modular and flexible content

To accommodate the diverse needs of learners, course content must be designed to be modular and flexible. This allows learners to engage with specific modules or units based on their interests, prior knowledge, or goals. Modular content enables learners to choose which areas to focus on and at what pace, ensuring that everyone can engage meaningfully with the material. This flexibility allows for a more inclusive learning environment, where learners can adjust their learning experience according to their individual needs.

Inspiration

- **Modular structure:** Break the content into distinct, clearly defined learning elements that learners can engage with at their own pace.
- **Flexible content delivery:** Offer content in multiple formats (e.g., text, video, quizzes, interactive tasks) to cater to different learning styles.
- **Multiple levels of engagement:** Provide different depths of content to match learners' prior knowledge and expertise, allowing both novice and advanced learners to engage effectively.
- **Pacing options:** Design the standalone course to allow learners to move through content at a pace that works for them, revisiting modules as necessary.

Strategic questions to guide the process

- How can the standalone course content be structured to allow flexibility and modularity?
- What options can be provided for learners to engage with content in a way that best suits their learning preferences?

6.9. (Consider) Offering personalised learning pathways

While section 6.7 focuses on creating content that is modular and flexible for learners, this consideration goes further by offering learners personalised learning pathways. In HEROES, we suggest a general learning path for learners, but we understand that one size does not fit all. Personalised learning pathways allow learners to tailor their learning journey based on their individual goals, background, and learning preferences.

Unlike section 6.7, which focuses on the flexibility within the content structure itself, this aspect is about providing learners with the freedom to choose their own learning path. By offering personalised pathways, we ensure that each learner can engage with the course in a way that best aligns with their own objectives and prior knowledge. This approach empowers learners to take control of their learning experience, making it more relevant and motivating.

Inspiration

- **Provide learning choices:** Allow learners to select from different content formats, assignments, or projects based on their learning preferences or goals.
- **Adaptive learning tools:** Incorporate adaptive learning systems that adjust content difficulty or recommendations based on the learner's performance.
- **Support personalised decisions:** Guide learners through the process of personalising their learning path, helping them understand how to make choices that best align with their objectives.

Strategic questions to guide the process

- How can we balance the suggested learning path with enough flexibility for learners to personalise their journey?
- What design elements can we use to help learners make informed decisions about their personalised pathways?

6.10. (Mandatory) Plan for evaluation

The course design must include a plan for how the course, and its relevance, will be evaluated after completion. The generic HEROES questionnaire is a useful tool for collecting immediate learner feedback, but it is not sufficient on its own. A tailored plan must also address the evaluation of the course's relevance for employers and whether professionals have benefitted from it after some time. There is no one-size-fits-all solution; the evaluation approach should be adapted to the course type, target audience, and sector. This item is directly linked to the final step in the administrative process, where course developers and administrative staff can collaborate to review quality based on the criteria defined here. The evaluation may lead to adjustments of the course, confirmation of its current format, or provide the basis for discontinuation if it is no longer relevant.

Strategic questions to guide the process

- How and when will immediate and follow-up evaluations be collected?
- How will employer perspectives and professional impact be incorporated?
- How will results be used to revise, maintain, or discontinue the course?
- Which stakeholders will be responsible for reviewing and validating the evaluation outcomes?

7. Administrative and technical responsibilities in the HEROES micro-credential workflow

This section outlines the administrative and technical workflow for implementing HEROES micro-credentials. It is intended to support the administrative process for coordination, system setup, quality assurance, and procedure for issuing across the alliance.

At the current stage, this workflow is to be understood as a guiding framework, subject to future refinement. Adjustments will be made once:

- The technical solutions available across partner institutions are validated.
- WP9 (responsible for platform and technology integration) has delivered its proposals for digital tools, metadata management, and system interoperability.

This part of the manual outlines the administrative and technical process that must take place once the course developers have finalized the standalone course or micro-credential using the official HEROES template.

The template functions as an agreement between participating institutions, outlining how the process should unfold. There is mutual responsibility for both completing the template and using it as a management tool in the implementation phase. It serves as the starting point for subsequent implementation steps, including:

- Learning environment setup
- Quality assurance procedures
- Procedures of issuing

7.1. Step-by-step guide

Once a standalone course or micro-credential pathway has been finalized using the HEROES template, those responsible for the administrative and technical process from the agreed administrative institution must carry out a structured set of actions to ensure the course is properly published, implemented, and integrated into the alliance's digital platforms and systems. In the HEROES Alliance it is agreed, that the course developer retains full responsibility for ensuring that course content remains up to date and holds the authority to remove the course if it becomes outdated.

For joint HEROES courses, the course developers must agree on which partner institution will carry out the administrative steps described in the implementation process. This decision must be clearly stated in the development template. Three scenarios can unfold:

- In the case of HEROES courses developed by a single institution, that institution automatically assumes responsibility for the administrative follow-up.
- If the course is a micro-credential, an assessing partner institution must always be designated. The assessing partner institution is formally responsible for the micro-credential and is therefore required to carry out the administrative procedures outlined in the following steps.
- For jointly developed courses that do not qualify as micro-credentials (i.e. courses without formal assessment and credentialing), course developers must indicate which of the contributing institutions will handle the administrative coordination.

On the next page, each step includes a short explanation of the purpose and scope of the task.

7.1.1. Step 1: Standalone course or micro-credentials shifts to administrative process

When the course developer notifies that the course or micro-credential has been completed using the HEROES template, this marks the transition from development to implementation. Those responsible for the administrative process must now:

- Review the completed template to ensure all required fields and documentation are in place (e.g. learning outcomes, ECTS, delivery format, assessment methods, metadata). Please note that a checklist will be provided later/tool.
- Upload the finalized template (file format and naming conventions to be defined) to the secure repository used across the alliance.
This template serves as a contractual and operational reference point for all further steps.

7.1.2. Step 2: Learning environment set-up

Once the template has been reviewed and stored, a learning environment must be created to host the standalone course or micro-credential. This applies to both digital and physical learning formats.

7.1.3. Step 3: Course quality questionnaire integration

To ensure consistent feedback and ongoing quality improvement, each standalone course or micro-credential must include the course quality questionnaire (CQ) as part of the learner experience.

Following steps needs to be checked:

- Ensure the CQ-questionnaire is embedded into the learning environment.
- For physical courses or micro-credentials, ensure that 15 minutes are allocated during a session to complete the CQ-questionnaire, as per HEROES alliance agreement.
- The CQ-questionnaire must always be placed at the end of the course, but before the final assessment begins, to ensure feedback reflects the learning experience without being influenced by grading outcomes.

7.1.4. Step 4: Quality assurance before publication on HEROES.eu

Once the learning environment has been created, the standalone course or micro-credential must be made visible to prospective learners through the HEROES.eu platform. Before a standalone course or micro-credential is published on the HEROES.eu platform, it must undergo a structured and documented internal quality assurance process.

Below is a step-by-step overview of the quality assurance requirements that must be completed before publication on HEROES.eu.

- Include all required metadata: Title, duration, ECTS, level determination based on EQF (EQF), delivery mode (online/physical/blended), and registration deadline. Please note that a full check list will be

provided to make sure that all information and details are labelled and presented accordingly on HEROES.eu.

- Apply skill tags as specified in the template. These tags will function as search filters and help position the micro-credential within the HEROES thematic and competence structure.
- Verify that the publication follows HEROES visual identity and editorial standards (to be defined).

7.1.5. Step 5: Add mobility information

If the standalone course or micro-credential includes physical (on-site) components, mobility information must be added to support cross-border participation. Please assure to follow the steps below:

- Add standard links or guidance for mobility options to the course listing on HEROES.eu (e.g. Erasmus+ procedures, travel advice, accommodation support).
- Confirm and coordinate with the responsible work package to ensure that:
 - The mobility information is accurate and up to date.
 - Any required documents or mobility application procedures are included.
- Ensure this information is clearly visible to learners before registration closes.

This step removes barriers to participation and supports the alliance's commitment to transnational learning.

7.1.6. Step 6: Add enrolment information

This step applies only to micro-credentials. Standard HEROES standalone courses, which do not involve formal assessment or credentialing, do not require this procedure.

For micro-credentials, the assessing partner institution is responsible for setting up and maintaining accurate enrolment information. This includes ensuring that prospective learners receive clear and correct guidance on how to enrol with them to take the credential. This information must be made available on Moodle.

7.1.7. Step 7: Launch

The launch of the standalone course or micro-credential must be coordinated between the course developer and those responsible for the administrative staff. The course developer is responsible for setting up the learning environment in Moodle and ensuring that all core content, modules, and learning activities are in place and functioning as intended.

The assessing partner institution is responsible for verifying that through their administrative process by assuring:

- All internal and external links in the course room work correctly.
- References to HEROES.eu, registration, and other platforms are active and accurate.
- Any mandatory information, such as the CQ-questionnaire or mobility links, is correctly positioned.
- Coordinating the final launch and opening the course in Moodle.

Only once both parties have confirmed that the course environment is complete and consistent with the template can the course be considered ready for launch. This coordination must be completed before the course is made accessible to learners.

7.1.8. Step 8: Formal enrolment and assessment

This step applies only to micro-credentials. HEROES standalone courses, which do not involve formal assessment or credentialing, do not require this procedure.

At this stage, the standalone course is running, and the administrative process is already set up for the enrolment procedure for assessment. The next step is to wait for learners to complete the course, earn the required badges, and indicate that they wish to proceed to assessment to achieve a micro-credential.

The institution will be notified of the learner's intent to enrol for assessment based on the procedure defined in section 7.1.6. Once the learner is enrolled, please assure to:

- Set up the assessment in the institution's own system.
- Retrieve and apply relevant information from the course template.
- Ensure that learners are informed that any complaints about the assessment process are handled according to the policies and procedures of the assessing partner institution.

7.2. Issuing, awarding and badging

When a learner successfully passes an assessment for a micro-credential the issuing institution must formally record the achieved result and prepare a certificate or a diploma confirming the completion of the learning activity. The institution is then responsible for issuing the certificate digitally to the learner. To ensure proper documentation and recognition, each institution must store the relevant academic and administrative data locally. This data forms the basis for the issued the certificate representing the micro-credential.

7.2.1. Mandatory issuing elements

Ensure that the following elements represent the minimum requirements for a micro-credential, based on the recommendations outlined in the Council Recommendation (The Council of the European Union, 2022):

- Identification of the learner
- Title of the micro-credential
- Country(ies)/Region(s) of the issuer
- Awarding body(ies)
- Date of issuing
- Learning outcomes
- Notional workload needed to achieve the learning outcomes (in ECTS credits, where possible)
- Level (and cycle, if applicable) of the learning experience leading to the micro-credential (EQF, QF-EHEA), if applicable
- Type of assessment
- Form of participation in the learning activity
- Type of quality assurance used to underpin the micro-credential

7.2.2. Optional issuing recommendations

In addition to the mandatory components, ensure the issuing institution may choose to include the following optional recommendations outlined in the Council Recommendation (non-exhaustive list) (The Council of the European Union, 2022):

- Prerequisites needed to enrol in the learning activity
- Grade achieved
- Supervision and identity verification during assessment (unsupervised with no identity verification, supervised with no identity verification, supervised online, or onsite with identity verification)
- Integration/stackability options (stand-alone, independent micro-credential/integrated, stackable towards another credential)
- Further information

7.2.3. Integration with Europass

A mandatory task related to the issuance procedure of digital certificates is ensuring integration to the Europass framework. This can be done in several ways. It is up to each partner institution to choose a path, as there is no joint platform to issue certificates through. The section below outlines examples of possible paths.

Depending on the chosen path, the institution may need external suppliers to build this part of the issuance procedure to ensure, that the issued certificates are verifiable across the different issuing institutions in the HEROES alliance.

- **eIDAS compliant seals** could be relevant for institutions, who chose to issue digital certificates in PDF-format. Such a seal can be acquired from an official eIDAS trust service provider¹.
- **European Digital Credentials (EDC)** framework could be relevant for institutions who either don't have an existing solution for digitally delivering and issuing diplomas or chose to create a specific issuance procedure for micro-credentials in the HEROES alliance but separate from all other credentials issued by the institution. EDC is a standalone open-source framework, which need to be set up and configured at the institution, either with help from inhouse IT departments or through a local provider². Please note that a prerequisite for using the EDC framework, is access to an eIDAS compliant seal.

¹ See this link for a complete list of European trust service providers: <https://eidas.ec.europa.eu/efda/trust-services/browse/eidas/tls/search/type?step=3&searchCriteria=eyJzZXJ2aWNIU2NvcGUiOiJFWENMVURFX0IOQUNUSVZFlwiY291bnRyeUNvZGVzIjpblkJFlwiQ1oiLCJESyIsIkZJliwiREUiLCJMVCIsIk5MliwiUFQiLCJTRSJdLCJzZXJ2aWNIVHlwZXMiOlsiUUNlcnRFU2VhbCJdfQ%3D%3D>

² Please see this link for more information about the EDC framework: <https://europass.europa.eu/da/what-europass-1/european-digital-credentials> and this link for more information about the EDC issuance procedure: <https://europass.europa.eu/da/how-issue-european-digital-credentials>

7.3. Ensuring implementation of the evaluation plan

Following the issuance and registration of the micro-credential, the responsible institution must ensure that the evaluation of the educational offer is carried out in accordance with the plan defined under point 6.10. This step requires cooperation between course developers and the staff responsible for reviewing feedback and assess quality against the established criteria. The outcome of the evaluation may lead to one of three actions: adjustment of the course, confirmation of its existing format, or discontinuation if it is deemed no longer relevant. Rather than being a final endpoint, this evaluation serves as the strategic mechanism that feeds back into the design and development loop, ensuring continuous improvement and long-term relevance. Documentation of the evaluation process and the decision taken must be retained for transparency and future reference.

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