

Requirements for the creation of learning modules: **Formal-and organizational requirements**

Below you will find some requirements that all learning modules should formally fulfil. The aim is to ensure that all groups are guided by the same requirements when developing the learning modules and that we can evaluate them accordingly.

(are the requirements fulfilled/are they not fulfilled)?

Requirements	Comments
<p><u>Division into teaching sequences:</u></p> <ol style="list-style-type: none"> 1. Each module starts with a problem-orientated introductory scenario 2. Concrete Tasks (for example planning of problem solving, work plan, division of work, ways of collaboration etc. 3. How do the students present their own results (also in between)? 4. How could you assess the training success? 5. How could you reflect and evaluate the learning process? 	<p>Work plan here is understood as a plan for the students to solve the problem. The plan need to be described in the methodical-didactical recommendations in a way that also teachers have an orientation.</p> <p>Output here can be also that the students prepare their own workplan. That should be described in the recommendations as well.</p>
Reference to both matrices	<p>The module always refers to at least one unit from the VQTS matrix (preferably several).</p> <p>The reference to the sustainability matrix must be given and described in the methodological and didactic explanations.</p>
Interdisciplinary / cross-disciplinary competences inherent in each learning module	<ol style="list-style-type: none"> 1. The ability to solve problems systematically in complex systems 2. The ability to communicate and collaborate with employees from other trades.

Requirements	Comments
	3. A basic knowledge on different technical systems in a building and their interconnection. 4. The ability to recognize and understand relationships between different Trades. 5. The ability to identify, analyze and resolve complex technical tasks. 6. Combining expertise in different trades to implement innovation. 7. The ability to collect, analyze and interpret data from various sensors to optimize building performance 8. The ability to integrate and automate various building systems 9. Understanding multiple disciplines including engineering, computer science, electronics and control systems
Modules can be implemented in the current curriculum or be offered as add-on for an additional qualification.	Methodical and didactic explanations
Modules can be carried out independently from special software or learning material providers.	-
Information on time and teaching settings	If special settings are required (e.g. premises, workshops), this must be described
Each learning module has a specific learning outcome	Knowledge, skills and competences
The modules can be used freely and are easy to develop further	Methodical and didactic explanations
Comprehensible language for the students	e.g. students with special needs