



**Education for zero
energy Buildings using
Building Information
Modelling**

Grant Agreement: 600946-EPP-1-2018-1-IE-EPPKA2-KA

Learning Unit 2



Co-funded by the
Erasmus+ Programme
of the European Union



BIM AND NZEB FOR WORKERS

EQF	4-5	Target	Craft workers Apprentices Specialized workers Construction workers
Description			

The following learning unit is intended to inform workers of the BIM methodology that has been used during project design, in this way, not only is the process speeded up, but there is an awareness to prevent and anticipate solutions. For this reason, digital communication using BIM tools on site between the design team and the construction team is essential.

Knowledge of nZEB will help you recognise the parameters which you should pay more attention to and execute effectively.

Objectives

- Carry out communication between design and construction teams.
- Use the BIM methodology on site to apply problem solving workflow.
- Evaluate the situation and apply the necessary prior actions to prevent setbacks using BIM methodology.
- Understand and apply the nZEB principles on site.

Generic competence

- Specialized problem solving required in the workplace.
- Recognise and demonstrate the use of digital techniques essential for obtaining measurements, generate floor plans and working collaboratively with the design team.
- Ability to apply construction procedures and work planning techniques.
- Demonstrate responsibility for evaluating and following best practices.



-
- Apply critical and problem-solving skills.
 - Demonstrate resilience to accept adverse situations objectively and interpret problems to offer a solution.
 - Demonstrate interdisciplinary collaboration and ability to work in a team towards common goals.
 - Apply analytical capacity.

Specific competence

- Recognise a variety of methods that can be utilized to optimize construction on site.
- Apply construction progress tracking to monitor from cost control to defects and safety.
- Design and establish solutions for collaborative workflows with native BIM projects (using the same software) or open BIM projects (using more than one vendor software).
- Compare 2D plans / drawings (contractual precedence) to BIM model through a diligence checking.
- Export 2D plans and other documentation from the BIM model in site.
- Assess systems related to building function and architecture.
- Communicate in contracting phase, understand and respect the role of all actors involved.
- Communicate with customers on construction progress and effectuation of building performance.
- Manage data, keep records of implementation, monitor outcome.
- Financial management.
- Monitor project realization and handle deviations.

Recommended learning methodology

Methodology



The recommended methodology for the course would be Gamification, which is based on the application of elements of games (non-playful context), in order to influence the behaviour of people from the stimulation of their motivation.

In addition, another recommended methodology would be Problem Based Learning, is based on group learning that uses real problems as a stimulus to develop skills in problem solving and acquire specific knowledge.

Methods

The recommended teaching methods should be based on problem solving and collaborative work.

Recommended assessment methodology

The recommended assessment methodology would be the realization of a portfolio with the resolution of practical cases made in the course and individual reflective exercises.
