



Course dossier: Face-to-Face Practical Workshop

Course title: European Training Programme on Energy Efficient Renovation of Old Buildings

For ETEROB Project

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1. Course outline

Course title	Energy Efficient Renovation of Old Buildings
Status of the course	To develop practical skills necessary for design of appropriate workflow for refurbishment project, design and planning of chosen RES system in buildings and practical cost control in refurbishment projects
Institution	University of Bydgoszcz
Course structure	Practical workshops, teamwork (3 - 5 members each)
Duration & format	24 hours of practical classes and 1 hours for introduction module and 1 hour of closing session
Intended audience	Learners/students who completed theoretical e-learning modules and passed tests for assessment of acquired knowledge successfully
Number of attendants	15 - 30

2. Content & learning outcomes

Module title	Introduction to practical classes	
Session No.	Description	Duration
1	Discussion about materials needed for doing of chosen practical tasks including in three modules. Knowledge has been acquired from e-learning modules. Questions and answers, additional explanations. Dividing the participants into groups and choosing task to do.	1h

Module title	Design of workflow for refurbishment project	
Session No.	Description	Duration
1	Example of hypothetical building and its characteristics. Learners receive all information and data necessary for design workflow structure, from choosing materials and system to finish refurbishment process. Trainer gives instruction and advices	1h
2	Practical tasks: design of most effective workflow structure. Type of work: diagrams, scheme, description.	6h
3	Discussion, questions and answers about learners works	1h
Learning outcomes	Learners are able to define objectives and set up criteria for designing of workflow structure as well as make a necessary assessment and calculations, making a diagram and scheme	

Module title		
Design and planning of RES system		
Session No.	Description	Duration
1	Example of hypothetical building structure and its characteristics. Learners receive basic information and data necessary for design and planning installation of RES systems, from choosing appropriate solutions to integrate various systems/devices. Trainer gives instruction and advices how to use given tools (templates and charts)	1h
2	Practical tasks: design of appropriate RES systems/devices installation and their integration into most effective system	6h
3	Discussion, questions and answers about learners works.	1h
Learning outcomes	Learner are able to use a practical skills to manage designing process, identify best RES systems/devices, assess their relative effectiveness in case of given building and refurbishment process as well as preserve building elements with great historic value	

Module title		
Practical cost control		
Session No.	Description	Duration
1	Example of refurbishment process of given building. Learners receive all information and data necessary for for cost control design. Trainer gives instruction and advices how to use given tools (templates and charts).	1h
2	Practical tasks: planning basic investment process and optimizing total cost of refurbishment project	6h
3	Discussion, questions and answers about learners works.	1h
Learning outcomes	Learner are able to identify and predict costs, identify uncertainties for investment, divide total costs into subtotal costs of each refurbishment phase; choosing cost-effective solutions, optimizing the costs of refurbishment project	

Module title		
Closing session		
Session No.	Description	Duration
1	Discussion and presentation of overall outcomes and results as well as their final assessment	30min
2	Collecting learners opinion and ideas for assessing course quality level and comparison between blended and traditional learning using special questionnaire	30 min