

MOOC title: DEEP RENOVATION FOR ENERGY EFFICIENT RESIDENTIAL BUILDINGS				
WEEK (module) TITLE	LESSON N.	LESSON TITLE - corretti	LECTURER	afiliation
TEASER	0_01	Introduction to the MOOC "Deep renovation for energy efficiency in residential buildings"	Marta Maria Sesana	Politecnico di Milano
WEEK 1 - Towards 2050 Carbon Neutrality: the role of energy efficiency in buildings	1_01	The renovation wave: the European 2050 climate neutrality challenge	Marta Maria Sesana	Politecnico di Milano
	1_02	Nearly Zero-Energy Building definition: EU and Italian standard overview	Graziano Salvalai	Politecnico di Milano
	1_03	The 4RinEU approach to deep renovation	Roberto Lollini	Eurac Research
		Quiz 1		
WEEK 2 - Building envelope: prefabricated multifunctional façade	2_01	The role of façade technologies in deep renovation	Graziano Salvalai	Politecnico di Milano
	2_02	Industrialization of the construction process	Riccardo Pinotti	Eurac Research
	2_03	Pros and Cons of prefabrication in the deep renovation of buildings	Riccardo Pinotti	Eurac Research
	2_04	Life cycle cost	Riccardo Pinotti	Eurac Research
		Quiz 2		
WEEK 3 - Building performance calculation and data analysis: definition, procedure, data flow and results representation and analysis	3_01	Introduction to modeling and simulation for buildings	Marta Maria Sesana	Politecnico di Milano
	3_02	Building energy simulation: model development, results representation and analysis	Marta Maria Sesana	Politecnico di Milano
	3_03	Building energy simulation: parametric studies	Roberta Perneti	Eurac Research/Università di Pavia
	3_04	Building energy modeling: verification and validation	Graziano Salvalai	Politecnico di Milano
	3_05	Energy and thermal comfort results analysis for BEM	Graziano Salvalai	Politecnico di Milano
		Quiz 3		
WEEK 4 - Deep renovation process: supporting decision	4_01	Renovation needs and performance targets	Roberta Perneti	Eurac Research/Università di Pavia
	4_02	Methods to aid the deep renovation process: risk evaluation and weighing of requirements	Roberta Perneti	Eurac Research/Università di Pavia
	4_03	Indoor environmental quality: design and management	Francesco Babich	Eurac Research
	4_04	Post-occupancy evaluation	Francesco Babich	Eurac Research
		Quiz 4		
WEEK 5 - Integration of renewables: early design methodology for renewables	5_01	BIPV as a viable option in building renovation packages	Laura Maturi	Eurac Research
	5_02	BIPV technologies	Jennifer Adami	Eurac Research
	5_03	Methodological approach for renewable harvesting optimisation	Mattia Dallapiccola	Eurac Research
	5_04	Renewable use optimisation through building cluster domain	Jennifer Adami	Eurac Research
	5_05	Practical approach for daylight optimisation	Giuseppe De Michele	Eurac Research
	5_06	Ventilative cooling	Annamaria Belleri	Eurac Research
		Quiz 5		
WEEK 6 - Lessons learnt from case studies	6_01	Deep renovation technology packages	Chiel Boonstra	Trecodome
	6_02	Demo case 1: Norway	Kari Thunshelle	SINTEF
	6_03	Demo case 2: The Netherlands	Chiel Boonstra	Trecodome
	6_04	Measurement and verification post-renovation	Daniele Antonucci	Eurac Research
		Quiz 6		