

## CEPH Virtual Classroom training course 2021

<b>DAY 1 - Basic concepts, Economics, Envelope and Thermal Bridges</b>	
09:00 A1 Passive House Introduction (* video)	Welcome, discussion of virtual workings, materials, logistics
9:45 A5 Compact Design (* video)	Discussion of video & A/V exercise
10:15 Break	
10:45 A3 Economics background (*) discussion of 'the formula'	Discussion of video
11:15 A4 Economics (30m), exercises (30m)	Virtual
12:15 Lunch	
13:00 B1 Envelope: construction types and U-values (*), U-value exercises (20m)	Discussion of video, live U-value calculations
13:35 B2 Envelope: Airtightness (*)	Discussion of video
14:00 B4 Airtightness testing (video of test prior to workshop)	Discussion of tests video plus a smoke test video and virtual presentation.
14:30 Airtightness exercise and materials demo	Materials demo plus flow calculations
15:00 Break	
15:15 B3 Thermal bridge free design (*)	Discussion of video
15:45 Building envelope junction detail exercise	Virtual with sketch submissions
16:15 Guest speaker [BRE] - Airtightness and thermal bridges design/execution and or simulation (30 min lecture +15 questions)	Virtual

<b>DAY 2- Fenestration and PHPP</b>	
9:00 B5 Thermographic imaging & demonstration	Virtual + live videos
9:30 B6 Windows principles	Virtual
10:15 Break	
10:45 B7 Shading (*)	Discussion of video + exercise
11:30 A2 Passive House Planning Package (PHPP) introduction*	Discussion of video
12:00 Lunch	
12:30 PHPP case study (intro & pre-seminar Q&A)	Virtual
14:30 PHPP case study (internal heat gains)	Virtual
15:15 Break	
15:30 PHPP case study (glazing, shading, ground)	Virtual
16:00 Guest speaker - 'A practitioner's view of Passive House projects and working practices' (30 min)	Virtual

<b>DAY 3 - HVAC Systems</b>	
9:00 C1 Ventilation requirements (*)	Discussion of video
9:15 C2 Ventilation principles	Virtual
10:15 Break	
10:30 C3 Ventilation component planning	Virtual
11:45 C4 Acoustics	Virtual
12:15 Lunch	
13:00 C5 Ventilation practical implementation	Virtual
13:30 C6 Ventilation examples (*)	Discussion of video
13:45 C6 Ventilation exercises	Review of exercises + Virtual duct design session
15:00 MVHR laboratory - BRE	Virtual tour
15:15 Break	
15:30 C7 Heating fundamentals (*)	Discussion of video
16:10 C8 Heat generation (*)	Discussion of video
16:40 C9/10 Temperature variation and distribution losses (*)	Discussion of video

<b>DAY 4 - Site observation, PHPP closing session and revision</b>	
9:00 B8 Site observations and exercises	Virtual
10:15 Break	
10:30 PHPP Heating & distribution losses & services & PER	Virtual
11:45 What-if studies via PHPP	Virtual
12:15 Lunch	
13:00 A6 Revision of PH principles, envelope calculations	Virtual
14:45 A7 Revision building services	Virtual
15:15 Break	
15:30 A8 Revision economics	Virtual
16:00 Overview of the online exam process	Virtual
16:30 A9 Revision of numerical calculations	Virtual

<b>DAY 5 - Mock exam and PH examples</b>	
9:00 Guest speakers – Experience of Passive House exam	Virtual
9:30 Mock exam design question	Virtual
10:30 Break	
10:45 Feedback/discussion of design exam	Virtual
12:30 Lunch	
13:00 Mock exam multiple choice & maths questions	Virtual
14:00 Feedback/discussion of mock exam, Q&A session	Virtual
15:15 Break	

15:30 Discussion, handout of 2nd mock exam and wrap-up	Virtual
16:30 Finish	Virtual