

Course „PHPP Expert“

Familiarise yourself with additional functions of the PHPP! This course enables you to enter more complex residential and non-residential buildings, mixed-use buildings and retrofit projects - both for the building envelope and building services.

Learn how to model buildings directly in the 3D programme designPH, get an in-depth knowledge about thermal bridges and take first steps in calculating thermal bridges.

This course assumes knowledge from the Passive House Designer course (modules 1-3) and initial experience with the PHPP. The course prepares for the examination to become a certified PHPP expert (a valid certificate "Passive House Designer/Consultant is required to hold this additional certificate).

Course participants who wish to take the PHPP Expert Examination receive a homework in the "PHPP Advanced" module as an additional practical exercise. This exercise and the feedback from the instructors ensures practical learning success. Use the 3 months to enter your own projects into the PHPP at the same time and thus anchor what you have learned in your everyday professional life.

**Modul 4:
PHPP
Advanced** This module allows you to enter more complex residential and non-residential buildings, mixed-use buildings and retrofit projects - for both the building envelope and building services. The input of typical components for larger projects is explained in detail and practiced practically. The possibilities of evaluating efficiency options with the variant calculation are presented, as well as the concept of economic comparisons in the PHPP, pre-certification for step-by-step modernisations and the use of the Energy Retrofit Plan (ESP).

**Modul 5:
3D data entry
(designPH)** In this module you will learn about the SketchUP plug-in "designPH", which can be used to model buildings directly in 3D, optimise them, update them and export them to PHPP with component properties.

**Modul 6:
Thermal
Bridges and
PHPP** Acquire in-depth knowledge on the topic of thermal bridges - indispensable for the energy-efficient planning of complex buildings. You will also learn how to calculate thermal bridges using the free THERM programme. In addition to determining the appropriate boundary conditions for thermal bridge calculations, you will learn how to read and use the results of two-dimensional heat flow calculations. In addition, various examples are used to provide an understanding of the range of typical thermal bridges and how to reduce thermal bridges in typical connection details in a way that is suitable for passive houses.

Becoming an PHPP Expert

The PHPP Expert certificate is only awarded after prior certification as a Passive House Designer/Consultant. Initial practical experience with the PHPP is recommended.

A prerequisite for participation in the PHPP expert examination is the successful completion of a homework.