

Project: CEPH
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D3.2 Revised “Definition of the main parameters of the course”



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Table of contents

1	Introduction	3
2.	Definition of the main parameters of the Passive House Course.....	4
2.1	Target group	4
2.2	Programme / content	5
2.3	Practical setting	6
2.4	Training materials and training elements	6
2.5	Further topics.....	6
2.6	Main results and conclusions.....	7
2.7	Ideal number of Participants	7
2.8	National differences	8
2.9	Fees / costs	8
2.10	Expected skills output	8
3.	Annexes.....	9
3.1	Agenda of the workshop held on 11. November 2008 in Kempten	9
3.2	Photo of the participants of the workshop in Kempten.....	10
3.3	Logo "Certified European Passive House Designer" project.....	11

1. Introduction

The Certified European Passive House Designer (CEPH) Project will elaborate the first intensive training course for Passive House Design at European level.

To reach this ambitious task, the following project-specific objectives were defined:

- Development of the first intensive training course for Passive House Design at European level (approx. 80 teaching hours)
- Development of a comprehensive set of training materials for nine European countries (including a “train-the-trainer” course)
- Implementation of training courses in all EU countries with developing passive-house markets
- Development of a highly transparent certification procedure
- Long-term sustainability of the established structures.
- Ensuring high visibility of the new training structure by means of a well-designed marketing campaign.

energie- & umweltzentrum allgäu (eza!) is the Leader of Work Package 3 of the CEPH Project (Development of Training-Course Design).

Work Package 3 refers to the development of a two-week training course for architects to become Certified European Passive House Designers. The design of the training course was based on existing schemes and was implemented in pilot training. Based on the experiences gathered within the pilot training, the course design was then revised and optimised.

The design was elaborated in such a way that the certification procedure was optimised for both the course and its participants.

The aim of this deliverable is the description of the development from the main parameters of the Passive House Course.

This aim was reached by working out the contents in intensive collaboration with competent partners of the project.

Partners in Work Package 3 were the following institutes:

energie- & umweltzentrum allgäu (eza!)

- Leader of Work Package 3
- Leader of Task 3.2 Definition of the Main Parameters of the Passive House Course
- Leader of Task 3.3 Design of the Part 'Building Envelope' in the course
- Leader of Task 3.8 Compilation of the complete training course
- Leader of Task 3.10 Revision and optimisation of course design
- Leader of Task 3.11 Referent Manual for Passive House Course

Energieinstitut Vorarlberg (EIV)

- Leader of Task 3.1 Compilation of existing training courses
- Leader of Task 3.7 Documentation of successful Passive House Projects

Passivhaus Dienstleistung GmbH (PHD)

- Leader of Task 3.4 Design of the Part Building Services
- Leader of Task 3.5 Design of the Part Calculation and Design Pool (PHPP) in the course
- Leader of Task 3.6 Design of the Part Costs and Economy in the Course

Passivhaus Institut Darmstadt (PHI)

- In this Work Package the PHI only acts as subcontractor for the final examination held at the end of the training course.

2. Definition of the main parameters of the Passive House Course

After the analysis of existing training materials (results in deliverable D3.1) this task will define the main parameters of the training course for Certified Passive House Designers. The training materials were developed on the basis of the experience of Energieinstitut Vorarlberg (EIV), Passivhaus Dienstleistung GmbH (PHD) and energie- & umweltzentrum allgäu (eza!) and are based on the examination regulations and training targets developed by the Passive House Institute (PHI). The final examination will be held by PHI.

This work was done in close communication with the Passive House Institute (PHI) which served as certification body and defined the requirements for Certified European Passive House Designers.

On 11 November 2008, the experts and trainers of PHD, EIV and eza! met at a one-day workshop in Kempten (Germany) to define the main parameters of the new training course. The agenda of the workshop is attached to this document (Annex 3.1).

2.1 Target group

At the one-day workshop, the above experts and trainers specified the following target group for this course:

- Architects
- Engineers (primarily construction and HVAC (heating, ventilation and air-conditioning))
- Master crafts- and tradesmen (carpenters, bricklayers, joiners, heating fitters)
- Technicians (building construction)
- Technicians (building services engineering)

Previous experience with energy-efficient buildings is an advantage.

The entry qualifications for the examination as a Certified Passive House Designer held by the Passive House Institute are listed on the web site www.passivhausplaner.eu (available in English and German). Since there are many different trades and professions across Europe which may sometimes prove difficult to assign to one of the above categories, the final decision about the admission to the Certified Passive House Designer examination will be made by the Darmstadt-based Passive House Institute (PHI).

The PHI will further differentiate between passive house designers and passive house consultants.

2.2 Programme / content

At the one-day workshop in Kempten (Germany) on 11 November 2008, PHD, eza! and EIV defined the content of the Certified European Passive House Designer Course

Length and format of course

The training course consists of 80 teaching units of 45 minutes each. The training is designed as a 10-day course for architects, planners and craftspeople.

The complete training course covers the following subjects:

- Information on passive-house design
- Building envelope
- Building services
- Costs and efficiency
- Quality control and construction management
- Calculation and design tool (PHPP), exercises
- Tendering and contract awarding
- Refurbishment with passive-house components
- Many exercises and different workshops
- Revision session

Following an introduction to passive houses, all requirements of passive houses will be described in detail and discussed, and then practised and consolidated in group work for small, medium-sized and large groups. Using a sample house, entries can be made in PHPP throughout the training course. Further actual houses have been documented to provide case studies for illustration purposes. At the end of the course, the issue will be summarized and sufficient time will be allowed for discussions and questions.

After completing the course, participants may sit the final "Certified European Passive House Designer" examination (developed by PHI).

Use of the training materials is described in detail in the Referent Manual. Drawing up a timetable, organizing the training material and holding the individual lessons are practised in the train-the-trainer course.

This course can be held on individual days, en bloc or as a weekly course.

2.3 Practical setting

At the workshop, PHD, eza! and EIV determined the number of teaching units needed for the individual subjects and content.

Two different types of implementation were designed and tested in the pilot training courses (while PHD uses modules that can be individually booked, eza! and EIV only offer complete training courses).

The workshop also addressed teaching approaches, i.e. what was the best method to teach the training course content to the participants.

The workshop decided that it was best to incorporate as many examples as possible and a wide variety of exercises and workshops into the teaching units. This approach ensures that participants will practise what they have been taught and consolidate their learning

The workshop further decided to start each training course with a slide that gives an overview of the training course content and targets.

2.4 Training materials and training elements

The workshop discussed what training materials were needed and should be available for the training courses.

EIV, PHD and eza! agreed on practice exercises of different length, team exercises, workshops and exercises using the Passive House planning package (PHPP).

A pictogram was developed for the exercises and added at those points in the course materials at which an exercise had to be completed. The time allowed for the exercise was added next to the pictogram. The pictogram facilitates identification of exercises and the time quoted provides general guidance to participants.

The way in which exercises and workshops are to be completed and which materials are required was documented in the training materials. These details can be found on the notes pages in the training materials. Training-course participants will receive a hardcopy of the complete training materials. The MS PowerPoint Presentations will be printed as "Notes Pages" (i.e. the slide will appear at the top of the page and the notes field for adding information about the slide at the bottom of the page).

2.5 Further topics

At the workshop and at further meetings, the following subjects were discussed and, where possible, decided and documented:

- Detailed coordination and agreement of training-course content and subjects
- Who will prepare which content plus associated training materials?
- Which practical case studies will be documented and used?
- Clarification of copyrights and rights of use
- Exchange of experience and information about the different types of training-course implementation
- Design of the contracts concluded between the project partners
- Development of instructions for authors and lecturers
- Fixing a date and advertising for the German-language training courses

- Development of guidelines for a joint CEPH logo that can be used by all project partners
- Development of a standardised CEPH MS PowerPoint slide master
- Slide layout (font, size, colours used,.....)

2.6 Main results and conclusions

After the first workshop of the project partners on 11 November 2008 in Kempten, the main parameters were defined. Details that were still unclear or had not arisen before were clarified in further discussions (mainly over the phone or in correspondence) and dates scheduled as needed.

Given this, the project partners were ready to start with the preparation of the training materials for the individual subject areas. The project partners agreed on a date by which the training materials prepared by the respective project partners were to be compiled.

Further dates:

- Compilation of training materials by training-course designers: Meeting on 9/10 March 2009, in Dornbirn (Austria). The date for the required meeting was fixed shortly after the workshop in Kempten.
- Completion and reciprocal supply of the training materials for the pilot training which was to be held by 3 April 2009 at the latest.
- Holding of three German-language pilot training courses in May 2009.
- Revision and optimisation of training materials: 30 June 2009 in Dornbirn (Austria)
- Examination for the German-language pilot training course on 4 July 2009
- 16/17 July 2009 development of the train-the-trainer course
- January 2010: implementation of the train-the-trainer pilot course

2.7 Ideal number of Participants

From a teaching point of view, 17 to 25 participants have proved to be the ideal course size. The number of participants also depends on the availability of finances, rooms and personnel. With groups of this size, the trainers can intensively assist participants during practices and give direct and detailed answers to any questions or discussions that may arise. Based on their long-standing experience, all training providers consider courses with more than 25 participants to be problematic because direct contact to the participants is no longer ensured, practices take too long to evaluate and, owing to the size of the group, not all participants can see and hear presentations equally well or can be adequately attended to.

2.8 National differences

When developing the training materials the greatest care was given to ensure their international character. Wherever possible, only EN standards were quoted.

A pre-formatted page which training providers and their trainers can use to describe special national features and distribute to the participants together with the script has been attached to every script. These additional pages are forwarded to the Passivhausinstitut in Darmstadt, subjected to quality testing and then included in the material.

Special features in the individual countries mainly concern possible funding, the types of contract award and invitations to tender, building regulations (e.g. earthquake resistance in South Tyrol), construction materials and the type and tradition of construction.

Customization to the individual countries thus ensures usability.

2.9 Fees / costs

All training providers can individually determine the fees charged for their courses. There is no general recommended price since the rates depend on the costs incurred for human resources and trainers, advertising of the training course, course materials, room for the training and catering for the participants. Although costs vary throughout the different European countries, costs of courses already given have been relatively similar.

2.10 Expected skills output

After completion of the training courses and after working through the entire training material, the participants have comprehensive knowledge of all aspects of passive houses and are able to plan and design a project for a passive house. The content listed in the catalogue of learning targets will be addressed and consolidated by means of exercises. Using a sample house, we carry out a complete data entry process in the PHPP. The training material, the supplied case studies and the completed PHPP provide the participants with reference material on the basis of which they will be able to do their own planning.

3. Annexes

Annex 3.1 Agenda of the workshop held on 11 November 2008 in Kempten

Workshop to define the parameters of the Certified Passive House Designer training course (Work Package 3, Task 3.2 Definition of the main parameters of the passive house course)

energie- & umweltzentrum allgäu, Burgstraße 26, 87435 Kempten

Tuesday 11 November 2008, 09:00 am to 17:00 pm

09.00 am – 10:00 am

Agenda Item 1: Presentation of current training courses and experiences

10.00 am – 10.15 am

Agenda Item 2: Current organisational issues for the core project team

10.15 am to 10.45 am

Agenda Item 3: Copyrights and contracts
Designing of contracts for

- Partners
- External training institutes (during and after the term of the project)
- Continuous improvement for partners after the term of the project (expiry, implementation)

10.45 am to 12.30 pm

Agenda Item 4: Definition of the framework conditions of the training course

- Definition of the target groups (entry qualifications?)
- Volume of the training materials
- Discuss attendance fees (inside and outside the project)
- Master slide for presentations (use of standardised master slide)
- Instructions for lecturers

12.30 pm – 13.30 pm

Lunch break

13.30 am – 16.30 am

Agenda Item 5: Definition of training-course contents and methods

- Contents in the individual thematic blocks
- Teaching methods (classroom-style, exercises, excursions,...)
- Illustrative material, equipment
- Clarifying the rights of use (copyrights)

16.30 pm – 17.00 pm

Agenda Item 6: To be done, next steps and dates

Annex 3.2: Photo of the participants of the workshop in Kempten on 11 November 2008



Annex 3.3: Logo of the "Certified European Passive House Designer" project

The logo was developed by a commissioned graphics designer in cooperation with the following organizations:

- eza!
- PHD
- EIV
- PHI

The logo was used at a host of occasions, for example at presentations and during preparation of the training materials.

