



# TRAINING METHODOLOGY

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## Executive summary

The training activities planned for the BeePro project are defined and described in this paper. In the framework of Project Result 1 "BeePro Curriculum containing State of the Art," CPIP Romania is in charge of directing the activity of designing the training methodology, while the other partners are expected to contribute in terms of their responsibilities for national content and development.

In order to assist partners, institutional stakeholders, and other relevant parties in implementing an online learning training based on BeePro developments, this deliverable summarizes the key information on the BeePro training methodology, a combination of modules delivered on a web-based platform.

**Chapter 1, Introduction**, provides further information about the topic of this paper, how the training activities will be created, and the techniques and didactical structures that will be used.

**Chapter 2, User Group Selection**, explains the steps taken to identify the user groups. It covers how to choose user groups, who the target market should be, and other pertinent requirements. The traits, competencies, and abilities of trainees are also described.

**Chapter 3, Modules**, provides further information about the training program's structure, module contents, and learning requirements.

**Chapter 4, Course Outline Template**, present the typologies of materials and documentation to be utilized and produced during the training course.



## Introduction

### Overall Training Methodology

Two crucial targets need to be addressed for training preparation: the definition of the training structure and methodology and the development of training modules.

The training activities contribute to the professional training of the involved actors.

The main characteristics of the BEEPRO training are:

- Easy to start
- Possible integration between modules
- Focused materials, feedback and support
- Ideal for adult learning and professionals
- Customization of modules program and training design
- Provide ongoing guidance and support
- Provide step-by-step, research-proven materials

It is essential to select the structure and methodology that will be the most effective for its training environment, considering the factors such as:

- **The overall training objectives:** *what is expected to be achieved through training?* In our case the training resources will focus on producing very useful training tools for VET organisations, teachers of VET students, farmers and beekeepers as well as for agricultural advisors to learn more about how to use plant protection products properly and effectively, in order to minimize the negative impact on the environment
- **Who needs the training:** *both in general, and any categories of trainees that will increase training effectiveness and economy?* In our case the training is needed by VET organisations, teachers of VET students, farmers and beekeepers as well as for agricultural advisors
- **The expected learning outcomes:** *what each person trained is expected to be able to do, and expect to know, at different stages and at the conclusion of training.* The main objective of the project is to update and improve knowledge and awareness of VET students, VET organisations, farmers and people working in the farm production area in the field of organic beekeeping and proper usage of the chemical plant protection products and fertilisers, by means of the creation of Curriculum and Interactive training content focused on organic beekeeping and development of interactive training materials and tools on organic apiculture and rational use of plant protection products.



- **The scope of the training methods**, such as *face-to-face intensive sessions, provision of reference materials, online available material and courses*. In BEEPRO training we decided to go with the online learning method.

In order to assess the module's outcomes and trainees' satisfaction with it, a final assessment test and user satisfaction survey will be issued.

The online learning program of the training course aims to provide:

- **Competency** on Bees in Nature, Pesticides, Insecticides, Fungicides, Acaricides, Herbicides, Rodenticides, Fertilizers and other Pesticides
- A **professional training** component that integrates European data and development in to the organization of local activities;
- An **opportunity to develop practical skills and abilities** in the area of lifelong learning adapted to agricultural environment in relation with bees.

At the end of the online learning experience a BEEPRO certificate of attendance will be distributed to all participants.

### **Training Objectives**

**Overall objective:** To raise the competency level of agricultural sector and VET providers and students on rational use of pesticides

#### **Specific objectives:**

- support knowledge about pesticides and fertilizers
- to support entrepreneurship on the rural areas
- to support awareness of a environment protection
- to promote EU demands on the use of pesticides
- promotion of the know-how related to pesticides
- to support improvement of quality of farming and beekeeping
- to support beekeepers and farmers in rural areas
- to support VET providers and students on the topic of the project

Trainees should gain at the end of the training experience solid improvement, as a direct result from the learning activity, in problem solving and decision making in several aspects related to the use of pesticides in agriculture. Special attention will be paid on the importance of further reading and development, as this is only an introductory base level training.



### **Training provision**

All modules in national language version must be tested during pilot testing. It means that each partner will test all modules in national language. To consider someone as a trained person, it is obligatory for the person/student/trainee to go through and pass the assessment test of: general module + 2 additional modules.

### **The on-line environment**

All the materials developed will be adapted for the online environment. Volume of the training materials content should be balanced across all developed modules, which means approx. 10-15 standard pages (one standard page is comprised of 1,800 characters with spaces) + additional resources. Also, for providing attractiveness materials should contain 5-10 additional resources (Photo, video, table, graph, external resources- pdf documents, ppt presentations, excel tables....). The training content together with the additional resources will be processed into interactive online modules at the Virtual Learning Environment platform.

### **Expected results**

The training courses are intended to provide an intensive and interdisciplinary sequence of on-line work. At the end of the course, participants should be able to:

- Use the BEEPRO learning environment and to export the learning experience through their daily activities
- Ensure an operative integration of BEEPRO knowledge into working routines.
- Communicate the knowledge acquired through BEEPRO learning experience to other stakeholders in the area.

## **User Group selection**

Our target groups at local and regional level, the groups among whom we aim to disseminate the project are:

### **LOCAL LEVEL:**

- VET students
- VET organisations
- Beekeepers working in the field of organic beekeeping and/or proper usage of the chemical plant protection products and fertilisers
- Farmers in crop production
- Regional administration
- Local government



- Technical companies
- Educational community (teachers and students)
- Youth associations
- Adult education
- Wide Public
- Other
- National and/or local governments (e.g., municipalities, County Council)
- Local entrepreneurship agencies and economic development bodies (e.g., Regional Development Agencies, Enterprises, Network of Local Enterprise Offices)
- Social inclusion bodies (e.g., Regional Centre for Social Policy)
- Development agencies, education and advisory institutions
- Umbrella bodies responsible for VET and entrepreneurship

#### **NATIONAL LEVEL:**

- Umbrella bodies responsible for VET and entrepreneurship
- National policy makers and accreditation bodies
- Entrepreneurship agencies and economic development bodies
- Chambers of Commerce
- Social inclusion bodies
- Development agencies, education and advisory institutions;
- Private sector including NGOs involved in the research, innovation and education activities and companies oriented on tourism development.
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#### **EUROPEAN LEVEL:**

- Umbrella bodies responsible for VET and entrepreneurship
- Networks and clusters.

### **Admission Conditions**

The training course of the BeePro project will be available for everyone that fulfills the following conditions:

- successful completion of the general course
- fill in the previous experience table





## PREVIOUS EXPERIENCE

	Not at all	Some degree	A lot
Previous trainings in organic beekeeping			
Previous trainings in proper usage of the chemical plant protection products and fertilisers			
Responsibilities in developing organic beekeeping activities using the chemical plant protection products and fertilisers			
Responsibilities in implementing organic beekeeping strategy using the chemical plant protection products and fertilisers			
Experience in European work / European projects			
Interest in providing organic beekeeping activities outside the region /country			

## Modules

### Training Structure

The objective of the training is to provide participants with the required knowledge and practice to use the BeePro knowledge and components as needed in the current society. The outcome of the need analyses confirmed project assumptions in regard to the content of the modules developed in BeePro project. Important information is visible in updating and developing modules partners that should focus on the needs of trainees. It can be noticed that this is the main reason why all existing materials and new methods/instruments must be developed and adapted to the requirements of the target group.

It was emphasized – as a guideline that the training content must be concentrated on the modern methods/instruments in the context of the improvements of the knowledge in organic beekeeping and proper usage of the chemical plant protection products and fertilizers.

The materials will be designed in the attractive and usable way and integrated into the e-learning platform, available to download on creative common license. The extended curriculum will be made available in English language and all partners' languages.

The training materials will be in compliance with the EQF documents and will be take us reference the EQF definitions for the trainee's achievements.



"Learning outcomes"	Statements of what a learner knows, understands and is able to do on completion of a learning process and which are defined in terms of knowledge, skills and competence
"Knowledge"	The outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual.
"Skills"	The ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments).
"Competence"	The proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy.

The level 3-4 of the EQF will be appropriate for training. All partners are free to adapt national version of the training content to higher level of EQF.

## Module design

After having evaluated the potential participants' needs and interest level, the training modules have been developed to be accessed in a flexible and customizable manner, according to the capabilities and existing skills of the trainees.

The **Module design template** follows the structure and methodology that will be the most effective for BeePro courses package, considering the factors such as:

- **Planned types, learning activities and teaching methods** - the following teaching and learning activities can be adapted and used in a range of course target groups<sup>1</sup>:
  - Concept mapping;
  - Participatory Learning in Action (PLA) Techniques;
  - Questioning;
  - Formative quizzes;

<sup>1</sup> Additional reading:

[http://www.fctl.ucf.edu/TeachingAndLearningResources/CourseDesign/Assessment/content/101\\_Tips.pdf](http://www.fctl.ucf.edu/TeachingAndLearningResources/CourseDesign/Assessment/content/101_Tips.pdf)

<https://www.uwc.ac.za/TandL/Pages/TandL-Activities.aspx>





- Problem-solving;
- Debates;
- Role-plays;
- Freewriting;
- Small group activities;
- Social media activities (Facebook, Twitter, Youtube);
- **Teaching hours** - the precise timing is very important part of the course design. During the syllabus development is very important to consider a time necessary for active learning and for learners to complete major assignments and prepare for exams.
- **Model of delivery** – the course content can be delivered in a variety of ways. However, the following innovative methods can be considered<sup>2</sup>:
  - *blended learning*, which encompasses a wide variety of designs, including:
    - technology enhanced learning (e.g. using pdf files or ppt presentations);
    - learning management systems as a support tool for face-to-face teaching and for storing learning materials and online discussion;
  - *online eLearning*, as a form of distance learning, with no face-to-face teaching, including:
    - courses for credits or non-credit courses, offered online and cover the relevant content, assessments, self-testing tools etc.;
    - fully open courses, such as MOOCs;
    - open educational resources, which can serve as supporting materials for teaching and learning.
- **EQF level** - The European Qualifications Framework (EQF) acts as a translation device to make national qualifications more readable across Europe, promoting workers' and learners' mobility between countries and facilitating their lifelong learning. The EQF aims to relate different countries' national qualifications systems to a common European reference framework. Individuals and employers will be able to use the EQF to better understand and compare the qualifications levels of different countries and different education and training systems. Since 2012, all new qualifications issued in Europe carry a reference to an appropriate EQF level<sup>3</sup>.
- **Assessment methods**<sup>4</sup> – the selection of appropriate assessment methods depends on factors like as planned learning outcomes, level of study, target groups of learners and their skills, knowledge and area of expertise, available resources, and delivery mode of the course and so on. Examples of assessment methods:
  - Course exams;
  - Course assignments/projects;
  - Essays;
  - Multiple-choice tests;
  - Self-assessment.

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<sup>2</sup> Additional reading:

<http://www.tonybates.ca/2015/02/03/deciding-on-modes-of-delivery/>

<sup>3</sup> Additional reading:

[https://en.wikipedia.org/wiki/European\\_Qualifications\\_Framework](https://en.wikipedia.org/wiki/European_Qualifications_Framework)

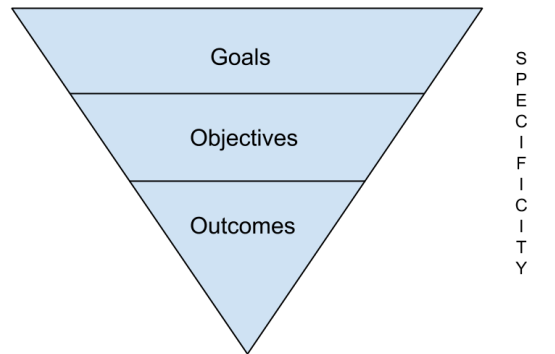
<sup>4</sup> Additional reading:

<http://facultyinnovate.utexas.edu/teaching/assess-learning/methods-overview>

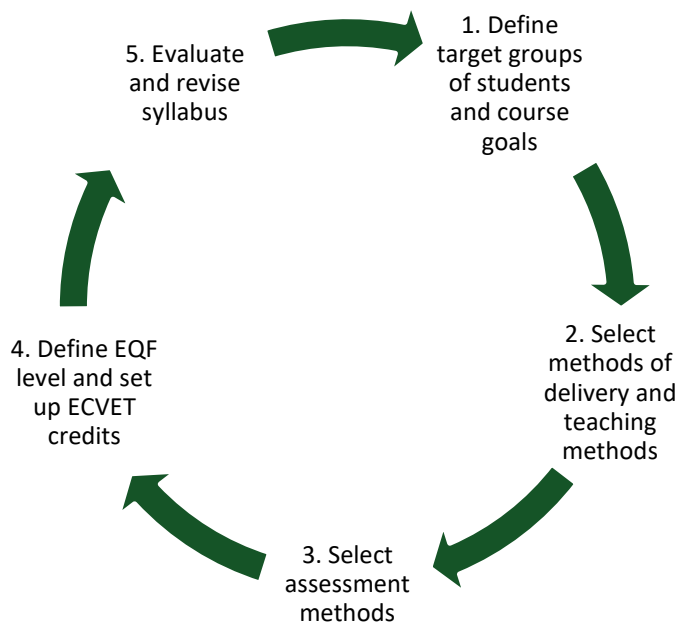
[http://www.learningandteaching.info/teaching/assess\\_form.htm](http://www.learningandteaching.info/teaching/assess_form.htm)



**Course objectives & Learning outcomes of the course unit** – course objectives clearly describe what you intend course participants to learn by the end of the course. Learning outcomes describe an intended or observed state, e.g. what your students will learn or what your students actually learned<sup>5</sup>.



### Process of curriculum development



<sup>5</sup> Additional reading:

<http://resources.depaul.edu/teaching-commons/teaching-guides/course-design/Pages/course-objectives-learning-outcomes.aspx>



## Course Outline Template

This chapter serves as the guideline for development of the content of BeePro course package.

The template refers to what is offered by the BeePro course package and covers the knowledge, attitude, behaviour, manner, performance and skills that are imparted or inculcated in a student. It contains the teaching methods, lessons, assignments, physical and mental exercises, activities, projects, study material, tutorials, presentations, assessments, test series, learning objectives, and so on.

The sections of course outline can be defined as follows:

- *English title of the course/Partner's language title of the course*  
Please, provide basic information about the course and title of the course in English and in all partners' languages
- *Course description*  
Explain concisely what the course is about and how the overall course will support student learning in the relevant disciplines.

In this part you can describe details of the background of the course and its overall aims and the prior knowledge the trainees should have. You can also include information how the course relates to the other BeePro modules.

To filling this part, answer on following questions can help you:

- What is the course about?
  - Why is it relevant, interesting, or significant?
  - What questions will your course answer?
  - What is the main argument of your course?
- *Learning outcomes*  
Learning outcomes refer specifically to what students are expected to achieve or learn at the end of the course. You can use Bloom's taxonomy to identify verbs to describe student learning. Examples of learning outcomes verbs for library instruction include:
    - Knowledge/Remembering: define, list, recognize;
    - Comprehension/Understanding: characterize, describe, explain, identify, locate, recognize, sort;
    - Application/Applying: choose, demonstrate, implement, perform;
    - Analysis/Analysing: analyse, categorize, compare, differentiate;
    - Evaluation/Evaluating: assess, critique, evaluate, rank, rate;
    - Synthesis/Creating: construct, design, formulate, organize, synthesize.
  - *Course curriculum*  
Highlight the main points in each topic/subject in order to help students better understand what is and what is not covered in the course.



***The Curriculum Template below.***

- *Learning activities*

Please, list the components of the course (e.g. face to face meeting in auditorium, interactive/3D learning materials, library activities, field-trip via the pathway, etc.).

Educational activities consist not only of the study of theoretical learning sources. Student must spend substantial part of the educational activities on the practical exercises. Please, plan activities of the topic/subject in the way to cover not only the theoretical but also interactive assessments.

- *Assessment type*

Assessments are part of the learning activities and must match to the planned learning outcomes. Please, describe how the assessment task(s) help to students achieve the planned learning outcomes.

Assessment type	Relations

- *Required and recommended readings*

Please, provide list of references and additional readings. The lists can include links to online resources and/or eBooks.

*Required readings:*

*Recommended readings:*