Development of a Union wide continuing professional development (CPD) framework for the field of laboratory animal science (LAS) to facilitate harmonised approach to maintenance of competence as required by the Directive

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Index

[Working group members 4](#_Toc168495499)

[Head 4](#_Toc168495500)

[Members (alphabetical order) 4](#_Toc168495501)

[Introduction 5](#_Toc168495502)

[Goals of these guidelines 5](#_Toc168495503)

[Continuing Personal Development CPD 6](#_Toc168495504)

[Definition of CPD 6](#_Toc168495505)

[Types of training and weighting of acquired knowledge 7](#_Toc168495506)

[Introduction 7](#_Toc168495507)

[Factor of multiplication 7](#_Toc168495508)

[Certification and CPD 9](#_Toc168495509)

[Listing of CPD with multiplication factors 10](#_Toc168495510)

[Theoretical knowledge training 10](#_Toc168495511)

[Practical skills training 12](#_Toc168495512)

[Active participation into the laboratory animal science community 14](#_Toc168495513)

[Active sharing of know-how and knowledge enlargement 15](#_Toc168495514)

[The Training organiser 16](#_Toc168495515)

[Definition of training organiser 16](#_Toc168495516)

[Roles and Responsibility of the training organiser 17](#_Toc168495517)

[Design of the continuing education course (CPD) 17](#_Toc168495518)

[Participant registration 17](#_Toc168495519)

[Confirmation and additional information 18](#_Toc168495520)

[Verification of the transfer of knowledge 18](#_Toc168495521)

[The certificate 19](#_Toc168495522)

[The Named Training and Competency Officer 22](#_Toc168495523)

[Definition of Named Training and Competency Officer 22](#_Toc168495524)

[Role of the Named Training and Competency Officer in CPD 22](#_Toc168495525)

[The effect of the NTCO on Harmonisation 24](#_Toc168495526)

[The Staff 25](#_Toc168495527)

[The Competent Authorities 25](#_Toc168495528)

[Definition of competent authorities 25](#_Toc168495529)

[Role of the authorities 25](#_Toc168495530)

[Harmonisation in point of view of the authorities 25](#_Toc168495531)

[Starting from scratch to implement course recognition. 26](#_Toc168495532)

[Appendix A - Designing a course 27](#_Toc168495533)

[Appendix B - Participant registration 28](#_Toc168495534)

[Appendix C –The assessment 29](#_Toc168495535)

# Working group members

## Head

Dr. Philippe Bugnon, DVM, Dipl. SVLAS

Institute of Laboratory Animal Science

Head of education and continuing education

University of Zürich – Switzerland

## Members (alphabetical order)

Dr. Sabine Bischoff

Head of Animal Welfare Office – Animal Welfare Officer

Universitätsklinikum Jena

Jena - Germany

Dr. Zara Heaven MRCVS

Veterinary Clinician and NTCO

Envigo - UK

Dr. Angela Kerton.

B.VetMed CertLAS MRCVS

Managing Director

Learning Curve (Development) Ltd

Hertfordshire – UK

Dr. Ivo A.C.W. Tiebosch

Animal Welfare officer · Competence Officer · Animal Welfare Body Utrecht

Utrecht University  - the Netherlands

Prof. Brun Ulfhake

Professor and emeritus professor of Anatomy
Department of Laboratory medicine, Karolinska Institutet

Stockholm – Sweden

# Introduction

Continuing Professional Development (CPD) is the continuation of basic training that allows a professional to acquire further competencies. CPD helps to maintain and improve the knowledge and skills of all professionals caring for and using laboratory animals. The field of animal experimentation is dynamic and regularly benefits from new improvements that reduce the number of animals or constraints, which also increase the quality of the research. 'Thus the purpose of CPD is to remind those who partake in it to regularly re-evaluate their knowledge and/or skills.

This in turn can impact CPD: what is new today and can be considered as an improvement will potentially be considered routine good practice in a few years and will be part of the basic training.

The training system requires several stakeholders, each with their own function and responsibility. To enable harmonisation of CPD which has several purposes, these guidelines focus on two bodies that can enable harmonisation: the training organisers, and the competent authorities.

A key element in this harmonisation process is the CPD certificate. This document allows the exchange of information concerning the CPD undertaken between the training organiser and the competent authorities.

These guidelines give the necessary guidelines for those responsible for organising CPD activities (e.g. training organisers) to transmit all the relevant information to the competent authorities for the recognition of a CPD course. The competent authorities in Europe, as in any other country, are responsible for the application of the law. This includes the recognition of the training necessary to ensure quality work that reduces either the number of animals used in animal experiments or the burden on the animals used (Article 24 of the EU Directive on the protection of animals used for scientific purposes).

In some countries a system of recognition of CPD is already in place in a form of hours or credit points ~~system~~. Both systems are not always compatible. These guidelines propose a system which can be easily adapted to both hours or credit points.

# Goals of these guidelines

Harmonisation can only be effective if the recommendations simplify the work of the involved parties. It should be noted that the work of recognition of training by the authorities is often complicated by the lack of information on CPD certificates. The aim of these guidelines is to ensure complete transfer of information , thus minimizing delays, and harmonization of recognition of training.

# Continuing Personal Development CPD

## Definition of CPD

Basic training and CPDs need to be clearly defined to ensure a clear distinction between the two. In most of situations, the distinction between basic training and CPD is very clear.

The initial training to obtain a certificate for function A, B, C or D before acquiring competence is considered as basic training.

Any education designed to regain competence after its loss in a practical skill is considered to be basic training because it aims to restore the lost competence acquired through initial basic training.

In the case of change of species for their experimentation, staff must complete appropriate and corresponding basic training to fulfil requirements for a license with the new species.

All persons fulfilling a role under the Act are expected to complete sufficient continuing professional development to ensure that their knowledge and skills are maintained, to keep up to date with relevant developments (particularly in the field of the 3Rs) and to meet professional requirements.

After obtaining one of the functions above, an option to include additional components of basic training associated with the acquisition of new knowledge (development) and/or strengthening acquired knowledge, up to a maximum of 20% CPD allowance may be permitted. The proviso for the inclusion of this type of basic training as CPD, is that the person should not have lost their competence in regulated technique itself, but that additional basic training (counted as CPD), enhances confidence in both theoretical and practical skills.

This should be discussed and agreed with the officer responsible for overseeing the training and competence assessment of professionals carrying for and using laboratory animals in the establishment (NTCO, Named Training and Competence Officer, §24).

new skills / knowledge

 max. 20%

new skills / knowledge

basic training

In the case of the development of a new technique which replaces an existing technique, the training in this new technique is considered as CPD. For instance, learning the tunnel technique for handling mice is considered CPD if the researcher learned the tail-gripping technique in basic training.

## Types of training and weighting of acquired knowledge

## Introduction

The objective is to propose a simple system that can also be adapted to any system already in place. There are two commonly used systems for quantifying CPD: a system based on the number of hours or a system of credit points. The system based on hours does not take into account the methods that enhance or establish acquisition of knowledge, unlike the credit system which weighs interaction and assessment. As several credit systems already exist, a system based on two factors was chosen: the number of hours and the type of course/event with a multiplication factor for the quantification of knowledge acquisition.

This system is compatible with any existing system that uses credit points.

## Factor of multiplication

The multiplication factor depends on several parameters

assessment

Duration (hours)

interaction

preparation

x

* Preparation: some courses require specific preparation (e.g. reading scientific publications, documents prepared specifically for the course or questions to be answered before the course). Preparing for the course has a beneficial effect on the acquisition of knowledge during the course. Note that in the case of preparation, the training organiser must define the number of hours required to prepare for the course. These are an integral part of, and should be factored into, the duration of the course.
* Interaction: some courses require interaction with participants. This term refers to the active promotion of interaction between participants in the form of a working group session, for example, or with the speaker(s) in a discussion session. This term does not include the few questions that participants may ask during a "classic" presentation, in some cases where answers are projected and reflected on within the presentation. Interaction has a beneficial effect on the acquisition of knowledge during the course through the active participation. Participants must be motivated to interact and benefit more from the knowledge acquired.
* Assessment: there are several ways of assessing knowledge acquisition. This can be done orally or in writing, in a group, or for an individual. The most commonly used form is the graded exam. Note that in the case of an assessment, the duration of the exam, for example, is an integral part of the course duration. In general, an education with an examination requires more work on the part of the participants to pass the examination, which is necessary to obtain the certificate.

All these parameters make it possible to better define the acquisition of knowledge by using the proposed multiplication factor for different types of CPD.

In the table below, the different types of courses or events (conferences, etc.) have been grouped into three categories:

* if the acquisition of knowledge is low, e.g in education courses with no or few preparation/interaction/assessment, the hours multiplication factor is 0.5. This means that two hours of these courses or activities correspond to one hour of knowledge acquisition.
* if the acquisition of knowledge corresponds to that expected in the number of hours of the course, e.g. in education courses with moderate preparation / interaction / assessment, no multiplication factor (or factor 1) should be used. In this case, one hour of the course or activity corresponds to one hour of knowledge acquisition.
* if the acquisition of knowledge is higher than can be expected in the number of hours of the course, e.g in education courses with intense preparation / interaction / assessment, etc., a factor of 2 is applied to the number of hours. In this case, one hour of the course or activity corresponds to two hours of learning.

This weighting of the number of hours enables the same process to be carried out as the transformation of hours into credit points for the systems that use them and can be used either to keep a number of (weighted) hours or to transform them after weighting into credit points.

## Certification and CPD

Certification is the process by which a certificate is issued to a person who has completed a training and educational activity. This certificate must contain all the information needed by anyone involved in supervising the training (competent authorities, institutions, animal welfare bodies (AWB), etc.). A certificate of education is mandatory to be considered as CPD. The competent authorities need certification which can be officially accepted as a proof of acquisition of knowledge.

Certification of an educational activity independent of the person who attended the education is essential for reasons of credibility, especially in the context of an official assessment by the competent authorities. Furthermore, with the free movement of researchers in Europe, it is necessary to have plausible certification to ensure other competent authorities, when a researcher moves to another institution, recognise a certified education obtained previously from a third party. This third party can be a training organiser, but, also for an internal course, the members of animal welfare bodies or the institutes examination committee.

The person who issues the certificate has some very important duties such as confirming whether participants are present. With her/his signature (digital or by hand) she/he confirms officially that the person receiving the certificate completed this education (duration, content, assessment, …). For more details see chapter training organiser / certificate.

The certification of a course is relatively simple to set up because the structure of a course makes it easy: duration, learning outcomes, content, attendance check. But this is not the case for other events, that can also contribute to professional development in laboratory animal science. In addition to courses in laboratory animal science, a common way to acquire and disseminate knowledge is through information transfer that could be organised. Information transfer can occur in the context of a 3Rs-meeting (e.g., an institutional meeting) or during an exchange visit to another facility/institution (site-visit). In both contexts, the goal is to learn new knowledge (theoretical) or work procedures (practical) that have clear 3Rs content and, when implemented, will improve conditions and/or welfare of laboratory animals. Accreditation of CPD for these types of activities is best managed through a standardized “3Rs-meeting”/”site-visit” protocol that can be signed, for example, by the named officer (art 24) responsible for education and training at the facility. This protocol can then be considered as an education certificate. More details in the chapter training organiser / certificate.

Important note concerning the content ~~those~~ of such meetings and site-visits: To be recognised as a CPD, the content of these events must be based upon the 3Rs (Replace, Reduce and/or Refine) in the strict sense of this term. To illustrate this: an institutional meeting on the 3Rs (new refinement technique, new method for replacing part of a research project) can count as a CPD if it meets the conditions set out above (certification). However, a "classic" traditional research meeting presenting the results of a research project that is not dedicated purely to the 3Rs cannot count as CPD.

## Listing of CPD with multiplication factors

The table below includes the different types of CPD with the multiplication factor that takes into account the parameters that influence the acquisition of knowledge (as mentioned above). The different CPDs are sorted by type of learning.

Note that only events (courses, congresses, meetings, etc.) that issue a certificate can be considered CPD

### Theoretical knowledge training

This type of training does not use live animals and only provides theoretical information used in experiments and animal facilities with a view to improving the conditions under which animals are used in experiments / animal facilities and for a better application of the 3Rs.

There is a very wide variety of types of theoretical training, from online courses to conferences dedicated to the science of laboratory animals.

|  |  |  |
| --- | --- | --- |
| Type of course | Content | Multiplication factor |
| Face to face laboratory animal science educational lectures (LAS) [[1]](#footnote-1) | Theoretical course on the quality of performing animal science or species specific courses (for example breeding efficiency, health monitoring or laboratory animal pathology) – **without interaction (working group, ….) and without assessment** | 1 |
| Theoretical course on the quality of performing animal science or species specific courses (for example breeding efficiency, health monitoring or laboratory animal pathology) – **with interaction (working group, ….) and with assessment** | 2 |
| Online LAS education orLAS Webinars | Online course (with the presence of the training organiser / speakers) without interaction or assessment | 1 |
| Online module (with the presence of the training organiser / speakers) with interaction such as with breakout rooms, problem solving component and/or assessment | 2 |
| E-learning / online pre-recorded lectures | Online module dedicated to self-learning without presence of the speakers / without interaction and assessment | 0.5 |
| E-learning / online pre-recorded lectures | Online module dedicated to self-learning with assessment | 1 |
| Non-LAS, but relevant training | Examples are: Courses that lead to culture of care, for example communication for animal technicians or animal caretakers; Educational or competence assessor training to ensure the effectivity of animals used in education. **All** **with assessment certificate** | 1 |
| Congresses / conferences in LAS | National or international congresses/conferences in laboratory animal science (3R relevant topics) with ~~frontal~~ oral presentations ~~with~~ of various topics, workshops, poster sessions. | 0.5 |
| Attending special presentations at AWB meetings | Meetings organised by the Information Officer and/or animal welfare bodies with new updates or developments within laboratory animal science or local regulations | 1 |
| Presentation in LAS | Presentation in a topic ~~in~~ of laboratory animal science in a course or conference. **Time allocated:** time for the presentation + twice that time for preparation. Counts as CPD for the first presentation (in case of repetition of the presentation) | 1 |

### Practical skills training

This type of course involves the use of live animals or alternatives. This is subject to an ethical evaluation of their use for training and in some countries also subject to official authorisation. Only people who need this training with live animals are entitled to take it if they will be using the techniques learned in these courses in their foreseeable experiments.

|  |  |  |
| --- | --- | --- |
| Type of course | Content | Multiplication factor |
| Replacement techniques / methods | Learning to work with non-animal methods/new approach methods in a course **without assessment** | 1 |
| Learning to work with non-animal methods/new approach methods in a course **with assessment** | 2 |
| Practical training | Hands-on training (accredited/established training program) to learn a **new technique [[2]](#footnote-2)**. Assessment is part of this kind of training because the person who completed this course must be able to ~~complete~~ use/deploy the technique properly in order to have the certification | 2 |
| Practical training | Hands-on training (formal course) on voluntary basis to **refine a technique learned** during basic training if the person no longer feels confident enough to do it correctly (without having lost the competence for that technique). For more details, see chapter definition of CPD. | 1 |
| Non-LAS, but relevant training | Examples are: Educational or competence assessor training with practical training to ensure the effectivity of animals used in education. **All** **with assessment certificate** | 1 |

Education should also be taken into account as animals used in education are also under the protection of the Directive (article 1). Teachers that educate with using animals, as is practice in for example veterinary medicine should have sufficient training in education. Supervisors and assessors that are responsible for technique training in practice should have had the basic training to enable them to do so effectively. The trainer is considered an experimenter and must fulfil the conditions for carrying out this experimentation (training). Additional training to become competent in education is considered as CPD.

### Active participation into the laboratory animal science community

#### Active voluntary participation in laboratory science associations

Sharing knowledge towards the LAS (laboratory animal science) community

Active participation in certain activities (association board, editorial board, publications) enriches the knowledge gained, enabling professional development. Given that it is not possible to quantify the acquisition of knowledge in the same way as in a course, we propose a number of hours per year.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Subjects | Chair of the Board | Board | Committee | Working group |
| National laboratory animal science associationInternational laboratory animal science association | 8 hours/year | 4 hours/year | 8 hours/year | 8 hours/year |

The head of the board of the association is responsible for certifying the time/duration that is considered CPD.

#### Laboratory animal science journals

|  |  |
| --- | --- |
| Subjects | Editorial board |
| International or national journals dedicated to LAS or 3Rs | 8 hours/year |

Scientific publications that are dedicated to the 3Rs, such as those describing or evaluating new replacement methods, techniques for reducing the number of animals and new refinement methods, can be considered as CPD because they contribute to improving the use of laboratory animals, or to the replacement of techniques that use laboratory animals. The people involved in such publications have had to think about, test and evaluate these new techniques. This can therefore be considered as CPD professional development.

|  |  |  |  |
| --- | --- | --- | --- |
| Subjects | First author | Co-authors | Last author |
| Peer-reviewed publication of Replace, Reduce or Refine methods/techniques | 8 hours / publication | 4 hours / publication | 8 hours / publication |

### Active sharing of know-how and knowledge enlargement

This is an important part of disseminating information and techniques that can be considered as CPD under certain conditions: the first is the content of the information or the technique, and the second is the certification of the content acquired.

The information acquired must be relevant to the 3Rs and be beneficial to the animals in the experiments and/or in the animal facilities.

Certifying such events is more challenging than certifying courses, because the structure and content of a course with an organiser is predefined: e.g includes registration of participants, learning outcomes, attendance checks, and certificates.

For the certification of a meeting, the meeting organiser provides the named officer or the animal welfare officer(s) (AWO(s)) / AWBs with the information required for the certification.

In the case of a meeting, the content of the course, the listing of participants are provided to the named officer or the AWOs / AWBs for the certification.

In the case of a site visit, a visit protocol detailing the revised information/techniques will be used for certification.

In both cases, after review and acceptance of the event as CPD, the certificates are issued by the NTCO or the AWOs / AWBs.

|  |  |  |
| --- | --- | --- |
| Type of course | Content | Multiplication factor |
| Attending special presentations at AWB meetings | Meetings organised by Information Officer and/or animal welfare bodies with new updates or developments within laboratory animal science or local regulations | 1 |
| 3Rs meetings | Presentation or workshop about new knowledge related to 3R **without interaction or assessment** | 1 |
| Presentation or workshop about new knowledge related to 3R **with interaction or assessment** | 2 |

A site visit also makes possible to acquire important information and/or new techniques that have not yet been implemented in the visitor’s experiments or animal. This type of visit allows the visitor to observe such techniques which can be used in the visitor’s experiments and/or animal facilities to improve the conditions of laboratory. Interaction with the person in charge of the animal facility or the experiment visited allows a good transmission of information / technique(s)

|  |  |  |
| --- | --- | --- |
| Site-visit | site visits to acquire new information /technique(s) to improve the welfare of laboratory animals either in experiments or in animal facilities | 0.5 |

# The Training organiser

## Definition of training organiser

The organiser of a course is the person responsible for the course or the person representing a group of people / an institution / an organization providing a course. From a legal point of view, this is the person or entity who, by signing the certificate, confirms the veracity of all the information contained in the certificate.

In the case of a group of people (for example the AWBs or AWOs of an institution), one person is designated for this task (named officer in the Directive article 24.1.c) which is the Named Training and Competence Officer (NTCO). This person must possess the necessary means for verifying the information so that he or she can confirm the facts contained in the certificate are correct.

## Roles and Responsibility of the training organiser

The role of the training organiser is to design and administrate the course, from its planning and the registration of participants, the course itself, and through to the issue of certificates. This is essential if the course is to be recognised by the competent authorities and also to ensure recognition by competent authorities in other countries. A lack of essential information in the certificate means that it may not be supported by the NTCO and may not be recognised by the relevant competent authorities.

### Design of the continuing education course (CPD)

Designing a course involves defining the following points:

* the objective(s) and learning outcome(s) (LO)
* the description of the course (curriculum)
* the expected knowledge/experience/education level of the applicant
* the format of the course (online, classroom, etc.)
* if planned, the form of interaction
* homework (if necessary), defining aims, content and whether a report is to be submitted
* the platform for collecting participant registrations
* the minimum and maximum number of participants
* the attendance check
* If included, the examination or other means used to assess the Learning Outcomes
* the duration of the course
* the form of the certificate and its content (see corresponding chapter)
* delivery of certificates
* data archiving period
* external recognition / accreditation

See details in Appendix A

### Participant registration

The registration must enable the following information to be collected.

Required information:

* surname and first name(s)
* Email - professional if possible
* Unique personal identification (social security number or equivalent of information of identity)

Basic information such as surname and first name(s) is also used to check attendance. It is imperative that the attending person’s identity is correct.

The email address is used to contact the participant for further information (e.g. request for confirmation of participation) and to give them information about the course: place and date, aims of the course, how the course will be run, course documents, homework if applicable

Additional information are listed in Appendix YYY

The Study Director's/NTCO/Superior officer contact details if a copy of the certificate is also to be sent to him/her.

### Confirmation and additional information

The organiser is responsible to confirm the registration to the participant giving additional important information to the participants.

* confirmation of participation
* cancellation conditions (deadline, costs related to cancellation)
* information on contacting the training organiser in case of questions
* location and description of the venue for face-to-face courses
* access to the online course (link) if the course takes place online. For online courses please see Appendix A for further recommendations).

### Verification of the transfer of knowledge

The organiser should define how the LOs of the course are assessed. This means that the organiser must define and justify the criteria for passing. This may take the form of an exam, individual essay, oral presentation or group work. It is also possible to assess the acquired knowledge in practical training (DOPS).

The criteria for repeating an examination or knowledge acquisition assessment must be defined and communicated.

See more details on constructive alignment for the preparation of evaluation of acquisition of knowledge in Appendix C.

## The certificate

This document is essential for harmonisation and/or recognition by the competent authorities. The information that the training organiser must include in the certificate must enable the authorities to have everything they need for recognition of the training and education. It is also the responsibility of the participants to provide all this information in their certificate.

The following information is required:

* the logo and details of the entity organising the training course
* the term "certificate of attendance" to indicate the type of document
* first name(s), surname and date and unique personal identifier of the participant
* the course location (where the course is given)
* the course title
* the course completion date
* the assessment of acquired knowledge/skills (LOs)
* the course content and LOs to provide details about the course so that the content can be easily assessed
* the actual duration of the course and the suggested multiplication factor for this type of course. See chapter Listing of CDP with multiplication factors. The duration calculated with the multiplication factor enables the competent authorities to better estimate the knowledge acquired, which is the primary aim of a course if the course is recognised/approved/accredited by the competent authorities/accrediting body, details of such recognition (date, contact details etc, …)
* the first name(s), surname and position of the training organiser, together with an email address to enable the competent authorities to contact for inquires if necessary
* the signature of the training organiser and the date to confirm that the document is valid. Remember that a signature by hand or digital on a document certifies that the content of the certificate is correct.

Page 1/2



Page 2/2




# The Named Training and Competency Officer

## Definition of Named Training and Competency Officer

According to the EU directive on the protection of animals used for scientific purposes all breeders, suppliers and users of animals used in science have a named officer responsible for ensuring that the staff are adequately educated, competent and continuously trained and that they are supervised until they have demonstrated the requisite competence according to article 24:1c of Directive. This task (or responsibility) is carried out by the named training and competency officer (NTCO) and who should be appointed as such by any institution or company licensed to breed, supply or use animals. The responsibility of the NTCO applies to staff working in functions A to D (in accordance with Article 23), but this could be extended to the responsibility of the staff responsible for the questions described in Article 24, as well as designated veterinarians (Article 25). In all cases these are referred to as staff, as is done in the directive.

To get a good insight into the function, responsibilities and possible qualities of a NTCO we refer to the paragraph “Person(s) responsible for education, competence and CPD of staff in Article 24(1)(c)”

## Role of the Named Training and Competency Officer in CPD

The framework considers CPD with a focus on a continuing trained of staff. Continuously trained contains, amongst other responsibilities, assurance that a CPD record is completed in a timely manner by those involved in the care and use of animals used in science and/or education. Possibly even more important, the NTCO is also responsible for reviewing the relevance of the CPD record according to the tasks of the staff involved in the work with animals. During the CPD acknowledgement process it is good practice to incorporate a review by the NTCO for the relevance of the portfolio. By regular contact between the NTCO and the staff that need renewal of their authority to use and/or care for animals used in science and education relevance can be assured. The frequency of this contact or moment of review must be determined by the NTCO and the institution/company, in order to ensure a good overview of the ongoing training of persons involved in animals in experiments or related activities (e.g. animal facilities), but at least once yearly is preferable.



Figure 1 Graphical delineation of the yearly cycle with the NTCO leading to a beneficial and relevant CPD portfolio of staff involved in animal science or education.

The NTCO can appraise the value of training, however the final decision of whether a training is possible always lays by the site license holder. Hence the NTCO has the central advisory role to align all responsibilities within laboratory animal science so that CPD is meaningful, but within the boundaries of what is financially and organizationally possible. Additionally, an additional role that is not described in the law, is that NTCO’s can help to provide high-quality ongoing training that meets the needs of staff. Working with training organisers to inform them of current training gaps, which they then take into account at the annual alignment meeting with staff. The advisory responsibilities are displayed in Figure 2 from a NTCO perspective. Finally, the NTCO can validate the value of internal meetings or site visits by issuing certificates as stated earlier.



Figure 2 Responsibilities of NTCO from the perspective of an NTCO (centered) in relation to parties involved in securing CPD for staff (bottom left)

Especially regarding advice to training organisers, but also the Competent Authority, it would be fruitful if NTCOs were organised on a national level, for example within the national laboratory animal science association. This way advice can be centralized and experience can be shared. This NTCO network should be supported by the licensed institute for their own benefit.

## The effect of the NTCO on Harmonisation

The competent authorities can assign tasks to the NTCO for the recognition and approval of courses taken abroad if they are relevant, either when staff transfers from abroad to the institute or company or in case staff goes outside the country to attend training or education that can be recognised as CPD. Therefore, being aware of courses on the national and international levels and being able to include them in the CPD development plans.

More importantly proper empowerment of NTCOs could increase the trust in the CPD in a certain country, allowing for easier mutual recognition abroad of staff having maintained their professional development for registration in another country. This might lead to easier transfer of staff and free movement within Europe.

# The Staff

The term "staff" is used in European law to define people who work with laboratory animals, i.e. experimenters or animal caretakers.

This part will be detailed by the FELASA task force. xxx reference

# The Competent Authorities

## Definition of competent authorities

The competent authorities are the national or regional authorities that take the official decisions on the delivery of animal experimentation licences and on recognition of training courses.

This function may also be delegated to associations specialising in laboratory animal science or to Named Training and Competency Officer (NTCO) of institutions, etc.

## Role of the authorities

The authorities are responsible for recognising training courses in the same way as they do for issuing experimentation licences. Both are linked, because only a trained person is in a position to correctly perform experiments with animals. Continuing professional development (CPD) ensures that knowledge and techniques are kept up to date so that the animal experiments can be performed in the best possible way over the long term.

It is important that the authorities responsible for recognising a course or independent recognized accrediting bodies are independent of the training organiser. If the authorities delegate this recognition to a third party (AWB, etc.), the procedure must be conducted independently of the training organiser.

## Harmonisation in point of view of the authorities

The competent authorities play a key role in harmonisation by accrediting or recognising continuing education courses CPD under their jurisdiction. This facilitates the work of competent authorities in other regions/countries because the official recognition work has been done. This information (accreditation by other competent authorities) should be included in the certificate to facilitate the recognition by other competent authorities (see chapter training organiser / certificate). Even if the rules/regulations in another region/country are slightly different, it is easier for the competent authorities in another region/country to recognise training (based on a certificate) of other countries as well respecting the different methods of accreditation.

# Starting from scratch to implement course recognition.

If there is no system in place for recognising courses, the simplest and most effective way for the competent authorities is to contact the entities that organise continuing professional development (CPD) courses to arrange some general content that is useful for all types of employees in your country.

The next step is to invite all NTCOs (see art. 24.1.cof the directive) of all entities, who are tasked legally to “setting and monitoring the required standards for the institution for training, supervision, competence and CPD for each of the functions”. In such a meeting it is possible to review what is being done and what is needed to allow these officers to ensure CPD.

The first step for the competent authorities is to decide on the conditions for recognition of a CPD course: the duration, the weighing according to the type of course, and type of content, if this is not defined by law or other official regulation.

The second step is to set up a recognition system that allows training organisers to have their training recognised before the course has taken place. The big advantage is that all the certificates for a course recognised beforehand by the competent authorities no longer have to be assessed for recognition by the competent authorities. This also facilitates the work of competent authorities in other regions or countries, as official recognition has already been achieved. This recognition must be indicated in the certificate (see chapter training organiser / certificate).

For continuing education training organisers, the first step is to contact the competent authorities to ask them about the conditions for recognition of their course(s) before the course takes place. To do this, all the information indicated in the previous chapters must be made available to the authorities to enable them to make a rapid assessment with a view to official recognition.

# Appendix A - Designing a course

Designing a course involves defining the following points:

* the objective(s) and learning outcome(s) (LO) of the course to clearly inform the participants and the competent authorities about the content of the course.
* the description of the course (curriculum) needs to be detailed enough to enable potential participants to make an informed decision about taking part, especially when live animals are included
* the criteria of participation: expected knowledge/experience/education level of the applicant
* the minimum number of participants to run a course: if the minimal number of participants is not reached the course can be re-scheduled to a next date.
* the maximum number of participants so that the aims of the course can be achieved with a good quality of training.
* the format of the course: online, classroom, etc.
* the duration of the course: If homework is planned, a duration must be given for this part of the course and clearly indicated in the course description
* the homework (if necessary): aims, content, form (report, presentation, ..), deadline, …
* the form of interaction (if planned): working group, presentation, etc. In the case of a classroom course, sufficient space must be planned so that the working groups can work without disturbing each other
* the technical equipment required by participants for online courses with planned interaction phases
* the assessment of the LOs including the success criteria: presence in the course, homework with correction, examination, etc.
* the platform for collecting participant registrations: this should allow in a simple way for the organiser to collect the participant’s information, to define the maximal number of registrations and if possible, to register the additional persons on a waiting list
* the attendance check, which confirms that the participant has completed the course as indicated on the certificate. This can be done by collecting signature at the beginning and end of the course, or in an online course to collect the log in-out of the participants. Recommendation: in case of an online course, different platforms allow to tracking ? collect the names of the participants and to edit automatically a report with names
* if necessary, an exam to check the acquisition of knowledge (multiple choice, free text, etc.) with a marking scheme
* the preparation of an course evaluation form

Note: If the exam is taken online, participant control poses a problem, as it is necessary to ensure that the correctly registered participant answers the questions, without the aid of various means or the help of third party(ies). The use of proctoring software enables this control but contravenes data protection rules in most of the countries.

* the format of the certificate and its content (see chapter the training organiser / the certificate)
* delivery of certificates: by post or e-mail, with a copy to the study director if necessary.
* the archiving of course participant data and course-related information must be defined from the beginning. If it is decided that no data will be kept, the participant must be informed of this: in this case, she or he will not be able to request a copy of her or his certificate at a later date. If the data is to be kept, it is essential to meet the legal data protection requirements and, if necessary, those of the course organising institution.
* the recognition or accreditation of the course by external bodies (competent authorities or recognised associations (NCA, FELASA, AAALAC others). This is important because approved education facilitates mutual recognition and mobility across EU. This information must be included in the certificate.
* the information about the course such as start and end times of the course, material required for the course (computers, ….)

# Appendix B - Participant registration

In addition to the information listed in chapter the training organiser / participant registration some other information may facilitate the organiser's work without being essential

* postal address
* billing address
* PO (Purchase Order) if necessary
* study director: surname, first name e-mail (professional if possible) and unique personal identification (social security number or equivalent of information of identity)

The postal address can be used if the certificate is not sent by e-mail.

The invoicing address if the course is invoiced (as well as the Purchase Order).

# Appendix C –The assessment

Constructive alignment suggests to design a course from the learning objectives to the evaluation of the acquisition of knowledge by the participants. Learning objectives, performance assessments and learning activities must therefore be aligned in an early stage of development.

The first phase is to clearly define and formulate the learning objectives.

The next phase is to determine the content and form of the assessment of knowledge acquisition. In other words, the examination in some forms: written, oral or practical.

There are several forms of examination that enable effective assessment and are adapted to the course and its objectives: written examination (multiple choice, free text, report, presentation, etc.), oral examination (questions prepared in advance (presentation), questions revealed during the examination, etc.) and also practical assessment as part of a hands-on course with the help, for example, of DOPs (direct observation of practical/procedural skills). The criteria such as marking procedures, examination pass criteria and appeal procedures (deadline, and procedure, appeal committee and communication of the decision) must be defined in advance.

The final phase defines the content and form of the course (see types of training and weighting of acquired knowledge).

In addition to this, the possible interactions with the course lecturers must be defined (open question sessions, mock exams, etc.) to enable the participants to acquire as much knowledge as possible from the course and to prepare for the exam. Inter-action between teaching staff and students as part of supervision and performance assessment is therefore an essential part of competency-based university education.

The following information should be communicated when registering for the course:

* learning objectives including, if necessary, preparation for the course (homework with or without a report)
* the form of assessment of the knowledge acquired (the examination)
* the criteria for passing the exam
* the communication of the exam results
* the possibility to redo the exam (if possible)
* the appeal procedure
1. The subjects of these courses must be in the field of laboratory animal science or 3Rs, such as the responsible science course, breeding efficiency, health monitoring or laboratory animal pathology training, model choice, National Bodies Licence training for licence holders. [↑](#footnote-ref-1)
2. The use of animals is subject to a balance of interests. This means that only people who need a specific technique in their foreseeable animal experiments are eligible to take a course using live animals to learn that technique. This applies to both basic training and CPD. The use of an alternative to animals must be assessed taking into account the aims of the training and the possibility of achieving the aim without animals but ensuring that this training allows the technique in question to be applied subsequently with live animals. [↑](#footnote-ref-2)