VET4VN

VOCATIONAL EDUCATION AND TRAINING FOR VETERINARY NURSES

1 ECVET UNIT
ECVET UNIT MANUAL

2 WORK-BASED LEARNING MANUAL

3 DISTANT LEARNING AND COACHING MANUAL

Co-funded by the Erasmus+ Programme of the European Union

ZONE.COLLEGE

ZWOLLE - THE NETHERLANDS, MARCH 2023

DISCLAIMER:

This document is not scientific research. However, many sources have been consulted. Those sources are listed in the blue parts and called references, and in the appendixes given in the list sources. Sources are not specifically given regarding (international) APA rules.

Authors have done their best to refer to most used sources.

ECVET UNIT MANUAL

With ECVET unit of learning outcomes on radiology

ECVET unit manual/ manual to develop and work with units of learning outcomes during exchange of students

Abstract

Working with learning outcomes is a way to internationally compare what a student can do, regardless of the learning process beforehand. It will help to validate and recognize internationally achieved knowledge, skills, and competences. It makes it easier to make both formal and informal learning visible.

This manual describes which steps to take from agreeing upon learning outcomes to validation and recognition. We share the experience we gained during our project Vet4VN: what to do, what did we do and how did we evaluate this? We also give an estimate of the time needed for each step.

In this document, we use the term mobility to refer to the situation in which the student is abroad to do a part of their studies in foreign country. It is relatively easy to send a student abroad. The student will learn a lot on a personal level. However, to recognize the learning outcomes in veterinary nursing, in a different country with a different education system, is more difficult. The ways to train a student for a specific job differs very much in the various countries. It differs so much so that it takes a lot of effort to make these learning outcomes “visible” and recognizable for the home school/ their own curriculum.

Effort must be put into developing and providing the learning activities. It is important to think about which learning activities will guide the student best towards the assessment. If there are already developed learning activities, this is relatively easy.

The steps after mobility are the least time consuming. Evaluation of the process is the most important.

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1 PROLOGUE VET4VN PROJECT

Vocational Education and Training for Veterinary Nurse Students

It's being said that in politics, most ideas and decisions are made outside the boardroom. Why should it be different with teachers and their projects and creativity? We, the project partners of VET4VN, experienced the same. Where did we meet each other, and when did we decide to step into the boat to go for our KA2 Erasmus application called VET4VN?

We do have to thank the board of VETNNET for organizing the annual conferences, because the project partners' cooperation started at those conferences! Many, many years, teachers from our organizations visited the conferences. They met and got to know each other better every year. And then, during breakfast, or lunch, or dinner, or when walking in the beautiful gardens of one of the colleges, or during the boat tour at the river Cam, or during drinks afterwards, but to be precise IN Cambridge in 2017, we decided to make the first small steps that would later turn out into this KA2 project.
We do want to point out that creativity shows, and best ideas only arise, when teachers are out of their daily routine. And cooperation only starts when people have the opportunity to get acquainted. The positive energy during the VETNNET conferences is so very supportive to that. And besides that, they contribute to show different cultures and educational systems. Altogether, that is a very strong basis for our successful project VET4VN!

We do hope that organizations will give lots of teachers the possibility to join the VETNNET conferences in future, to experience the same positivity as we did. And we wish the VETNNET board lots of success, and hopefully their conferences will be possible again every year from 2023 in Uppsala!

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About the project partners

VET4VN is the abbreviation of Vocational Education and training for Veterinary Nurses. In the project Vet4VN, six schools from four different European countries have worked together for three years. These are the schools involved:

- Taitotalo (Helsinki, Finland),
- Hansenberg (Kolding, Denmark),
- BIC (Ljubljana, Slovenia),
- Aeres (Leeuwarden, The Netherlands),
- Terra MBO (Meppel/ Emmen/ Groningen, The Netherlands)
- Zone.college (Doetinchem/ Deventer/ Zwolle/ Almelo/ Hardenberg, The Netherlands)

All six partners educate veterinary nurses (VN) on EQF level 4. Even though these schools train their students towards the same European level of autonomy, responsibility and complexity, huge differences in the way students are educated exist.

The work field of the VN is changing at an incredible speed. Big changes are seen in technology, medications, ICT innovations, role of the clinics in human health, and customer behavior. The work field of veterinary nurses is becoming more and more internationally oriented. Large chains take hold of the work field. This change leads to the need for highly educated VNs in all countries, regardless of differences in educational systems. The schools participating in this project see the urgency to cooperate more internationally, in order to equip the students better for this trend.

The partners in VET4VN have a history of cooperation that goes back for years (starting 2010). Our mutual connection is VETNNET (Veterinary European Transnational Network for Nursing Education and Training). During meetings at international VETNNET conferences we got to know each other. In 2017 we took the next step: we decided to visit each other's schools to investigate how each partner was training their veterinary nurses. These visits back and forth, helped enormously in understanding each other's curriculum, student population, approach to education and examination and learning environment in and outside of the school. During those visits and meetings, we did not only investigate, but we also talked about what each school would like to improve and how we could benefit from each other. We built trust. We explored the ECVET system and decided that we wanted to move forward with working towards learning outcomes. We applied for a KA 2 project, which was granted to us by Erasmus. The project started in September 2020 and ends in august 2023.

Project experiences

Three of the goals of Vet4VN are:

- students at all schools to be equipped with up-to-date and comparable knowledge and competencies
- increase employability of our students in a more international working environment
- to improve our education at level EQF4, to cope with higher demands of the work field

Our project will have an impact on a broad variety of subjects. And in addition, with Vet4VN we are going to realize this impact on different levels. We aim for:
Short term impact -> accreditation and recognition of learning outcomes and curricula
Long term impact -> better employability, increased international awareness, and lifelong learning.

To achieve these goals, we have worked on intellectual outputs and have performed pilots.

In this project we worked on four intellectual outputs:

1. An ECVET unit/ unit of learning outcomes
   An ECVET unit manual/ manual to develop and work with units of learning outcomes during exchange of students
3. A work-based learning manual
4. A distant learning and coaching manual

Those outputs are worked out by comparing educational systems, relevant literature, and experiences of student's activity pilots. The outputs are meant to be of great help to other educators.
We ended up with three outputs instead of four. Output one and output two are combined. During the creation process the unit of learning outcomes turned out to be an essential element of the "ECVET" manual. It is now an appendix of this manual.
During the project the system of "ECVET" was discontinued. However: the system of working with learning outcomes is still an important way to cooperate internationally and agree upon what a person should be able to do when working in the veterinary sector. It is an important means to work around the enormous differences in education between the countries. ECVET used to make use of the terms knowledge, skills and competences.

Reader tip: when reading "ECVET", know that in all new documents made after this project the term "microcredentials" will be used. ECVET used to make use of the term's knowledge, skills and competences. The word "competence" will be replaced by "level of autonomy, responsibility and complexity". In the documents from this project the term "ECVET" and "competences" will be used, because when our project started those terms were in use and mentioned in the application.

The four intellectual outputs are linked to each other, as shown in figure 1.

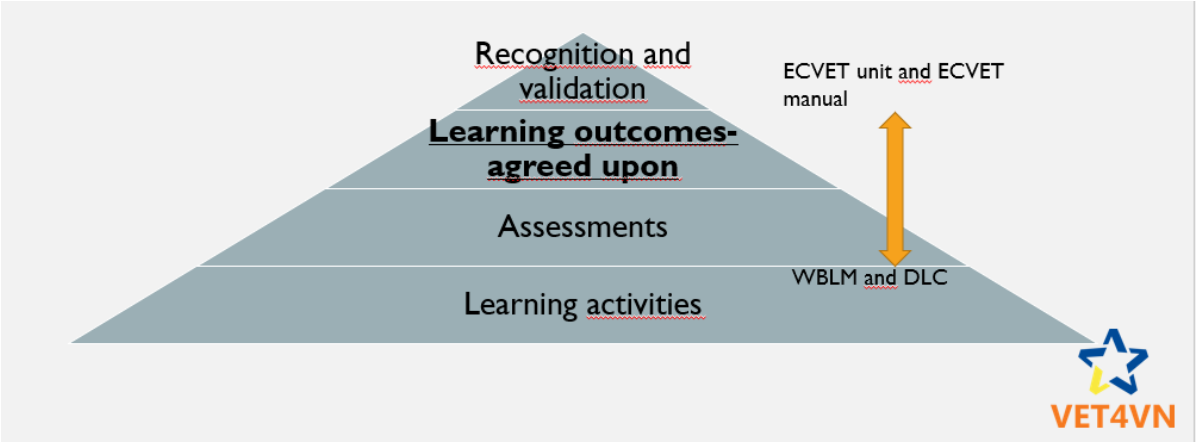


Fig.1. The connection between the four intellectual outputs and learning outcomes

In the center: a unit of learning outcomes. We agreed upon a set of learning outcomes on radiology. This output is called "ECVET unit"

Just below learning outcomes: assessments. In an assessment (parts of) a unit of learning outcomes is tested. Assessments should match with the learning outcomes and can be part of distant learning and coaching and work-based learning.

On top: the "ECVET manual". In this manual is described how to make use of a unit of learning outcomes when a student does (part of the) education abroad. By means of an assessment based on learning outcomes, one can recognize and validate the achieved learning outcome of a student who has been abroad.

The basis: learning activities. Despite a very different way of learning (for instance in another institution in another country), students can achieve the same learning outcomes. These learning activities can take place in a work-based environment. This is called work-based learning and we have developed a manual for this (WBLM). These learning activities

also can take place from a distance, where the student is not in the same (class)room as the teacher/ guide. This is called distant learning and coaching (DLC).

During the project we have had three pilots with students in which we have experimented with international work-based learning, distant learning and coaching and working with learning outcomes.

In the first pilot we prepared an exchange; five students from each school went to HANSENBERG in Denmark. During the exchange they had practical lessons on radiology, they made a theoretical assessment and performed a practical assessment. Prior to the exchange we built a distant learning/coaching unit (DLCU). We used the platform “Moodle” for this. Details on this DLCU are elaborated in the DLC manual. So, in the first pilot distant learning and coaching was part of/ a preparation to a live exchange. In the exchange we experienced with work-based learning in an international group and with an international assessment. This pilot was a so-called Learning-teaching-training activity (LTTA).

In the second pilot we decided to focus more on DLC. In this pilot we also organized a student exchange. Five students from each school went to Taitotalo in Finland. During the exchange they had theoretical lessons on radiology, they made an instruction video on positioning with peer teaching. They also performed a livestream to students abroad about this positioning. Prior to the exchange we used the same Moodle platform as in Denmark, but now it was obligatory instead of voluntary. This pilot was a so-called Learning-teaching-training activity (LTTA).

The third pilot on DLC was not planned in the original application but was a spinoff of the second pilot. It turned out that the lessons, peer teaching and performing a live stream in Finland was successful, and that triggered us to try out more DLC. In Finland we had mainly experienced with online learning, but less with online guiding. During the third pilot there was no exchange of students and teachers. One teacher in Finland made connection with one teacher and three students in the Netherlands. All were in a room where normally practical instruction lessons are held. The teacher in Finland gave the instruction; the students in the Netherlands practiced; both the Dutch teacher and the Finnish teacher assisted the students. All pilots were thoroughly evaluated. This was done by teachers observations and evaluations (Padlet) and student evaluations (google forms).

The whole planning and description of all activities can be found in the original KA2 (key action 2) application for the project.

2. INTRODUCTION

Working with learning outcomes is a way to internationally compare what a student can do, despite the learning process beforehand. It will help to validate and recognize internationally achieved knowledge, skills, and competences. It makes it easier to make both formal and informal learning visible.

This manual describes which steps to take from agreeing upon learning outcomes to validation and recognition. We share the experience we had in our project Vet4VN. What to do, what did we do and how did we evaluate this. We also give an estimate of the time needed for each step.

It is relatively easy to send a student abroad. They will learn a lot on a personal level. However, to recognize the learning outcomes in veterinary nursing, in a different country with a different education system, is more difficult. The way to educate a student for the same job in a different country is that different, that it takes a lot of effort to make these learning outcomes “visible” and recognizable for the home school/ their own curriculum.

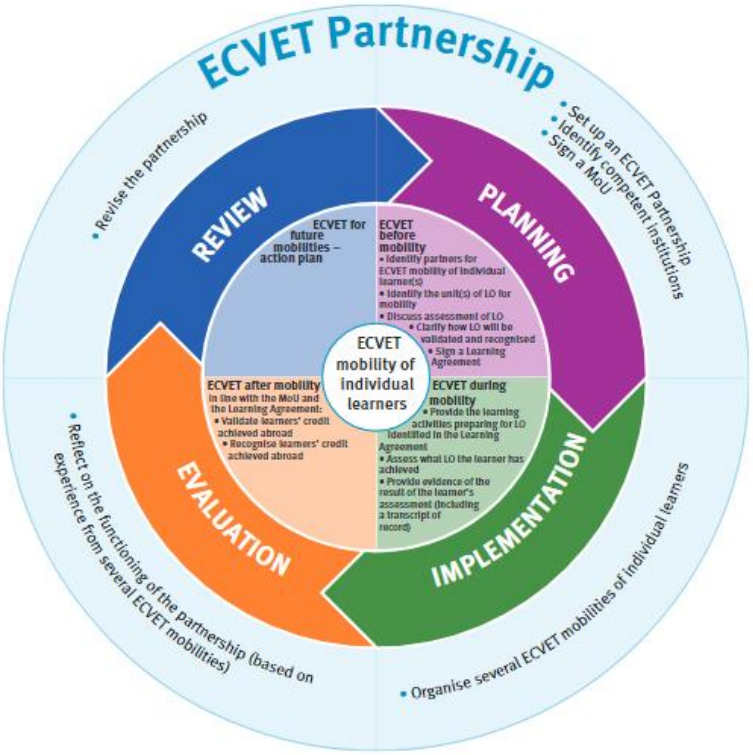
Effort must be put into developing and providing the learning activities. It is important to think about which learning activities will guide the student towards the assessment. If there are already developed learning activities, this is relatively easy.

The steps after mobility are the least time consuming. Evaluation of the process is the most important.

3. ECVET PARTNERSHIP

We have had very little experience with ECVET. In our project we wanted to develop this. We used the steps as shown in the figure “Quality circle: using ECVET for transnational mobility”. In our process we started with writing learning outcomes, then we developed assessments. We had to try out if our assessment was good enough. We did this by organizing learning teaching training activities (LTTA). This was financed by our KA2 project.

FIGURE 2 | Quality Circle: Using ECVET for transnational mobility



Source: https://www.cedefop.europa.eu/en/news/using-ecvet-geographical-mobility-2012

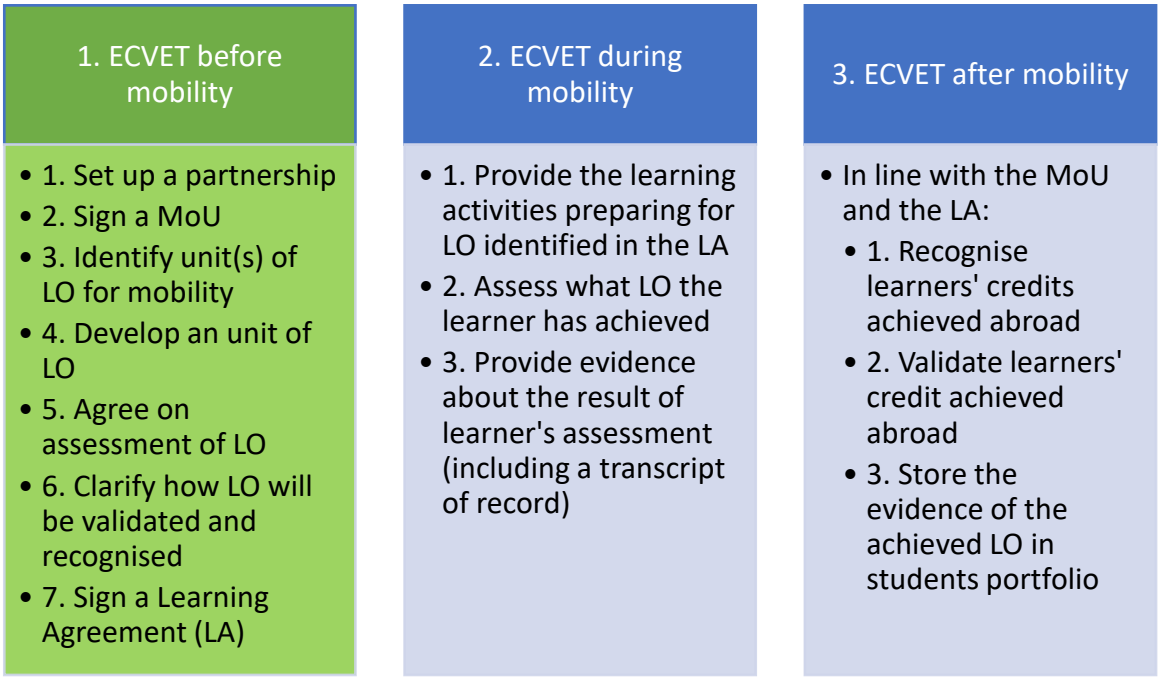
4. ECVET BEFORE MOBILITY

It is relatively easy to send a student abroad. The student will learn a lot on a personal level. However, to recognize the learning outcomes in veterinary nursing, in a different country with a different education system, is more difficult. The way a student is trained to do a specific job differs very much in the various countries. It differs so much so that it takes a lot of effort to make these learning outcomes “visible” and recognizable for the home school/ their own curriculum.

Do not underestimate the work it takes to recognize and validate learning outcomes achieved abroad. Before you can even recognize and validate the outcomes, a lot of effort must be put in setting up a partnership, signing a memorandum of understanding, identifying units of learning outcomes, agreeing upon assessment and clarifying the validation and recognition process.

In this chapter these steps are described: what to do, what did we do and how did we evaluate this? There is also an estimate of the time needed for each step.

Figure 4.1 Key Issues to be taken into account before, during and after mobility when using ECVET



Legend: LO: Learning Outcomes; LA: Learning Agreement; MoU: Memorandum of Understanding

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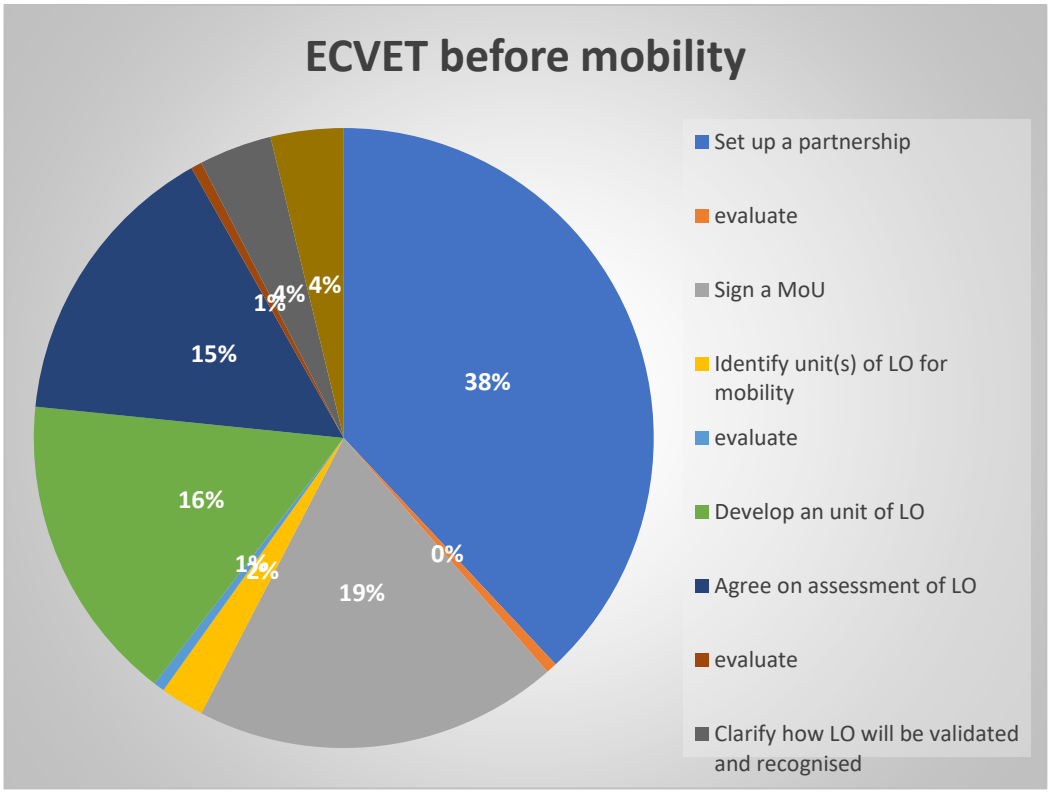
The pie chart “ECVET before mobility” figure 4.2. gives an estimate of the time each step will take. These estimates are based on the experience of the partners during the project.

Figure 4.2



Task	Hours
4.1 Set up a partnership*	200
evaluate	3
4.2 Sign a MoU*	100
4.3 Identify unit(s) of LO for mobility	12
evaluate	3
4.4 Develop an unit of LO	85
4.5 Agree on assessment of LO	80
evaluate	3
4.6 Clarify how LO will be validated and recognised	20
4.7 Sign a Learning Agreement (LA)	20

* If you submit a KA2 application, it will take approximately 300 hours. Our project was a KA2 project.

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4.1. Set up a partnership

In order to facilitate the implementation of ECVET, VET providers and/or competent bodies on the relevant level could establish partnership agreements or a Memorandum of Understanding (MoU). During this phase of initialization, the memorandum of understanding could contribute to creating the climate of trust which is necessary for insuring the durability of the system, its operational characteristics, and the effective credit transfer.

Experience

The partners in our project Vet4VN have been chosen carefully. The partners Zone College, Terra MBO and Aeres Leeuwarden (formerly Nordwin college) already have a history of cooperation in "4-groen" in the Netherlands, that goes back several years. This cooperation is historically very strong. That is because our institutes are dealing with similar problems. Problems we all must deal with are decreasing chances of employment and less job opportunities compared to urban areas, and a diminishing population.

The cooperation with colleagues of "4-groen", BIC, Taitotalo (formerly AEL Amiedu) and HANSENBERG has increased in recent years through meetings at the VETNNET conferences. We all educate our veterinary nurses (VNs) at level EQF4. Other members of VETNNET educate their VNs at a higher or a lower level. Furthermore, the changes and problems we must deal with are similar. We all must respond to technical and ICT changes, and the VN has to be educated for an international work field with new large international conglomerates as for example, Anicura and Evidensia. Our institutes have recognized the need for development of our educational program, and the urgency to keep up with changes mentioned previously. During the annual VETNNET conferences, we discussed the necessity to improve our programs and the difficulties of doing that. We shared best practices, but nevertheless we felt we needed to do more to get a sustainable improvement. We started different activities to get closer to each other, getting to know each other, and to start cooperation on teacher level. We took English classes. We had meetings before the VETNNET conferences. We compared our different curricula, EQF levels and governmental rules. We started job shadowing and visited each other's schools. We learned about each other's strengths and experiences. We used this knowledge to divide the work for the intellectual outputs.

Evaluation

Looking back at the past years, we have organized multiple activities and learned a lot about each other's institutes, curricula, students, teachers, and work field. It has been a long-lasting process, in which we have spent a lot of time getting to know each other. We have invested time and energy too in getting to know each other's facilities, curricula, educational systems, student prerequisites, ages et cetera.

Investigate and describe the differences and similarities of the above. The differences can be really huge, as can be seen if you compare the documents in the appendices 1 and 2.

Be aware of (cultural) differences and language barriers. Take nothing for granted. Work hard!

We chose to work together on a KA2 project. We did this to provide the necessary funding, reach more goals and make improvements that are more sustainable. We had the support of the management, as well as the commitment of the teachers. This combination is necessary to set up a lasting partnership.

Links

https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2020-1-NL01-KA202-064628 (Page 79-81 gives the complete list of actions we undertook)

Appendices

Europass certificate supplement veterinary nurse of the partner countries: Appendix 1

Structure of educational systems per country: Appendix 2

4.2 Sign a Memorandum of Understanding (MoU)

The MoU forms the framework for cooperation between the competent institutions. It aims to establish trust between the partners. In this Memorandum of Understanding partner organisations mutually accept their respective criteria and procedures for quality assurance, assessment, validation and recognition of knowledge, skills, and competence for the purpose of transferring credits.

You can use predefined documents from Erasmus. Below you will find links to Guidelines and to the MoU.

Experience
Be clear about definitions (they can differ per country). We discovered that the way students are taught from toddler to adult is very different per country. Even a small remark like "our students are in ninth grade" can be misunderstood, because in another country there is no Ninth grade." it is not easy to define the concept of working towards learning outcomes but it is necessary if one wants to cooperate internationally.

Evaluation
In our process, we needed the project with the pilots to build on the learning outcomes and its assessments. If you just want to exchange students and/or agree on units of learning outcomes you can go for a Memorandum of Understanding in a KA1 project, it does not have to be put in a KA2 project.

Links
Link to ERASMUS MoU https://ufm.dk/uddannelse/tilskud-til-udveksling-og-internationale-projekter/erasmusplus/administrer-dit-tilskud/2020-filer-til-mobilitetsprojekter/ka102-ka116-eud/2020-ecvet-memorandum-of-understanding.docx
Link to Danish guidelines for MOU: https://ufm.dk/uddannelse/anerkendelse-og-dokumentation/dokumentation/ecvet/links-og-dokumenter/retningslinjer-for-udarbejdelse-af-et-mou-final.pdf

4.3 Identify unit(s) of Learning Outcomes (LO) for mobility

The partners need to define which units of learning outcomes can be agreed on by all. For this process, comparison of curricula per country and school is a way to start. The exact time/hours spend on subjects at the different partner schools is not that important. Important are the learning outcomes defined by the students' achieved knowledge, skills, and competences. The terminology "competence" is not used anymore in 2023, nowadays it is "level of autonomy, responsibility and complexity".

Experience
We started with one suggestion (veterinary dentistry) which turned out to be a subject that is hard to estimate the scope of. This was replaced by veterinary radiology, a subject everyone taught in similar ways, the content is the same and the student responsibilities regarding radiology tasks in veterinary practice are compatible in all countries.

Evaluation
We made use of the electronic "radiology (x-ray) unit questionnaire" created by the ECVET Unit group and sent to the various partners. The questionnaire gives an overview of curricula and the content of subjects and is an easy way to compare similarities and differences. It helps with deciding on where some work still needs to be done, so you can focus on the relevant units.

Appendix
Radiology (X-ray) Unit Questionnaire: Appendix 3

4.4. Develop a unit of Learning Outcomes (LO)

When you have identified the unit(s) of learning outcomes, make a holistic and a more detailed description in which the learning outcomes are described in terms of skills, knowledge and competences. A subdivision of learning outcomes in the unit gives a better overview. Use active verbs and specify these in describing skills, knowledge, and competences (level of autonomy, responsibility, and complexity) so the wording is correct and understandable. The unit and subsections should also be assessable. All partners must agree on the final description of the learning outcomes. Keep the desired EQF-level in mind.

Experience

A small group with representatives from different schools did the work together. We used the existing curricula from the partners and the questionnaire (see 4.3 and appendix 3) and material from outside our own schools to get a picture of what was necessary. This included the Euro Syllabus and the Dossier of European Competences from VETNNET and a RCVS veterinary nursing professional syllabus.

How much time is spent on a subject differs per country and per school. Also, the way to teach a subject varies enormously per school (some do it completely in practice placement and work based and others with the majority of time at school with both theoretical and practical lessons).

We used the Zoom document: “Guidelines for the Description of Learning Outcomes” as inspiration and guide.

We asked for feedback from all partners a couple of times during the development.

We came across differences in national legislation: by law, not all veterinary nurses are allowed to do the same tasks in different countries for instance: contrast X-ray. There are also national differences regarding safety issues.

The developed unit of learning outcomes in radiology can be seen in appendix 6.

Evaluation

It is important that the partners agree that it does not matter how and how long a student is taught, but that the student achieves the learning outcomes.

It says in the Zoom document: “The manner in which the learning outcomes are acquired is not relevant for the learning outcome description.” It is really challenging to keep the focus on the learning outcomes and not on the learning process. We have had the same experience.

National differences must be taken into account when assessing the students.

Links

VETNNET Euro Syllabus: https://www.vetnnet.com/projects/eurosyllabus/

VETNNET Dossier of European Competences: http://acovene.org/new_acovene/wp-content/uploads/Dossier-of-Competencies-2nd-edition-Nov-2012-1.pdf

Zoom document, ”Guidelines for the description of learning outcomes” Gabriele Grün, Sabine Tritxcher-Archan, Silvia Weiss, 2009: http://taloe.up.pt/wp-content/uploads/2014/06/WP3-Guidelines-for-the-Description-of-Learning-Outcomes.pdf

Source: RCVS Awarding Body, Veterinary Nursing Professional Syllabus, Certificates in Veterinary Nursing Theory at Levels 2 and 3, 2006.

Appendix

Unit of learning outcomes in radiology: Appendix 6

4.5. Agree on assessment of LO

You must agree on how to assess the learning outcomes. This can be done theoretically, orally or practically or a combination of these for instance with a multiple-choice test, a practical assignment, a checklist to sign, or a performance rating/rubrics. Also discuss the location in which the assessment should take place. Is it inside or outside the school environment (internship, work placed setting)? The time for the assessment should be described and also procedures that ensure the quality of the assessment.

Make guidelines for the assessor and the student. Give guidelines upon time needed, materials needed and what is a ”pass” and what is a ”fail” (cut-off point). Describe the grading system that is to be used.

Also agree on how to record the results of the assessment. Develop a format for the transcript of record.

Experience

It is important to agree upon the way to assess, otherwise it is not possible to give students credits for their achievements. We have agreed upon the assessment beforehand, at our TransNational Meetings.

For radiology it was a good idea to assess both theoretical knowledge and practical skills. The theoretical knowledge was tested via a multiple-choice test. The practical skills were tested via an OSCE-task (objective structured clinical examination) from the PEPAS project with oral examination. In this way we made sure that the competences were achieved. The link to PEPAS is in the box below.

It is also crucial to create the assessments based on the described learning outcomes (also if you use already existing assessments or exams). In that way you do not accidentally skip a part of the learning outcomes. You must make a cross reference of the detailed LOs and the assessments (assessment grid). So first the LO, then the assessment. In that way you can secure that the student has really achieved the desired level of LO.

It is a good idea to make use of existing assessment material, so you do not have to start from scratch.

Evaluation

The assessment has to be developed based upon the learning outcomes.

Use an assessment grid/cross reference.

From the questionnaire from the first LTT: all students, no matter from where they came (level and way of education), mentioned that the assessment was valuable for their work in the clinic.

Links

Document “ECVET mobility” page 19:
https://www.cedefop.europa.eu/en/news/using-ecvet-geographical-mobility-2012

Link to europass: https://europa.eu/europass/nl

Link to PEPAS: https://www.vetnnet.com/projects/pepas/

4.6. Clarify how learning outcomes will be validated and recognised

The home organization appoints responsible person(s) to validate that the learning outcomes are achieved. This is the quality control of the process. This should not be a problem if the LOs are agreed upon by the partners, and the learning activities cover the LOs and are assessed accordingly.

Each partner school must investigate what recognition means for their student and what level of credit it will give. This can be very different per country (and school) since curricula and national exams are not the same. The responsible person(s) should also be appointed regarding the recognition of the LOs.

Validation and recognition should be explained in the learning agreement before the student goes abroad.

Experience None yet in the project. We did make mock documents both for learning agreement and transcript of records in which we described how the validation and recognition could take place.
Evaluation This part should be clear before the student goes abroad. In our project we have not reached this stage yet, because we are still building the assessment and testing to see if what we have developed is right.
Appendices Mock document learning agreement: Appendix 4 Mock document transcript of record: Appendix 5

4.7 Sign a Learning Agreement (LA)

The Learning Agreement is created by using the Erasmus+ template. It is a document that is used for each student who is going abroad. The LA is filled with information about the individual student and the home organisation and host organisation (LA section 1), the duration of the learning period (LA section 2) and the qualification being taken (LA section 3).

The LA is completed with the learning outcomes from 4.4 (LA section 4), a description of the assessment and documentation from 4.5 (LA section 5) and a description of validation and recognition from 4.6 (LA section 6).

The LA is then signed by all parties (LA section 7).

Experience None yet because this is not part of our project. We have put our radiology unit in a mock learning agreement (appendix 4)
Evaluation The learning agreement with the description of learning outcomes focusses on the exchange. It will help to give a better mutual understanding of all parties involved in an exchange. It is necessary for validation and recognition of achieved learning outcomes.
Links Link to LA: https://ufm.dk/uddannelse/tilskud-til-udveksling-og-internationale-projekter/erasmusplus/administrer-dit-tilskud/2020-filer-til-mobilitetsprojekter/ka102-ka116-eud/2020-ka102-ka116-learning-agreement-with-ecvet-learners.docx **Appendix** Mock document learning agreement: Appendix 4

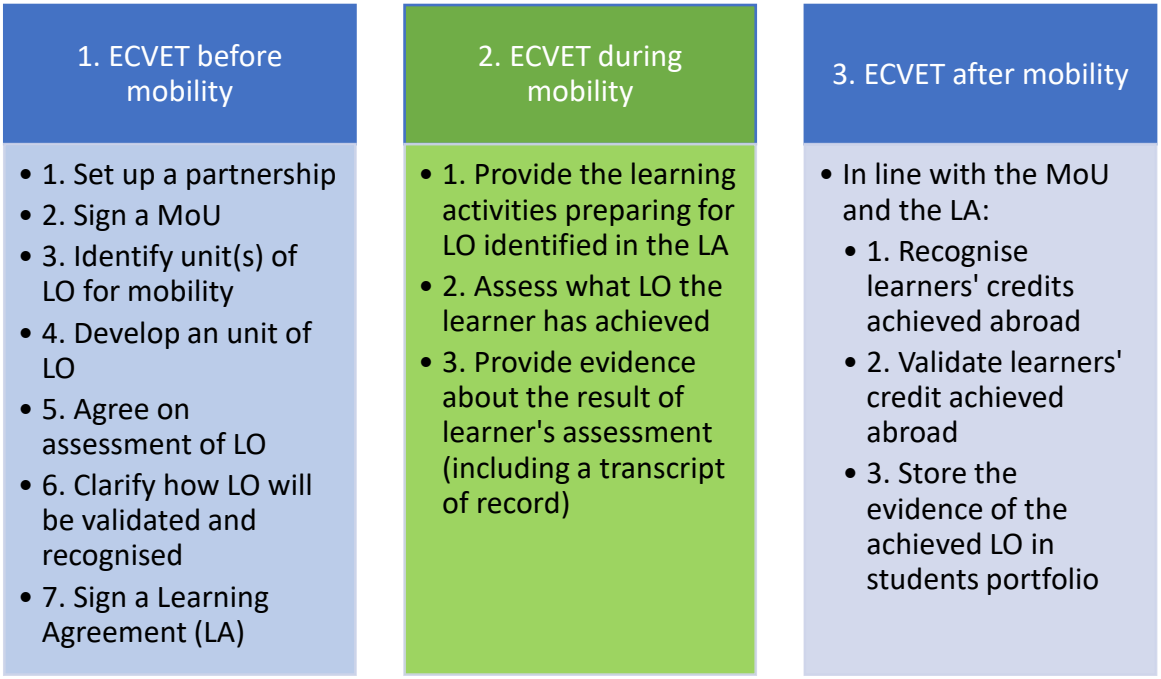
5. ECVET DURING MOBILITY

If the “before mobility” part is done properly and thoroughly, the steps during mobility are not that difficult.

The most effort must be put in developing and providing the learning activities. It is important to think about which learning activities will guide the student towards the assessment. If there are already developed learning activities, this is relatively easy.

In this chapter the steps are described: what to do, what did we do and how did we evaluate this. There is also an estimate of the time needed for each step.

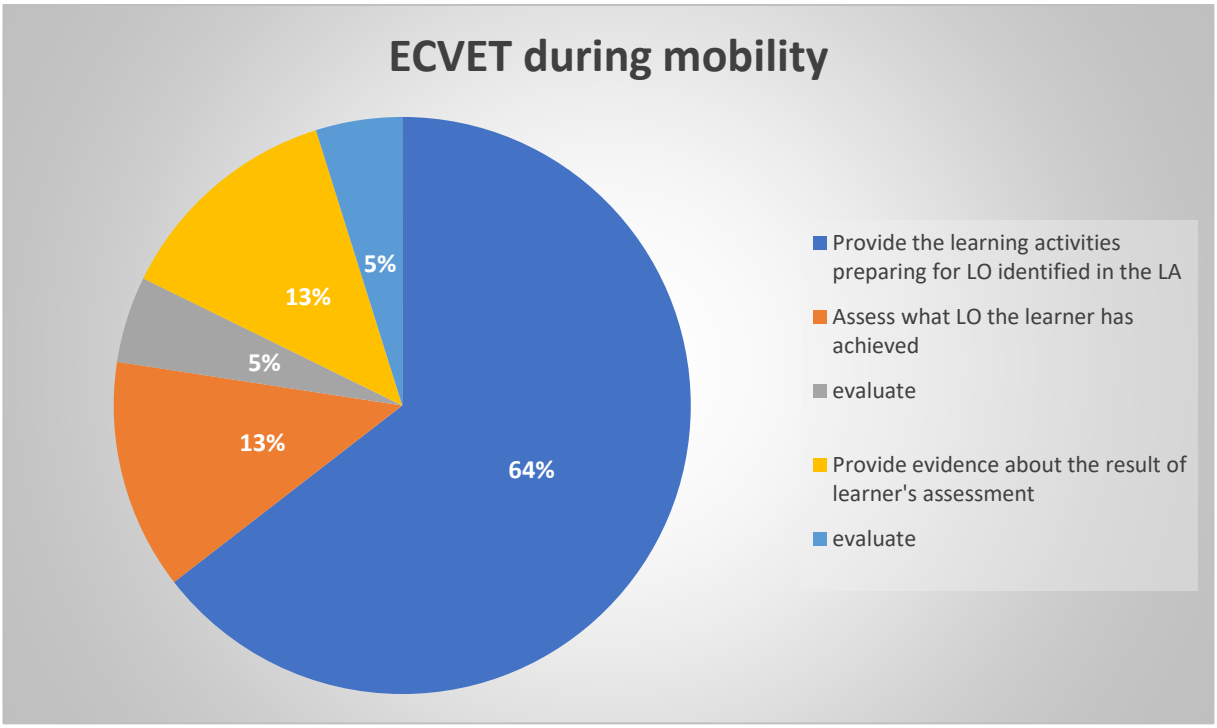
Figure 5.1 Key Issues to be taken into account before, during and after mobility when using ECVET



Legend: LO: Learning Outcomes; LA Learning Agreement; MoU: Memorandum of Understanding

The pie chart “ECVET during mobility” figure 5.2 gives an estimate of the time each step will take. These estimates are based on the experience of the partners during the project.

Figure 5.2



task	hours
5.1 Provide the learning activities preparing for LO identified in the LA*	40
5.1 Assess what LO the learner has achieved	8
evaluate	3
5.1 Provide evidence about the result of learner's assessment	8
evaluate	3

* If you cannot use existing lessons/ learning activities, please keep in mind that this will have to be developed. In that case the number of estimated hours for this step will be higher.

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5.1. Provide the learning activities

To provide for learning activities, one should work towards learning outcomes as identified in the learning agreement. Find an existing course and make the necessary adjustments to match the learning outcomes. Make use of existing teaching and training materials. Each learning activity should contribute, one way or another, to the complete set of learning outcomes.

Experience
It is important to use the same terminology in the LOs, the learning activities and the assessments to avoid misunderstandings and remember not to leave anything out.
We were inspired by and used existing material from the partners and from PEPAS. The development of learning activities was a large part of some of our transnational meetings in the project, since the students did not follow an already developed course in radiology, but attended a pilot project.

Evaluation
It worked well to make use of existing materials. Start with the LOs when planning or revising the teaching material. We matched the LOs with the teaching material.
When you can use pre-existing courses, the preparation of the lessons will not take the same amount of time as we needed.

Links
About PEPAS: https://www.vetnnet.com/projects/pepas/

5.2. Assess which learning outcomes the learner has achieved

Use the assessment(s) which are developed in accordance with the learning outcomes.
Follow the guidelines that are described for the assessor and student. Use chapter 4.5 and 4.6 from this manual.

Experience
We chose to only pilot a part of the complete set of learning outcomes on radiology.
By both assessing theoretical knowledge (a multiple choice test) and doing a practical–oral assessment (hands on) which covered the skills, knowledge and competence parts (level of autonomy, responsibilty and complexity), it was proved that the learners achieved the planned set of LOs.
This worked out well. Students from different nationalities and with different prerequisites were able to do the assessments.

Evaluation
Once the assessment is ready, follow the procedure to run the assessment. It is the preparation of the assessment that takes a lot of effort. Once the partners have agreed upon the way how, the assessment itself is easily organised.
There was a language barrier, so we advise to translate the assessment into the native language of the participating students.
We piloted a part of the learning outcomes. That worked out fine. Based on this experience, we expect that the assessment for the other sets of LOs would work out fine as well.

Links
Source: Moodle (Electronic learning environment) for the project (theoretical test and OSCE tasks). The link is not publicly accessible.

5.3. Provide evidence about the result of learner's assessment (including a transcript of record)

It is important to determine beforehand which type of evidence will be needed for recognition and validation of the learning outcomes. It is described in chapter 4.6 how this could be done.

For validation and recognition, it is necessary to have an assessment grid (a list of learning outcomes and cross references to the assessment(s)).

You can use the ”mock” document for the learning agreement and add a transcript of record showing that the assessment(s) were successful. Define the grading scale (pass/ fail; 7-point scale; 10-point scale; or...).

Experience Our students in the pilot got a certificate of attendance, not a transcript of record. They were graded “pass” or “fail” in the assessments, but since we were piloting the assessments, we were not able to actually make a transcript of record of achieved learning outcomes yet.
Evaluation Partners should agree upon the format of the transcript of record. It is necessary to match the transcript of record with the learning agreement.
Appendices Mock document LA section 6: Appendix 4 Mock transcript of record: Appendix 5

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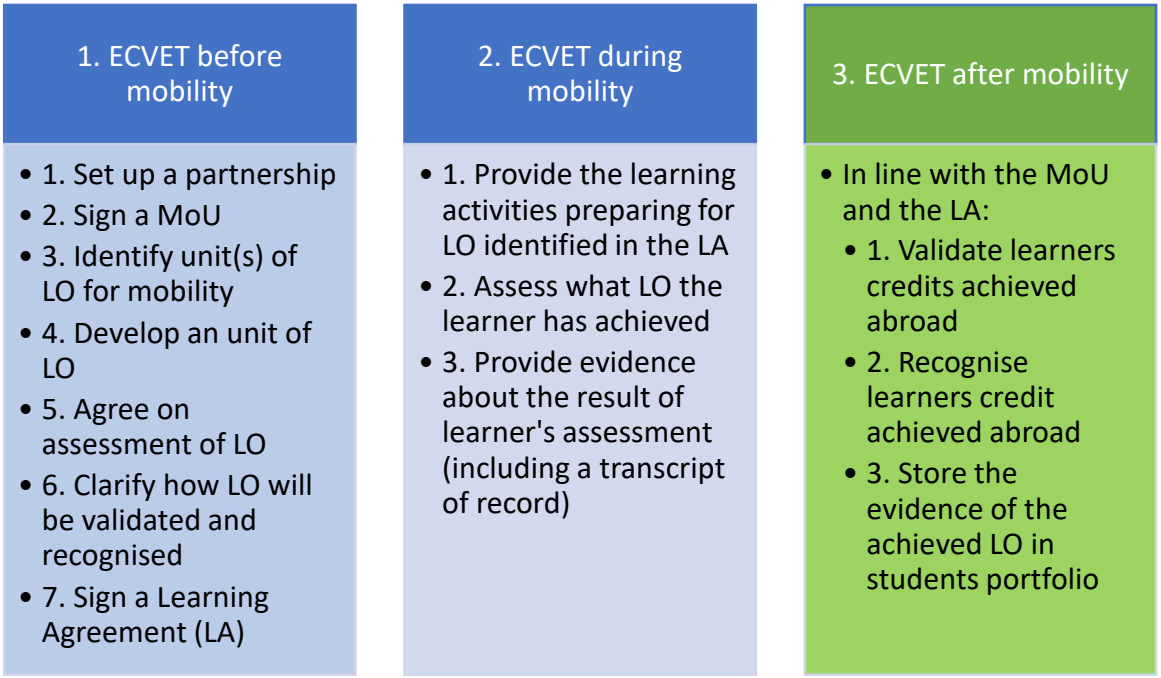
6. ECVET AFTER MOBILITY

If the “before and during mobility” parts are done properly and thoroughly, the steps after mobility are the least time-consuming.

Evaluation of the process is essential.

In this chapter, the steps are described: what to do, what did we do and how did we evaluate this. There is also an estimate of the time needed for each step.

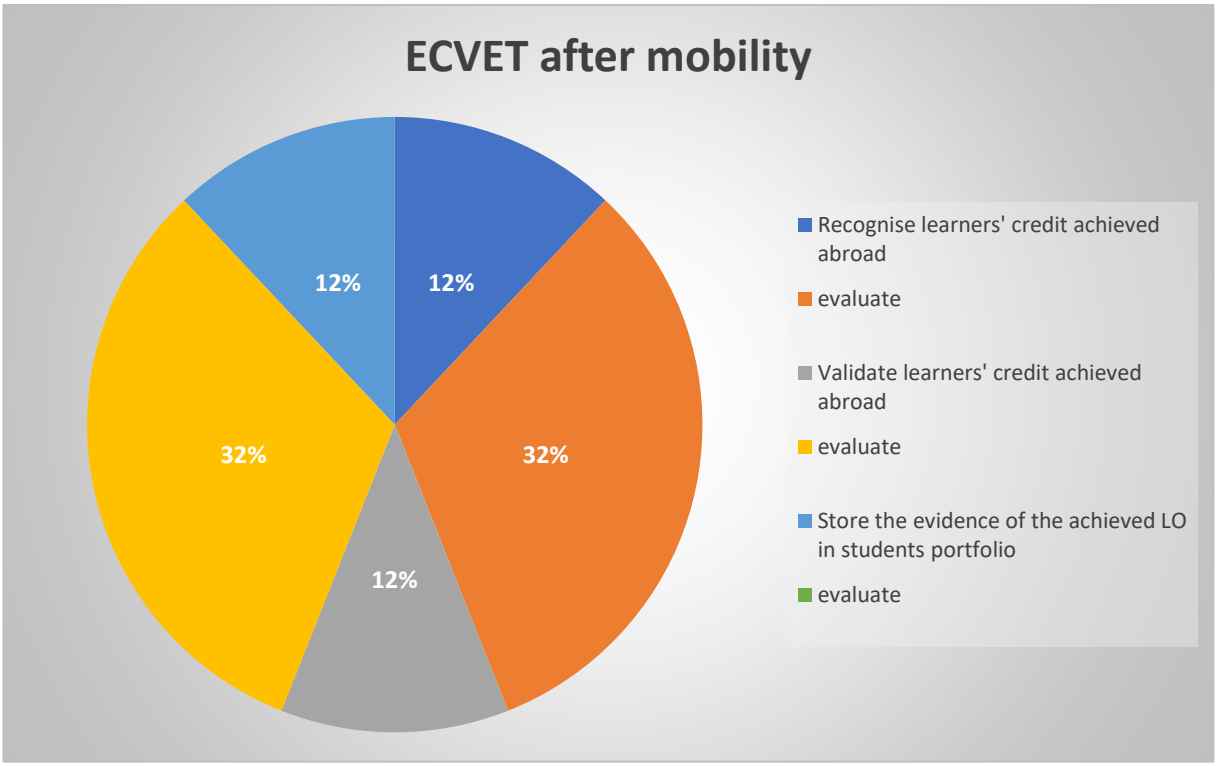
Figure 6.1 Key Issues to be taken into account before, during and after mobility when using ECVET



Legend: LO: Learning Outcomes; LA Learning Agreement; MoU: Memorandum of Understanding

The pie chart “ECVET after mobility” figure 6.2 gives an estimate of the time each step will take. These estimates are based on the experience of the partners during the project.

Figure 6.2



task	hours
6.1 Validate learners' credits achieved abroad	2
evaluate	3
6.2 Recognize learners' credits achieved abroad	2
evaluate	3
6.3 Store the evidence of the achieved LO in student’s portfolio	1
evaluate	3

6.1 Validate learners' credits achieved abroad

The student gets a transcript of record of the achieved LOs from the host organization. The transcript of records will then, first be validated and then recognised by the home school.

The validation process is a quality control of that the agreements on learning outcomes, learning activities and assessment content and procedures described in the LA have been followed.

Experience None. In our pilot we have not validated the learner’s credits. In the mock documents we have described a way to do this.
Evaluation The learning agreement and the transcript of record are essential documents for validation.
Appendices Mock document learning agreement: Appendix 4 Mock document transcript of record: Appendix 5

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6.2 Recognise learners' credit achieved abroad

When partners have agreed upon the unit of LOs, they have agreed upon the desired learning outcomes and the assessments in which the student proves that he or she has achieved the LO.

Recognition can differ per country and per school. We advise to put the description of the LO and/or the assessment grid next to the school's curriculum and exams, see where the matches are, and thus decide what credits the student will get.

For instance: is it possible to replace an exam or to give a dispensation for the student lessons or a whole course? Does the transcript of record give the student the right to do work in the clinic that otherwise is not allowed?

Experience None. In our pilot we have not recognised the learner's credits. In the mock documents appendices 4 and 5 we have described a way to do this.
Evaluation The learning agreement and the transcript of record are essential documents for recognition. We do not expect that separate ECVET-units will replace national or final exams, because then recognition should be done at a national level and not at school level.
Appendices Mock document learning agreement: Appendix 4 Mock document transcript of record: Appendix 5

6.3 Store the evidence of the achieved LO in students' portfolio

Find out where to store the evidence, for instance: use the electronic learning environment of the school. Check if there is a national registration system in the home country where it can be placed. Use Europass if you want to store it for international use.

Experience None within this project.
Evaluation None within this project
Links https://europa.eu/europass/en

APPENDIX 1: Europass certificate supplement veterinary nurse per country

Denmark

Description of the vocational education and training programme for
Veterinary nurse

Title of certificate in Danish
Uddannelsesbevis for **Veterinærsygeplejeske**

Translated title of the certificate
Veterinary nurse

Profile of skills and competences
A qualified veterinary nurse is able unsupervised to undertake animal care, technical and administrative laboratory work, client service and other tasks related to the operation of a veterinary practice. A qualified veterinary nurse is able to assists veterinary surgeons in the type of work that must be carried out by a qualified veterinary surgeon under the Danish Act on practising veterinary science (Dyrlægeloven).

A qualified veterinary nurse is to cooperate with others, to communicate effectively with clients, colleagues and managers, and to show their empathy with other people.

Range of occupations accessible to the holder of the certificate
Qualified veterinary nurses generally perform the following job functions: client guidance and service, nursing of ill animals, examinations, quality control and matters relating to the finances and administration of a veterinary practice. They are also able to maintain clinical and diagnostic equipment, sterilise surgical equipment and undertake the day-to-day maintenance of practice premises.

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Certificate Supplement

europass

Description of the vocational education and training programme for
Veterinary nurse

Duration and mode of education and training

The total duration of the education and training programme 3 years and 3 months, with 50 weeks of formal education and training and 116 weeks of on-the-job training.

Danish vocational education and training programmes are alternating programmes, which means that the education and training activities alternate between education and training at a school and on-the-job training in an enterprise.

Level of certificate

The training programme is a vocational education programme which is placed in:
The Danish qualification framework for life-long learning at level: 4
European Qualification Framework (EQF) at level: 4

Access to the next level of education/training

The education and training described in this certificate gives access to continuing and further vocational education and training in Denmark.

Name and status of the body awarding the certificate

Det faglige Udvalg for Veterinærsygeplejeuddannelsen
Rosenlunds Alle 8
2720 Vanløse

In pursuance of an order issued by the Danish Ministry of Education, the awarding authority is authorised to issue a certificate concerning this education and training program.

Grading scale

For training certificates issued after 1 August 2007, the 7-point grading scale is used. The 7-point grading scale is equivalent to the ECTS scale so that the grade 12 corresponds to A, 10 corresponds to B, 7 corresponds to C, 4 corresponds to D, 02 corresponds to D, 00 corresponds to F+ and -3 corresponds to F.
The 13-point grading scale is used for training certificates issued before 1 August 2007, after which it was replaced by the 7-point grading scale.

Additional information

Danish Agency for Higher Education
Bredgade 43
DK-1260 Copenhagen K
Telf: +45 7231 7800
Fax +45 7231 7801
E-mail: uds@uds.dk
www.ufm.dk

Explanatory note

The purpose of this document is to explain the contents of the certificate. Wherever possible the various sections of the descriptions are based of the recommendations given in 2241/2004/EC of the European Parliament and Council of 15 December 2004 on a single Community framework for the transparency of qualifications and competences (Europass).

Netherlands

europass

CERTIFICATE SUPPLEMENT (*)

the Netherlands

1. TITLE OF THE CERTIFICATE (NL)

Diploma Beroepsonderwijs
Kwalificatie: Dierenassistent paraveterinair
Kwalificatiedossier: Dierverzorging
In the original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Certificate Senior Secondary Vocational Education
Qualification: Veterinary nurse
Qualification file: Animal care
This translation has no legal status

3. PROFILE OF SKILLS AND COMPETENCES

The most important duties of a Veterinary nurse are:

Core task 1: Takes care of animals
1.1 Feeds animals
1.2 Takes care of animals
1.3 Maintains the living and working surroundings

Core task 2: Takes care of information processing
2.1 Informs colleagues, clients, the public
2.2 Carries out public-oriented activities

Core task 3: Carries out general tasks
3.1 Manages the pharmacy
3.2 Manages practice areas and instruments
3.3 Inventories request for care and provides advice

Core task 4: Provides veterinary acts
4.1 Assists during consultations
4.2 Assists during operations
4.3 Does professional dental cleaning
4.4 Carries out laboratory work
4.5 Performs imaging techniques or assists in them

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE

A Veterinary nurse can work in a service-providing company, such as a veterinary practice providing (bio-) medical services.

*** Explanatory note**

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: http://www.europass.cedefop.europa.eu/

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February 2016

5. OFFICIAL BASIS OF THE CERTIFICATE	
Name and status of the body awarding the certificate The certificate issued on completion of the programme is signed by the examination board at the school where the pupil attended the programme.	**Name and status of the national/regional authority providing accreditation/recognition of the certificate** Ministry of Education, Culture and Science
Level of the certificate (national or international) Qualification level 4 of the Dutch VET qualification structure Characteristics: non-job related skills such as tactical and strategic capacities. The professional bears his or her own responsibility, which is not only related to practical implementation in terms of monitoring and supervision, but also a more formal, organisational responsibility. The range of tasks also includes drafting new procedures. NLQF level 4 - EQF level 4 - ISCED 3A	**Grading scale / Pass requirements** 10 excellent 9 very good 8 good 7 very satisfactory 6 pass 5 fail 4 unsatisfactory 3 very unsatisfactory 2 poor 1 very poor
Access to next level of education/professions There is a limited possibility to develop based on further education and/or experience. A Veterinary nurse can specialise in various disciplines within this profession. For example, he can develop further in managing an veterinary practice or certain related disciplines, such as taking and developing x-rays, anaesthetics, pharmacy management and laboratory work. Furthermore, specialised animal clinics or veterinary offices can offer further development, such as secondary care services or services aimed at specific types of animals. It is possible to develop through higher professional educations such as Animal health & welfare and Animal Management.	**International agreements** The profession of Veterinary nurse is regulated in the Netherlands under the European directive 2005/36/EC, amended by directive 2013/55/EU.
Legal basis Act on Vocational Education and Training (WEB), registered number of qualification (crebo): 25540 The education and training for this qualification is offered as of August 1, 2016.	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE	
Senior secondary vocational education features two learning pathways: the school-based pathway (bol) and the training on the job pathway (bbl). In the school-based pathway, the majority of the course consists of theory at school. The extent of the practical component (vocational practice) is between 20% and 60%. In the training on the job pathway, the extent of vocational practice is at least 60% of the course. The participant works four days a week in a training company, and attends school for theory subjects just one day a week. In principle it is possible to follow both learning pathways, but which pathway is offered will depend on the individual educational institution.	
Average duration of the education/ training leading to the certificate	**4 years (6400 study hours) (depending on previous education)**
Entry requirements The certificate preparatory vocational secondary education (vmbo) advanced vocational programme, combined programme, or theoretical programme, or a comparable level.	

February 2016

7. ADDITIONAL INFORMATION
Dutch senior secondary VET is based on qualification files, that each contain one or more qualifications. The information included in part 3 and 4 is derived directly from the qualification file determined by the Minister of Education, Culture and Science. The complete qualification file can be found at http://kwalificaties.s-bb.nl/, only in Dutch. Optional subjects are linked to the qualification. The optional subjects have a total size of 15% of the course duration. The optional subjects completed by the student are listed on the certificate. Additional information, including a description of the Dutch national qualifications system, is available at the Netherlands National Reference Point (NRP): www.s-bb.nl. The NRP is the information centre for vocational qualifications in the Netherlands. SBB has been appointed in this capacity by the Ministry of Education, Culture and Science.

February 2016

Slovenia

EUROPASS CERTIFICATE SUPPLEMENT (*)

1. TITLE OF THE CERTIFICATE AND OF THE EDUCATION PROGRAMME (SL) (1)
Spričevalo o poklicni maturi po izobraževalnem programu: **VETERINARSKI TEHNIK** (ID: 171605)
(1) In native language.

2. TRANSLATED TITLE OF THE CERTIFICATE AND OF THE EDUCATION PROGRAMME (EN) (1)
School-leaving certificate: **VETERINARY TECHNICIAN** (ID: 171605)
(1) This translation has no legal status.

3. ACQUIRED KNOWLEDGE, SKILLS AND PROFESSIONAL COMPETENCES

The holder of the certificate is qualified to:

- identify animals' needs, their proper treatment and transport;
- carry out veterinary and technical treatment of animals;
- conduct lab tests (from taking of samples to report elaboration);
- prepare animals for procedures and treatment as well as notify and inform owners after the performed procedures;
- assist in diagnostic and surgical procedures;
- apply medication;
- help in running a veterinary pharmacy;
- work in the reception, receive and organise customers;
- treat animals humanely;
- communicate in a business context (with animal owners and associates);
- work in a group and use ICT;
- protect health of people and animals, protect the environment and use natural resources, energy and raw materials rationally;
- comply with safety, hygiene and other regulations;
- provide for the quality of performed procedures.

Optional:

- breed, protect health and care for pets (carnivores, rodents, reptiles, ornamental birds and fish);
- identify deviations from a physiological condition and act correctly;
- advise animal owners about care and treatment of pets.
- inseminate bovine animals and sows;
- control and help at delivery, treat new-born animals and animals after birth;
- treat horn formations;
- control milk.

In addition, the holder of the certificate also upgraded his/her key professional skills and competences with key general knowledge and skills in line with national standards.

4. RANGE OF OCCUPATIONS ACCESSIBLE TO HOLDER OF THE CERTIFICATE

The holder of the certificate can find employment at veterinary clinics, laboratories, animal shelters, zoos, big farms, pet stores etc.

(*) **Explanatory note**

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information available at: http://europass.cedefop.eu.int

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5. OFFICIAL BASIS OF THE CERTIFICATE	
Name and status of the body awarding the certificate The institution is accredited with the Ministry of Education, Science and Sport.	**Name and status of the national/regional authority providing accreditation/recognition of the certificate** Ministry of Education, Science and Sport Masarykova 16 SI-1000 Ljubljana www.mizs.gov.si
Level of the certificate (national or international) Upper Secondary Technical Education Slovenian Qualification Framework: SOK 5 European Qualification Framework: EQF 4 ISCED 2011: 354	**Grading scale** 5 – excellent 4 – very good 3 – good 2 – sufficient
Access to next level of education/training Education programme completed with the Vocational Matura exam enables enrolment to higher vocational and professional study programmes. Passing an additional General Matura exam is required to enrol to one of the university study programmes, which allow this possibility.	**International agreements** The Republic of Slovenia has concluded agreements on the recognition of education with individual countries. The relevant information is available at ENIC/NARIC - the National Academic Recognition Information Centre.
Legal basis Organisation and Financing of Education Act) Vocational and Technical Education Act	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE	
Time of the education	4 years
Number of credits[1]	240 credits
General education	110 credits
Professional education	80 credits
Practical education at the employer	6 credits
Extracurricular activities	14 credits
Open curriculum[2]	26 credits
Vocational matura	4 credits
Entry requirements The programme can be attended by anyone who has completed the programme of primary education or lower vocational education or equivalent education in line with previous regulations.	
Additional information – Ministry of Education, Science and Sport (www.mizs.gov.si): Education programme and description of education and schooling in Slovenia – National Reference Point for Vocational Qualifications - NRP (www.nrpslo.org) – National Europass Centre (www.europass.si)	

[1] One credit equals 25 hours of candidate's work.
[2] Goals of the open curriculum are defined by schools in cooperation with companies on a local/regional level.

7. A DETAILED DESCRIPTION OF EDUCATION

GENERAL EDUCATION:

1. Slovene (24 credits)
2. Mathematics (20 credits)
3. Foreign language (21 credits)
4. Art (3 credits)
5. History (5 credits)
6. Geography (3 credits) or
7. Sociology (3 credits) or
8. Psychology (3 credits)
9. Physics (3 credits)
10. Chemistry (7 credits)
11. Biology (7 credits)
12. Physical education (14 credits)

PROFESSIONAL EDUCATION:

Mandatory Modules (62 credits)

1. Anatomy and physiology of domestic animals (12 credits)
2. Informatics and business communication (5 credits)
3. Animal treatment (5 credits)
4. Lab work in veterinary science (7 credits)
5. Veterinary technology (33 credits)

Optional Modules (18 credits)

6. Breeding and health care of pets (18 credits)
7. Veterinary technology of livestock (18 credits)

OPEN CURRICULUM (26 credits):

The open curriculum is determined by the school in cooperation with companies on the local level.

PRACTICAL EDUCATION:

1. Practical training in school
2. Practical training through work placement

EXTRACURRICULAR ACTIVITIES (14 credits):

Extracurricular activities involve compulsory activities, programme-related content and electives.

VOCATIONAL MATURA:

Mandatory part:

- written and oral exam of Slovenian language,
- written and oral exam in Veterinary science.

Optional part:

- written and oral exam in a Foreign language or Mathematics,
- presenting and defending a project or service (4 credits):

OTHER NOTES:

Finland

europass

CERTIFICATE SUPPLEMENT

Title of the qualification (FI, SV)
Eläintenhoidon ammattitutkinto
Yrkesexamen i djurskötsel
Qualification requirements entered into force on 01.01.2019 (OPH-2487-2018)

Translated title of the qualification (EN)
Further vocational qualification in Animal Care
This translation has no legal status.

Profile of skills and competences

Composition of the qualification

The Further vocational qualification in Animal Care (150 competence points) is composed of compulsory units (110-130 competence points) and optional units (20-40 competence points). The Further vocational qualification in Animal Care comprises the following competence areas and qualification titles:

- Competence area of Animal Boarding (FQ)
- Competence area of Pet Sales (FQ)
- Competence area of Animal Training (Animal Trainer FQ)
- Competence area of Animal Grooming (Animal Groomer FQ)
- Competence area of Care of Animals at Clinics (Animal Attendant at Clinics FQ)
- Competence area of Care of Laboratory Animals (Laboratory Animal Attendant FQ)
- Competence area in Dog Massage (Dog Massage Therapist FQ).

Vocational skills and competences required for completion of the qualification

Qualification holders who have completed the Competence area of Animal Boarding are responsible for the care of animals. In addition, they clean and maintain the company's facilities, purchase supplies, maintain and replenish the stocks, and carry out different customer service tasks.

Qualification holders who have completed the Competence area of Pet Sales are familiar with products specific to different animal species. Their work tasks also include the customer service tasks in the company, such as sales and guidance of customers.

Qualification holders who have completed the Competence area of Animal Training know how to train animals. They are able to guide customers in improving the welfare of animals for example through training. They know how to take into account the behaviour typical of different species and breeds of animals and use this knowledge when teaching animals everyday skills and obedience or when teaching them to assist the owner. In addition, by choosing the unit Care of zoo animals and protection of species students are able to deepen their competence by learning about the special characteristics of zoo animals and about taking care of their welfare.

Qualification holders who have completed the Competence area of Animal Grooming are able to groom an animal according to the grooming plan drawn up in cooperation with the owner and carry out work tasks related to the basic healthcare of animals. In addition, they are able to carry out customer service tasks in their company and guide customers in questions concerning the care of animals.

Qualification holders who have completed the Competence area of Care of Animals at Clinics are able to assist a vet in treatment and procedures, carry out the most common laboratory examinations, take X-rays, work in an operating theatre, carry out tasks related to instrument care,

and attend to and ensure the welfare of animal patients. In addition, they are able to work in diverse and demanding customer service tasks, take care of the tidiness of the clinic premises and replenish the stocks.

Qualification holders who have completed the Competence area of Care of Laboratory Animals know how to take care of the welfare of laboratory animals. In addition, they are able to assist in research and work in customer services. Their work tasks also include reporting and monitoring of procedures.

Qualification holders who have completed the Competence area of Dog Massage are able to massage dogs according to the plans they have drawn up and provide the owners or trainers of the dogs with the necessary further instructions. In addition, they are able to carry out customer service tasks in their company and guide customers in questions concerning the care of animals.

Range of occupations accessible to the holder of the certificate
Qualification holders who have completed the Competence area of Animal Boarding may work either in an entrepreneurial capacity or as employees in animal boarding establishments or animal shelters. Qualification holders who have completed the Competence area of Pet Sales may work in an entrepreneurial capacity or as employees in companies conducting retail or wholesale of pet supplies and pet food. Qualification holders who have completed the Competence area of Animal Training may work in an entrepreneurial capacity or as employees in companies providing services related to the training or behaviour of animals, or work in zoos. Qualification holders who have completed the Competence area of Animal Grooming may work in an entrepreneurial capacity or as employees in companies providing grooming services. Qualification holders who have completed the Competence area of Care of Animals at Clinics may work at veterinary clinics and in hospitals for small animals or horses. Qualification holders who have completed the Competence area of Care of Laboratory Animals may work in laboratory animal centres or in smaller laboratory animal units. Qualification holders who have completed the Competence area of Dog Massage may work in an entrepreneurial capacity or as employees in companies providing dog massage services.

Official basis of the certificate	
Name and status of the body awarding the certificate An education provider with an authorisation to provide education and award qualifications granted by the Ministry of Education and Culture.	**Name and status of the national/regional authority providing accreditation/recognition of the certificate** Ministry of Education and Culture Finnish National Agency for Education, the national agency subordinate to the Ministry of Education and Culture
Level of the certificate (national or international) National Qualifications Framework (nqf) 4 European Qualifications Framework (eqf) 4 ISCED 3	**Grading scale/Pass requirements** pass/fail
Access to the next level of education/training The qualification confers eligibility for higher education studies.	**International agreements**
Legal basis Vocational Education and Training Act 531/2017 and the decrees that complement it.	

Officially recognised ways of obtaining the certificate

The vocational skills required for completing the modules are demonstrated by performing practical tasks in authentic situations and work processes (demonstration of knowledge and skills). The student's knowledge and skills are assessed diversely by a teacher and a working life representative and compared to the competence defined in the qualification requirements. The education provider awards the student a qualification certificate once the qualification has been completed acceptably in accordance to the qualification requirements laid down by the Finnish National Agency for Education.
Entry requirements No formal qualifications are required to take the competence test. **Additional information** Finnish National Agency for Education P.O. Box 380, FI-00531 Helsinki, Finland www.oph.fi

Explanatory note

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

For more information on transparency, visit http://www.cedefop.europa.eu/en/themes/understanding-qualifications

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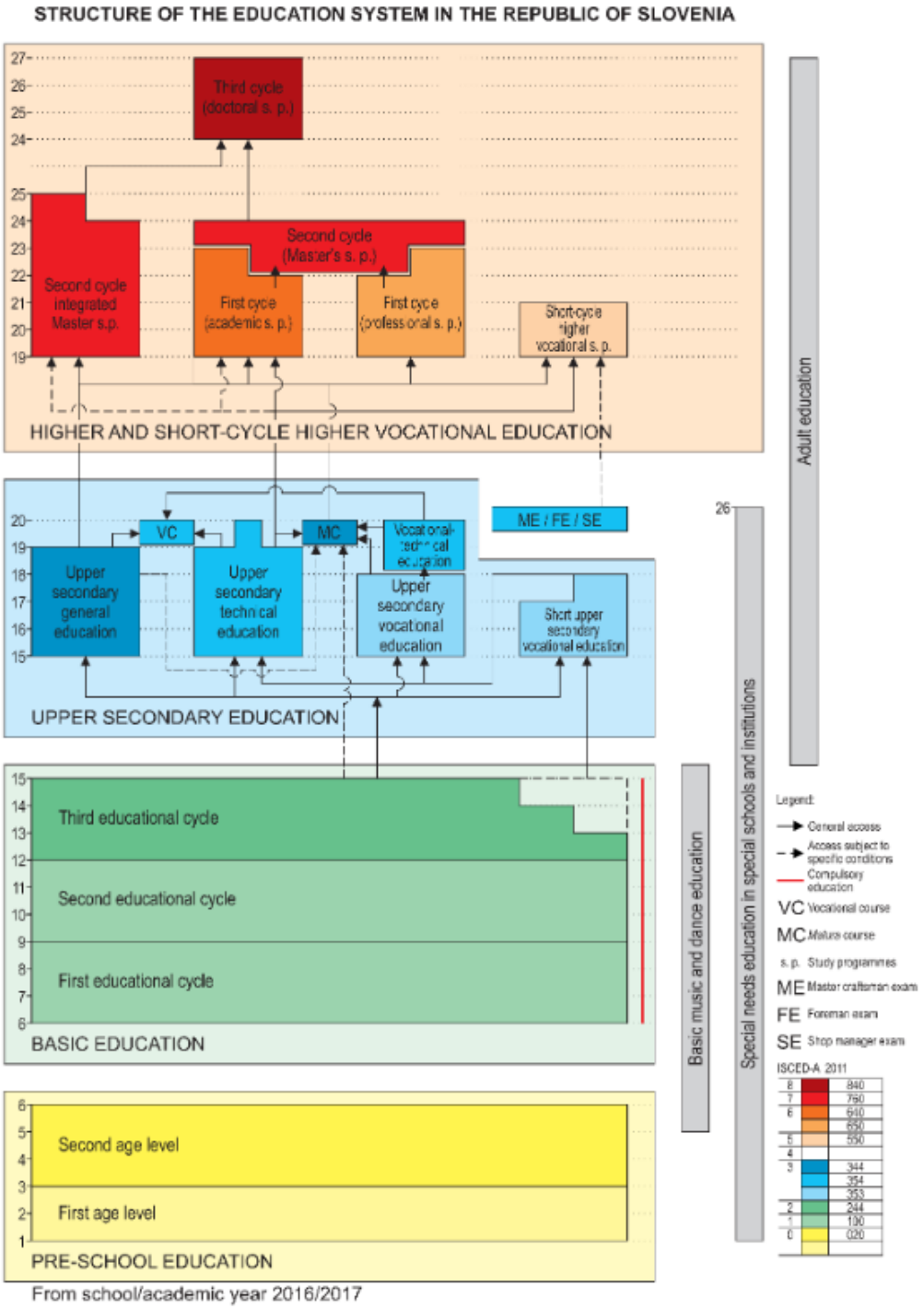
APPENDIX 2: Structure of educational systems per country

Slovenia



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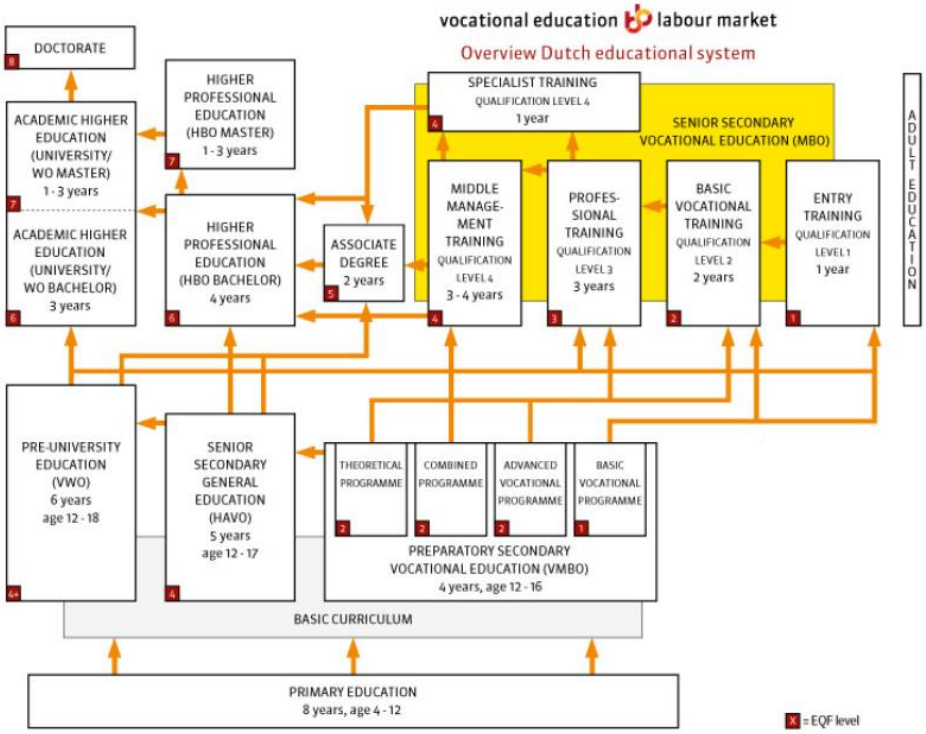
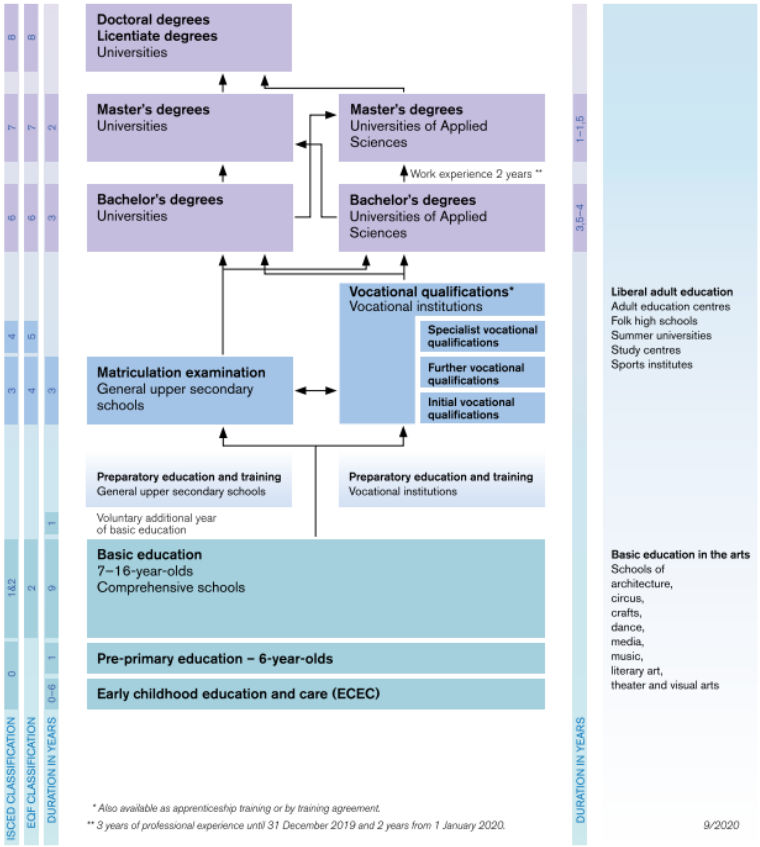
Netherlands



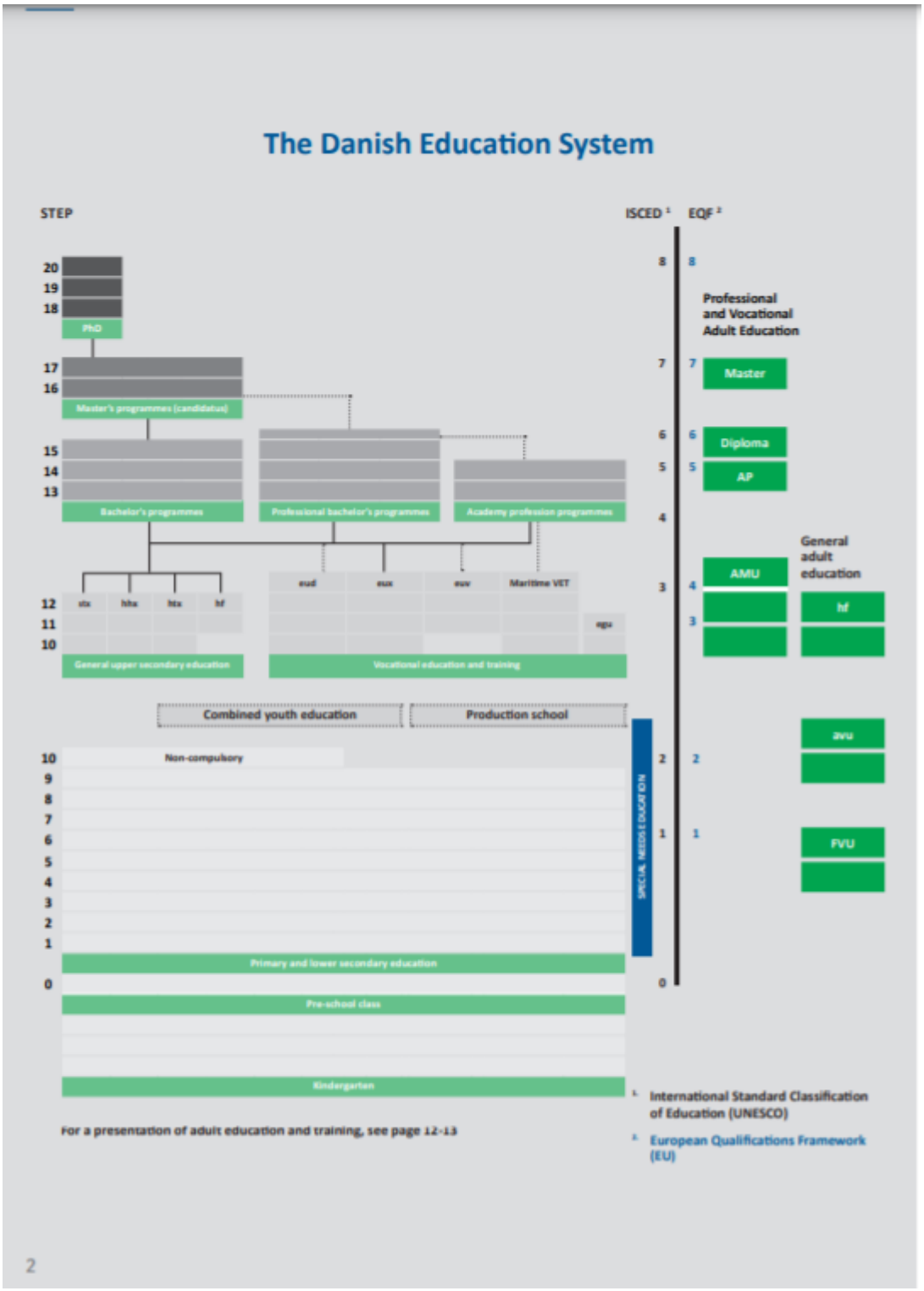
Description of the diagram of the current Dutch educational system

Finland

EDUCATION SYSTEM IN FINLAND



Denmark



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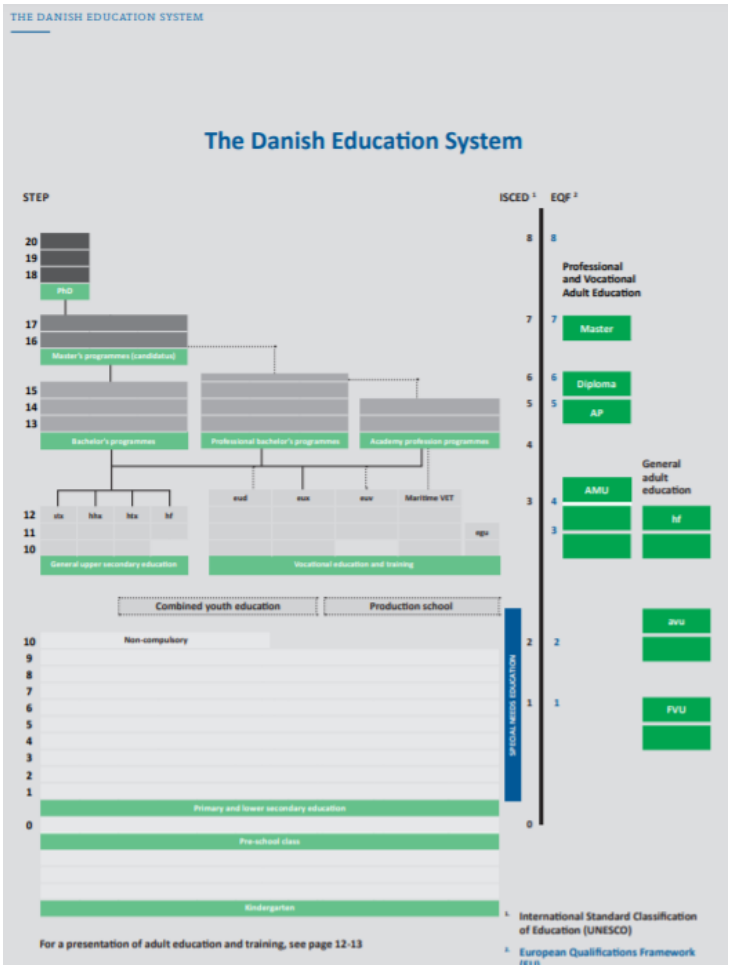
THE DANISH EDUCATION SYSTEM
The Danish Education System
STEP
ISCED 1
EQF 2
PhD
Master's programmes (candidatus)
Bachelor's programmes
Professional bachelor's programmes
Academy profession programmes
General upper secondary education
Vocational education and training
Maritime VET
Combined youth education
Production school
Non-compulsory
Primary and lower secondary education
Pre-school class
Kindergarten
SPECIAL NEEDS EDUCATION
Professional and Vocational Adult Education
Master
Diploma
AP
AMU
General adult education
hf
avu
FVU
For a presentation of adult education and training, see page 12-13
1. International Standard Classification of Education (UNESCO)
2. European Qualifications Framework

APPENDIX 3: VET4VN Radiology (X-ray) Unit Questionnaire

1.The name of your organization.

2. Please, write here in English what is stated in your national curriculum about radiology (x-ray) (in veterinary nurse education).

3. Please, write here in English what is written in your school's education plan about radiology.

4. Describe your goals and learning outcomes for teaching radiology.

5. How far in their education are the students when you teach radiology?

6. How many theoretical and practical hours are used to teach this subject?

7. Do you monitor or require some practical training during the clinical placements?

8. What kind of exams or test do you have in this unit?

9. Is this a compulsory subject in your final exams? Please specify.

APPENDIX 4: Mock learning agreement

VET4VN

Learning Agreement

1. Information about the participants

Contact details of the home organisation	
Name of organisation	Zone College
Address	Hoeflingweg 9, 7241 CJ Lochem
Telephone/fax	+31 88 262 0700
E-mail	Info@zone.college
Website	Zonecollege.nl
Contact person	Nienke Dijkerman/ Jan Steverink/ Angelique Withaar
Telephone/fax	+31 88 262 0700
E-mail	ndijkerman@zone.college; withaar@zone.college: jsteverink@zone.college

Contact details of the host organisation	
Name of organisation	HANSENBERG
Address	Skovvangen 28, 6000 Kolding
Telephone/fax	+45 4579320100
E-mail	Hansenberg@hansenberg.dk
Website	www.hansenberg.dk
Contact person	Helge Lei Hansen, International Coordinator
Tutor/mentor	Dorte Windeløv
Telephone/fax	+45 4579320100
E-mail	dwi@hansenberg.dk

Contact details of the learner	
Name	Marije M.
Address	…

Telephone/fax	06- 12345678
E-mail	…
Date of birth	10.04.1999
Please tick	☐ Male X☐ Female ☐ Undefined

Contact details of parents or legal guardian of the learner, if applicable	
Name	
Address	
Telephone	
E-mail	

If an intermediary organisation is involved, please provide contact details	
Name of organisation	
Address	
Telephone/fax	
E-mail	
Website	
Contact person	
Telephone/fax	
E-mail	

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2. Duration of the learning period abroad

Start date of the training abroad	03.10.2022
End date of the training abroad	14.10.2022
Length of time abroad	2 weeks

3. The qualification being taken by the learner - including information on the learner's progress (knowledge, skills and competence already acquired)

Title of the qualification being taken by the learner (please also provide the title in the language of the partnership, if appropriate)	Veterinary nurse (Dierenassistent Paraveterinair)
EQF level (if appropriate)	4
NQF level (if appropriate)	4
Information on the learner's progress in relation to the learning pathway (Information to indicate acquired knowledge, skills, competence could be included in an annex)	Marije is in the third year of her education as Veterinary Nurse. She has had 4 weeks of lessons on the subject radiology, but no practical training yet
Enclosures in annex - please tick as appropriate	☐ Europass Certificate Supplement ☐ Europass CV ☐ Europass Mobility ☐ Europass Language Passport ☐ European Skills Passport ☐ (Unit[s] of) learning outcomes already acquired by the learner ☐ Other: please specify

4. Description of the learning outcomes to be achieved during mobility

Title of unit(s)/groups of learning outcomes/parts of units to be acquired	Radiology ECVET Unit of Learning Outcomes Radiography on companion animals Part A, B and C.
Number of ECVET points to be acquired while abroad	Not used in this mobility.
Learning outcomes to be achieved	**A. Radiographic safety** Overall competence: She/he can describe and carry out the specific safety requirements for radiography **B. Patient handling and positioning** Overall competence: She/he can handle and position the patient for radiography in a suitable and correct way. **C. Conduct radiography on companion animals; Radiographic technique** Overall competence: She/he can routinely prepare and operate X-ray machines and other equipment for radiography Overall competence: She/he can routinely maintain X-ray machines and equipment for radiography.
Description of the learning activities (e.g. information on location(s) of learning, tasks to be completed and/or courses to be attended)	The student follows these courses at HANSENBERG: Radiographic safety in the veterinary clinic (theoretical course 2 days) Patient handling and positioning (theoretical and practical course 4 days) Radiographic technique (theoretical and practical course 4 days)
Enclosures in annex - please tick as appropriate	☐X Description of unit(s)/groups of learning outcomes which are the focus of the mobility (ECVET Unit of radiology section A + B + C) ☐X Description of the learning activities (local educational plan) ☐ Individual development plan when abroad ☐X Other: please specify: Template for transcript of record

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5. Assessment and documentation

Person(s) responsible for assessing the learner's performance	Name: Anders Fiil Nyboe
	Organisation, role: X-ray teacher at HANSENBERG
Assessment of learning outcomes	Date of assessment: Multiple choice test: 07.10.2022 The practical tests: 14.10.2022
	Method: Radiographic safety in the veterinary clinic: multiple choice test. Patient handling and positioning: Practical OSCE-test with oral examination Radiographic technique: Practical test with oral examination
How and when will the assessment be recorded?	It will be recorded in the transcript of record 18.10.2022 latest.
Please include	☐X Detailed information about the assessment procedure (e.g. methods, criteria, assessment grid) ☐X Template for documenting the acquired learning outcomes (such as the learner's transcript of record or Europass Mobility) ☐ Individual development plan when abroad ☐ Other: Please specify

6. Validation and recognition

Person (s) responsible for validating the learning outcomes achieved abroad	Name: Jan ter Horst and Pauline Hupkes
	Organisation, role: Jan ter Horst, exam committee, Zone College. Pauline Hupkes, Educationalist at Zone College
How will the validation process be carried out?	In the validation process, it is checked if everything went according to plan. Are the assessments reliable? Quality control of the process. This will be performed by the department "onderwijs en kwaliteit" together with the exam committee.
Recording of validated achievements	Date: 15/11/2022
	Method: Checks if the learning outcomes fit with the assessment. And compare these learning outcomes with the Dutch dossier of competences. Checks if the assessment is reliable, objective, valid.
Person(s) responsible for recognizing the learning outcomes achieved abroad	Name: Angelique Withaar/ Nienke Dijkerman
	Organisation, role: Teacher in veterinary nursing specialised in radiology
How will the recognition be conducted?	The result of the assessment (the achieved learning outcomes) will be put next to the goals of the radiology unit of the Dutch curriculum. This will be done by a teacher who is experienced in the subject of radiology. This person will advise the exam committee about the steps to take.

7. Signatures

Home organisation/country	Host organisation/country	Learner
Zone College	HANSENBERG	Marije M...
Name, role	Name, role	Name
Angelique Withaar	Helge Lei Hansen International coordinator	Marije
Place, date	Place, date	Place, date
Zwolle	Kolding	

If applicable: Intermediary organisation	If applicable: Parent or legal guardian
Name, role	Name, role
Place, date	Place, date

8. Additional information

9. Annexes

Radiology ECVET Unit of Learning Outcomes, Radiography on companion animals Part A, B and C.

Local educational plan on radiology, HANSENBERG.

Detailed information about the assessment procedure:

- Multiple choice test: evaluation basis and criteria for pass/fail
- Description of an OSCE-test with oral examination + criteria for pass/fail/grades
- Description of a practical test with oral examination + criteria for pass/fail/grades
- Assessment grid to document that the LOs are met in the three assessment types

Template for documenting the acquired learning outcomes such as the learner's transcript of record or Europass Mobility.

APPENDIX 5: Mock transcript of record

Transcript of record

10. Information about the participants	
Contact details of the home organisation	
Name of organisation	Zone College
Address	Hoeflingweg 9, 7241 CJ Lochem
Telephone/fax	+31 88 262 0700
E-mail	Info@zone.college
Website	Zonecollege.nl
Contact person	Nienke Dijkerman/ Jan Steverink/ Angelique Withaar
Telephone/fax	+31 88 262 0700
E-mail	ndijkerman@zone.college; jsteverink@zone.college; withaar@zone.college
Contact details of the host organisation	
Name of organisation	HANSENBERG
Address	Skovvangen 28, 6000 Kolding
Telephone/fax	+45 4579320100
E-mail	Hansenberg@hansenberg.dk
Website	www.hansenberg.dk
Contact person	Helge Lei Hansen, International Coordinator
Tutor/mentor	Dorte Windeløv
Telephone/fax	+45 4579320100
E-mail	dwi@hansenberg.dk

Contact details of the learner	
Name	Marije M...
Address	...
Telephone/fax	06- 12345678
E-mail	...
Date of birth	10.04.1999
Please tick	☐ Male X☐ Female ☐ Undefined
Contact details of parents or legal guardian of the learner, if applicable	
Name	
Address	
Telephone	
E-mail	
If an intermediary organisation is involved, please provide contact details	
Name of organisation	
Address	
Telephone/fax	
E-mail	
Website	
Contact person	
Telephone/fax	
E-mail	

11. Unit(s) of learning outcomes

Unit of Learning outcomes	Description	Duration of course	EQF level	NQF level (Dk)	NQF level (Nl)
Radiographic safety	Overall competence: She/he can describe and carry out the specific safety requirements for radiography Assessment: is described in part 3	2 days	4	4	4
Patient handling and positioning	Overall competence: She/he can handle and position the patient for radiography in a suitable and correct way. Assessment: is described in part 3	4 days	4	4	4
Conduct radiography on companion animals; Radiographic technique	Overall competence: She/he can routinely prepare and operate X-ray machines and other equipment for radiography Assessment: is described in part 3	4 days	4	4	4

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12. Assessment and documentation

Person(s) responsible for assessing the learner's performance	Name: Anders Fiil Nyboe
	Organisation, role: X-ray teacher at HANSENBERG
Assessment of learning outcomes	Date of assessment: Multiple choice test: 07.10.2022 The practical tests: 14.10.2022
	Method: Radiographic safety in the veterinary clinic: multiple choice test. Patient handling and positioning: Practical OSCE-test with oral examination Radiographic technique: Practical test with oral examination
Please include	☐X Detailed information about the assessment procedure (e.g. methods, criteria, assessment grid) ☐X Detailed information on the description of the units of learning outcomes ☐ Individual development plan when abroad ☐ Other: Please specify

13. Transcript of record of the achieved learning outcomes

Unit of Learning outcomes	Score (fail/ pass)
A. Radiographic safety	
B. Patient handling and positioning	
C. Conduct radiography on companion animals; Radiographic technique	

14. Signatures

Host organisation/country:	Learner:	Place:
HANSENBERG	Marije	Kolding
Name, role:		Date:
Anders Fiil Nyboe X-ray teacher		18.10.2022
Signature:	Signature:	Stamp:

NB : This document is not valid without the signature of the registrar/dean/administration officer and the official stamp of the institution.
NB2: this document is necessary for validation and recognition of the learning outcomes in the Netherlands

15. Validation and recognition

	Person (s) responsible for validating the learning outcomes achieved abroad	Name: Jan ter Horst and Pauline Hupkes
		Organisation, role: Jan ter Horst, exam committee, Zone College. Pauline Hupkes, Educationalist at Zone College
	How will the validation process be carried out?	In the validation process is checked if everything went according to plan. Are the assessments reliable? This is a quality control of the process. This will be performed by the department "onderwijs en kwaliteit" together with the exam committee.
	Recording of validated achievements	Date: 15 nov 2022
		Method: Checks if the learning outcomes fit with the assessment. And compare these learning outcomes with the Dutch dossier of competences. Checks if the assessment is reliable, objective, valid.
	Person(s) responsible for recognizing the learning outcomes achieved abroad	Name: Angelique Withaar/ Nienke Dijkerman
		Organisation, role: Teacher in veterinary nursing specialised in radiology
	How will the recognition be conducted?	The result of the assessment (the achieved learning outcomes) will be put next to the goals of the radiology unit of the Dutch curriculum. This will be done by a teacher who is experienced in the subject of radiology. This person will advise the exam committee about the steps to take.

16. Annexes

Radiology ECVET Unit of Learning Outcomes, Radiography on companion animals Part A, B and C.

Local educational plan on radiology, HANSENBERG.

Detailed information about the assessment procedure:

- Multiple choice test: evaluation basis and criteria for pass/fail
- Description of a OSCE-test with oral examination + criteria for pass/fail/grades
- Description of a practical test with oral examination + criteria for pass/fail/grades
- Assessment grid to document that the LOs are met in the three assessment types

APPENDIX 6: Unit of learning outcomes on radiology

Radiology ECVET Unit – Unit of Learning Outcomes
Radiography on companion animals

a. Radiographic safety

Knowledge	Skills	Level of autonomy, responsibility, and complexity
Headline: She/he can describe and carry out the specific safety requirements for radiography		
Explains the legislation which regulates the work in radiology.	Knows how to act and behave on the basis of radiology legislation.	Works according to the radiology legislation.
Describes the harm of radiation and health risks both to staff, clients, and animals.	Understands the harm and health risks radiation can cause staff, clients, and animals, and acts according to that.	Plans and carries out activities so that the harms of radiation are taken into consideration.
States the conditions in which it is dangerous for the veterinary nurse to take X-rays.	Identifies situations in which it is dangerous for the veterinary nurse to take X-rays.	Considers individual conditions when taking X-ray images.
Knows the importance of protecting themselves and the client and describes the ways in which exposure to scattered radiation can be reduced:	Knows how to act and behave to protect themselves and the client and reduce exposure to scattered radiation:	Protects themselves and the client and reduces the exposure to scattered radiation:
Is aware of the importance of only taking the justified quantity of X-rays per patient to minimize the radiation exposure.	Takes only the justified quantity of X-rays per patient.	Performs only the necessary quantity of X-rays per patient and by doing this minimizes the radiation exposure.
Knows what to advise the client on radiation safety when staying with the patient during the X-ray examination (legislation, age 18, protective clothing, pregnancy, behaviour).	Dresses the client in suitable protective clothing and instructs the client in radiation-safe restrictions of the patient to reduce the radiation exposure.	Takes the clients radiographic safety into consideration, when clients attend the X-ray examination and ensures that the legal requirements are followed.
Knows why and how to use and check protective clothing like lead gowns, lead gloves, lead collar.	Demonstrates methods of storing and checking protective clothing.	Stores and checks the protective clothing correctly.
	Selects and puts on protective clothing correctly.	Protects the restrainers from scattered radiation exposure by using protective clothing when they need to be in the X-ray area during imaging.

Explains the methods to reduce exposure from scattered radiation.	Indicates the location and boundaries of a controlled area and designated area.	Protects the restrainers from scattered radiation exposure by increasing the distance to the source of radiation as much as possible and setting the collimation as small as possible.
	Increases the distance between the source of radiation and the restrainers as much as possible.	
	Sets the collimation as small as possible.	
Is aware of other ways to reduce radiation exposure, such as the use of positioning aids (sandbags, wedges, strings etc.), sedation, or anaesthesia when positioning the patient.	Uses positioning aids, sedation, or anaesthesia when positioning the patient.	Uses positioning aids or medication to restrain the patient during X-ray, so distance can be kept, or leaves the room during exposure.
Describes radiation warning symbols.	Recognises radiation warning symbols.	Acts according to the radiation warning symbols.
Describes the meaning and use of warning light systems.	Checks and operates warning light systems.	Checks and operates warning light systems correctly and acts accordingly when the light is on.
Describes the ways in which exposure of staff to X-rays can be monitored.	Places a film badge monitor correctly.	Uses a film badge monitor and takes part in the monitoring of exposure risks.
Describes appointments and protocols required to maintain safe working practices.	Demonstrates the use of protocols to maintain safe working practices.	Takes part in the use of protocols to maintain safe working practices.

a. Patient handling and positioning

Knowledge	Skills	Level of autonomy, responsibility, and complexity
Headline: She/he can handle and position the patient for radiography in a suitable and correct way.		
Knows the standard radiographic views, which are commonly used.	Positions the animal in a way that is suitable for the type of X-ray that needs to be taken.	Chooses the suitable sets of radiographic view for a patient and carries out the handling and positioning.
Knows how to identify the animal and its condition.	Identifies the animal and its condition.	Confirms the animal´s identity and condition.
Knows how to take the animals condition into consideration when planning the positioning and knows if it is going to be awake or sedated/anaesthetised.	Positions the patient considering what is correct for the specific patient.	Uses only positions that are considered correct for the specific patient and avoids positions that would endanger the animal's health.
Describes how animals must be positioned for the different radiographic views.	Positions the animal in a way that is suitable for the type of X-ray that needs to be taken.	Decides about the correct positioning of the animal and can instruct others (colleagues and clients) to assist in positioning the animal.
Describes the vital functions of a healthy animal.	Monitors the patient's condition during the X-ray examination.	Takes responsibility for the wellbeing of the animal during the X-ray examination.
Describes methods of calming the animal during the procedure.	Reassures the animal when the animal is in distress.	Takes responsibility for restraining the animal in the right position after weighing the advantages and disadvantages of options and in a way that is safe for both the animal and handlers.
Explains methods to avoid movement of the patient, both chemical and manual methods.	Uses the right method of restraining an animal and fixating the animal.	
Describes the application and use of positioning aids.	Uses positioning aids in the right way.	
Knows which records of patients need to be registered.	Registers the necessary data of the patient and the owner.	Takes responsibility for keeping an updated registration of patient records.

a. Conduct radiography on companion animals; Radiographic technique

Knowledge	Skills	Level of autonomy, responsibility, and complexity
Headline: She/he can routinely prepare and operate X-ray machines and other equipment for radiography		
Describes the principles of radiation and radiography in veterinary practice in accordance with key terms, properties and effects of radiation used to create diagnostic images.	Identifies and recognises functions and the different parts of commonly used X-ray machines.	Understands the function of comm only used X-ray machines.
Explains the function of commonly used radiography apparatuses including the role of anode and cathode.		
Knows the difference between analogue and digital radiography.		
Describes how to prepare the X-ray machine and the X-ray room before the examination.	Prepares and operates the X-ray machine, taking standard X-rays quickly and efficiently by the correct use of the equipment.	Independently prepares the X-ray machine and the other radiogra phic equipment before taking a diag nostic image.
Describes the clinics basic X-ray equipment and its function.		Independently produces X-rays of high diagnostic quality (the image provides sufficient informati on to make a diagnosis) in a safe and responsible way for both animals and staff in accordance wit h current regulations.
Describes the effects of varying kilovoltages (kV) and milliamperage (mA) on resulting exposure and their relationship.	Adjusts kV and mAs correctly according to the acquired diagnostic image.	
Explains structure, function, and u se of X-ray equipment other than apparat us: cassettes, grids, tables, screen s.	Can choose, load and position cassettes, screens, grids correctly according to the acquired diagnostic image.	
Explains grid factors and their effe ct on exposure settings.		
Describes primary beam and scatt er production in relation to absorption by a range of animate and inanimate subjects with a ran ge of densities.	Sets the X-ray machine and equipment correct ly for recording considering the indi vidual animal, the area, and the tissue to be radiographed.	
	Adjusts the light beam diaphragm correctly (collimates the beam).	

Explain how to mark X-ray images correctly.	Marks the X-ray images correctly.	
Describes principles of digital imaging, computer processing and the resultant images.	Handles digital imaging and computer processing.	Acts independently in handling X-ray images and data from the images according to practice procedures.
Describes methods of storage of images (including computer based) and maintaining the images.	Archives X-rays correctly.	
Describe the practice procedure for recording exposure and results of images.	Record exposures and results of images according to practice procedures.	
Explain identification of anatomical locations and landmarks.	Identify anatomical landmarks on digital images.	
Headline: She/he can routinely maintain X-ray machines and equipment for radiography.		
Describes maintenance of X-ray machines, screens, cassettes, grids, protective clothing, and other equipment.	Maintains screens, cassettes, grids, protective clothing, and other X-ray equipment.	Independently handles maintenance and quality control of the X-ray equipment of the clinic.
Explains common errors and malfunctions in the X-ray machine and the equipment.	Recognises common errors and malfunctions of the X-ray machine and equipment.	Identifies errors and malfunctions of the X-ray machine and equipment and acts accordingly.
Describes which action is to be taken on malfunction and when to arrange for servicing or repairs.	Acts on errors and malfunctions of the X-ray machine and equipment.	Independently arranges for the servicing, quality control and repairs of the X-ray machine and equipment.
	Arranges for quality control, servicing and repairs of the X-ray machine and equipment when neccesary.	

a. Quality of radiographic images

Knowledge	Skills	Level of autonomy, responsibility, and complexity
Headline: She/he can identify faults and obtain and secure good quality in radiographic imaging.		
Knows how to distinguish between diagnostic and non-diagnostic image quality.	Assesses whether the quality of th e X-ray is diagnostic.	Determines the quality of X-ray images and when to produce a new X-ray if necessary.
Explains terms associated with radiographic quality: • density • contrast sharpness • causes of under/over exposure. • exposure indicators (exposure index, S-value, latitude etc.)	Recognises errors and common fa ults in the radiographs such as: • Contamination on screen • Double exposure • Effects of under/over exposur e • Identification of movement an d penumbra effect (shadow) • Effects of suboptimal processi ng • Strange exposure indicators	Remedies and/or avoids errors and common faults in relation to optimi zing the radiographic examinations.
Explains errors and reasons for poor quality in X-rays and the resulting implications r egarding: • equipment • exposure • positioning • processing		

a. Contrast radiography

This section can be optional.

Knowledge	Skills	Level of autonomy, responsibility, and complexity
Headline: She/he can assist in producing or can independently produce contrast X-rays in accordance with current national legislation.		
Knows the indications for performing contrast X-ray examinations.	Administrates or assists in administration of contrast media correctly and safely to the patient.	Produces or assists in producing contrast X-rays of a high diagnostic quality in a safe and responsible way for both animals and humans and in accordance with current national regulations.
Explains the use of common contrast media, such as air and barium.		
Explains patient care and safety in contrast radiography.		
Explains how to perform contrast X-ray examination of the gastrointestinal tract (alimentary tract studies) and bladder (cystography).	Takes or assists in taking diagnostic contrast X-rays of the gastrointestinal tract and bladder.	
Knows the clinics equipment for X-ray contrast examinations.	Prepares and maintains the clinics equipment for contrast X-ray examinations.	
Explains problems with contrast media contamination of patient and surrounding.	Does not contaminate patient and surroundings with contrast media.	
Explains errors and reasons for poor quality in contrast X-rays.	Recognises errors in relation to the contrast X-ray examination.	
Knows the use, types, and implications of contrast imaging for i.e., myelography, arthrography, angiography.	Assists the veterinarian in other kinds of contrast imaging.	