Competence Model for the Veterinary Medicine Study Programme at the Faculty of Veterinary Medicine Cluj-Napoca

Introduction & Theoretical Competence Model

Background

In this document, you will find an example of good practice for a competence model for a veterinary medicine study programme developed in the course of the project "Internal Quality Management: Evaluating and Improving Competence Based Higher Education" at the University of Agricultural Sciences and Veterinary medicine of Cluj-Napoca. This model is based on the existing competences in our faculty and was developed and implemented in the 2012-2013 academic year. In addition, the new competence model takes the "European System of Evaluation of Veterinary Training (ESEVT) Standard Operating Procedures", 2016, regarding "Day One Competences" into consideration. The model will be further adapted in the next 2 years because our faculty's curriculum is in a transition period with regard to clinical activities. The model will be finalised and then fully implemented in 2019-2020.

The competence model is based on the 'Day One Competences' applied by the European Association of Establishments for Veterinary Education (EAEVE), the accrediting body for veterinary education institutions in Europe and developer of the ESEVT. Following discussions with the faculty board, we decided to structure the competence model as follows:

The competences were grouped into 7 competence areas (clinical competences were sub-divided in 3 areas), namely:

- Personal competences (5 competences)
- Animal production competences (5 competences)
- Food hygiene and food safety competences (5 competences)
- Laboratory diagnostic competences (5 competences)
- Clinical competences:
    - a – general clinical competences (5 competences),
    - b – surgery and anesthesiology competences (5 competences)
    - c – infectious and obstetrics diseases competences (5 competences)
- Socio-economic competences (5 competences)
- Scientific competences (5 competences)

The competence levels were defined for students in their 10th and 12th semesters. We chose to evaluate students in their 10th semester because they should have finished taking courses in almost all disciplines at that point. In their 12th semester, students are at the end of their study programme and we want to evaluate their progress in acquiring competences from the 10th to 12th semester. At FVM Cluj-Napoca, we defined the success criterion as 75% of our students reaching the intended level or higher.

The competence levels were formulated in accordance with the European Qualification Framework but were adapted to our needs at the Faculty of Veterinary Medicine. The purpose of the competence screening is to determine our study programmes' strengths and weaknesses.

In Table 1, we present our competence model.

Tab. 1. Theoretical Competence model – Veterinary medicine study programme Faculty of Veterinary Medicine Cluj-Napoca

Competence Model - Veterinary Medicine				
Competence Area	**Competence**	**Aspect**	**Competence Level**	
			10th semester	**12th semester**
Area 1 – **Personal competences**	**C1** – Understand a veterinarians' ethical and legal responsibilities in relation to patients, clients, society and the environment	**Cognitive**	2	4
		Practical	2	3
	C2 – Effective communication with clients, veterinarians, experts, competent authorities and the public	**Cognitive**	3	4
		Practical	2	3
	C3 – Responsibility for public health and the medical profession	**Cognitive**	3	4
		Practical	2	3
	C4 – Ability to cooperate and work in a multi-disciplinary team	**Cognitive**	3	4
		Practical	3	4
	C5 – Capacity for lifelong learning and further professional development	**Cognitive**	2	3
		Practical	2	3

Competence Area	Competence	Aspect	Competence Level	
			10th semester	12th semester
Area 2 – **Animal production**	**C1** – Food rationing for farm animals	**Cognitive**	3	4
		Practical	3	4
	C2 – Nutritional management of different pathological disorders	**Cognitive**	3	4
		Practical	3	4
	C3 – Breeding and use systems for farm animals	**Cognitive**	3	4
		Practical	3	4
	C4 – Farm environmental hygiene assessment	**Cognitive**	3	4
		Practical	3	4
	C5 – Animal welfare assessment	**Cognitive**	3	4
		Practical	3	4
Area 3 – **Food hygiene and food safety**	**C1** – Hygienic quality and safety assessment of food	**Cognitive**	3	4
		Practical	3	4
	C2 – Implementation of preventive programmes: GHP, GMP, HACCP	**Cognitive**	3	4
		Practical	4	5
	C3 – Risk analysis assessment	**Cognitive**	4	5
		Practical	4	5
	C4 – Implementation of measures for zoonotic and food-borne diseases	**Cognitive**	5	5
		Practical	4	5
	C5 – Ante- and post-mortem inspection of food-producing animals	**Cognitive**	4	5
		Practical	5	5

Competence Area	Competence	Aspect	Competence Level	
			10th semester	12th semester
Area 4 – Laboratory diagnostic	C1 – Sample collection, preservation and transportation	Cognitive	3	4
		Practical	4	5
	C2 – Selection of appropriate diagnostic tests, and interpretation and understanding of the limitations of results	Cognitive	4	5
		Practical	4	5
	C3 – Histopathological and necropsy techniques, interpretation and diagnostic reporting	Cognitive	3	4
		Practical	3	4
	C4 – Antimicrobial susceptibility testing	Cognitive	3	4
		Practical	3	4
	C5 – Recognition of parasitic stages in collected samples	Cognitive	3	4
		Practical	4	5
Area 5 a – Clinical competences	C1 – Safely handling and restraining animal patients while respecting animal welfare	Cognitive	3	5
		Practical	4	5
	C2 – Complete clinical examination and clinical decision-making abilities	Cognitive	3	4
		Practical	4	5
	C3 – Development of appropriate treatment plans and administering treatment in the interests of the patients	Cognitive	4	5
		Practical	3	5
	C4 – Understanding the contribution imaging and other diagnostic techniques can make in achieving a diagnosis	Cognitive	4	5
		Practical	4	5
	C5 – Emergency medicine and first aid protocols for all species	Cognitive	3	4
		Practical	4	5

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Competence Area	Competence	Aspect	Competence Level	
			10th semester	12th semester
Area 5 b – Clinical competences	C1 – Anaesthesia monitoring and measures to take in case of accidents and complications	Cognitive	3	4
		Practical	3	4
	C2 – Basic surgical techniques for domestic animals	Cognitive	3	4
		Practical	3	4
	C3 – Understanding and application of principles of bio-security	Cognitive	3	4
		Practical	3	4
	C4 – Assessing and managing pain	Cognitive	3	4
		Practical	3	4
	C5 – Clinical assessment and aseptic surgery for animal diseases	Cognitive	3	4
		Practical	3	4
Area 5c – Clinical competences	C1 – Recognising suspicious signs of possible notifiable, reportable and zoonotic diseases and taking appropriate action	Cognitive	4	4
		Practical	4	4
	C2 – Analysing the development of a disease outbreak and designing an appropriate contingency plan	Cognitive	3	4
		Practical	3	4
	C3 – Designing prevention protocols for infectious diseases	Cognitive	4	5
		Practical	4	4
	C4 – Semen evaluation, artificial insemination and pregnancy diagnosis in domestic animals	Cognitive	4	4
		Practical	4	4
	C5 – Recognising when euthanasia is appropriate and performing it while showing respect to the animal	Cognitive	4	4
		Practical	4	5

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Competence Area	Competence	Aspect	Competence Level	
			10th semester	12th semester
Area 6 – **Socio-economic**	**C1** – Understanding the economic and emotional context in which veterinarians operates	**Cognitive**	0	4
		Practical	0	3
	C2 – Understanding veterinarians' ethical and legal responsibilities in relation to patients, clients, society and the environment	**Cognitive**	2	4
		Practical	1	3
	C3 – Understanding business practices relevant to the veterinary field	**Cognitive**	0	4
		Practical	0	3
	C4 – Documentation for writing and developing a business plan	**Cognitive**	0	3
		Practical	0	2
	C5 – Developing a management and marketing plan for veterinary activities	**Cognitive**	0	4
		Practical	0	3
Area 7 – **Scientific competences**	**C1** – Scientific thinking and problem-solving competence	**Cognitive**	2	3
		Practical	1	2
	C2 – Accessing appropriate data sources	**Cognitive**	3	4
		Practical	3	4
	C3 – Ability to write scientific documents, review and communication	**Cognitive**	1	2
		Practical	1	2
	C4 – Ability to review and evaluate literature and presentations critically	**Cognitive**	2	4
		Practical	3	5
	C5 – Ability to apply principles of scientific research in the veterinary field	**Cognitive**	2	3
		Practical	1	3

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Further information on the project is available on the Erasmus+ platform for project results:

→ Go to http://ec.europa.eu/programmes/erasmus-plus/projects.
→ Enter the project title 'Internal Quality Management: Evaluating and Improving Competence-Based Higher Education' in the search bar to get to the project homepage.