

# Competence Model for the Professional Degree in Veterinary Medicine at the Veterinary Faculty, University of Ljubljana



## Introduction & Theoretical Competence Model



Erasmus+



University of Ljubljana



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Austria

## Competence Model

In the following document, we present the competence model for the Professional Degree in Veterinary Medicine at the University of Ljubljana Veterinary Faculty (VF). This competence model was developed as a part of the project "Internal Quality Management (IQM): Evaluating and Improving Competence-Based Higher Education" by the VF's IQM team over the course of many workshops. The competence model was discussed in working groups composed of teaching faculty, support staff and students and presented to Prof. Dr. Andrej Kirbiš, Dean, the Commission for Study and Student Affairs and the VF Senate before final approval.

The competence model is structured into 13 competence areas:

1. Data management in veterinary medicine (3 competences)
2. Managerial and communication skills (5 competences)
3. Responsibility in veterinary medicine 3 competences)
4. Structure, function and behaviour of healthy animals (3 competences)
5. Structure, function and behaviour of sick animals (3 competences)
6. Diagnostic methods in veterinary medicine (5 competences)
7. The causes of animal diseases (5 competences)
8. Treatment approaches (3 competences)
9. Notifiable animal diseases (3 competences)
10. Use of veterinary medicine products (3 competences)
11. Animal husbandry (5 competences)
12. The hygiene of food of animal origin (3 competences)
13. Legislation and forensics in the field of veterinary medicine (3 competences)

A corresponding list of competences for each competence area can be found below. There are 47 competences altogether, each of which with two aspects, a cognitive aspect (knowledge) and a practical aspect (skill). We defined the level of competences students should acquire during our study programme for each competence and - more specifically - for each aspect of each competence. We did this for two groups of students:

- (1) Students at the end of their 6<sup>th</sup> semester of studying veterinary medicine.
- (2) Students in the end of their 10<sup>th</sup> semester of studying veterinary medicine.

A note on the success criterion:

Our goal is that, at least 75% of our students reach the intended level or higher.



| Competence Model - Veterinary Medicine    |  |           |                                     |                                      |
|---|--|-----------|-------------------------------------|--------------------------------------|
| Competence Area                           | Competence                                     | Aspect    | Competence Level                    |                                      |
|   |  |           | end of the 6 <sup>th</sup> semester | end of the 10 <sup>th</sup> semester |
| 1. Data management in veterinary medicine | Information acquisition from different sources | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 2                                   | 3                                    |
|   | Information analysis and use                   | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 2                                   | 3                                    |
|   | Information distribution                       | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 2                                   | 3                                    |
| 2. Managerial and communication skills    | Communication                                  | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 2                                   | 3                                    |
|   | Planning and organising work                   | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 2                                   | 3                                    |
|   | Teamwork abilities                             | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 3                                   | 4                                    |
| 3. Responsibility in veterinary medicine  | Ethical responsibility                         | Cognitive | 2                                   | 3                                    |
|   |  | Practical | 1                                   | 4                                    |
|   | Social responsibility                          | Cognitive | 3                                   | 4                                    |
|   |  | Practical | 3                                   | 4                                    |
|   | Material responsibility                        | Cognitive | 3                                   | 4                                    |
|   |  | Practical | 2                                   | 3                                    |

|  |  |                  |   |   |
|--|--|------------------|---|---|
| <b>4. Structure, function and behaviour of healthy animals</b> | Biochemical processes and physiology of animals                      | <b>Cognitive</b> | 3 | 4 |
|  |  | <b>Practical</b> | 1 | 3 |
|  | Structure of animals (cells, tissues, organs and whole animals)      | <b>Cognitive</b> | 3 | 3 |
|  |  | <b>Practical</b> | 3 | 3 |
|  | Animal behaviour   | <b>Cognitive</b> | 3 | 4 |
|  |  | <b>Practical</b> | 2 | 4 |
| <b>5. Structure, function and behaviour of sick animals</b>    | Pathophysiological processes   | <b>Cognitive</b> | 3 | 4 |
|  |  | <b>Practical</b> | 1 | 2 |
|  | Pathomorphological changes   | <b>Cognitive</b> | 3 | 4 |
|  |  | <b>Practical</b> | 2 | 3 |
|  | The behavior of sick animals   | <b>Cognitive</b> | 2 | 3 |
|  |  | <b>Practical</b> | 0 | 3 |
| <b>6. Diagnostic methods in veterinary medicine</b>            | History taking, clinical examination and patient work-up             | <b>Cognitive</b> | 2 | 4 |
|  |  | <b>Practical</b> | 1 | 4 |
|  | Microbiological and parasitological analyses                         | <b>Cognitive</b> | 3 | 4 |
|  |  | <b>Practical</b> | 3 | 3 |
|  | Pathomorphological investigations                                    | <b>Cognitive</b> | 3 | 3 |
|  |  | <b>Practical</b> | 2 | 3 |
|  | Diagnostic imaging   | <b>Cognitive</b> | 2 | 3 |
|  |  | <b>Practical</b> | 1 | 3 |
|  | Haemathological, cytological, toxicological and biochemical analyses | <b>Cognitive</b> | 1 | 3 |
|  |  | <b>Practical</b> | 0 | 3 |

|   |  |                  |   |   |
|---|--|------------------|---|---|
| <b>7. The causes of animal diseases</b> | Infectious   | <b>Cognitive</b> | 2 | 4 |
|   |  | <b>Practical</b> | 1 | 3 |
|   | Genetic  | <b>Cognitive</b> | 1 | 3 |
|   |  | <b>Practical</b> | 1 | 2 |
|   | Nutritional  | <b>Cognitive</b> | 2 | 4 |
|   |  | <b>Practical</b> | 2 | 3 |
|   | Physical factors   | <b>Cognitive</b> | 1 | 4 |
|   |  | <b>Practical</b> | 1 | 3 |
| Management conditions                   | <b>Cognitive</b>   | 2                | 3 |   |
|   | <b>Practical</b>   | 1                | 3 |   |
| <b>8. Treatment approaches</b>          | Economic animals   | <b>Cognitive</b> | 1 | 4 |
|   |  | <b>Practical</b> | 1 | 3 |
|   | Herd health  | <b>Cognitive</b> | 1 | 4 |
|   |  | <b>Practical</b> | 1 | 3 |
|   | Companion animals  | <b>Cognitive</b> | 1 | 4 |
|   |  | <b>Practical</b> | 1 | 3 |
| <b>9. Notifiable animal diseases</b>    | Databases for reporting and studying the epidemiological situation   | <b>Cognitive</b> | 1 | 3 |
|   |  | <b>Practical</b> | 1 | 2 |
|   | Measures and procedures to control and eradicate notifiable diseases | <b>Cognitive</b> | 2 | 4 |
|   |  | <b>Practical</b> | 0 | 2 |
|   | Measures and procedures to control and (eradicate) zoonosis          | <b>Cognitive</b> | 2 | 4 |
|   |  | <b>Practical</b> | 0 | 2 |

|  |  |  |                  |   |   |
|--|--|--|------------------|---|---|
| <b>10. Use of veterinary medicine products</b>           | For prevention   | <b>Cognitive</b>                         | 2                | 4 |   |
|  |  | <b>Practical</b>                         | 1                | 3 |   |
|  | For treatment  | <b>Cognitive</b>                         | 2                | 4 |   |
|  |  | <b>Practical</b>                         | 1                | 3 |   |
|  | To ensure food chain safety                                      | <b>Cognitive</b>                         | 2                | 4 |   |
|  |  | <b>Practical</b>                         | 1                | 3 |   |
| <b>11. Animal husbandry</b>                              | Breeding of economic animals (selection and reproduction)        | <b>Cognitive</b>                         | 2                | 3 |   |
|  |  | <b>Practical</b>                         | 1                | 3 |   |
|  | Breeding of companion animals (selection and reproduction)       | <b>Cognitive</b>                         | 2                | 3 |   |
|  |  | <b>Practical</b>                         | 1                | 3 |   |
|  | Animal welfare   | <b>Cognitive</b>                         | 3                | 4 |   |
|  |  | <b>Practical</b>                         | 2                | 3 |   |
|  | Living conditions for animals and maintenance of hygiene         | <b>Cognitive</b>                         | 3                | 4 |   |
|  |  | <b>Practical</b>                         | 2                | 3 |   |
|  | Composition of meals for a particular type and purpose of animal | <b>Cognitive</b>                         | 3                | 3 |   |
|  |  | <b>Practical</b>                         | 2                | 2 |   |
|  | <b>12. The hygiene of food of animal origin</b>                  | Food safety assessment (chemical safety) | <b>Cognitive</b> | 1 | 4 |
|  |  |  | <b>Practical</b> | 1 | 4 |
| Food safety assessment (microbiological safety)          |  | <b>Cognitive</b>                         | 1                | 4 |   |
|  |  | <b>Practical</b>                         | 1                | 4 |   |
| Inspection of carcasses and organs at the slaughterhouse |  | <b>Cognitive</b>                         | 0                | 4 |   |
|  |  | <b>Practical</b>                         | 0                | 4 |   |

|  |                           |                  |   |   |
|--|---------------------------|------------------|---|---|
| <b>13. Legislation and forensics in the field of veterinary medicine</b> | National Legislation (SI) | <b>Cognitive</b> | 1 | 4 |
|  |                           | <b>Practical</b> | 1 | 3 |
|  | EU legislation            | <b>Cognitive</b> | 1 | 4 |
|  |                           | <b>Practical</b> | 1 | 3 |
|  | Expert opinions           | <b>Cognitive</b> | 0 | 4 |
|  |                           | <b>Practical</b> | 0 | 3 |

## Background Information

This competence model was developed in the course of the project

'Internal Quality Management: Evaluating and Improving Competence-Based Higher Education.'

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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.