



At the Service of One Health

Competency Based Veterinary Education (CBVE-FVMUZ)

21 April 2024

Competency Based Veterinary Education - FVMUZ

Learning outcomes will be regularly reviewed and suggestions for amendments should be forwarded to:

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PREFACE

We were prompted to prepare the document entitled Competency Based Veterinary Education - FVMUZ by the recommendations of the European Association of Establishments for Veterinary Education (EAEVE). In order to improve and advance the teaching and study programmes at the Veterinary Faculty of the University of Zagreb, after the completion of the visitation procedure by EAEVA, recommendations were made, that is, measures for improvement related to the continuation of enhancement of the traceability of Day One Competences (ESEVT *Day One Competences, DOC*) and their better integration into the learning outcomes of the study programmes.

To that end, the Competency Based Veterinary Education - FVMUZ document was drawn up, which provides evidence of the acquisition of specific skills and knowledge by students of the Integrated Under-graduate and Graduate University Study Programmes in Veterinary Medicine, over the entire course of their studies. Review of the document makes it possible to systematically study and observe the levels of competence defined by the national learning outcomes (learning outcomes both on the level of the study programmes and on the level of the Occupational Standards of the Croatian Qualifications Framework) in the relevant subject curriculum, or teaching plan and programme. Students are also provided with access to all the necessary information to make it easier for them to monitor and acquire Day One Competences through the precisely defined learning outcomes acquired from each subject course. A signature given for all levels of learning outcomes in the subject is an expression of achievement of competence by the student in the teaching subject/field, and will be based on the evaluation process conducted throughout the academic year.

Advisory Committee: Strong support and constructive comments by members, all heads of subject in the 2023/2024 academic year, and the especially useful working group of staff from the Veterinary Faculty clinics.

Individual doctors of veterinary medicine who represent various aspects of professional work offered helpful comments, for which we are particularly grateful.

Editor

Ksenija Vlahović, DVM, PhD, Full Professor
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General provisions

Educational aims and the general strategy for the design, resources and management of the curriculum status.

FVMUZ has developed and is implementing an Integrated Undergraduate and Graduate University Study (IUGUS) in Veterinary Medicine (VM) in line with the requirements of the Bologna Process and the requirements of the Croatian Qualifications Framework (CQF) and Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). In Croatia, the VM profession is a regulated profession, and therefore the IUGS programme is aligned with the provisions of the Act on Regulated Professions and Recognition of Foreign Professional Qualifications (OG 124/09, 45/11, 82/15, 70/19 and 47/20), Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications, and Directive 2013/55/EU of the European Parliament and of the Council amending Directive 2005/36/EC.

Defining learning outcomes (LOs) and delivering the study programme in line with the mission, vision and objectives of the FVMUZ is a guarantee of the recognition and mobility of Doctor of Veterinary Medicine (DVM), graduates of the FVMUZ, within the European Higher Education Area (EHEA) and the European Research Area (ERA). The anticipated LOs clearly reflect the competencies needed for inclusion in the labour market, continuing education, or other needs of the individual and society as a whole.

All students wishing to obtain the qualification of DVM must acquire the competencies included in the Diploma Supplement (DS), and the competencies adopted by Day One Competences (DOC) including the general academic and professional attitudes related to professional development, and the relevant generic and clinical skills.

The Curriculum is implemented through subjects covering all subject groups, as listed in European System of Evaluation of Veterinary Training (ESEVT) SOP Annex 2, to achieve the Objectives of the IUGS programme. The Curriculum is regularly reviewed, improved, adjusted and updated to ensure that it remains relevant, adequate and that the DOCs can be effectively achieved.

Graduates of the IUGS programme are awarded with the qualification of DVM in Veterinary Sciences. The degree and qualification in VM conform to Qualification Level 7.1.sv of the CQF Descriptor, which is in line with the European Qualification Framework (EQF).

For new graduates, Croatian Veterinary Chamber (CVC) issues the license permitting them to practice veterinary medicine. International students receive a license in their home country in accordance with the legislation in force in that country.

Since 2016/2017, a study programme of veterinary medicine in English has been implemented. The IUGS programme in English is conducted in the same manner as studies in Croatian. The number of compulsory and elective subjects, and the three tracks are completely identical in both study programmes.

The curriculum design is based on the following principles:

- The modern design of the curriculum is the result of nearly a century of teaching tradition, application of modern scientific achievements, the Bologna Process and ESG.

- Competence-based learning outcomes acquired at the curriculum and subject level are defined and described in the subject syllabi and catalogue of learning outcomes.
- Teaching, learning and examination methods are constructively aligned with the learning outcomes.
- The IUGS programme is designed by consistently distributing and integrating study subjects so that students acquire the knowledge and skills necessary to develop clinical competencies.
- An interdisciplinary approach to teaching in which subjects are integrated horizontally and vertically, from both non-clinical and clinical disciplines.
- Student-centred learning: students are encouraged to participate actively in their own learning, fostering transferable skills such as problem-solving, exploratory learning, critical thinking, and self-directed learning.
- Study tracks¹ in the fifth academic year provide advanced competence training.
- As part of the study programme, students must complete a variety of practical training. For example, students are required to complete external practical training (EPT) in a different veterinary organisations and institutions. The entire practice programme is created such that the student is designated a mentor, and that programme implementation is monitored and up to date.
- The principles of One Health Concept have been introduced through the compulsory and elective subjects.
- By encouraging the development of digital technologies and artificial intelligence (DT&AI) through the acquisition of digital skills, the FVMUZ is modernising the profession and offering new services and products for the Croatian market and the global market.
- The current IUGS programme was adapted to the ECTS credit system.
- Each study year, the total student workload is 60 ECTS credits, with one semester consisting of 30 ECTS credits. One ECTS credit represents 25 to 30 hours of student workload during the subject.
- A skills lab was opened in 2022 and training has been gradually introduced into the curriculum.

Resources and management of the curriculum

In addition to the facilities on campus and the veterinary teaching hospital (VTH), the following partners are being integrated into curriculum delivery: Ministry of Agriculture (MA), Board of Veterinary Medicine (BVM) (20 mentors), 53 veterinary stations and ambulatory services in the territory of Croatia (98 instructor mentors). The Črnovščak hunting and training ground operates as part of the FVMUZ and is used for the needs of teaching, research and professional work within the scope of the FVMUZ. Additional resources include the National and University Library in Zagreb (NSK) which has learning space and electronic resources, University Computing Centre SRCE (applications, repositories, collaboration tools, IT and intermediary systems).

Study tracks:

In the 10th semester of study, students select a study track: SCA, FAH or VPH and take the compulsory clinical subjects, subjects related to veterinary public health and other compulsory subjects within the selected study track. In the study tracks, intensive hands-on clinical training and problem-based learning in small groups is of the utmost importance. In these subjects, real and complex problems from everyday professional

life are analysed. Furthermore, students are involved in seminars, practical work and discussions about scientific issues, and they make research-based decisions about further procedures.

During the winter semester of the 5th year of study, the Vice-dean for IUGS and students and the course leaders in each study track present students with the main characteristics of each study track and their subjects during the workshop. Students also receive a brochure outlining each of the study tracks and their subjects. Detailed descriptions of the study tracks can be found in the Information Package (IP, catalogue of all subjects).

Since 2016/2017, a IUGS programme of VM has been delivered in English. The programme in English is completely the same as Croatian programme and is delivered according to the same rules (approved by UNIZG and MSE) and same QA processes, except for those related to enrolment. The number of compulsory and elective subjects, and the three tracks are identical in both study programmes. The LOs and qualifications resulting from the study programme IUGC in English are published in the Diploma Supplement.

All students enrol in 62 core subjects in their 1st to 6th year of study (including compulsory subjects related to an individual study track), while students select a total of 70 elective subjects.

With the exception of the core subjects which are compulsory for all students, the curriculum includes electives that students may choose from the list of the elective subjects. Study tracks include compulsory subjects related to individual study tracks and electives related to individual study tracks.

Sources of additional information - Republic of Croatia; Ministry of Science, Education and Sports, <http://mzos.hr>, University of Zagreb, <http://www.unizg.hr>, Faculty of Veterinary Medicine, <http://www.vef.unizg.hr>

Curriculum hours of extra mural studies (EMS) for each student

In the first four years of study, all students are required to carry out practical field work during mandatory subjects, outside of the Faculty. This field work is a part of basic, zootechnical, pre-clinical and clinical subjects. It is in accordance with programme progression requirements and complement core learning. Field work is defined as an off-campus supervised learning experience in which academic and non-academic persons are involved. In the pre-clinical years (year 1/2), students undertake 96 hours of pre-clinical work placements/extra mural studies (EMS). In the clinical years (years 4/5/6) they undertake 33 hours extra mural studies.

Core clinical exercises/practicals/seminars prior to the start of the clinical rotations

- From the 1st to 4th semester, students are in contact with animals, either those available at the FVMUZ facilities or during farm visits in the form extra mural studies (EMS) (related to the following subjects: Introduction to Veterinary Medicine, Zoology, Environment, Animal Behaviour and Welfare, Animal Breeds Characteristics, Basic Animal Nutrition, Domestic Animal Physiology, Animal Breeding and Production). In doing so, they are trained for adequate knowledge of the structure, ethological and physiological needs of animals, and learn the skills and competences necessary for their breeding, nutrition,

welfare, reproduction and hygiene in general. From the very first year of studies, FVMUZ encourages and prepares students for self-study and lifelong learning. Bones (whole skeletons/fragmentary), fresh organs, whole carcasses and other materials (microscopic slides, museum collections, software, models, etc.) are routinely used in pre-clinical training. The carcasses used in practical teaching, e.g., of anatomy, are donated after euthanasia (selection is based on biosecurity assessment); fresh organs are procured from slaughterhouses, and the quantity of both is determined on the basis of the number of students at the subject level.

- In the 5th and 6th semesters, as part of the General and Special Veterinary Pathology subject, students participate actively in laboratory exercises and perform dissections of whole carcasses of different animal species. In the 5th semester, students acquire knowledge, skills and competencies necessary for responsible and reasonable use of veterinary drugs in the treatment of animals, ensuring the safety of food chains and environmental protection.
- In the 6th semester, students are trained for efficient communication with owners, the public, colleagues and authorities. They are trained for professional conversation, conversation in individual cases, and other communication using advanced technology. For acquiring clinical skills before working on live patients and in the form of a special classroom, integration of the CSL is underway. In the CSL, students can practice veterinary skills, techniques and can self-assess their knowledge. Clinical Propaedeutics is performed with theoretical and practical training on the clinic's own animals in small groups. Students begin to develop their clinical skills through problem-based teaching and mandatory clinical work (with appropriate supervision). In studying Clinical Propaedeutics, students learn to perform general examinations animal fixation methods of all organ systems, blood sampling, drug injection techniques, etc.
- In the 7th and 8th semesters, students are included in clinical subjects through lectures and laboratory exercises (reproduction, neurology, orthopaedics, ophthalmology, anaesthesia, etc., in smaller groups), where they can acquire theoretical and practical knowledge and clinical experience through independent learning and mandatory clinical work with supervision. Students develop their clinical thinking and knowledge in aetiology and pathogenesis through diagnostics and examinations, treatments and accompanying procedures. They are also trained to use basic imaging equipment and perform an examination appropriate to the case, in accordance with good health and safety practices, and to assist all types of animals (including horses and exotic animals) in case of emergence. Clinical rotations are undertaken in small groups of students per teacher (from 4 to 6), also for night shifts and AC subjects.
- In the 9th, 10th and 11th semesters, students are trained to apply knowledge, skills and competencies in: preventive medicine, epidemiology, analytical skills, maintaining prescribed necessary documentation and making appropriate treatment plans and treatment management in the interest of patients (related to subjects Herd Health and Veterinary Epidemiology). Students perform AC work, including examination, diagnostics, therapy and general patient care, under teacher supervision. Students are able to improve their practical and clinical skills and acquire their first clinical experience in the field. They also acquire knowledge on applying principles of biosecurity, zoonotic disease control, environmental protection, sorting and disposal of medical waste. The

One Health Concept is introduced in curriculum (related to subjects Infectious Diseases of Domestic Animals, Emerging Infectious Diseases, Zoonoses and Parasitic Zoonoses). During practical clinical work, students are required to describe all cases in the Ambulatory Clinic Logbook (Field work log) (HR) (ENG) and the Night Shift Logbook (HR) (ENG).

- The DOCs list is available to students, teachers and external stakeholders in the EPT Work Logbook (HR) (ENG) and other documents related to clinical subjects. It is also available on the FVMUZ website and other professional publications and journals.
- The Faculty has a software programme (VEF.Protocol) for registering patients in clinics and it is intended for issuing prescriptions, recording findings in patient records, scheduling examinations and charging for services. The programme is available to all employees and students.
- Training for the professional ethics and legal responsibilities of veterinarians in relation to patients, owners, society and the environment is performed from the 1st to 11th semester and is contained within the following subjects (core and elective subjects): Veterinary Ethics, Environment, Animal Behaviour and Welfare, Introduction to Veterinary Medicine, History of Veterinary Medicine and Forensic Veterinary Medicine, Responsibilities in Veterinary Medicine and State Veterinary Medicine.
- Adequate knowledge of hygiene and technology for the production, manufacture and placing on the market of food for animals or food of animal origin intended for human consumption forms the basis of training through subjects in the 10th and 11th semester, e.g. Food Hygiene and Technology and Veterinary Public Health. In addition to these subjects, this is also delivered in the elective subjects (Type 2) in the study tracks VPH and Type 3 elective subjects related to study track VPH.

Day One Competences

“Competence” is a concept that unites knowledge, skills and attitudes. Competence requires acquisition of knowledge and skills, as well as self-confidence and the ability to apply what has been learned in practice. Day One Competences are the minimum standards required and the starting point for various roles in the veterinary profession.

After completing the degree, life-long professional training in the chosen field of activity will be necessary. Some fields of work may require training at the post-graduate level and further formal qualifications. New graduate students who have achieved Day One Competences should be able to perform the appropriate tasks independently as part of the duties of the veterinary profession, and will be sufficiently self-confident to perform the work of veterinary medicine, whilst still aware that they should seek guidance from more experienced colleagues. New graduates will probably need more time to perform some procedures. The support and guidance of older colleagues must be made possible and be readily available.

The Veterinary Faculty of the University of Zagreb is responsible for acquisition of Day One Competences by their students, and guarantees that students, when they graduate, are prepared to fulfil their professional role. In that sense, they are helped by professional practice in veterinary organizations. This contributes to the further perfection of skills for students through practical work, and even to the acquisition of new competences.

The acquired Day One Competences means that the graduated veterinarian is able to:

- 1.1 Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society.
- 1.2 Demonstrate knowledge of the organisation, management and legislation related to a veterinary business economics and employment rights.
- 1.3 Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice.
- 1.4 Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy.
- 1.5 Prepare accurate clinical and client records, and case reports when necessary, in a form satisfactory to colleagues and understandable by the public.
- 1.6 Work effectively as a member of a multi-disciplinary team in the delivery of services.
- 1.7 Understand the economic and emotional context in which the veterinary surgeon operates.
- 1.8 Be able to review and evaluate literature and presentations critically.
- 1.9 Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine.
- 1.10 Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health.
- 1.11 Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change.
- 1.12 Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary.
- 1.13 Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence.
- 1.14 Take part in self-audit and peer-group review processes in order to improve performance.
- 1.15 Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment.
- 1.16 Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques.
- 1.17 Perform a complete clinical examination and demonstrate ability in clinical decision-making.
- 1.18 Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available.
- 1.19 Attend in an emergency and perform first aid in common animal species*.
- 1.20 Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding.
- 1.21 Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results.
- 1.22 Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history.
- 1.23 Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations.
- 1.24 Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities.
- 1.25 Access the appropriate sources of data on licensed medicines.
- 1.26 Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance.
- 1.27 Report suspected adverse reactions through the appropriate channel.
- 1.28 Apply principles of bio-security correctly.
- 1.29 Perform aseptic procedures appropriately.
- 1.30 Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint.
- 1.31 Assess and manage pain.
- 1.32 Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass.
- 1.33 Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them.
- 1.34 Perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain.

- 1.35 Perform inspection of food and feed including post-mortem inspection of food producing animals and inspection in the field of related food technology.
- 1.36 Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards.

Underpinning knowledge and understanding In order to perform effectively their professional duties, new veterinary graduates will need underpinning knowledge in the field of biological, social and animal sciences and laws related to the animal industries.

In general, this includes the following:

- 2.1 Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each.
- 2.2 Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement).
- 2.3 The structure, function and behaviour of animals and their physiological and welfare needs.
- 2.4 A knowledge of the businesses related to animal breeding, production and keeping.
- 2.5 The aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species*.
- 2.6 Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade.
- 2.7 Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases.
- 2.8 Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and antiparasitics.
- 2.9 The principles of disease prevention and the promotion of health and welfare.
- 2.10 Veterinary public health issues, e.g. epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology.
- 2.11 Principles of effective interpersonal interaction, including communication, leadership, management and team working.
- 2.12 The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare-related ethics.

Abbreviations

| | |
|--------|--|
| IU-PR | Study Programme Learning Outcomes |
| OIU-SK | Mandatory Learning outcomes of the qualification/professional standard |
| DOC | Learning outcomes - Day One Competences |

Competency Based Veterinary Education (CBVE) – FVMUZ

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2024

| Subject code for certificate | Subject code for certificate | Subject code for certificate |
|---|---|---|
| 1. 160995 Anatomy with Organogenesis of Domestic Animals I | 21. 198132 Animal Breeding and Production | 40. 253246 Internal Medicine |
| 2. 160899 Physics and Biophysics | 22. 173844 Hygiene and Housing of Animals | 41. 198139 Surgery, Orthopaedics and Ophthalmology II |
| 3. 212592 Medical Chemistry | 23. 173878 General Microbiology | 42. 198140 Obstetrics and Reproduction I |
| 4. 185559 Zoology | 24. 161017 Histology with General Embryology | 43. 198141 Methods of Physical Therapy and Diagnostics |
| 5. 160986 Botany in Veterinary Medicine | 25. 253207 Parasitology and Parasitic Diseases | 44. 198142 Biology and Pathology of Beneficial Insects |
| 6. 160998 Basic Statistics in Veterinary Medicine | 26. 185659 General Veterinary Pathology | 45. 253249 Biology and Pathology of Aquatic Organisms |
| 7. 161004 Introduction to Veterinary | 27. 226365 Pathophysiology I | 46. 198148 Toxicology |
| 8. 161006 Environment, Animal Behaviour and Welfare | 28. 185661 Special Microbiology | 47. 238174 Surgery, Orthopaedics and Ophthalmology III |
| 9. 161013 Anatomy with Organogenesis of Domestic Animals II | 29. 185662 Pharmacology | 48. 212606 Obstetrics and Reproduction II |
| 10. 253193 Biochemistry in Veterinary Medicine | 30. 238160 Radiation Hygiene | 49. 238178 Food Hygiene and Technology |
| 11. 161022 Animal Breeds Characteristics | 31. 253244 Parasitology and Parasitic Diseases | 50. 212608 Infectious Diseases of Domestic Animals |
| 12. 173682 Physiology of Domestic Animals I | 32. 185665 Special Veterinary Pathology | 51. 212609 Veterinary Epidemiology |
| 13. 173702 Molecular Biology and Genomics in Veterinary Medicine | 33. 238161 Pathophysiology II | 52. 212676 State Veterinary Medicine |
| 14. 238159 Basic Animal Nutrition | 34. 238162 Clinical Propedeutics | 53. 212680 Infectious Diseases of Domestic Animals |
| 15. 173706 Anatomy with Organogenesis of Domestic Animals III | 35. 185773 Communication Skills in Veterinary Medicine | 54. 238191 Food Hygiene and Technology |
| 16. 198130 Animal Breeding and Production | 36. 253245 Internal Medicine | 55. 212682 Field Service Clinic |
| 17. 173723 Hygiene and Housing of Animals | 37. 198136 Surgery, Orthopaedics and Ophthalmology I | 56. 226395 Forensic Veterinary Medicine |
| 18. 253196 Veterinary Immunology | 38. 198137 General and Clinical Radiology | 57. 253998 Poultry Diseases |
| 19. 253198 Physiology of Domestic Animals II | 39. 198138 Game Breeding and Management | 58. 238195 Heard Health |
| 20. 238158 Applied Animal Nutrition | | 59. 226402 Veterinary Economics |
| | | 60. 226406 Field Service Clinic |

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DRAFT-A

Subject (Course): **Zoology**
 Subject code for certificate: **185559**
 IU-PR: 1
 OIU-SK:7
 DOC: 1.2, 1.7, 1.14, 2.,1, 2.2, 2.12

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | Taxonomically classify every animal to the phylum level and mammals to the order level. |
| 2 | Interpret basics of evolutionary processes. |
| 3 | Explain the structure and role of cell parts during cell divisions. |
| 4 | Distinguish types of reproduction, ways and processes of fertilization |
| 5 | Know abiotic and biotic ecological factors and mechanisms of their interactions |
| 6 | Distinguish biomes and phases of community successions. |
| 7 | Classify types of pollutants and basic mechanism of their interactions in ecosystems. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union relating to these activities. | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| Demonstrate knowledge of the organisation, management and legislation related to a veterinary business economics and employment rights. | DOC 1.2 |
| Understand the economic and emotional context in which the veterinary surgeon operates. | DOC 1.7 |
| Take part in self-audit and peer-group review processes in order to improve performance. | DOC 1.14 |
| Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each. | DOC 2.1 |
| Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement). | DOC 2.2 |
| The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare related ethics. | DOC 2.12 |

Subject (Course): Botany in veterinary medicine

Subject code for certificate: **160986**

IU-PR: 1, 2

OIU-SK: 1, 7

DOC: 1.7, 1.14, 2.1, 2.12, 2.2, 1.20, 2.3, 2.4

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Compare the structure of prokaryotic and eukaryotic cells and enumerate groups of prokaryotes and explain their significance for animal health as well as the role and application of bacteria in the biosphere and life of humans and animals |
| 2 | Distinguish basic systematic categories of plants important for veterinary medicine |
| 3 | Differentiate morphology group of plants important in animal nutrition and identify groups of medicinal and honey plants and groups of plants poisonous to animals |
| 4 | Draw and explain the processes associated with cell division in plants and animals, and operate a light microscope and draw observed cells and intracellular structures |
| 5 | Written to summarize their knowledge of the structure of plant cells and the function of its organelles with special reference to material, accommodation and the role of DNA molecules |
| 6 | Demonstrate their knowledge in the process of separating molecules of DNA from plant cells |
| 7 | Explain the processes that arise from inorganic organic matter and light energy is converted to chemical (division reaction, photolysis of water and the respiratory chain) |
| 8 | Systems used to search for content relevant to botany in veterinary medicine using literature and databases |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| Apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Adequate knowledge of structures, behaviors and physiological needs of animals and skills and competencies required for animal breeding, nutrition, welfare, reproduction and hygiene in general | OIU-SK 1 |
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Understand the economic and emotional context in which the veterinary surgeon operates. | DOC 1.7 |
| Take part in self-audit and peer-group review processes in order to improve performance. | DOC 1.14 |
| Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each | DOC 2.1 |
| Understand the ethical framework within which veterinary surgeons should work, including important ethical theories that inform decisionmaking in professional and animal welfare-related ethics | DOC 2.12 |
| Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement). | DOC 2.2 |
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding | DOC 1.20 |
| Understand the structure, function and behaviour of animals and their physiological and welfare needs. | DOC 2.3 |
| A knowledge of the businesses related to animal breeding, production and keeping. | DOC 2.4 |

Subject (Course): **Medical Chemistry**

Subject code for certificate: **212592**

IU-PR: 1, 3

OIU-SK: 7

DOC: 1.21

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Apply basic chemical reactions and physicochemical processes; |
| 2 | Compare the structure and properties of simple organic compounds and complex biologically important molecules; |
| 3 | Link the relationship of chemical structure of a molecule and its physical and chemical properties; |
| 4 | Independently use basic methods of analytic chemistry for quantitative and qualitative analysis; |
| 5 | Apply chemical calculations to solve the tasks. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |

Subject (Course): Physics and biophysics

Subject code for certificate: 84278

IU-PR: IU-PR1, IU-PR3, IU-PR7

OIU-SK: 2, 7

DOC: 1.8, 1.23, 1.30, 2.2

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | explain the physical basis of biological processes at the molecular level |
| 2 | distinguish the mechanisms of action of biological systems based on knowledge of basic physical laws with the help of simple models |
| 3 | describe the ways of transferring energy and matter within the organism and during its interaction with the environment |
| 4 | clarify the effect of external energy sources on the animal's organism |
| 5 | connect the laws of physics with the working principles of basic diagnostic methods |
| 6 | handle simple measuring instruments |
| 7 | analyze the measured data using a error calculus |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-PR 7 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death | OIU-SK 2 |
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union relating to these activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Be able to review and evaluate literature and presentations critically | DOC 1.8 |
| Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations. | DOC 1.23 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint. | DOC 1.30 |
| Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement). | DOC 2.2 |

Basic Statistic in Veterinary Medicine

Subject code for certificate: **160998**

IU-PR: 1, 7

OIU-SK: 7

DOC: 1.8; 2.1; 2.2

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | identify the types of variables |
| 2 | interpret the results of basic statistical data processing and analysis |
| 3 | determine the normality of variables |
| 4 | select the test to verify the hypothesis |
| 5 | determine the correlation between two or more variables |
| 6 | utilise different programming environments for statistical analysis |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply, analyse and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-LO 1 |
| independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-LO 7 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| adequate scientific knowledge on which the veterinarians' activities are based and the Union laws relating to these activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| be able to review and evaluate literature and presentations critically | DOC 1.8 |
| understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each | DOC 2.1 |
| research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement) | DOC 2.2 |

Subject (Course): **Environment, Animal Behaviour and Welfare**

Subject code for certificate: **93208**

IU-PR: 2,8

OIU-SK: 1

DOC: 1.10; 1.13; 1.14; 1.15; 1.8; 2.2; 2.3; 2.4; 2.7; 2.9

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | explain the effect of soil and water on health, production and reproduction of animals, but also explain the animal impact on the environment in order to preserve the biological and ecological relationships in it |
| 2 | interpreting results of soil and water examinations |
| 3 | organize grazing systems for animals on the basis of climate-specificity, depending of their species, number and health |
| 4 | identify physiological and abnormal behaviour in domestic animals |
| 5 | self-judge the welfare of (farm) animals |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | IU-PR 8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| adequate knowledge of the structure, behavior and physiological needs of animals, as well as the skills and competences required for their breeding, nutrition, welfare, reproduction and hygiene in general | OIU-SK 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health. | DOC 1.10 |
| Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence. | DOC 1.13 |
| Take part in self-audit and peer-group review processes in order to improve performance. | DOC 1.14 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement). | DOC 2.2 |
| Understand the structure, function and behaviour of animals and their physiological and welfare needs. | DOC 2.3 |
| A knowledge of the businesses related to animal breeding, production and keeping. | DOC 2.4 |
| Understand legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases. | DOC 2.7 |
| Understand the principles of disease prevention and the promotion of health and welfare. | DOC 2.9 |

Subject (Course): Animal Breeds Characteristics

Subject code for certificate: **161022**

IU-PR: 2, 7

OIU-SK: 1, 7

DOC: 1.8; 1.14, 1.20

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Explain the morphological, physiological and psychological changes of animals after domestication and selection directed to certain characteristics as well as animal breed characteristics (general and special) |
| 2 | Identify the species, breed, category and / or production type of domestic animals (cattle, horses, pigs, sheep, goats, donkeys, poultry, dogs, cats and the most important breeds of rabbits, laboratory animals and cage pets) |
| 3 | Describe the exterior of certain domestic animals |
| 4 | Evaluate production type or breeding group based on individual phenotypic characteristics |
| 5 | Use the gained knowledge in judging the exterior, condition, constitution, temperament and age as well as measuring and marking of animals |
| 6 | Identify basic administrative books, forms and computer programs used in the registration of domestic animals |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| Independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-PR 7 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the structure, behaviour and physiological needs of animals, as well as the skills and competencies required for their breeding, nutrition, well-being, reproduction and hygiene in general | IU-PR 1 |
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union relating to these activities | IU-PR 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Be able to review and evaluate literature and presentations critically | IU-PR 1.8 |
| Master and safely restrain patient animals, with respect for the animal and teach others about assisting the veterinarian in performing specific techniques | IU-PR 1.16 |
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding | IU-PR 1.20 |
| Understand legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases | IU-PR 2.7 |

Subject (Course): **Biochemistry in Veterinary Medicine**

Subject code for certificate: **253193**

IU-PR: 1, 2

OIU-SK: 1

DOC: 1, 2

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | After successfully passing the course student will be able to define the structure of most proteins, carbohydrates and fats in the body, and the importance of certain types of chemical bonds in metabolic processes |
| 2 | to explain the correlation of structure and main function of most proteins, carbohydrates and fats |
| 3 | to show the sequence of biochemical changes in the major metabolic pathways, explain the effect of the major enzyme systems in catalysis of certain reactions |
| 4 | to analyse the ways of regulation of biological activity |
| 5 | to apply a simple biochemical methods for measuring analytes in biological samples |
| 6 | to understand the connection of metabolic pathways and accept the theoretical basis for the selection and evaluation to the results of various laboratory measurements and understand changing of metabolic pathways using various treatment procedures |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| apply, analyze and interpret scientific knowledge on which veterinary medicine is based in order to make evidence-based decisions in veterinary medicine | IU-PR 1 |
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health, conditions of feeding, housing, well-being and production of all types of animals | IU-PR 2 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| adequate knowledge of the structure, behavior and physiological needs of animals as well as the skills and competences required for their breeding, nutrition, well-being, reproduction and hygiene in general | OIU-SK 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| the structure, function and behaviour of animals and their physiological and welfare needs. | IU-PR 1 |
| be able to review and evaluate literature and presentations critically. | IU-PR 2 |

Subject (Course): Introduction to Veterinary

Subject code for certificate: **161004**

IU-PR: 1, 10 i 8

OIU-SK: OIU-SK: 7

DOC: DOC: 1.1 i 2.12

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | define the term, subject and role of veterinary medicine in modern society |
| 2 | recognize all aspects of veterinary activities and scope of the veterinary profession |
| 3 | interpret the development of science and profession |
| 4 | recognize the suspicion of an infectious or parasitic disease of interest to the Republic of Croatia and the EU |
| 5 | knowledge of the responsibility and obligations of natural and legal persons with regard to animal protection and protection of their health |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| identify the need and demonstrate readiness to be involved in the lifelong learning process for further professional development and care for animals according to the highest standards of the profession | IU-PR 10 |
| apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | IU-PR 8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society. | DOC 1.1 |
| The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare-related ethics. | DOC 2.12 |

Subject (Course): **Anatomy with Organogenesis of Domestic Animals I**

Subject code for certificate: **160995**

IU-PR: 1

OIU-SK: 7

DOC: 2.3; 1.8; 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Following successful completion of the course, students will be able to describe the function and structure of the studied organs and organ systems |
| 2 | After successful completion of the course, the student will use the acquired knowledge in the study of veterinary medicine and veterinary practice |
| 3 | Following successful completion of the course, the student will distinguish organs and organ systems and their function in different species of domestic mammals |
| 4 | After successful completion of the course, the student will be able to assess whether or not it is a normal macroscopic anatomical finding |
| 5 | After successful completion of the course, the student will be able to present the usual development and changes in the embryonic development of organs and organ systems |
| 6 | After successful completion of the course, the student will be able to independently assess the mutual relationship between the organs and organ systems of domestic mammals and understand their function. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | LO1 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union that apply to these activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| The structure, function and behaviour of animals and their physiological and welfare needs | DOC 2.3 |
| Be able to review and evaluate literature and presentations critically | DOC 1.8 |
| Apply principles of bio-security correctly | DOC 1.28 |

Subject (Course): **Anatomy with Organogenesis of Domestic Animals II**

Subject code for certificate: **161013**

IU-PR: 1

OIU-SK: 7

DOC: 2.3; 1.8; 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Following successful completion of the course, students will be able to describe the function and structure of the studied organs and organ systems |
| 2 | After successful completion of the course, the student will use the acquired knowledge in the study of veterinary medicine and veterinary practice |
| 3 | Following successful completion of the course, the student will distinguish organs and organ systems and their function in different species of domestic mammals |
| 4 | After successful completion of the course, the student will be able to assess whether or not it is a normal macroscopic anatomical finding |
| 5 | After successful completion of the course, the student will be able to present the usual development and changes in the embryonic development of organs and organ systems |
| 6 | After successful completion of the course, the student will be able to independently assess the mutual relationship between the organs and organ systems of domestic mammals and understand their function. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | LO1 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union that apply to these activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| The structure, function and behaviour of animals and their physiological and welfare needs | DOC 2.3 |
| Be able to review and evaluate literature and presentations critically | DOC 1.8 |
| Apply principles of bio-security correctly | DOC 1.28 |

Subject (Course): **Basic Animal Nutrition**

Subject code for certificate: **238159**

IU-PR: 2, 3

OIU-SK: 1

DOC: 1.20, 1.21, 2.4

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Understand basic concepts about nutrients |
| 2 | Have an insight into analytical methods and basic chemical analysis of feed |
| 3 | Estimate the nutritional value of feeds |
| 4 | Understand the variations between feed mixtures and pet food |
| 5 | Have knowledge about substances that can contaminate feed |
| 6 | Interpret the results of individual analyses of animal feed |
| 7 | Recognize the nutritional value and safety of certain feed ingredients |
| 8 | Know the production technology of certain forms of feed |
| 9 | Identify the specific nutritional needs of animals in certain physiological and production periods |
| 10 | Calculate the required nutritional composition of feed suitable for individual physiological and production periods |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Apply a professional and ethical approach in all areas of veterinary activity to improve health, nutrition, accommodation, welfare and production of all species of animals | IU-PR 2 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the structure, behaviour and physiological needs of animals; and skills and competences necessary for their cultivation, nutrition, well-being, reproduction and hygiene in general | OIU-SK 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Assess the physical condition, welfare and nutritional status of an animal or group of animals; and advise the owner on the principles of breeding and feeding | DOC 1.20 |
| Collect, store and transport samples, select appropriate diagnostic tests, interpret and understand limitations in test results | DOC 1.21 |
| Knowledge of activities related to breeding, production and keeping of animals | DOC 2.4 |

Subject (Course): **Applied Animal Nutrition**

Subject code for certificate: **238158**

IU-PR: 1,2

OIU-SK: 1

DOC: 1.20, 1.21,1.8, 2.3, 2.4

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Knowing the characteristics of feeding different species of domestic and wild animals in certain physiological periods |
| 2 | Estimating the daily nutritive needs of animals according to the tables of nutritional requirements, biological experiments and practical experience |
| 3 | Recognize deficiencies in feed of domestic and wild animals |
| 4 | Applied manual and computer assembling meals for certain species and categories of animals |
| 5 | Recommend proper feeding for different species and categories of animals in practical farm conditions and corrections for inappropriate feeding |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Apply, analyze, and interpret knowledge from the sciences underlying veterinary medicine to make evidence-based decisions in veterinary medicine. | IU-PR 1 |
| Apply a professional and ethical approach in all areas of veterinary profession to improve the health, nutrition, housing, welfare, and production conditions of all animal species | IU-PR 2 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the structure, behavior, and physiological needs of animals and skills and competencies required for their breeding, nutrition, well-being, reproduction, and hygiene in general. | OIU-SK: 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding. | 1.20 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | 1.21 |
| Be able to review and evaluate literature and presentations critically | 1.8 |
| The structure, function and behaviour of animals and their physiological and welfare needs. | 2.3 |
| A knowledge of the businesses related to animal breeding, production and keeping | 2.4 |

Subject (Course): **PHYSIOLOGY OF DOMESTIC ANIMALS I**

Subject code for certificate: **173682**

IU-PR: 1,3

OIU-SK:1

DOC: 1.8, 1.21, 1.28, 2.3

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | describe the basic principles and the facts of the physiological processes from the cell to the whole organism |
| 2 | explain the physiological functions of the blood, nervous and muscular system and hormones |
| 3 | recognize the importance of maintaining continuous function of blood, nerve and muscle tissue, |
| 4 | connect the regulatory mechanisms maintain homeostasis and acid-base balance; |
| 5 | use the skills of obtaining and analyzing whole blood, plasma, and serum |
| 6 | to evaluate whether the obtained values are within physiological limits for certain species of domestic animals |
| 7 | to conclude how blood tests can indicate certain pathological changes or certain disease stages |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the structure, behavior and physiological needs of animals, as well as the skills and competences required for their breeding, nutrition, well-being, reproduction and hygiene in general | IU-PR 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Be able to review and evaluate literature and presentations critically | IU-PR 1.8 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | IU-PR 1.21 |
| Apply principles of bio-security correctly. | IU-PR 1.28 |
| The structure, function and behaviour of animals and their physiological and welfare needs | IU-PR 2.3 |

Subject (Course): **PHYSIOLOGY OF DOMESTIC ANIMALS II**

Subject code for certificate: **253198**

IU-PR: 1,3

OIU-SK:1

DOC: 1.8, 1.21, 1.28, 2.3

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | describe physiology of heart and cardiovascular system, respiration, digestion in monogastric animals and ruminants, excretion, the metabolism of nutrients, minerals and vitamins, physiological processes of oviposition, lactation and thermoregulation; |
| 2 | associate regulatory mechanisms of specific body systems; |
| 3 | interpret functions of different body systems during different physiological conditions; |
| 4 | prepare biological samples for various laboratory analyses; |
| 5 | know the concept of modern diagnostic tools and machines (haematological and biochemical analyser, spirometry, ECG, EMG, EEG); |
| 6 | analyse and interpret the results of laboratory tests |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|------------|
| Adequate knowledge of the structure, behavior and physiological needs of animals, as well as the skills and competences required for their breeding, nutrition, well-being, reproduction and hygiene in general | IU-PR 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|--------------|
| Be able to review and evaluate literature and presentations critically | IU-PR 1.8 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | IU-PR 1.21 |
| Apply principles of bio-security correctly. | IU-PR 1.28 |
| The structure, function and behaviour of animals and their physiological and welfare needs | IU-PR 2.3 |

Subject (Course): Hygiene and Housing of Animals

Subject code for certificate: **173723 i 173844**

IU-PR: 2, 10

OIU-SK: 1

DOC: 1.10, 1.13, 1.20, 1.28, 1.36, 1.8, 2.4, 2.7, 2.9

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | describe the impact of the accommodation and housing conditions of certain species and categories of animals on their health, production and reproductive performance |
| 2 | define the role of veterinarians in the transportation and care of animals, in order to avoid stress and disorders in their health due to improper transfer from one environment to another, or poor hygiene of animals |
| 3 | choose ways of animal waste substances disposing for the environmental pollution prevention |
| 4 | independently measure microclimatic conditions in certain animal facilities |
| 5 | propose appropriate measures of disinfection and control of harmful insects and rodents in order to preserve the animals and humans health status |
| 6 | independently conclude about animal welfare on the basis of the production conditions |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| identify the need and demonstrate readiness to be involved in the lifelong learning process for further professional development and care for animals according to the highest standards of the profession | IU-PR 10 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| adequate knowledge of the structure, behavior and physiological needs of animals, as well as the skills and competences required for their breeding, nutrition, welfare, reproduction and hygiene in general | OIU-SK 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health. | DOC 1.10 |
| Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence. | DOC 1.13 |
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding. | DOC 1.20 |
| Apply principles of bio-security correctly. | DOC 1.28 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards. | DOC 1.36 |
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| A knowledge of the businesses related to animal breeding, production and keeping. | DOC 2.4 |
| Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases. | DOC 2.7 |
| The principles of disease prevention and the promotion of health and welfare | DOC 2.9 |

Histology with General Embryology

Subject code for certificate: **161017**

IU-PR: 1; 2

OIU-SK:1

DOC: 1,21; 1,28; 2.2; 2.3

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | recognize and define the basic elements of the microscopic structures of tissues and organs of animals |
| 2 | explain and compare the structure of certain organs in different animal species |
| 3 | propose the necessary histological method of processing the sample |
| 4 | independently cut off a piece of tissue and fix it correctly for the selected histological method |
| 5 | use the microscope efficiently for the purpose of analysis and study of histological slides |
| 6 | recognize and analyze the histological slides of various organs and tissues |
| 7 | examine the relations between the structures and development of domestic animals |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply, analyze and interpret scientific knowledge on which veterinary medicine is based evidence-based decision-making in veterinary medicine | IU-PR 1 |
| to apply a professional and ethical approach in all areas of veterinary activity improving the health, conditions of feeding, housing, well-being and production of all kinds of animals | IU-PR 2 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| adequate knowledge of the structure, behavior and physiological needs of animals and skills i competencies required for their breeding, nutrition, well-being, reproduction and hygiene in general | IU-SK 1 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| apply principles of bio-security correctly. | DOC 1.28 |
| research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement) | DOC 2.2 |
| the structure, function and behaviour of animals and their physiological and welfare needs | DOC 2.3 |

Subject (Course): Molecular biology and genomics in veterinary medicine

Subject code for certificate: **173702**

IU-PR: 1, 7

OIU-SK:7

DOC: 1.2, 1.7, 1.14, 2.1, 2.2, 2.12, 1.8, 1.25, 2.1

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Recognition and understanding of contemporary aspects of cytology, molecular biology and genetics in veterinary medicine, public health and forensic |
| 2 | Understanding of basic principles of molecular research of animal cells and tissue |
| 3 | Understanding of molecular processes of replication, transcription and translation of animal information macromolecules. |
| 4 | Understanding health and ecological justification and risk of using transgenic animal organisms and cells, biotechnological preparations (cytokines, hormones, enzymes, vaccines, medications) and genetically modified food of animal origin. |
| 5 | Understanding genetic disorders of animals of interest for veterinary medicine |
| 6 | Selecting molecular-genetic method for preventive, diagnostic and therapy of ill animal. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions. | IU-PR 1 |
| Independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-PR 7 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union relating to these activities. | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Demonstrate knowledge of the organisation, management and legislation related to a veterinary business economics and employment rights. | DOC 1.2 |
| Understand the economic and emotional context in which the veterinary surgeon operates. | DOC 1.7 |
| Take part in self-audit and peer-group review processes in order to improve performance. | DOC 1.14 |
| Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each. | DOC 2.1 |
| Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement). | DOC 2.2 |
| Understand the ethical framework within which veterinary surgeons should work, including important ethical theories that inform decisionmaking in professional and animal welfare-related ethics | DOC 2.12 |
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Access the appropriate sources of data on licensed medicines. | DOC 1.25 |

Animal Breeding and Production
Subject code for certificate: **198130, 198132**

IU-PR: 2; 7

OIU-SK: 1; 7

DOC: 1.3; 1.7; 1.8; 1.10; 1.20; 1.21; 1.28; 1.36; 2.2; 2.4; 2.7; 2.9

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | After successfully completing the course, students will be able to explain the role of the genetic basis in different ways of breeding and exploiting animals, |
| 2 | apply different methods to improve the genetic basis of animals with regard to specific breeding traits, |
| 3 | interpret the breeding value of purebred animals |
| 4 | utilize breeding programs |
| 5 | explain molecular genetic methods in improving animal production and health |
| 6 | identify different animal production systems, |
| 7 | collect and analyze animal health and production data, set goals in cooperation with the farmer and control progress towards the set goals. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-LO 2 |
| independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-LO 7 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Adequate knowledge of structures, behaviors and physiological needs of animals and skills and competencies required for animal breeding, nutrition, welfare, reproduction and hygiene in general | OIU-SK 1 |
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|--------------|
| Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice. | DOC 1.3 |
| Understand the economic and emotional context in which the veterinary surgeon operates. | DOC 1.7 |
| Be able to review and evaluate literature and presentations critically | DOC 1.8 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health. | DOC 1.10 |
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding. | DOC 1.20 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Apply principles of bio-security correctly. | DOC 1.28 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards | DOC 1.36 |
| Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement). | DOC 2.2 |
| A knowledge of the businesses related to animal breeding, production and keeping. | DOC 2.4 |
| Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases. | DOC 2.7 |
| The principles of disease prevention and the promotion of health and welfare. | DOC 2.9 |

Subject (Course): General Microbiology

Subject code for certificate: 173878

IU-PR: 3

OIU-SK: 4

DOC: 1.8, 1.21, 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | to demonstrate basic knowledge on morphology, physiology, specific qualities of cultivation and identification of microorganisms |
| 2 | to demonstrate basic knowledge on antigen properties, tenacity, relation to antimicrobial substances, pathogenicity of microorganisms |
| 3 | to demonstrate basic knowledge on methods of etiological diagnostics as well as possibilities of immunoprophylaxis of infectious diseases |
| 4 | students can take and send different materials for microbiological and immunological tests |
| 5 | perform simple procedures of microorganism identification, including use of commercial compounds suitable for veterinarians in practice |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | LO3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological and analytical skills and competences necessary for the prevention, diagnosis and treatment of diseases transmissible to humans | OIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Be able to review and evaluate literature and presentations critically. | 1.8 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | 1.21 |
| Apply principles of bio-security correctly. | 1.28 |

Subject (Course): Veterinary Immunology

Subject code for certificate: 253196

IU-PR: 1, 5

OIU-SK: 3, 4

DOC: 1.8, 1.10, 1.36, 2.9

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Unite the importance of serological methods with identification of infectious agents |
| 2 | Perform the proper serological reactions for right diagnosis of infectious disease |
| 3 | Read off and interpretate the obtained results of serological methods |
| 4 | Aquire knowledge of vaccinnnes and vaccination programs for safety of animal health |
| 5 | Conceive the meaning of hyper- and hypo-reactivity of immune system with its outcomes |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| Conduct preventive veterinary medicine and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Adequate knowledge, skills and competences for preventive medicine, including the competence about issuing the certifications. | OIU-SK 3 |
| Clinical, epidemiological and analytic skills and competences which required for prevention, diagnosis and treatment the diseases which can transfer from animals to humans. | OIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Be competent for critical observation and evaluation of literature and presentations | DOC 1.8 |
| Exploit the professional abilities in accordance to progress of veterinary science and concept of One Health with aim of improvement the animal's health and welfare, improvement the quality of animal care and veterinary public health. | DOC 1.10 |
| Advise and implement programs of prevention and eradication the infectious diseases in accordance with standards for animal health, welfare and veterinary public health. | DOC 1.36 |
| Principles of prevention the infectious diseases and promotion the animal health and welfare. | DOC 2.9 |

Subject (Course): **Anatomy with Organogenesis of Domestic Animals III**

Subject code for certificate: **173706**

IU-PR: 1

OIU-SK: 7

DOC: 2.3; 1.8; 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Following successful completion of the course, students will be able to describe the function and structure of the studied organs and organ systems |
| 2 | After successful completion of the course, the student will use the acquired knowledge in the study of veterinary medicine and veterinary practice |
| 3 | Following successful completion of the course, the student will distinguish organs and organ systems and their function in different species of domestic mammals |
| 4 | After successful completion of the course, the student will be able to assess whether or not it is a normal macroscopic anatomical finding |
| 5 | After successful completion of the course, the student will be able to present the usual development and changes in the embryonic development of organs and organ systems |
| 6 | After successful completion of the course, the student will be able to independently assess the mutual relationship between the organs and organ systems of domestic mammals and understand their function. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | LO1 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union that apply to these activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| The structure, function and behaviour of animals and their physiological and welfare needs | DOC 2.3 |
| Be able to review and evaluate literature and presentations critically | DOC 1.8 |
| Apply principles of bio-security correctly | DOC 1.28 |

Subject (Course): **Communication Skills in Veterinary Medicine**

Šifra predmeta za certifikat: **185773**

IU-PR: 9

OIU-SK: 3

DOC: 1.4; 1.6; 1.11; 1.14; 1.22; 2.11; 2.12

| IU broj | Learning outcome at the course level - VEFUNIZG |
|---------|--|
| 1 | analyze and compare communication relationships in dialogue and persuasion in discussing the prognosis of treatment and risk communication; |
| 2 | correctly interpret the underlying concepts - intrapersonal, interpersonal, verbal, nonverbal, social and media communication; |
| 3 | argue the importance of knowing the communication dynamics and challenges of communication in veterinary; |
| 4 | to describe the role of verbal and non-verbal communication in everyday and business life and prepare to talk about giving diagnosis and therapy; |
| 5 | analyze and interpret the verbal and non-verbal communication of their interlocutors; |
| 6 | use the acquired knowledge about the relationship of interpersonal communication and communication in the business environment; |
| 7 | analyze and compare various types of communication; |
| 8 | to evaluate the quality of interpersonal communication; |
| 9 | critically analyze and adopt the process of active listening in interpersonal diagnostic communication; |
| 10 | to argue the reasons why it is necessary to know the communication dynamics in the everyday and business environment and how to use them in relation between veterinarian and owner of the client; |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Šifra (1-10) |
|---|--------------|
| communicate effectively with colleagues, clients and the public, educate and collaborate in different social contexts, with the ability to act independently and in teams | IU-PR 9 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Šifra (1-7) |
|--|-------------|
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | OIU-SK 3 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Šifra (36+12) |
|---|---------------|
| Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. | 1.4 |
| Work effectively as a member of a multi-disciplinary team in the delivery of services. | 1.6 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | 1.11 |
| Take part in self-audit and peer-group review processes in order to improve performance. | 1.14 |
| Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history. | 1.22 |
| Principles of effective interpersonal interaction, including communication, leadership, management and team working. | 2.11 |
| The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare related ethics. | 2.12 |

Subject (Course): Parasitology And Parasitic Diseases

Subject code for certificate: **253207, 253244**

IU-PR:4,

IU-PR:5

OIU-SK: 3;4;6

DOC 1.10; 1.12; 1.13; 1.18; 1.21; 1.24; 1.26; 1.28; 1.36; 2.5; 2.6; 2.8; 2.10

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Knowledge of biology and ecology of parasites and vectors of veterinary and medical importance |
| 2 | Identification of important parasites and their developmental stages |
| 3 | Knowledge of pathogenesis caused by parasites or their developmental stages |
| 4 | Application of diagnostic skills regarding collection, preparing and investigation |
| 5 | Interpretation of diagnostic results |
| 6 | Knowledge of the control of parasites and appropriate treatment |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| actively apply professional knowledge in the implementation of clinical procedures, obstetrics and surgical procedures, establish diagnoses and carry out treatment, and provide complete information and instructions about disease states that take into account the needs of animals and owners, available resources, financial and legal requests | IU-PR 1 |
| Knowledge of unified preventive veterinary medicine, and implementation of prevention and control programs of bacterial, viral and parasitic animal diseases, with a special emphasis on infectious diseases and zoonoses and the rational use of antimicrobials/antiparasitics in accordance with the concept of One Health IU-PR 5 | IU-PR 2 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Adequate knowledge, skills and competencies of preventive medicine, including competencies related to inquiries and issuing certificates | OIU-SK3 |
| Clinical, epidemiological and analytical skills and competences necessary for the prevention, diagnosis and treatment of diseases transmissible to humans | OIU-SK4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals and ensuring the safety of the food chain and environmental protection | OIU-SK6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Use your professional skills to contribute to the advancement of veterinary science and the concept of "One Health" with the aim of improving animal health and welfare, improving the quality of animal care and veterinary public health | DOC 1.10 |
| Demonstrate the ability to recognize personal and professional limitations and know how to ask for professional advice, help and support when needed | DOC 1.12 |
| Demonstrate the ability of lifelong learning and commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competencies | DOC 1.13 |
| Concerning available resources, develop appropriate treatment plans and carry out treatment in the interest of the animal entrusted to care | DOC. 1.18 |
| Collect, store and transport specimens, select appropriate diagnostic tests, interpret and understand limitations in test results. | DOC 1. 21 |
| Recognize signs of possible diseases that need to be reported or reported to the competent authority, recognize signs of possible zoonoses, as well as signs of abuse and take appropriate measures, including notifying the competent authorities | DOC 1.24 |
| Correctly and responsibly prescribe and dispense medicines in accordance with laws and the latest guidelines. | DOC 1.26 |
| Correctly apply biosecurity measures | DOC 1.28 |

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| | |
|--|----------|
| Advise and implement disease prevention and eradication programs that are appropriate for individual species and in accordance with accepted standards of animal health, animal welfare and public health. | DOC 1.36 |
| Etiology, pathogenesis, clinical signs, diagnosis and treatment of common diseases and disorders that occur in certain animal species | DOC 2.5 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade | DOC 2.6 |
| Medicines Act and guidelines on the responsible use of medicines, including the responsible use of antimicrobials and antiparasitics | DOC 2.8 |
| Veterinary public health issues (epidemiology, transboundary epizootic diseases, zoonoses and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology...) | DOC 2.10 |

General Veterinary Pathology
 Subject code for certificate: **185659**
 IU-PR: 1, 3
 OIU-SK: 4, 7
 DOC: 1.8; 1.15; 1.21; 1.28; 1.33; 2.6

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | get knowledge in general pathology for further performing of education in other clinical subjects |
| 2 | be able to recognise a pathological process |
| 3 | be able to make a right diagnosis for a purpose of therapy |
| 4 | if the animal perishes to get the right diagnosis in a proper way (by autopsy and other laboratory studies) thus act as a preventive measure for other animals |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| Apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| Independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Clinical, epidemiological and analytical skills and competencies required for prevention, diagnostics and treatment of diseases transmissible to humans (zoonoses) | OIU-SK 4 |
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Apply principles of bio-security correctly. | DOC 1.28 |
| Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them. | DOC 1.33 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |

Special Veterinary Pathology
Subject code for certificate: **185665**

IU-PR: 4, 5

OIU-SK: 2, 3, 4, 6

DOC: 1.8; 1.10; 1.11; 1.15; 1.21; 1.28; 1.33; 2.6

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | analyze pathological changes (lesions) and classify them in order to determine specific animal diseases |
| 2 | analyze microscopic slides of basic pathologic processes and most important animal diseases |
| 3 | correlate macroscopic and microscopic changes together with the results of other ancillary laboratory tests |
| 4 | make diagnosis and conclusion about emergence and development of disease or animal death |
| 5 | write necropsy report |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |
| Conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | OIU-SK 3 |
| Clinical, epidemiological and analytical skills and competencies required for prevention, diagnostics and treatment of diseases transmissible to humans (zoonoses) | OIU-SK 4 |
| Knowledge, skills and competencies required for responsible and reasonable usage of veterinary drugs for the treatment of the animals, safety, and insurance of food chain and protection of the environment | OIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health. | DOC 1.10 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Apply principles of bio-security correctly. | DOC 1.28 |
| Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them. | DOC 1.33 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |

Subject (Course): Pharmacology
Subject code for certificate: 185662

IU-PR: 4, 6, 8

OIU-SK: 5, 6

DOC: 1.1; 1.9; 1.10; 1.11; 1.18; 1.26; 1.27; 1.30; 1.31; 1.34; 1.35; 2.8

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | choose the most suitable drug(s) indicated for a specific disease or pathological condition, taking into account species, age and other factors |
| 2 | differentiate the treatment approach with regard to the categories of animals (individual and group treatment) |
| 3 | apply a drug or a combination of drugs in an optimal dose according to prescribed dosing regimen |
| 4 | write a veterinary prescription for different forms of medicine |
| 5 | choose the appropriate analgesic therapy within the framework of multimodal pain therapy |
| 6 | use quality sources of pharmacological literature |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-LO4 |
| know and apply laws and other administrative provisions related to food safety in hygiene procedures and technology of foodstuffs of animal origin intended for human consumption | IU-LO6 |
| apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | IU-LO8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Adequate knowledge of hygiene and technology in production, processing and placing on the market of feed or food of animal origin intended for human consumption | OIU- SK 5 |
| Knowledge, skills and competencies required for responsible and reasonable usage of veterinary drugs for the treatment of the animals, safety, and insurance of food chain and protection of the environment | OIU- SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|--------------|
| Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society | DOC 1.1. |
| Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine | DOC 1.9 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health | DOC 1.10 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change | DOC 1.11 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | DOC 1.18 |
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance | DOC 1.26 |
| Report suspected adverse reactions through the appropriate channel | DOC 1.27 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint | DOC 1.30 |
| Assess and manage pain | DOC 1.31 |
| Perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain | DOC 1.34 |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|--|---------|
| Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and antiparasitics | DOC 2.8 |
|--|---------|

Subject (Course): **Radiation hygiene**

Subject code for certificate: **238160**

IU-PR: 1

OIU-SK: 7

DOC: 1.8; 1.13; 1.35

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | recognize the sources of ionizing radiation |
| 2 | describe the pathway of radioactive contamination and the biological effects of ionizing radiation |
| 3 | protect the housings, animal habitats, domestic animals, animal feed and foodstuff from radioactive contamination and radiation |
| 4 | perform decontamination of domestic animals, animal feed, meat, milk, water and other food of animal origin, animal habitats, various subjects and environment (soil, farmlands) and check up the success of decontamination |
| 5 | evaluate radiation hygiene properties of meat, milk and other food |
| 6 | use the dosimeters and detectors of ionizing radiation and calculate the radiation dose |
| 7 | recognize food conserving by ionizing radiation |
| 8 | recognize the sources of non-ionizing (microwave) radiation and describe the biological effects |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-LO 1 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Primjereno poznavanje znanosti na kojoj se temelje djelatnosti veterinaru i prava Unije koje se odnose na te djelatnosti | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence. | DOC 1.13 |
| Perform inspection of food and feed including post-mortem inspection of food producing animals and inspection in the field of related food technology. | DOC 1.35 |

Subject (Course): **Pathophysiology I**

Subject code for certificate: **225789**

IU-PR: 3

OIU-SK: 4

DOC: 1.8; 1.21; 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Define the terms health and disease |
| 2 | Describe bioactive substances and their role in pathophysiology |
| 3 | Describe endocrinopathies |
| 4 | Describe disturbances in neural system function |
| 5 | Master biological samples handling |
| 6 | Determine serum protein, glucose and lipid concentrations and interpret the results |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine. | LO-PR 3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Clinical, epidemiological, and analytical skills and competencies required for the prevention, diagnosis, and treatment of human transmissible diseases. | OIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Apply principles of bio-security correctly. | DOC 1.28 |

Subject (Course): **Pathophysiology II**

Subject code for certificate: **118334**

IU-PR: 3

OIU-SK: 4

DOC: 1.8; 1.21; 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Describe disturbances in carbohydrate, fat and protein metabolism |
| 2 | Describe disturbances in hepatic and biliary function |
| 3 | Describe digestive system pathophysiology |
| 4 | Describe disturbances in blood and hematological system |
| 5 | Describe disturbances of heart functions |
| 6 | Describe disturbances in respiratory system functions |
| 7 | Describe renal diseases pathophysiology |
| 8 | Perform biochemical laboratory analyses and interpret results |
| 9 | Perform hematological laboratory analyses and interpret results |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | LO-PR 3 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Clinical, epidemiological and analytical skills and competencies required for the prevention, diagnosis and treatment of animal diseases | OSIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Apply principles of bio-security correctly. | DOC 1.28 |

Subject (Course): **Special Microbiology**

Subject code for certificate: **185661**

IU-PR: 3, 5

OIU-SK: 4

DOC: 1.8, 1.21, 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Have knowledge about properties of the most important microbiological agents as causers of infectious diseases in animals, with microbiological techniques for isolation and identification |
| 2 | Master with taking and sending materials at microbiological examinations |
| 3 | Prepare the microscopic preparates (stained and unstained) |
| 4 | Master with procedures of bacterial, fungal and viral cultivation and their identification based on morphological and physiological properties |
| 5 | Have knowledge about relation between microorganisms and antimicrobial agents with principles of immunoprophylaxis |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Apply, analyse and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence – based decisions | IU-PR 3 |
| Conduct preventive veterinary medicine and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological and analytical skills and competences necessary for the prevention, diagnosis and treatment of diseases transmissible to humans | OIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Be ably to review and evaluate literature and presentations | DOC 1.8 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | DOC 1.21 |
| Apply principles of bio-security appropriately | DOC 1.28 |

Clinical Propedeutics
 Subject code for certificate: **238162**
 IU-PR: 3, 4, 9
 OIU-SK: 1, 2
 DOC: 1.15, 1.16, 1.17, 1.20, 1.21

| IU broj | Ishod učenja (IU-K) na razini kolegija - VEFUNIZG |
|----------------|---|
| 1 | Students will be able to make clinical examination |
| 2 | Students will have adequate knowledge for basic differential diagnostics of most common clinical problems. |
| 3 | Students shall be able to perform additional clinical examinations (depending of the organic system involved). |
| 4 | Students will be able to decide which advanced additional clinical methods should be employed and be able to partly conduct those methods, eg. blood analysis). |

| Learning outcome ((IU-PR) at the level of the qualification standard to which the course contributes VEFUNIZG | Code (1-7) |
|--|-------------------|
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |
| identify the need and demonstrate readiness to be involved in the lifelong learning process for further professional development and care for animals according to the highest standards of the profession | IU-PR 9 |

| Learning outcome (IU-SK) at the level of the study program to which the course contributes - - HKO | Šifra (1-7) |
|---|--------------------|
| Adequate knowledge of the structure, behavior and physiological needs of animals, as well as the skills and competences required for their breeding, nutrition, well-being, reproduction and hygiene in general | IU-SK 1 |
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death | IU-SK 2 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. | DOC 1.16 |
| Perform a complete clinical examination and demonstrate ability in clinical decisionmaking. | DOC 1.17 |
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding. | DOC 1.20 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | DOC 1.21 |

Subject (Course): Internal Medicine
Subject code for certificate: 253245, 253246

IU-PR: 1, 3, 4, 7, 9, 10

OIU-SK: 1,2,6,7

DOC: 1.4; 1.5; 1.6; 1.7; 1.8; 1.9; 1.11; 1.15; 1.16; 1.17; 1.18; 1.19; 1.21; 1.22; 1.23;
 1.26; 1.27; 1.28; 1.31; 1.32; 2.1; 2.5; 2.12

| IU number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | perform clinical examination of a sick animal or herd |
| 2 | observe clinical signs of diseases of the digestive system, liver and pancreas, diseases of the heart and blood vessels, blood and blood-forming organs and diseases of the metabolism |
| 3 | interpret and relate clinical signs of different organs or organ systems and accordingly prepare a clinical report or presentation of a clinical case |
| 4 | independently interpret the basic laboratory findings in a sick animal or herd |
| 5 | independently establish a working diagnosis in a sick animal |
| 6 | independently start treatment with usual drugs or procedures, and if necessary perform euthanasia |
| 7 | independently assess integral and longitudinal observation and interpretation of different diseases, critically using professional literature |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-PR 7 |
| communicate effectively with colleagues, clients and the public, educate and collaborate in different social contexts, with the ability to act independently and in teams | IU-PR 9 |
| identify the need and demonstrate readiness to be involved in the lifelong learning process for further professional development and care for animals according to the highest standards of the profession | IU- PR 10 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death | OIU-SK 2 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals and ensuring the safety of the food chain and environmental protection | OIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|--------------|
| Communicate effectively with owners, the public, colleagues in the profession and responsible bodies using language appropriate to needs and with full respect for confidentiality | DOC 1.4 |
| Prepare accurate clinical records; records of owners and, when necessary, case reports in a form satisfactory to colleagues and comprehensible to the public | DOC 1.5 |
| Work effectively as a member of a multidisciplinary team in providing services | DOC 1.6 |
| Understand the economic and emotional context in which the Doctor of Veterinary Medicine operates | DOC 1.7 |
| Be able to critically keep track of and evaluate literature and presentations | DOC 1.8 |

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| | |
|--|----------|
| Understand and apply principles of clinical management, and be able to base practical work on evidence in veterinary medicine | DOC 1.9 |
| Demonstrate the ability to deal with incomplete information, deal with unforeseen situations and adapt to changes | DOC 1.11 |
| Know how to take an accurate and relevant history of an individual animal or group of animals and describe their environment | DOC 1.15 |
| Master and restrain animal patients in a safe way, with respect for the animal, and teach others about helping the veterinarian in performing certain techniques | DOC 1.16 |
| Perform a full clinical examination and demonstrate decision-making ability in clinical practice | DOC 1.17 |
| Given the available resources, develop appropriate treatment plans and carry out treatment in the best interest of the animal entrusted to care | DOC 1.18 |
| Attend emergencies and provide first aid to common types of animals (common animal species are listed in ESEVT SOP, 2019) | DOC 1.19 |
| Collect, store and transport specimens, select appropriate diagnostic tests, interpret, and understand limitations of test results | DOC 1.21 |
| Communicate clearly and collaborate with triage and diagnostic services, including providing appropriate history | DOC 1.22 |
| Understand the contribution that imaging and other diagnostic techniques can provide in establishing a diagnosis; be able to use basic recording equipment and effectively conduct examinations as appropriate and in accordance with good health and safety practice and applicable regulations | DOC 1.23 |
| Correctly and responsibly prescribe and dispense medicines in accordance with laws and the latest guidelines | DOC 1.26 |
| Report suspected side effects | DOC 1.27 |
| Apply biosecurity measures correctly | DOC 1.28 |
| Pain assessment and management | DOC 1.31 |
| Recognize when euthanasia is appropriate and carry it out respecting the animal and using the appropriate method, showing empathy for the feelings of the owner and others, while taking care of the safety of those present; advise on the disposal of the carcass | DOC 1.32 |
| Understanding and competence in logical approaches to scientific and clinical judgment, distinguishing between these approaches and the strengths and limitations of each of them | DOC 2.1 |
| Etiology, pathogenesis, clinical signs, diagnosis and treatment of common diseases and disorders that occur in certain animal species | DOC 2.5 |
| An ethical framework within which veterinarians should work, including important ethical theories that inform decision-making in professional and animal welfare ethics | DOC 2.12 |

Subject (Course): **General and Clinical Radiology**

Subject code for certificate: **198137**

IU-PR: 3,4

OIU-SK:2

DOC: 1.6, 1.23, 1.16., 2.1

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | After successful completion of the course, the student will be able to understand the physics of x-ray and CT imaging, potential harmful effect of x-ray and protection |
| 2 | After successful completion of the course the student will be able to perform the x-ray survey and the image processing |
| 3 | After successful completion of the course, the student will be able to analyse and interpret different anatomical structures and opacities with the goal of determining the diagnosis |
| 4 | After successful completion of the course, the student will be able to choose and apply suitable contrast survey and to compare it with plain radiographs |
| 5 | After successful completion of the course, the student will be able to evaluate the diagnostic possibility in different pathological conditions and to determine the possible use of radiological exam. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes – VEFUNIZG | Code (1-10) |
|--|--------------------|
| Independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Work effectively as a member of a multi-disciplinary team in the delivery of services. | DOC 1.6 |
| Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations. | DOC 1.23 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. | DOC 1.16 |
| Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each. | DOC 2.1. |

Subject (Course): Game management and breeding

Subject code for certificate: **198138**

IU-PR: 1, 2, 5

OIU-SK: 1, 3, 7

DOC: 2.1; 1.20; 2.3; 1.30; 1.11; 1.3; 2.9

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Recognize the characteristics of game that are important for breeding, depending on the conditions of the habitat as well as the type and purpose of breeding |
| 2 | Identify most important management aims for large and small game in different intensified breeding system |
| 3 | Accept the basics principles of keeping and breeding game animals in natural and farm conditions |
| 4 | Accompany the regulations and planning of breeding procedures, facilities and health monitoring as a unique technological complex |
| 5 | Assess the category and value of the game and possible risks during manipulation and handling |
| 6 | Apply the principles of game welfare in all breeding and handling procedures |
| 7 | Prepare and organize SOP for all important game species during handling, transport and exploitation |
| 8 | Create the Hunting Management Plan, Game Breeding Program and Game Protection Program |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10 LO) |
|--|-----------------------|
| Apply, analyse and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| Apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| Conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Adequate knowledge of the structure, behaviour and physiological needs of animals, as well as the skills and competences required for their breeding, nutrition, well-being, reproduction and hygiene in general | OIU-SK 1 |
| Adequate knowledge, skills and competencies in preventive medicine, including competencies related to inquiries and certification | OIU-SK 3 |
| Adequate knowledge of the science on which the activities of veterinarians are based and the laws of the Union relating to these activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each. | DOC 2.1 |
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding. | DOC 1.20 |
| Understand the structure, function and behaviour of animals and their physiological and welfare needs | DOC 2.3 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint. | DOC 1.30 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |
| Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice. | DOC 1.3 |
| Understand the principles of disease prevention and the promotion of health and welfare. | DOC 2.9 |

Subject (Course): **Methods of Physical Therapy and Diagnostics**

Subject code for certificate: **198141**

IU-PR: 3,4

OIU-SK: 2

DOC: 1.6, 1.18, 1.23, 2.1

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | After successful completion of the course, the student will be able to know different methods of physical therapy and their effect on the body |
| 2 | After successful completion of the course the student will be able to apply and to determine the duration of the methods depending on clinical condition |
| 3 | After successful completion of the course, the student will be able to to evaluate the outcome of physical therapy treatment |
| 4 | After successful completion of the course, the student will be able to to interpret ultrasound image of different body system |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Work effectively as a member of a multi-disciplinary team in the delivery of services. | DOC 1.6 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | DOC 1.18 |
| Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations. | DOC 1.23 |
| Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each. | DOC 2.1. |

Subject (Course): **Biology and Pathology of Beneficial Insects**

Subject code for certificate: **198142**

IU-PR: 2,10

OIU-SK: 1,2

DOC: 1.1, 1.10, 1.15, 1.17, 1.21, 1.24, 1.26, 1.28, 1.36, 2.5

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Annotate the role of honeybee in natural ecosystems |
| 2 | Explain manner of life and activities of honeybee colony, construction of combs and development of brood |
| 3 | Recognize different types of hives, feeders and water suppliers, and beekeeping equipment |
| 4 | Describe individual organs of health honeybee and alterations caused by diseases |
| 5 | Apply basic clinical and diagnostic techniques with aim to appoint suspicion on honeybee diseases |
| 6 | Define role of veterinarian in procedure of sampling and sending materials for laboratory examinations, treatments and sanitation of diseases |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| identify the need and demonstrate readiness to be involved in the lifelong learning process for further professional development and care for animals according to the highest standards of the profession | IU-PR 10 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Adequate knowledge of structures, behaviors and physiological needs of animals and skills and competencies required for animal breeding, nutrition, welfare, reproduction and hygiene in general | IU-PR 1 |
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | IU-PR 2 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society | DOC 1.1 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health | DOC 1.10 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment | DOC 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decisionmaking | DOC 1.17 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | DOC 1.21 |
| Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities. | DOC 1.24 |
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance | DOC 1.26 |
| Apply principles of bio-security correctly | DOC 1.28 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards | DOC 1.36 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards | DOC 2.5 |

Biology and Pathology of Aquatic Organisms

Subject code for certificate: **198145**

IU-PR: 2,3,5,8

OIU-SK:1,3,4,5

DOC: 2,3; 2.4; 1.21; 1.33; 1,36; 1.24; 2.9; 2.8; 2.7

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | Recognize fish species and other aquatic organisms important for breeding |
| 2 | Obtain general knowledge about breeding of aquatic organisms |
| 3 | Comprehend the importance and role of veterinarians in maintenance of fish health and human health |
| 4 | Perform routine diagnostic examination, recognize clinical signs of disease |
| 5 | Professional sampling and transport of samples for laboratory examinations |
| 6 | Apply therapeutic measures and measures for prevention of disease |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |
| apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | IU-PR 8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Adequate knowledge of structures, behaviors and physiological needs of animals and skills and competencies required for animal breeding, nutrition, welfare, reproduction and hygiene in general | OIU-SK 1 |
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | OIU-SK 3 |
| Clinical, epidemiological and analytical skills and competencies required for prevention, diagnostics and treatment of diseases transmissible to humans (zoonoses) | OIU-SK 4 |
| Adequate knowledge of hygiene and technology in production, processing and placing on the market of feed or food of animal origin intended for human consumption | OIU-SK 5 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| The structure, function and behaviour of animals and their physiological and welfare needs | DOC 2.3 |
| A knowledge of the businesses related to animal breeding, production and keeping | DOC 2.4 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | DOC 1.21 |
| Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them | DOC 1.33 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards | DOC 1.36 |
| Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities | DOC 1.24 |
| The principles of disease prevention and the promotion of health and welfare | DOC 2.9 |
| Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases | DOC 2.7 |
| Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and antiparasitics | DOC 2.8 |

Subject (Course): Toxicology
Subject code for certificate: 198148

IU-PR: 4, 6, 8

OIU-SK: 2, 5, 6

DOC: 1.1; 1.11; 1.15; 1.17; 1.18; 1.19; 1.30; 1.34; 2.5

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | recognize poisoning |
| 2 | undertake therapeutic measures |
| 3 | evaluate the success of the therapeutic measures |
| 4 | evaluate possible hazardous consequences produced by the poisoning |
| 5 | identify possible sources of pet poisoning among things from their immediate living environment |
| 6 | professional sampling and transport materials for toxicological analysis |
| 7 | evaluation of the results of chemical toxicological tests in the case of residues according to legislation |
| 8 | identify fish and avian poisoning, and poisoning with venoms and toxins of animals |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| Actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | LO4 |
| Know and apply laws and other administrative provisions related to food safety in hygiene procedures and technology of foodstuffs of animal origin intended for human consumption | LO6 |
| Apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | LO8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |
| Adequate knowledge of hygiene and technology in production, processing and placing on the market of feed or food of animal origin intended for human consumption | OIU-SK 5 |
| Knowledge, skills and competencies required for responsible and reasonable usage of veterinary drugs for the treatment of the animals, safety, and insurance of food chain and protection of the environment | OIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society. | DOC 1.1 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decision-making | DOC 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | DOC 1.18 |
| Attend in an emergency and perform first aid in common animal species*. | DOC 1.19 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint. | DOC 1.30 |
| Perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain. | DCC 1.34 |
| Understand the aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species*. | DOC 2.5 |

Subject (Course): Obstetrics and Reproduction 1

Subject code for certificate: 198 140

IU-PR: 4

OIU-SK: 2,4,6

DOC: 1.9, 1.11, 1.12, 1.15, 1.16, 1.17, 1.18, 1.19, 1.23, 1.26, 1.27, 1.28, 1.29, 1.30, 1.31, 1.32, 2.5

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Interpretation of knowledge on ovarian function |
| 2 | Interpret knowledge on the influence of various factors on ovarian function |
| 3 | Interpret knowledge on fertilization and pregnancy diagnostics |
| 4 | Interpret knowledge on delivery |
| 5 | Interpret knowledge on the physiology and pathology of the puerperium, diseases of the offspring |
| 6 | Interpret knowledge about the structure of sperm cell, spermatogenesis, semen collection, artificial insemination of domestic animals |
| 7 | Interpretation of knowledge about the structure of the mammary gland, physiology of lactation, inflammatory conditions and treatment |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into consideration the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnostics and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death | OIU-SK 2 |
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnostics and treatment of zoonotic diseases | OIU-SK 4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals ensuring the safety of the food chain and protection of the environment | OIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Understand and apply principles of clinical management, and evidence-based practice in veterinary medicine | DOC 1.9 |
| Demonstrate the ability to deal with incomplete information, unforeseen situation and adapt to current changes | DOC 1.11 |
| Demonstrate the ability to recognize personal and professional limitations and know the way how to address and get a professional advice, help and support when necessary | DOC 1.12 |
| Know how to take an accurate and relevant history of an individual animal or group of animals and their environment | DOC 1.15 |
| Master and restrain animals in a safe manner, with respect for the animal, also teach others how to assist the veterinarian in performing certain procedures | DOC 1.16 |
| Perform a complete clinical examination and demonstrate decision-making ability in clinical practice | DOC 1.17 |
| Given the available resources, develop appropriate treatment plans and conduct treatment in the interest of the animal entrusted to care | DOC 1.18 |
| Attend emergencies and provide first aid to common animal species (common animal species are listed in ESEVT SOP, 2019) | DOC 1.19 |
| Understand the contribution that imaging and other diagnostic techniques can make in diagnostics; be able to use basic equipment for imaging and efficient animal examinations in accordance with good health and safety practice and relevant regulations | DOC 1.23 |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|---|----------|
| Properly and responsibly prescribe and dispense drugs in accordance with recent laws and guidelines | DOC 1.26 |
| Report suspected serious adverse reactions | DOC 1.27 |
| Correctly apply biosecurity measures | DOC 1.28 |
| Adequately perform asepsis procedures | DOC 1.29 |
| Safely perform sedation and general and regional anesthesia; apply chemical methods of restrain | DOC 1.30 |
| Pain assessment and management | DOC 1.31 |
| Recognize when euthanasia is appropriate and perform it respecting the animal and using appropriate methods; showing empathy towards the feelings of the owner and others; taking care of the safety of present people; advise on the disposal of the carcass | DOC 1.32 |
| Be aware of the etiology, pathogenesis, clinical signs, diagnostics and treatment of common diseases and disorders that appear in certain animal species | DOC 2.5 |

Subject (Course): **Surgery, orthopaedics and ophthalmology 1**

Subject code for certificate: **198136**

IU-PR: 4

OIU-SK: 2,4,6

DOC: 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9; 1.11; 1.12; 1.13; 1.15; 1.16; 1.17; 1.18; 1.19;
1.21; 1.22; 1.23; 1.28; 1.29; 1.31; 1.32; 2.1; 2.5; 2.12

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | Take history, treat and restrain the animal in a safe and human way and perform the whole clinical examination. |
| 2 | Propose the other additional diagnostic examination which are needed to get objective status of the surgical patient. |
| 3 | Determine the way and content of treatment in postoperative period of patient; fill in surgical and anesthesiologic protocol and taking record in the book of patient in a way understandable to his/her profession and the public. |
| 4 | Administer safely the sedation, local and general anaesthesia and estimate the control of the pain. |
| 5 | Recognise states indicating appropriateness of euthanasia and make it in a human way understandable to the emotional state of the owner. |
| 6 | Apply techniques of first aid giving in case of bleeding, wounds, burns and frost bite injuries. |
| 7 | Perform techniques involving workup and bandaging the wounds, immobilisation and hemostasis. |
| 8 | Assist during surgical procedures, honoring the principles of aseptic surgery. |
| 9 | Be able to conservatively and surgically workup small wounds and apply basic techniques of stitching of organs and tissues and choose adequate suture material. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes | Code (1-10) |
|--|-------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death. | OSIU-SK 2 |
| Clinical, epidemiological and analytical skills and competences necessary for the prevention, diagnosis and treatment of diseases transmissible to humans | OSIU-SK 4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals and ensuring the safety of the food chain and environmental protection. | OSIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decision- making. | 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | 1.18 |
| Attend in an emergency and perform first aid in common animal species. | 1.19 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint. | 1.30 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. | 1.16 |
| Asses and manage pain. | 1.31 |
| Understand the aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species. | 2.5. |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|--|------|
| Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass. | 1.32 |
| Perform aseptic procedures appropriately. | 1.29 |
| Apply principles of bio-security correctly. | 1.28 |
| Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine. | 1.9 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | 1.11 |
| Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary. | 1.12 |
| Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations. | 1.23 |
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance. | 1.26 |
| Report suspected adverse reactions through the appropriate channel. | 1.27 |

Subject (Course): **Surgery, orthopaedics and ophthalmology 2**

Subject code for certificate: **198139**

IU-PR: 4

OIU-SK: 2,4,6

DOC: 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9; 1.11; 1.12; 1.13; 1.15; 1.16; 1.17; 1.18; 1.19;
1.21; 1.22; 1.23; 1.28; 1.29; 1.31; 1.32; 2.1; 2.5; 2.12

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | Recognize certain diseases of head and neck of small and large animals, as well as undergo basic treatment. |
| 2 | Recognize thoracic diseases and undergo basic treatment and stabilize thoracic patient and point him to referral clinic |
| 3 | Recognize various types of hernias and decide the type of treatment. |
| 4 | Recognize indications for castration in various animal species. |
| 5 | Recognize the patient with alimentary and urogenital disease, type of treatment and indication for pointing him to referral clinic |
| 6 | Decide for the indication for laparotomy in ruminants |
| 7 | Recognize the abdominal disease in a horse, with colic pain as the cardinal symptom |
| 8 | Discuss the basic postulates of surgical diagnostics and treatment of oncologic patient |
| 9 | Recognize the eye diseases of small and large animals and undergo basic treatment of eye disease, as well as emergency treatment, and pointing to referral clinic |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes – HKO | Code (1-7) |
|---|------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death. | OSIU-SK 2 |
| Clinical, epidemiological and analytical skills and competences necessary for the prevention, diagnosis and treatment of diseases transmissible to humans. | OSIU-SK 4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals and ensuring the safety of the food chain and environmental protection. | OSIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decision- making. | 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | 1.18 |
| Attend in an emergency and perform first aid in common animal species. | 1.19 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint. | 1.30 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. | 1.16 |
| Asses and manage pain. | 1.31 |
| Understand the aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species. | 2.5. |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|--|------|
| Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass. | 1.32 |
| Perform aseptic procedures appropriately. | 1.29 |
| Apply principles of bio-security correctly. | 1.28 |
| Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine. | 1.9 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | 1.11 |
| Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary. | 1.12 |
| Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations. | 1.23 |
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance. | 1.26 |
| Report suspected adverse reactions through the appropriate channel. | 1.27 |

Subject (Course): Field Service Clinic

Subject code for certificate: 226406

IU-PR: 4, 5

OIU-SK: 1, 2, 3, 4

DOC: DOC 1.5,1.11, 1.15, 1.16, 1.17,1.21, 1.28

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Independently perform all diagnostic procedures including methods of clinical examination in conditions of field work. |
| 2 | Taking samples from the live patients or cadavers which would enable material for all types of laboratory tests. Perform all obstetrical procedures that can be performed well in the conditions of fieldwork and routine gynecological and andrological exams for all aspects of clinical reproductive practice. Perform all surgical procedures adapted to conditions of fieldwork and thorough clinical examination of all kinds of internal diseases on farm. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. | IU-PR 4 |
| Prepare accurate clinical and client records, and case reports when necessary, in a form satisfactory to colleagues and understandable by the public | IU-PR 5 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-SK 1 |
| conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-SK 2 |
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | IU-SK-3 |
| Clinical, epidemiological and analytical skills and competencies required for prevention, diagnostics and treatment of diseases transmissible to humans (zoonoses) | IU-SK-4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Prepare accurate clinical and client records, and case reports when necessary, in a form satisfactory to colleagues and understandable by the public. | DOC 1.5 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques | DOC 1.16 |
| Perform a complete clinical examination and demonstrate ability in clinical decisionmaking. | DOC 1.17 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Apply principles of bio-security correctly. | DOC 1.28 |

Subject (Course): State Veterinary Medicine

Subject code for certificate: **212676**

IU-PR: 5, 6, 1 i 8

OIU-SK: OIU-SK: 2, 3 i 7

DOC: DOC: 1.1, 1.2, 1.10, 1.26, 1.32, 1.36, 2.6, 2.7 i 2.8

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | interpret, apply and implement the formal legislation of the area of the General Administrative procedure the Veterinary Act, the Veterinary Medicinal Products Act, the Food Act, the Animal Protection Act and subordinate legislation based on the above and equivalent regulations of secondary legislation of the European Union |
| 2 | know the procedure and manner of issuing the record and decisions in the administrative procedure related to veterinary activities |
| 3 | knowledge of the following procedures in veterinary medicine: veterinary checks and controls on farms, farms, livestock fairs and other facilities issuing animal health certificates, certificates for consignments of products of animal origin and feed; conducting compulsory marking of animals and keeping prescribed records on the identification and registration of animals of the movement, on the implementation of stipulated measures for the detection, prevention, control and control of infectious or parasitic diseases, take diagnostic material from animals, samples of products of animal origin and animal waste matter for the purpose of examining the health status of animals, i.e. the sanitary safety of products of animal origin |
| 4 | recognize the suspicion of an infectious or parasitic disease of interest to the Republic of Croatia and the EU |
| 5 | knowledge of the responsibility and obligations of natural and legal persons with regard to animal protection and protection of their health |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |
| know and apply laws and other administrative provisions related to food safety in hygiene procedures and technology of foodstuffs of animal origin intended for human consumption | IU-PR 6 |
| apply, analyze and interpret the knowledge of the sciences on which veterinary medicine is based in order to make evidence-based decisions | IU-PR 1 |
| apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | IU-PR 8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | OIU-SK 3 |
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society. | DOC 1.1 |
| Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. | DOC 1.2 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health. | DOC 1.10 |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|--|----------|
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance. | DOC 1.26 |
| Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass. | DOC 1.32 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards. | DOC 1.36 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |
| Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases. | DOC 2.7 |
| Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and antiparasitics. | DOC 2.8 |

Subject (Course): Food Hygiene and Technology

Subject code for certificate: **238178, 238191**

IU-PR: 6

OIU-SK: 5

DOC: 1.6, 1.10., 1.12, 1.24, 1.341.35, 2.6, 2.7, 2.9, 2.10

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | explain the structure, purpose and methods of veterinary inspection, control and monitoring of production, processing and distribution of food of animal origin |
| 2 | identify hazards and risks in the production and distribution of food of animal origin |
| 3 | interpret results quality assessment and health food safety |
| 4 | differentiate between types of food to the production process |
| 5 | define factors acceptability of food for human consumption |
| 6 | know legislation for the purposes of participation in the preparation and analysis reports in the field of hygiene and technology of food of animal origin |
| 7 | assess the hygiene practices of production facilities and indicators of process control |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| Know and apply laws and other administrative provisions related to food safety in hygiene procedures and technology of foodstuffs of animal origin intended for human consumption | IU-PR 6 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Adequate knowledge of hygiene and technology in production, processing and placing on the market of feed or food of animal origin intended for human consumption | OIU- SK 5 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|---------------------|
| Work effectively as a member of a multi-disciplinary team in the delivery of services. | DOC 1.6 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health | DOC 1.10 |
| Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary | DOC 1.12 |
| Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities | DOC 1.24 |
| Perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain | DOC 1.34 |
| Perform inspection of food and feed including post-mortem inspection of food producing animals and inspection in the field of related food technology. | DOC 1.35 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |
| Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases. | DOC 2.7 |
| The principles of disease prevention and the promotion of health and welfare. | DOC 2.9 |
| Veterinary public health issues, e.g. epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology. | DOC 2.10 |

Subject (Course): **Veterinary Epidemiology**

Subject code for certificate: **212609**

IU-PR: 5,7,9

OIU-SK: 2,3,4

DOC: 1.8, 1.21, 1.22, 1.36, 2.9, 2.10

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | Identifying the types of data, types of sampling, collecting, sorting and processing of data |
| 2 | Applying epidemiological methods in biomedical research |
| 3 | Interpretation of association (risk, odds ratio, etiological fraction, ...) |
| 4 | Evaluation of diagnostic tests, defining the cut off values, interpretation of sensitivity, specificity and predictive values of the diagnostic test |
| 5 | Analysis and decision making in the implementation of preventive measures |
| 6 | Support in the planning of programs of animal and public health care |
| 7 | Application of epidemiological methods in research |
| 8 | Interpretation of the basic epidemiological concepts |
| 9 | To distinguish and interpret the epidemiological studies |
| 10 | To distinguish and calculate the measures of the epidemiological assessment of disease occurrence and association |
| 11 | To be able to make own study design |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|-------------|
| conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic diseases of animals, with special emphasis on on the concept of One Health | IU-PR 5 |
| independent search of literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-PR 7 |
| communicate effectively with scientific community, field practitioners, clients and general public, educate and collaborate in different social contexts, with the ability to act independently and in teams | IU-PR 9 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| Competences needed for prevention, diagnostics and treatment | OIU-SK 2 |
| Acquired knowledge for planning and inclusion of preventive medicine, including certificate issuing | OIU-SK 3 |
| All necessary skills for diagnostics, prevention and treatment of zoonotic diseases | OIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| 1.8 Be able to review and evaluate literature and make critical overview | DOC 1.1 |
| 1.21 Understand how to collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results | DOC 2.2 |
| 1.22 Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history. | |
| 1.36 Advise on, and implement, preventive and eradication programmes appropriate to the species and course/duration of disease, in line with accepted animal health, welfare and public health standards. | |
| 2.9 The principles of disease prevention and the promotion of health and welfare. | |
| 2.10 Veterinarska javnozdravstvena pitanja (epidemiologija, prekogranične epizootske bolesti, zoonoze i bolesti koje se prenose hranom, bolesti u nastajanju i ponovnom pojavljivanju, higijena hrane i tehnologija...) | |

Subject (Course): Surgery, orthopaedics and ophthalmology 3

Subject code for certificate: 238174

IU-PR: 4

OIU-SK: 2,4,6

DOC: 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9; 1.11; 1.12; 1.13; 1.15; 1.16; 1.17; 1.18; 1.19; 1.21; 1.22; 1.23; 1.28; 1.29; 1.31; 1.32; 2.1; 2.5; 2.12

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | Recognise diseases of muscles, tendons, joints and ligaments in small animals, determine the basic treatment and indication for referring patients to a referral clinic. |
| 2 | Diagnose fracture and use basic ways to treat fractures in small animals. |
| 3 | Give the first aid to a patient, immobilize the fracture and recommend other options of treatment. |
| 4 | Recognise type of lameness, diseases of muscles, tendons and tendon sheaths in large animals. |
| 5 | Recognise paralyzes and paresis in small and large animals and estimate indication for referring patients to a referral clinic. |
| 6 | Recognise hoof and toes diseases in large animal, treat simple cases and indicate possible need to refer the patient to a referral clinic |
| 7 | Know basics of hoof corrections, types of horseshoes and with the basic techniques of toes corrections. |
| 8 | Perform basic neurological examination, diagnostics of a fracture and luxation of vertebrae and estimate the indication for referring the patients to a referral clinic. |
| 9 | Diagnose diseases of intervertebral disc and degenerative diseases of vertebral column and is able to estimate indication for referring the patents to a referral clinic. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnosis and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death. | OSIU-SK 2 |
| Clinical, epidemiological and analytical skills and competences necessary for the prevention, diagnosis and treatment of diseases transmissible to humans | OSIU-SK 4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals and ensuring the safety of the food chain and environmental protection. | OSIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decision- making. | 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | 1.18 |
| Attend in an emergency and perform first aid in common animal species. | 1.19 |
| Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint. | 1.30 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. | 1.16 |
| Asses and manage pain. | 1.31 |
| Understand the aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species. | 2.5. |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|--|------|
| Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcase. | 1.32 |
| Perform aseptic procedures appropriately. | 1.29 |
| Apply principles of bio-security correctly. | 1.28 |
| Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine. | 1.9 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | 1.11 |
| Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary. | 1.12 |
| Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safely practice and current regulations. | 1.23 |
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance. | 1.26 |
| Report suspected adverse reactions through the appropriate channel. | 1.27 |

Subject (Course): **Obstetrics and Reproduction 2**

Subject code for certificate: **212606**

IU-PR: 4

OIU-SK: 2, 4, 6

DOC: 1.9, 1.11, 1.12, 1.15, 1.16, 1.17, 1.18, 1.19, 1.23, 1.26, 1.27, 1.28, 1.29, 1.30, 1.31, 1.32, 2.5

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|--|
| 1 | to explain the irregular ovarian function in domestic animals |
| 2 | to relate the impact of feeding and keeping animals on their reproduction |
| 3 | to use knowledge about inflammatory diseases and conditions of uterus and its diagnostics |
| 4 | to check parturient animal and being acquainted with the parturition pathology, obstetrical and gynaecological surgery |
| 5 | to diagnose congenital and acquired pathology of the reproductive organs that cause infertility |
| 6 | to independently choose a proper method to assist the difficult parturition |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | LO4 |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|-------------|
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnostics and treatment of animal diseases, including anaesthesia, aseptic surgery and painless death | IU-PR 2 |
| Clinical, epidemiological and analytical skills and competences required for the prevention, diagnostics and treatment of zoonotic diseases | IU-PR 4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals ensuring the safety of the food chain and protection of the environment | IU-PR 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|--|--------------|
| Understand and apply principles of clinical management, and evidence-based practice in veterinary medicine | DOC 1.9 |
| Demonstrate the ability to deal with incomplete information, unforeseen situation and adapt to current changes | DOC 1.11 |
| Demonstrate the ability to recognize personal and professional limitations and know the way how to address and get a professional advice, help and support when necessary | DOC 1.12 |
| Know how to take an accurate and relevant history of an individual animal or group of animals and their environment | DOC 1.15 |
| Master and restrain animals in a safe manner, with respect for the animal, also teach others how to assist the veterinarian in performing certain procedures | DOC 1.16 |
| Perform a complete clinical examination and demonstrate decision-making ability in clinical practice | DOC 1.17 |
| Given the available resources, develop appropriate treatment plans and conduct treatment in the interest of the animal entrusted to care | DOC 1.18 |
| Attend emergencies and provide first aid to common animal species (common animal species are listed in ESEVT SOP, 2019) | DOC 1.19 |
| Understand the contribution that imaging and other diagnostic techniques can make in diagnostics; be able to use basic equipment for imaging and efficient animal examinations in accordance with good health and safety practice and relevant regulations | DOC 1.23 |
| Properly and responsibly prescribe and dispense drugs in accordance with recent laws and guidelines | DOC 1.26 |
| Report suspected serious adverse reactions | DOC 1.27 |
| Correctly apply biosecurity measures | DOC 1.28 |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|---|----------|
| Adequately perform asepsis procedures | DOC 1.29 |
| Safely perform sedation and general and regional anesthesia; apply chemical methods of restrain | DOC 1.30 |
| Pain assessment and management | DOC 1.31 |
| Recognize when euthanasia is appropriate and perform it respecting the animal and using appropriate methods; showing empathy towards the feelings of the owner and others; taking care of the safety of present people; advise on the disposal of the carcass | DOC 1.32 |
| Be aware of the etiology, pathogenesis, clinical signs, diagnostics and treatment of common diseases and disorders that appear in certain animal species | DOC 2.5 |

Subject (Course): Infectious Diseases of Domestic Animals

Subject code for certificate: **212680**

IU-PR: 3, 4, 5, 8, 10

OIU-SK: 2, 3, 4, 6

DOC: 1.3, 1.5, 1.6, 1.8, 1.9, 1.10, 1.11, 1.13, 1.15, 1.17, 1.18, 1.19, 1.21, 1.22, 1.24, 1.26, 1.28, 1.32, 1.36, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Recognise the suspicion of an infectious disease. |
| 2 | Identify the factors that determine infectious disease occurrence, spread and termination. |
| 3 | Apply measures to prevent the immediate spread of infectious diseases. |
| 4 | Carry out a diagnostic procedure with the aim of raising the suspicion of an infectious disease. |
| 5 | Choose the sampling method of diagnostic material and the necessary laboratory tests for objective diagnosis of infectious diseases. |
| 6 | Evaluate the laboratory test results. |
| 7 | Choose a further procedure with the animals suffering from an infectious disease. |
| 8 | Carry out targeted treatment. |
| 9 | Implement legally prescribed measures for the control and/or eradication of infectious diseases. |
| 10 | Recommend measures for the suppression and prevention of infectious diseases that are not legally regulated. |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Independently use appropriate laboratory equipment and conduct critical analyses of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine. | IU-PR 3 |
| Actively apply expertise in conducting clinical, obstetric and surgical procedures and make recommendations for diagnosis, treatment and prognosis of disease, considering the needs of animals and owners, available resources, and financial and legal requirements. | IU-PR 4 |
| Understanding of preventive veterinary medicine procedures and implementing programs to prevent and control bacterial, viral and parasitic animal diseases, with particular emphasis on infectious diseases and zoonoses and the concept of One Health. | IU-PR 5 |
| Apply legal and ethical principles of the veterinary profession in health, safety and legal issues, veterinary activities—compliance and enforcement of professional ethics, responsibilities and norms in veterinary medicine. | IU-PR 8 |
| Recognise the need and show willingness to be included in the lifelong education process for further professional development and implementation of veterinary activity according to the profession's highest standards. | IU-PR 10 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological and analytical skills and competences necessary for prevention, diagnosis and treatment of animal diseases, including anesthesia, aseptic surgery and painless death. | OIU-SK 2 |
| Adequate knowledge, skills and competencies in preventive medicine, including competencies related to inquiries and certification. | OIU-SK 3 |
| Clinical, epidemiological and analytical skills and competences necessary for prevention, diagnosis and treatment of diseases transmissible to humans. | OIU-SK 4 |
| Knowledge, skills and competences necessary for the responsible and reasonable use of veterinary drugs for the treatment of animals and ensuring the safety of the food chain and environmental protection. | OIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
|---|---------------------|

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|--|----------|
| Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice. | DOC 1.3 |
| Prepare accurate clinical and client records, and case reports when necessary, in a form satisfactory to colleagues and understandable by the public. | DOC 1.5 |
| Work effectively as a member of a multidisciplinary team in the delivery of services. | DOC 1.6 |
| Be able to review and evaluate literature and presentations critically. | DOC 1.8 |
| Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine. | DOC 1.9 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health. | DOC 1.10 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |
| Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence. | DOC 1.13 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decision-making. | DOC 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | DOC 1.18 |
| Attend in an emergency and perform first aid in common animal species*. | DOC 1.19 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history. | DOC 1.22 |
| Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities. | DOC 1.24 |
| Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance. | DOC 1.26 |
| Apply principles of bio-security correctly. | DOC 1.28 |
| Recognise when euthanasia is appropriate and perform it with respect of the animal, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass. | DOC 1.32 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards. | DOC 1.36 |
| Understand the aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species*. | DOC 2.5 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |
| Understand legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases. | DOC 2.7 |
| Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and antiparasitics. | DOC 2.8 |
| Understand the principles of disease prevention and the promotion of health and welfare. | DOC 2.9 |
| Veterinary public health issues, e.g. epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology. | DOC 2.10 |

Subject (Course): Poultry diseases

Subject code for certificate: 253998

IU-PR: 2, 3, 4, 5

OIU-SK: 1, 2, 3, 4, 6

DOC: 1.3, 1.10, 1.15, 1.16, 1.17, 1.18, 1.20, 1.21, 1.22, 1.24, 1.28, 1.33, 1.36, 2.3, 2.5, 2.6, 2.9, 2.10

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | Recognize poultry diseases of infectious and noninfectious ethiology |
| 2 | Knowing basics of technology principals and poultry health protection be able to independently organize health control on poultry holdings in defined area |
| 3 | Independently estimate serology and other diagnostic procedure results and recommend and apply immunoprotection measures |
| 4 | Independently apply basic principles of treatment and other procedures with aim to protect and control specific diseases, especially zoonosis. |
| 5 | Perform necropsy and select appropriate samples for further diagnostic procedures |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| Apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| Independently use appropriate laboratory equipment and conducts critical analyzes of laboratory test results, with an understanding of applied techniques and diagnostic procedures in veterinary medicine | IU-PR 3 |
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |
| Conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Primjereno poznavanje strukture, ponašanja i fizioloških potreba životinja te vještine i kompetencije potrebne za njihov uzgoj, prehranu, dobrobit, reprodukciju i higijenu općenito | OIU-SK 1 |
| Kliničke, epidemiološke i analitičke vještine i kompetencije potrebne za prevenciju, dijagnostiku i liječenje bolesti životinja, uključujući anesteziju, aseptične operacije i bezbolnu smrt | OIU-SK 2 |
| Primjereno znanje, vještine i kompetencije za preventivnu medicinu, uključujući kompetencije koje se odnose na upite i izdavanje potvrda | OIU-SK 3 |
| Kliničke, epidemiološke i analitičke vještine i kompetencije potrebne za prevenciju, dijagnostiku i liječenje bolesti prenosivih na ljude | OIU-SK 4 |
| Znanje, vještine i kompetencije potrebne za odgovornu i razumnu upotrebu veterinarskih lijekova radi liječenja životinja te osiguravanja sigurnosti prehrambenog lanca i zaštite okoliša | OIU-SK 6 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice. | DOC 1.3 |
| Use their professional capabilities to contribute to the advancement of veterinary knowledge and One Health concept, in order to improve animal health and welfare, the quality of animal care and veterinary public health | DOC 1.10 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. | DOC 1.16 |
| Perform a complete clinical examination and demonstrate ability in clinical decision-making. | DOC 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | DOC 1.18 |

Obrazac 1 en – Course certification - VEFUNIZG

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|---|----------|
| Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding | DOC 1.20 |
| Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results. | DOC 1.21 |
| Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history. | DOC 1.22 |
| Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities. | DOC 1.24 |
| Apply principles of bio-security correctly | DOC 1.28 |
| Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them. | DOC 1.33 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards. | DOC 1.36 |
| Understand the structure, function and behaviour of animals and their physiological and welfare needs. | DOC 2.3 |
| Understand the aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common animal species | DOC 2.5 |
| Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |
| Understand the principles of disease prevention and the promotion of health and welfare. | DOC 2.9 |
| Veterinary public health issues, e.g. epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology. | DOC 2.10 |

Subject (Course): **Veterinary Economics**

Subject code for certificate: **226402**

IU-PR: 9

OIU-SK: 3

DOC: 1.2, 1.4, 1.7, 2.6

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|---|
| 1 | interpret basic economic terms |
| 2 | explain the laws of production and economic success indicators |
| 3 | explain and interpret criteria in decision analysis |
| 4 | recognize and assign costs |
| 5 | make veterinary calculations |
| 6 | apply economic methods of loss assessment due to animal disease |
| 7 | apply economic assessment procedures on animal health protection programs and decision making |
| 8 | draft a systematic animal health protection program |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|---|--------------------|
| communicate effectively with colleagues, clients and the public, educate and collaborate in different social contexts, with the ability to act independently and in teams | IU-PR 9 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|--|-------------------|
| Primjereno znanje, vještine i kompetencije za preventivnu medicinu, uključujući kompetencije koje se odnose na upite i izdavanje potvrda | OIU-SK 3 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| 1.2 Demonstrate knowledge of the organisation, management and legislation related to a veterinary business economics and employment rights. | DOC 1.2 |
| 1.4 Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. | DOC 1.4 |
| 1.7 Understand the economic and emotional context in which the veterinary surgeon operates. | DOC 1.7 |
| 2.6 Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade. | DOC 2.6 |

Subject (Course): Forensic Veterinary Medicine

Subject code for certificate: **226395**

IU-PR: 4, 7 i 9

OIU-SK: OIU-SK: 2, 3 i 7

DOC: DOC: 1.1, 1.4, 1.11, 1.24, 1.33 i 2.12

| IU Number | Learning outcome at the course level - VEFUNIZG |
|------------------|--|
| 1 | apply the acquired knowledge of veterinary medicine clinics, veterinary public health, animal production and biotechnology with newly acquired ones in the field of forensic veterinary medicine to use in veterinary medicine |
| 2 | recognize the responsibility of future veterinary staff in dealing on requests by judicial authorities, inspection control, legal and natural persons |
| 3 | recognize and apply of formal and material legislation of Civil, Misdemeanour and Criminal Act |
| 4 | knowledge of the professional witness and expert witness duties in report writing and giving evidence in court |
| 5 | ability to investigate, collect evidence from or prepare reports about matters concerning crime scene investigation |
| 6 | knowledge of the procedure of identification of vertebrates from the preparation of various biological samples to the performance of selected molecular methods |
| 7 | ability to carry out forensic necropsy as full as possible, in order to ascertain the cause of death, the mechanism of death and the manner of death |
| 8 | ability to carry out forensic clinical examination of an animal prior to purchase or that might be the subject of a legal case |
| 9 | ability to estimate the value of animals relevant to legal and insurance cases |
| 10 | knowledge of medical-legal and forensic aspects of most important animal diseases and disorders |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|--------------------|
| actively apply expertise in conducting clinical, obstetric and surgical procedures, and make recommendations for diagnosis, treatment and prognosis of disease taking into account the needs of animals and owners, available resources, as well as financial and legal requirements | IU-PR 4 |
| communicate effectively with colleagues, clients and the public, educate and collaborate in different social contexts, with the ability to act independently and in teams | IU-PR 9 |
| independently search literature, databases and other sources of information in order to improve theoretical knowledge and practical skills in solving professional and scientific problems in the field of veterinary medicine | IU-PR 7 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|-------------------|
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | OIU-SK 3 |
| Adequate knowledge of the science on which basis of activity of veterinarians relies on and knowledge of EU law that relates to that activities | OIU-SK 7 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|---------------------|
| Understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society. | DOC 1.1 |
| Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. | DOC 1.4 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |

Obrazac 1 en – Course certification - VEFUNIZG

| | |
|---|----------|
| Recognise signs of possible notifiable, reportable and zoonotic diseases as well as abuse and take appropriate action, including notifying the relevant authorities. | DOC 1.24 |
| Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them. | DOC 1.33 |
| The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare-related ethics. | DOC 2.12 |

Subject (Course): Herd Health
Subject code for certificate: 238195

IU-PR: 2, 5, 8

OIU-SK: 1, 2, 3, 4

DOC: 1.4, 1.11, 1.15, 1.17, 1.18, 1.28, 1.36

| IU Number | Learning outcome at the course level - VEFUNIZG |
|-----------|---|
| 1 | Basic principles of herd health and production management |
| 2 | Interpreting the farm status according to general requirements |
| 3 | Organizing the farm visits |
| 4 | Complete the farm report with present state, plans for the future and veterinarian recommendation for the improvement |

| Learning outcome (IU-PR) at the level of the study program to which the course contributes - VEFUNIZG | Code (1-10) |
|--|-------------|
| apply a professional and ethical approach in all areas of veterinary activity in order to improve the health and conditions of feeding, housing, welfare and production of all species of animals | IU-PR 2 |
| conduct preventive veterinary medicine, and implement programs for prevention and control of bacterial, viral and parasitic animal diseases, with special emphasis on infectious diseases and zoonoses and the concept of One Health | IU-PR 5 |
| apply the legal and ethical professional principles on health, safety and legal issues, respect and implementation of professional ethics, responsibilities and standards in veterinary medicine | IU-PR 8 |

| Learning outcome (OIU-SK) at the level of the qualification standard to which the course contributes - HKO | Code (1-7) |
|---|------------|
| Adequate knowledge of structures, behaviors and physiological needs of animals and skills and competencies required for animal breeding, nutrition, welfare, reproduction and hygiene in general | OIU-SK 1 |
| Clinical, epidemiological, and analytical skills and competencies required for prevention, diagnostics and treatment of animal diseases, including anesthesia, aseptic operations and painless euthanasia | OIU-SK 2 |
| Adequate knowledge, skills and competencies for preventive medicine, including competencies relating to inquiries and issuance of certificates | OIU-SK 3 |
| Clinical, epidemiological and analytical skills and competencies required for prevention, diagnostics and treatment of diseases transmissible to humans (zoonoses) | OIU-SK 4 |

| Learning outcome Day One Competences to which the course contributes - EAEVE | Code (36+12) |
|---|--------------|
| Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. | DOC 1.4 |
| Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change. | DOC 1.11 |
| Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment. | DOC 1.15 |
| Perform a complete clinical examination and demonstrate ability in clinical decisionmaking. | DOC 1.17 |
| Develop appropriate treatment plans and administer treatment in the interests of the animals under their care with regard to the resources available. | DOC 1.18 |
| Apply principles of bio-security correctly. | DOC 1.28 |
| Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards. | DOC 1.36 |