



Establishment of postgraduate
master studies of veterinary
medicine in English



POSTGRADUATE MASTER STUDIES

Faculty of Veterinary Medicine, Zagreb



Evropska unija
"Zajedno do boljitka EU"



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Establishment of postgraduate master studies of veterinary medicine in English

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ABOUT OUR FACULTY

The Faculty of Veterinary Medicine, the University of Zagreb is a public institution of higher education, which organizes and conducts university study courses, and performs scientific and highly professional work in the realm of biomedicine and health, in the field of veterinary medicine, and other related fields, as well as educational life-long learning programmes for doctors of veterinary medicine. It was founded one hundred years ago, in 1919., as one of the oldest faculties in the Republic of Croatia, and by its long tradition and established criteria of excellence, is inseparable from the development of the veterinary profession in the territory of Croatia.

Over the one hundred years of its existence, the Faculty has executed its basic educational and scientific function in the realm of veterinary medicine. The University graduate study course is now run as an integrated under-graduate and graduate course in veterinary medicine and lasts six years. Apart from the course in Croatian, there is also an integrated course in veterinary medicine in English. At the Veterinary Faculty, there is also a post-graduate PhD course in veterinary sciences, which in 2017 received the designation of high quality from the Agency for Science and Higher Education, as well as many other specialized post-graduate course.

Apart from education and scientific research, the Faculty conducts many professional activities in many fields, such as: veterinary public health and environment protection, clinical and in-field diagnostics, treatment and prevention of illnesses of animals and zoonoses, supervision and professional expertise in the field of veterinary medicine and breeding of animals, research and production of medication intended for the protection of animal health, designing and organizing livestock production, and hygiene and technology in the production of foodstuffs of animal origin.



POSTGRADUATE MASTER STUDIES

The dynamic nature of veterinary medicine and the everyday development of new insights and techniques require continual training and raising the level of one's own competences. The Faculty of Veterinary Medicine, University of Zagreb, as an EAEVE approved institution with 100 years of tradition in educating veterinarians, offers 15 post-graduate specialized courses, lasting one or two years.

These newly designed courses offer innovative approach to fully accommodate needs of the students, offering discipline oriented courses (i.e. surgery, epidemiology, farm biosecurity) and species specific courses like Porcine Health Management, Companion Animal Medicine or Bovine Health Management. Within programme, a certain level of mobility between courses is planned in order to enable students to create a course which will fully satisfy their future professional needs. Courses with existing dossier of competences will undergo VETCEE accreditation in the near future. Beside master's degree, courses are offering PG certificate and single module possibilities as a part of lifelong education programmes. Studies are oriented towards practical work, problem-based assignments and Journal Club reviews and discussions.

Stimulating environment, international recognition, long-term tradition, innovative and individual approach, and practical work are the reasons we wish to invite you to apply for Master degree at Veterinary Faculty University of Zagreb, Croatia.

Vice-dean for science, postgraduate education and lifelong learning
Assoc. Prof. Dean Konjević, DVM, PhD, Dipl. ECZM (Wildlife Population Health)
European Veterinary Specialist in Zoological Medicine



VETERINARY PHYSICAL THERAPY AND REHABILITATION - CERTIFIED CANINE REHABILITATION PRACTITIONER (CCRP)

Physical therapy and rehabilitation has become increasingly recognized in orthopedics and neurology as well as in canine athletes and working dogs. Understanding the animal's underlying disease or condition, specialists evaluate the patient, set up an effective treatment plan and successfully treat the patient.

Upon completion of the study programmes, students acquire qualifications for specialist work in the field of canine physical therapy and rehabilitation. Students will be able to:

- ▶ apply knowledge in the field of anatomy, neurology and biomechanics in the assessment of patients and the determination of rehabilitation protocols.
- ▶ apply the acquired theoretical knowledge of the effect of a particular method of physical therapy in the procedure of rehabilitation of orthopaedic and neurological patients.

The course consists of e-learning and presence days followed by clinical work, case reports and finally the exam. The program is aimed at graduates of veterinary medicine and draws from ongoing research, evidence based case studies and clinical experience.



Title: Master of Veterinary Canine Physical Therapy and Rehabilitation - Certified Canine Rehabilitation Practitioner

Head of the study:

Assistant Professor Zoran Vrbanac,
DECVSMR, DACVSMR

Email: zoran.vrbanac@vef.hr



ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **3.000 EUR per semester**





VETERINARY SURGERY, ANAESTHESIOLOGY AND OPHTHALMOLOGY WITH VETERINARY DENTISTRY - SMALL ANIMALS

Postgraduate course objectives are to promote structured professional development and life long learning of veterinarians in the field of small animal veterinary surgery. Participants will have opportunity to improve the level of theoretical knowledge, practical surgical skills and competencies needed to achieve expectation of owners and for the benefit of animal health and welfare.

Surgery-small animal postgraduate course emphasizes the importance of the individually tailored analgesic and anesthetic management providing the student with knowledge in performing anesthesia in patients with different diagnosis and for different types of surgery. The course addresses importance of preoperative planning, identification of key surgically anatomical structures, principles of tissue handling, perioperative decision-making and the limitations and contraindications related to surgeries in small animals. Ophthalmology aim to clarify basic surgical skills and introduce management options in the treatment of eye related diseases. Veterinary dentistry clarifies decision making and treatment strategies in this very complex medicinal specialization.

The postgraduate course goals are achieved through a mixture of theoretical case based and problem oriented lectures, seminars, book and journal clubs and practical exercises on cadavers and selected cases at the Clinic for surgery, orthopedics and ophthalmology, Faculty of Veterinary Medicine, University of Zagreb

Quality evaluation methods that ensure the acquisition of output knowledge, skills and competences are midterm exams, seminar papers, evaluation of students' practical skills and the final written exam.



Head of the study:

Professor Dražen Matičić, DVM, MSc, PhD, F.C.A.

Email: drmaticic@vef.hr



ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **4.900 EUR per semester**





VETERINARY PATHOLOGY

The principal reason for initiation of this study is to qualify attendants for independent work in the field of veterinary pathology. Another purpose is the conveying of new, primarily professional, but also scientific knowledge that was not sufficiently presented in the curriculum of the undergraduate study.

This kind of education will grant significantly higher work quality of doctors of veterinary medicine in the fields of diagnostics of diseases of domestic and wild animals, and veterinary public health. At the same time, it will enable unique approach to methodology and considerably easier upgrade of knowledge acquired through the means of courses integrated in continuous education. It should be noted that nowadays a veterinary pathologist is a diagnostician who together with other specialists takes part in diagnostics of diseases, as well as in their monitoring and assessment of treatment efficiency. The demand for veterinary pathologists is in increase throughout the world. Currently in the European community there is a program for specialization in veterinary pathology which is conducted by European College of Veterinary Pathology, and everybody who pass the exam earn the title of ECVP Diplomate, which is as such recognized in the whole world. Attendants of our speciality study will be notified of and in major part educated in compliance with mentioned European program, while at the same time appreciating our specificities. Those that will be interested in further upgrade of their study will be able to adjoin additional European education. It is important to note that two professors from the Department already have Diplomate degree in the veterinary pathology.

Upon completion of this course students will be able to:

- ▶ Conduct necropsies of all domestic species in a professional manner, for determining the cause of death or for making an opinion about the disease that caused the death
- ▶ come up with a list of differential diagnoses based on gross findings



Head of the study:

Assistant Professor Ivan-Conrado Šoštarić-Zuckermann, *Dipl. ECVP*

Email: isostaric@vef.hr



- ▶ determine laboratory methods that will prove with certainty the disease in question, what is especially important in infectious diseases, including zoonoses
- ▶ recognize basic changes and common lesions in a cytological slide coming from any tissue or fluid of a pet animal
- ▶ recognize basic changes and common lesions in a histopathological slide coming from domestic or wild animals

ECTS credits: **120 ECTS**
Duration: **4 semesters**
Fee: **5.000 EUR per semester**





REPRODUCTION IN FARM ANIMALS, EQUINES AND SMALL ANIMALS

The Reproduction & Obstetrics Clinic has a long and rich tradition of running courses for the lifelong training of doctors of veterinary medicine. This type of postgraduate education will provide the students not only theoretical but also practical experience thanks to the number of various patients admitted to the clinic. The scope of work at the clinic covers gynecological operations, artificial insemination, determining the optimal mating time, neonatology etc. The aim of training students is to acquaint them with the biotechnology of reproduction, contemporary approaches to diagnostics of pregnancy, prevention of infertility of domestic mammals, new insights in the field of reproduction of cattle and their practical application in everyday work. The study offers students education in essential areas of reproduction, with particular emphasis on prevention and treatment of fertility, or infertility. It includes a multidisciplinary approach and offers knowledge, skills and procedures in management, selection, feeding, animal welfare, prevention and treatment of metabolic, reproductive disorders, prevention and treatment of diseases of milk glands, infectious diseases, protection of the health of calves in order to improve reproduction and production.

By completing the studies, students will be qualified specialist trained to work on reproduction and infertility in domestic mammals.



Head of the study:

Professor Marko Samardžija, DVM, PhD

Email: smarko@vef.hr



ECTS credits: **120 ECTS**
Duration: **4 semesters**
Fee: **2.000 EUR per semester**





SMALL ANIMAL EMERGENCY AND CRITICAL CARE MEDICINE

Small animal emergency and critical care medicine is a one-year training post-graduate programme which provides a comprehensive knowledge of emergency medicine and management of cases with complex critical conditions. The programme focus is based on triage, stabilisation and life-saving procedures in small animals. The programme is consisted of multi-disciplinary approach in which students learn how to diagnose and treat emergent as well as critically ill patients. During the training programme students are obligated to attend lectures, practicals and to work with patients, supervised by various mentors depending on each subject (i.e. cardiology, neonatology, ophthalmology, endocrinology, neurology etc.). The training programme has a strong emphasis on clinical duties, but seminars and mentor guided learning are also integral parts of the programme. Furthermore, during the programme students will learn how to assess outcomes and to appreciate the economic and emotional factors involved in the patients' health care as well as to develop so called team-skills of interpersonal communications for proper colleague and client relationships. Since the case load highly varies (from 1 to 20 emergency cases per day) students will be obligated to work in night-shifts as well as during weekends. Successfully finished programme (passing the final written and oral exam) will result in being familiar with diseases and conditions afflicting small animal emergency and critically ill patients and being able to logically correlate all clinical data in order to formulate and execute correct treatment plans.

Diploma: Certified Emergency and Critical Care Specialist

Head of the study:

Associate Professor Mirna Brkljačić, DVM, PhD

Email: mbrkljagic@vef.hr





ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **6.000 EUR per semester**





FARM ANIMAL WELFARE

Farm Animal Welfare is a one-year (2 semesters) postgraduate master study with 60 ECTS credits indicating the workload required to complete the study. The task of the study is to upgrade student knowledge and skills with the latest concepts in the field, to render them competent for independent work in the field of farm animal welfare. The study is focused on the principles of animal welfare related to humane and ethically acceptable procedures in animal management, and legal regulations in the field of farm animal welfare including game breeding. The students will receive education in applied ethology, e.g., normal and abnormal behaviours in farm animals, welfare issues in these species, and possibilities for their welfare improvement. In addition, the latest concepts on the welfare indicators and assessment in particular farm animal species will be presented to students. Animal welfare in slaughterhouses relative to meat quality and safety is a separate subject. Students will also receive education on animal welfare economics. Upon completing the study, students receive Master's degree in Farm Animal Welfare. Students that have completed the studies in veterinary medicine or animal sciences can enrol this programme. Students need not enrol the entire study curriculum but only particular subjects for which they will receive a certificate with the respective ECTS credits as part of their continuing lifelong education.

Upon completion of the study, the students will be able to:

- ▶ explain the concepts of animal welfare
- ▶ use the knowledge in applied ethology to improve farm animal welfare
- ▶ assess poultry welfare
- ▶ assess cattle welfare
- ▶ assess pig welfare
- ▶ assess the welfare of sheep and goats
 - ▶ assess the welfare of farmed deer and gamebirds
 - ▶ assess the welfare of animals in slaughterhouses
 - ▶ point out the gaps in farm management
 - ▶ apply economic analyses of animal welfare
 - ▶ interpret legislation in the field of farm animal welfare protection.



Head of the study:

Associate Professor Mario Ostović, DVM, PhD

Email: mostovic@vef.hr



ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **7.500 EUR per semester**





PIG PRODUCTION AND HEALTH MANAGEMENT

The development of the veterinary medicine profession requires upgrading the knowledge acquired at the level of integrated undergraduate and graduate study in veterinary medicine in order to educate highly specialised experts in particular fields. Postgraduate master study of Pig Production and Health Management enables specialist training of students in successful organisation of intensive, semi-intensive and extensive production of pigs, prevention of diseases in production by proper management of animals and ensuring appropriate housing and feeding conditions, as well as compliance with zoo-hygienic measures, diagnosis, treatment and control of diseases that occur during production. Furthermore, upon completion of the study, the student will be trained to improve productivity and cost-effectiveness of production by applying methods of selection, breeding, molecular genetics and ensuring the welfare of breeding pigs. All of the aforementioned is a prerequisite for establishing the components of a programme to improve pig production and health.

During the course, practical training will be provided at several different locations: large and small family farms, clinics, slaughterhouses, molecular laboratory and a computer classroom.

The quality of the proposed programme is reflected in the previous experience, as well as in the scope of prominent experts and scientists covering certain areas, because only an interdisciplinary approach can ensure a comprehensive training of specialists in the field of pig health management and economic production. Furthermore, cooperation with veterinary organisations, experts in the field and producers (farms and family farms) vastly contributes to the quality of the study programme.

Therefore, the role of the postgraduate study Pig Production and Health Management is to provide experts with fast and efficient specialist education based on the development and state-of-the-art science, techniques and technology. It can be expected that



Head of the study:

Professor Anamaria Ekert Kabalin, DVM, PhD

Email: akabalin@vef.hr



the graduates of this study will have significant and internationally recognised expertise and have a competitive advantage in the labour market.

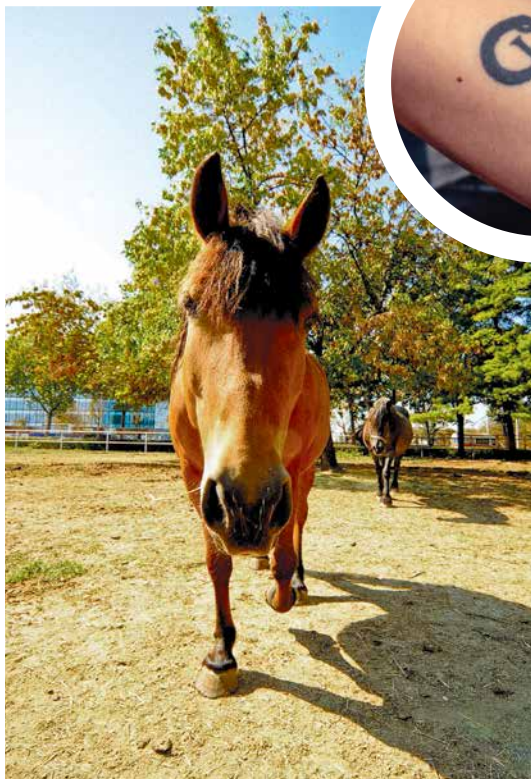
Enrolment conditions: Students who have graduated from the Faculty of Veterinary Medicine can enrol in the full study, while the module “Biotechnological Procedures in Pig Production” can be enrolled by students who have completed the university undergraduate studies at one of the faculties in the field of biomedicine, as well as applicants who have completed the graduate study at faculties of agronomy (agriculture), food and biotechnology, forestry and natural sciences and mathematics.

Academic / professional title acquired after study completion: Master of Pig Production and Health Management

ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **6.000 EUR per semester**









HEALTH PROTECTION IN BREEDING AND PRODUCTION OF SMALL RUMINANTS

Given the current trends in the development of small ruminant production, there is a growing need for additional training and specialisation of doctors of veterinary medicine. A good sheep and/or goat veterinarian has to have excellent diagnostic skills, and a solid understanding of the epidemiology of sheep diseases, and can apply that knowledge in the context of often complex farm business operations. Besides that, they have to be able to develop and introduce the whole farm approach to improve outcomes in all areas including profitability and efficiency of sheep production systems, the quality of sheep products and the welfare of the sheep in those systems. The role of the postgraduate study “Health Protection in Breeding and Production of Small Ruminants” is to provide experts with fast and efficient specialist education based on the development and state-of-the-art science, techniques and technology. The primary target group for enrolment in this study are students who have completed university study of veterinary medicine and who are interested to continue their education according to their desired specialisation in the field of sheep and goat production.

Upon completion of the postgraduate study students will have significant and internationally recognised expertise in:

- ▶ Technology of Breeding, Reproduction and Production of Sheep and Goats
 - > Sheep and goat farm as a system
 - > Management of sheep and goat reproduction
 - > Basics of welfare assessment in sheep and goat breeding



Head of the study:

Professor Velimir Sušić, DVM, PhD

Email: susic@vef.hr



- ▶ Health Protection in Sheep and Goat production
 - > The practical approach to health control in sheep and goat herds
 - > Herd health and production management programmes for sheep and goats

Academic / professional title acquired after study completion: Master of Health Protection in Breeding and Production of Small Ruminants

ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **7.500 EUR per semester**





AGRI-FOOD CHAIN MICROBIOLOGY

Connecting animal production and animal health with food safety concepts should be more integrated into modern food microbiology curricula. Within the concept of One Agri-Food Health, this includes all factors that influence the microbiological risks from the farm to the market.

The overall microbiological safety of food of animal origin should include the impact of measures and interventions at pre-harvest and post-harvest levels, such as feed safety and feeding modulations, hygiene and housing of farm animals, farm biosecurity, epizootiology/epidemiology of current biological hazards transmitted through the food chain, slaughterhouse hygiene and food processing hygiene. Furthermore, recent progress in laboratory tools and methods may significantly enhance the microbiological risk assessment applicable within the Agri-Food Chain approach.

During the course, practical training will be provided at several different locations: farms, slaughterhouses, molecular, -omics and microbiological laboratories and a computer classroom. The majority of lectures and seminars will be organized as Distance Learning.

Upon completion of this course students will be able to:

- ▶ explain the impact of feeding, biosecurity, and welfare of farm animals on (microbial) risks in the food chain;
- ▶ analyze food chain information (FCI) and harmonized epidemiological indicators;
- ▶ assess the microbiological risks in the food chain;
- ▶ conduct microbiological/serological/molecular analyses of food-chain samples and interpret results;
 - ▶ explain the integrated meat safety system from farm to slaughterhouse; and
 - ▶ select and implement the technological/hygiene interventions to reduce microbiological risks in the food chain.



Head of the study:

Associate Professor Nevijo Zdolec, DVM, PhD

Email: nzdolec@vef.hr



ECTS credits: **60 ECTS**
Duration: **2 semesters – 1 year**
Fee: **6.000 EUR per semester**





FARM BIOSECURITY

Farm Biosecurity is a postgraduate master study that offers necessary education to doctors of veterinary medicine and other related professionals through upgrading their knowledge and skills acquired in their graduate studies for work in the field of farm biosecurity, aiming at protection of animal health and welfare, along with human and environmental protection. Nowadays, the concept of biosecurity, which implies an integral approach to managing the risks for human and animal health, including control of agricultural pests and environmental safety, has been integrated in the context of veterinary hygiene and public health. One of the special tasks of biosecurity is control of zoonoses, as well as of other risks of animal origin threatening humans and the environment. Therefore, any livestock production without engagement of these experts is hard to imagine.

Upon completion of the postgraduate study, the students acquire the qualification of a specialist who is theoretically and practically qualified and competent to work in the field of farm biosecurity.

Upon completion of the study, the students will be able to:

- ▶ evaluate the advantages and disadvantages of certain animal housing systems and to analyse the quality of the microclimatic complex
- ▶ assess the impact of soil, water and air on animal health and productivity and explain the environmental impact of animals
- ▶ define the term biosecurity and explain the impact of biosecurity measures on animal health and welfare
- ▶ apply methods of preventing the intake and spread of invasive diseases in animal breeding
- ▶ explain the features of the most important pathogens of infectious diseases
 - ▶ explain the mechanism of toxic effects of pesticides on the organism
 - ▶ define the basic principles of immunoprophylaxis
 - ▶ plan disinfection implementation
 - ▶ plan disinsection implementation



Head of the study:

Professor Kristina Matković, DVM, PhD

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- ▶ plan deratisation implementation
- ▶ explain and identify the risk factors in animal farming
- ▶ prepare and interpret checklists, apply assessment forms and point out gaps in the implementation of biosecurity measures.

Upon completing the study, students receive specialist qualification, making them competent for work in the field of farm biosecurity. Students having enrolled and completed particular subjects from the study programme, as well as those having enrolled the entire study programme but without passing all exams including final exam, can receive a certificate on the particular segment of the study programme as part of their continuing lifelong education with the respective ECTS credits.

ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **7.500 EUR per semester**





VETERINARY EPIDEMIOLOGY

Veterinary epidemiology, especially analytic veterinary epidemiology, is a relatively young scientific and teaching discipline that is developing at a very fast rate, especially in the most developed countries. It is an indispensable and integral part of the curricula in the education of veterinary medicine doctors. However, ever-increasing demands on veterinary medicine doctors working in all fields of veterinary medicine, especially in the field of veterinary public health, food safety and preventive medicine, require a more specific specialisation and more detailed knowledge and skills pertaining to this area. The number of scientists and experts who work within this scientific discipline in Croatia and who would enable Croatia to be involved in international research and developmental projects in this field is almost negligible.

This master study provides additional knowledge and new, primarily professional, but also scientific insights and experience for independent work in the field of veterinary epidemiology through a broader, integrated approach that is in line with the needs and scientific developments based on EU, RES, WHO and FAO regulations.

The aim of the postgraduate master study of Veterinary Epidemiology is to acquire theoretical and practical knowledge in the field of epidemiology, statistics and data analysis that enables decision-making in animal health care, as well as to acquire knowledge in the field of economics that is focused on economic analysis of epidemiological data and application of epidemiology and the herd health concept in practical veterinary medicine.

Upon completion of this course students will be able to:

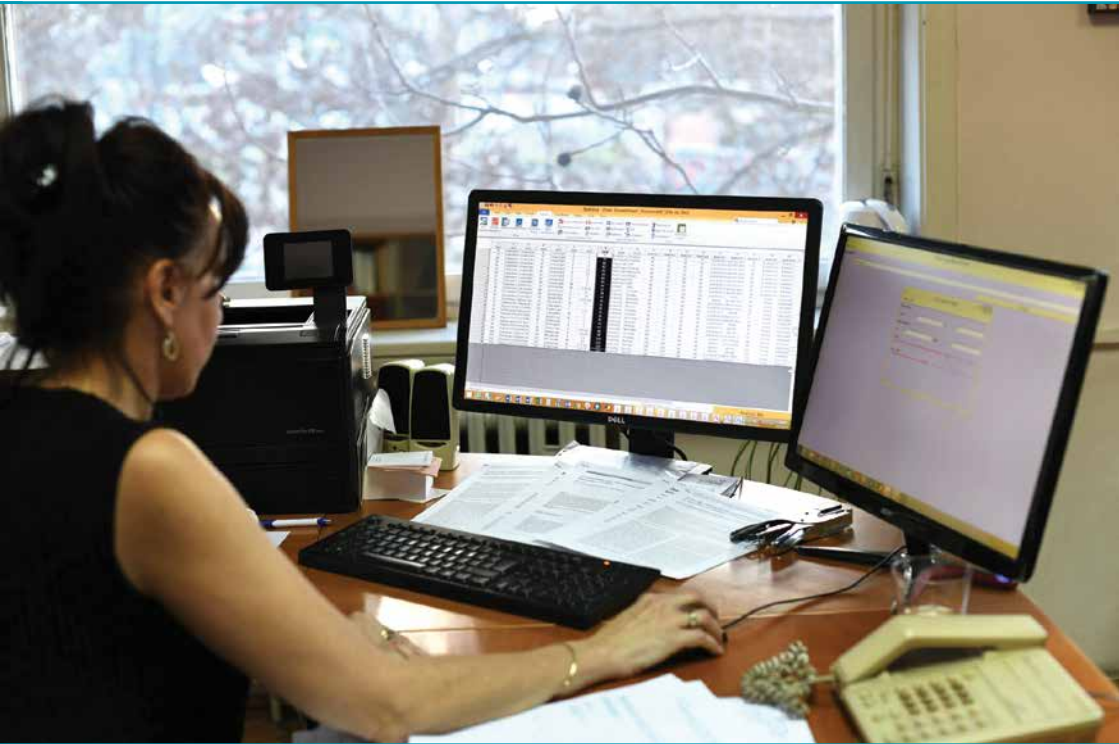
- ▶ Apply epidemiological methods in veterinary practice
- ▶ Apply epidemiological principles in surveillance and control of diseases in human and animal populations and organise and conduct disease surveillance, as well as surveillance and monitoring programmes as well as to develop crisis plans, organise and participate in crisis activities related to animal



Head of the study:

Professor Marina Pavlak, DVM, MSc. PhD

Email: marina.pavlak@vef.hr



and human health

- ▶ Plan and organise epidemiological studies/research and analyse and interpret results
- ▶ Organise and conduct research on disease outbreaks and analyse the collected data
- ▶ Integrate quantitative knowledge of the reliability of diagnostic protocols in the context of decision-making
- ▶ Conduct an economic evaluation of animal health issues at the farm, local community and state levels
- ▶ Know the basics of forecasting and simulation modelling of the incidence and consequences of diseases (including risk analysis) and interpret their results
- ▶ Communicate effectively with professionals of different profiles, policy makers and decision makers, as well as all other stakeholders in the decision-making and public information system

ECTS credits: **120 ECTS**
Duration: **4 semesters**
Fee: **6.000 EUR per semester**





FORENSIC VETERINARY MEDICINE

Forensic veterinary medicine is undoubtedly becoming increasingly important in today's law-and-order society that is 'getting close to perfection'. The conception of this field as a separate veterinary discipline that combines the overall veterinary knowledge and legal action in order to determine certain facts or explanations of the interaction of numerous facts and circumstances, and to establish credible material facts, has not changed to date. Knowledge acquired in the undergraduate studies is becoming insufficient for serious and professional engagement in this area. Specifically, the development of many veterinary disciplines and customary law requires that current and future professionals, who are using knowledge in the field of veterinary forensic medicine in their daily work (expert witness, court appointed expert, consultant to the insurance companies, veterinarian inspector...), obtain new insights. Therefore, the objective of this postgraduate specialist study is to build on the existing knowledge and to introduce students with primarily technical but also scientific insights and experience that will enable them to work independently in the field of veterinary forensics.

The main objective of this study will be to enable students to present their expert explanations by providing findings and opinions through the veterinary expertise and/or statements to the court or other body which seeks these services. Also, the procedure for determining material facts, weight of evidence, and providing evidence will be covered through almost all courses of study. Particular emphasis will be placed on the area of forensic pathology, identifying vertebrates, determining damage to animals and neglect and cruelty to animals. Participants will learn about the principles of forensic laboratories, accreditation procedures and quality management system as well as the process of validating the methods of expertise.

Upon completion of this course the students will be able to:

- ▶ interpret, apply and enforce formal and substantive legislation on administrative, civil and criminal proceedings in the areas of animal health protection, animal protection, the veterinary activities and civil obligations



Head of the study:

Professor Krešimir Severin, PhD, DVM

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- ▶ identify crime scenes that are relevant to the veterinary medical profession
- ▶ identify, collect, mark, and secure/protect biological traces and items that can serve as evidence
- ▶ determine, describe and assess mechanical, asphyxial and physical injuries and distinguishing between post-mortem tissue and organ damage
- ▶ establish a suspicion of a violent death
- ▶ apply entomology in forensics in determining the post-mortem interval, for cases of neglect and abuse of animals (myiasis), improper storage of foodstuffs, illegal trade in protected species, etc.
- ▶ analyze osteological material
- ▶ produce written findings and opinions

ECTS credits: **60 ECTS**
Duration: **2 semesters/1 year**
Fee: **4.000 EUR per semester**





WILDLIFE HEALTH AND MANAGEMENT

Wildlife Health and Management is an interdisciplinary specialist study intended to improve theoretical knowledge and practical skills necessary for health protection and conservation of wildlife. This course is designed in a way to offer complete individuality to each attendee, giving them the possibility to shape their education in a most suitable way. Optimal number of MSc students is 6.

Course is divided into core subjects and elective subjects provided within four directions (Game Health and Management; Large Carnivore Management; Reptile, Amphibian and Bird Health and Management; and Marine Mammal Conservation). The full length of the master course is two semesters (60 ECTS points) and covers all core subjects and one direction. Additionally, attendees can choose an option of postgraduate diploma which consists of one course direction and one of the core subjects. Final option is to choose postgraduate certificate which consists of one or more subjects aimed to upgrade specific skills and earn ECTS points that are transferrable to further education.

Cutting-edge topics include wildlife anesthesia, capture and translocation, reintroduction programs, conservation of species, fundamentals of wildlife diseases, habitat evaluation, problems at human-wildlife-livestock interface and health management of captive wildlife. The course is open for veterinarians, biologists, foresters and other natural sciences according to the entry requirements described in the program. The course is based at Veterinary Faculty University of Zagreb with a long tradition in wildlife research and several national and European wildlife projects, which guarantees the conduction of practice-based specialist course.



Head of the study:

Associate Professor Dean Konjević,

Dipl. ECZM (WPH)

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Upon completion of this study programme, students will be able to:

- ▶ actively participate in wildlife protection and species conservation programmes
- ▶ know the basics of wildlife management
- ▶ implement methods for capturing and transporting wildlife animals
- ▶ identify, control and prevent wildlife diseases
- ▶ identify, control and prevent zoonoses
- ▶ participate in fundamental epidemiological research related to wildlife

ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **4.000 EUR per semester**





LABORATORY ANIMAL MEDICINE

The veterinary profession is certainly one of the most responsible ones when it comes to the care, health and welfare of laboratory animals. Laboratory animals have enormous importance as models for predicting behavior, health, and disease in humans and animals. The education programmes offered today in the field of education for work with laboratory animals should be in line with Directive 2010/63/EU. Veterinarians with appropriate training and experience in laboratory animal medicine make important contributions to comparative medicine and biomedical science.

The objective of this study programme is to present basic facts and principles that are essential for the humane use and care of laboratory animals and for the quality of research. In this role, the program offers the acquisition of basic knowledge that includes legislation, anatomy, physiology and nutrition of laboratory animals (the emphasis is on the mouse and the rat), housing hygiene and welfare, laboratory animals as models in biomedical research, breeding and genetics, health management and pathology, the use of anesthetics and analgesics, appropriate surgical techniques and euthanasia and communication skills. The duration of the study programme is 2 semesters (1 year) and completion of the program brings 60 ECTS credits.

The course is primarily intended for veterinarians working in institutions with laboratory animals facilities and it is based at the Faculty of Veterinary Medicine University of Zagreb and Institute for Medical Research and Occupational Health.

Upon completion of this study programme, students will:

- ▶ Interpret the legislation concerning the use of animals for scientific purposes
- ▶ Gain a deeper knowledge of anatomy, physiology and nutrition of laboratory animals



Head of the study:

Associate Professor Andrea Gudan Kurilj,

DVM, PhD, DECV

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- ▶ Gain knowledge about laboratory animal care, health and management
- ▶ Implement the assessment of well-being, be able to recognize and alleviate pain, suffering and distress in laboratory animals and implement the Three Rs
- ▶ Be able to choose relevant animal model
- ▶ Be able to use of medicines, perform surgical and non-surgical interventions and gain knowledge about a naesthesia, analgesia and euthanasia

ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **4.000 EUR per semester**





HONEYBEE HEALTH PROTECTION

Beekeeping is more dependent on complex environmental factors than any other animal or food production industry, and currently, this important economy sector is faced with *health crisis*. Veterinarians have a vital role in the health of honeybee colonies and their notifiable disease monitoring, prevention, control and eradication. It is now known there is rather a variation with regard to the time of the veterinary studies that honeybee biology and pathology is taught throughout the different veterinary study curriculums in Europe and rest of the world. It is an area of veterinary medicine to which under graduate students get little exposure during their regular studies, but as veterinarians they should have knowledge about practical skills for clinical examinations of honeybee colonies and other veterinarian tasks at apiaries.

The veterinary profession strongly promotes the principle of continuous education and encourages veterinary education establishments to develop postgraduate opportunities to cover the needs of the veterinarians. This would enable graduate veterinarians to acquire the necessary competences and *hands-on* skills to be ready to practice veterinary medicine in apiaries. That means handling, examining, diagnosing and treating honeybee colonies, as well as ensuring the safety of their beehive products. Implementing good veterinary, beekeeping and environmental practices can guarantee the safety of apiculture food products as well as environmental biodiversity. Students of the Honeybee Health Protection master study programme shall acquire knowledge about the biology and diseases of honeybee colonies, important pollinator insects - wild bees, as well as the basics of the preservation and protection of natural biodiversity.

Upon completion of this study programme, students will:

- ▶ be able to actively participate in honeybee colony protection programmes and wild bee species conservation programmes;
- ▶ know the basics of managing apiaries and ancillary facilities;



Head of the study:

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- ▶ carry out all the tasks of veterinarians in the apiary in accordance with the requirements and specifics of the life of honeybee colonies as social insects;
- ▶ be able to identify, manage, control and prevent diseases of honeybee colonies;
- ▶ be able to participate in basic epidemiological research related to honeybee colonies as well as other selected pollinator insects (bumblebee colonies, solitary bees of the genus *Osmia*).

ECTS credits: **60 ECTS**
Duration: **2 semesters**
Fee: **8.000 EUR per semester**





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Establishment of postgraduate
master studies of veterinary
medicine in English



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