

## Postgraduate Teaching Programme for specialization no 4. „Diseases of dogs and cats”

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The course of training lasts 6 semesters (3 years)  
The total hours of teaching equals to 392,  
including 232 hours of lectures  
and seminars and 160 hours of internship

### Topics: lectures, seminars and practical classes

No	Topics	Hours			Total hours
		lectures	seminars	practical classes	
1.	<p><b>Dogs and cats breeding and principles of nutrition of ill and healthy animals:</b></p> <ul style="list-style-type: none"> <li>— dog breeds according to FCI standards,</li> <li>— cat breeds according to FCI standards,</li> <li>— congenital diseases and defects in dogs and cats,</li> <li>— socialization process in kittens and puppies,</li> <li>— principles of dogs and cats according to FCI regulations,</li> <li>— proper nutrition of dogs and cats,</li> <li>— nutrition in chosen pathological situations (diabetes, renal insufficiency, liver insufficiency, acidosis, pancreatitis, obesity),</li> <li>— methods and patterns of animal slimming,</li> <li>— attitudes and weaknesses of pet food,</li> <li>— diseases caused by abnormal nutrition,</li> <li>— parenteral nutrition methods – indications, attitudes and weaknesses.</li> </ul>	<b>12</b>	<b>4</b>	-	<b>16</b>
2.	<p><b>Infectious diseases:</b></p> <ul style="list-style-type: none"> <li>— principles of diagnostics, prophylaxis and</li> </ul>				

	<p>management of infectious diseases in dogs,</p> <ul style="list-style-type: none"> <li>— canine Distemper, Infectious canine hepatitis, Canine viral enteritis (parvovirus), Canine herpesvirus infection, canine infectious tracheobronchitis, Rabies,</li> <li>— enteric bacterial infections, leptospirosis, borreliosis, tetanus, brucellosis,</li> <li>— principles of diagnostics, prophylaxis and management of infectious diseases in cats,</li> <li>— feline leukemia virus infection, Feline parvovirus infection, Feline immunodeficiency viral infection, Feline coronavirus infection, Feline respiratory infections,</li> <li>— chlamydial infections, hemobartonellosis, salmonellosis, mycobacterial infections, cutaneous fungal infections,</li> <li>— laboratory diagnosis of viral, bacterial and fungal infections,</li> <li>— immunoprophylaxis,</li> <li>— antiviral and immunomodulatory chemotherapy, antibacterial and antifungal chemotherapy,</li> <li>— zoonoses.</li> </ul>	<b>12</b>	<b>4</b>	-	<b>16</b>
<b>3.</b>	<p><b>Parasitology:</b></p> <ul style="list-style-type: none"> <li>— parasitoses of dogs and cats imported into Poland. (E.g. leishmaniosis, dirofilariosis),</li> <li>— seldom noticed or described parasitic invasions of dogs and cats. E.g. isosporosis, cryptosporidiosis, neosporosis, urinary bladder capillariosis, respiratory tract capillariosis, crenosomosis, ollulanosis, aelurostrongylosis, angiostrongylosis,</li> <li>— parasitoses of dogs and cats and hazard to human health – toxoplasmosis, giardiasis, leishmaniosis, opisthorchosis, hydatidosis, alveococcosis, toxocarosis (visceral larva migrans), cutaneous larva migrans, epidemiology of parasitic zoonoses,</li> <li>— selected ectoparasites of dogs and cats and their importance as a pathogen vector,</li> <li>— diagnosis of parasitoses of dogs and cats. Effectiveness of classic and modern methods, possibility of performance under</li> </ul>	<b>10</b>	-	<b>2</b>	<b>12</b>

	<p>veterinary practice condition, interpretation of results, the most often committed mistakes,</p> <ul style="list-style-type: none"> <li>— control of parasitic invasions in dogs and cats. Effectiveness of antiparasitic agents in elimination of endo- and ectoparasites, control of therapy result, some programs of dogs and cats antiparasitic therapy – disadvantages and advantages.</li> </ul>				
<b>4.</b>	<p><b>Skin diseases:</b></p> <ul style="list-style-type: none"> <li>— physical examination of skin, morphology of primary and secondary skin lesions,</li> <li>— laboratory procedures in skin diseases.</li> </ul> <p><b>Skin diseases of dogs:</b></p> <ul style="list-style-type: none"> <li>— bacterial skin diseases,</li> <li>— parasitic skin diseases,</li> <li>— fungal skin diseases,</li> <li>— immunologic skin diseases (allergies, autoimmunological disorders),</li> <li>— endocrine dermatoses,</li> <li>— principles of topical and systemic treatment of skin diseases.</li> </ul> <p><b>Skin diseases of cats:</b></p> <ul style="list-style-type: none"> <li>— parasitic skin diseases,</li> <li>— fungal skin diseases,</li> <li>— immune-mediated skin diseases (allergies, autoimmunological disorders),</li> <li>— feline eosinophilic granuloma complex,</li> <li>— feline miliary dermatitis,</li> <li>— psychogenic dermatoses,</li> <li>— principles of topical and systemic treatment of skin diseases.</li> </ul>	<b>12</b>	<b>-</b>	<b>4</b>	<b>16</b>
<b>5.</b>	<p><b>Respiratory tract diseases:</b></p> <ul style="list-style-type: none"> <li>— species predispositions for respiratory tract diseases in dogs,</li> <li>— the principles of clinical examinations of dogs and cats and symptomatology of respiratory tract diseases,</li> <li>— upper respiratory tract diseases,</li> <li>— bronchial, lung and pleura disorders,</li> </ul>				

	<ul style="list-style-type: none"> <li>— acute and chronic respiratory insufficiency.</li> <li>— brachycephalic upper airway syndrome (BUAS),</li> <li>— the principles of therapy in respiratory tract diseases,</li> <li>— veterinary diagnostic imaging in respiratory tract diseases (Bronchoscopy, RTG, CT),</li> <li>— bronchoalveolar lavage (BAL).</li> </ul>	<b>8</b>	-	<b>2</b>	<b>8</b>
<b>6.</b>	<p><b>Cardiology:</b></p> <p><b>Acute and chronic cardiac failure:</b></p> <ul style="list-style-type: none"> <li>— the ethiology and classification of cardiac failure,</li> <li>— the compensatory mechanisms</li> <li>— canine and feline cardiac breed predisposition,</li> <li>— cardiological examination: anamnesis; clinical examination – palpation of arterial pulse and chest, heart percussion, auscultation of cardiac sound and murmur; differential diagnosis of cardiac failure,</li> <li>— the most common cardiac disorders in dogs and cats;</li> <li>— ethiology, clinical sign, diagnosis and therapy of chronic degenerative valvular disease, hypertrophic cardiomyopathy, dilatative cardiomyopathy and breed specific cardiomyopathies,</li> <li>— the therapy of congestive cardiac failure: positive inotropic drugs (glycoside, pimobendan, catecholamine), diuretics, ACEI; taurine, carnitine, PUFA, cardiac diets, “healthy live style”, anticoagulant drugs,</li> <li>— therapy of acute left cardiac failure - ABCD rule.</li> </ul> <p><b>Radiography, electrocardiography and echocardiography in cardiological diagnostics:</b></p> <ul style="list-style-type: none"> <li>— RTG examination: chest radiography; ventriculography, angiography,</li> <li>— elektrokardiography: different recordings metod, ECG leads; the normal and pathological heart electrical activity;</li> <li>— ECG recording and analysis: heart rate,</li> </ul>	<b>12</b>	-	<b>4</b>	<b>16</b>

	<p>duration and amplitude of waves, segment and intervals, the mean electrical axis. The artefacts. The most common arrhythmias in dogs and cats.</p> <ul style="list-style-type: none"> <li>— antiarrhythmic therapy,</li> <li>— echocardiography: the technics of cardiac ultrasonography, normal heart views; pathological picture of the heart and veessels in most common cardiovascular disease; echocardiographic artefacts.</li> </ul>				
<b>7.</b>	<p><b>Oral and dental disease small animals:</b></p> <ul style="list-style-type: none"> <li>— oral anatomy and physiology, oral examination and diagnosis, clinical oral pathology,</li> <li>— periodontal disease and general health, pathobiologic classification of periodontitis,</li> <li>— operative and restorative dentistry, components of prepared cavities, restorative materials,</li> <li>— basic endodontic therapy, root canal instruments, obturation techniques,</li> <li>— extraction of simple single- root teeth, multiroot extraction, complications,</li> <li>— oral neoplasms, diagnostic techniques, treatment principles,</li> <li>— basics of orthodontics, orthodontic appliances and materials.</li> </ul>	<b>6</b>	-	<b>2</b>	<b>8</b>
<b>8.</b>	<p><b>Esophageal Diseases, Gastrointestinal Diseases (Gastropathies and Enteropathies), Pancreatic and Liver Diseases (Pacreatopathies and Hepatopathies):</b></p> <p><b>Esophageal diseases and gastrointestinal diseases (gastropathies and enteropathies):</b></p> <ul style="list-style-type: none"> <li>— vomiting - diagnostic significance, principles of therapy,</li> <li>— esophageal diseases: achalasia, gastroesophageal reflux, esophagostenosis in cats,</li> <li>— gastropathies: gastric ulcers, gastric volvulus, reflux gastritis, acute and chronic gastritis, foreign bodies, neoplasms,</li> <li>— inflammatory bowel diseases (IBD),</li> <li>— antibiotic responsive diarrhea (ARD),</li> </ul>	<b>12</b>	-	<b>4</b>	<b>16</b>

	<ul style="list-style-type: none"> <li>— protein-losing enteropathy,</li> <li>— acute and chronic colitis,</li> <li>— acute and chronic diarrhea – differential diagnosis, therapeutic management, diet.</li> </ul> <p><b>Liver and pancreatic diseases (hepatopathies and pancreatopathies):</b></p> <ul style="list-style-type: none"> <li>— part I (general): symptomatology, clinical examinations, laboratory diagnostics, imaging techniques, liver biopsy, basic principles of hepatopathy treatment,</li> <li>— part II: selected non-infectious and non-inflammatory diseases in dogs and cats,</li> <li>— liver diseases (hepatopathies) in dogs: hepatic failure, acute and chronic hepatitis, idiopathic fibrosis of the liver, hepatocholangitis, focal nodular hyperplasia, neoplasm, congenital and acquired portocaval shunt, cirrhosis of the liver,</li> <li>— liver diseases (hepatopathies) in cats: hepatocholangitis, toxic hepatitis, fatty degeneration of the liver, bile duct obstruction, neoplasm, portocaval shunt, cirrhosis of the liver,</li> <li>— acute pancreatitis, exocrine pancreatic insufficiency,</li> <li>— constipations.</li> </ul> <p><b>Disturbances of the water-electrolyte balance and acid-base equilibrium, fluid therapy:</b></p> <ul style="list-style-type: none"> <li>— disturbances of the water-electrolyte balance: abnormalities in the levels of sodium, potassium, calcium and phosphorus,</li> <li>— disturbances of the acid-base equilibrium: metabolic, respiratory and mixed-type disorders,</li> <li>— fluid therapy: introduction, technical aspects, monitoring and potential complications,</li> <li>— fluid therapy in gastroenterological disorders and pancreatic diseases,</li> <li>— administration of electrolyte solutions in liver, kidney and heart diseases and metabolic disorders, and in the treatment of shock.</li> </ul>				
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<b>9.</b>	<b>Kidney Diseases (Nephropathies) and Urologic Diseases (Uropathies):</b> <ul style="list-style-type: none"> <li>— urologic diseases - symptomatology and diagnostic principles,</li> <li>— contrast X-ray imaging, ultrasound imaging,</li> <li>— disorders of micturition,</li> <li>— nephritis (interstitial nephritis, glomerulonephritis, nephrotic syndrome)</li> <li>— acute and chronic renal failure (peritoneal dialysis),</li> <li>— urinary tract infections,</li> <li>— calculosis (differential diagnosis, treatment, diet),</li> <li>— prostatic diseases,</li> <li>— additional diagnostic tests in urologic diseases (urine analysis and interpretation of results, blood biochemical tests, imaging),</li> <li>— principles of therapy,</li> <li>— principles of dietary treatment in kidney and urologic diseases,</li> <li>— urinary incontinence.</li> </ul>	<b>8</b>	-	-	<b>8</b>
<b>10.</b>	<b>Skeletal muscle and joint diseases:</b> <ul style="list-style-type: none"> <li>— disorders of skeletal muscle of dogs and cats,</li> <li>— degenerative, metabolic, inflammatory and traumatic diseases of skeletal muscle of dogs and cats,</li> <li>— hereditary and congenital diseases of skeletal muscle,</li> <li>— joint diseases of dogs and cats (arthritis, polyarthritis),</li> <li>— inflammatory, metabolic, degenerative diseases of bone in dogs and cats (osteofibrosis, osteoporosis, panosteitis),</li> <li>— nutritional, metabolic and endocrine skeletal muscle and joint diseases.</li> </ul>	<b>4</b>	-	-	<b>4</b>
<b>11.</b>	<b>Neurologic and behavioral disorders in dogs and cats:</b> <ul style="list-style-type: none"> <li>— neurological examination,</li> <li>— neurodiagnostics of central nervous system</li> </ul>				

	<p>(CNS),</p> <ul style="list-style-type: none"> <li>— neurodiagnostics of peripheral nervous system (PNS),</li> <li>— diseases of CNS,</li> <li>— diseases of PNS,</li> <li>— disorders of neuromuscular junction</li> <li>— neurologic symptoms in general conditions (endocrinopathies, intoxications, fluid and electrolyte disorders),</li> <li>— behavioral disorders (depression, aggression, etc.),</li> <li>— principles of treatment of acute and chronic diseases of CNS and PNS.</li> </ul>	<b>12</b>	-	-	<b>12</b>
<b>12.</b>	<p><b>Haematology:</b></p> <ul style="list-style-type: none"> <li>— anemias (definition, clinical and clinicopathological evaluation, principles of management of anemic patient),</li> <li>— disorders of hemostasis, coagulopathies,</li> <li>— blood transfusion (practical approach),</li> <li>— disorders of bone marrow and spleen,</li> <li>— leukemias,</li> <li>— the basic procedures in haematology.</li> </ul>	<b>4</b>	-	-	<b>4</b>
<b>13.</b>	<p><b>Endocrine disorders:</b></p> <ul style="list-style-type: none"> <li>— disorders of pituitary gland (pituitary dwarfism, acromegaly, central diabetes insipidus),</li> <li>— disorders of thyroid gland (feline hyperthyroidism, canine hypothyroidism),</li> <li>— disorders of parathyroid gland (hyperparathyroidism, hypoparathyroidism, idiopathic hypercalcemia in cats),</li> <li>— disorders of endocrine pancreas (diabetes mellitus, insulinoma, gastrinoma),</li> <li>— disorders of adrenal gland (hypercorticism, adrenal insufficiency, pheochromocytoma),</li> <li>— sex hormones imbalances in male,</li> <li>— sex hormones imbalances in female.</li> </ul>	<b>8</b>	-	-	<b>8</b>
<b>14.</b>	<p><b>Intoxication:</b></p> <ul style="list-style-type: none"> <li>— the most common causes of intoxication in dogs and cats,</li> </ul>	<b>8</b>	-	-	<b>8</b>



	<ul style="list-style-type: none"> <li>— general principles of management of intoxications,</li> <li>— emergency treatment in intoxication.</li> </ul>				
<b>15.</b>	<p><b>Neoplastic diseases:</b></p> <ul style="list-style-type: none"> <li>— classification of neoplastic diseases and diagnostic procedures,</li> <li>— neoplasma treatment (skin, mamme)</li> <li>— sampling principles of diagnostic materials (cytology and histopathology, biopsy),</li> <li>— principles of chemotherapy.</li> </ul>	<b>8</b>	-	-	<b>8</b>
<b>16.</b>	<p><b>Physiology and pathology of reproduction:</b></p> <ul style="list-style-type: none"> <li>— <b>oestrus cycle in the bitch and queen</b> endocrinology, clinical and laboratory methods of diagnosis ( abdominal palpation, vaginal cytology, progesterone and LH assays, ultrasonography),</li> <li>— <b>contraception in pet animals</b> unwanted pregnancy, ovariohystorectomy (spaying), permanent suppression of the heat, temporary postponement of the heat, suppression of the oestrus, hormonal vs surgical methods of pet population control,</li> <li>— <b>disorders of oestrus cycle</b> prolonged anoestrus, prolonged or irregular heat, prolonged proestrus/estrus, follicular cysts, ovarian tumors, pseudopregnancy,</li> <li>— <b>diseases of the uterus and the vagina</b> cystic endometrial hyperplasia/pyometra, neoplasia, prolapse of the vagina, vaginitis, congenital abnormalities, tumors of the reproductive tract,</li> <li>— <b>disorders of the males reproduction</b> orchitis and epididimitis, testicular tumors, cryptorchidism, disorders of the prostate, balanoposthitis, penile and preputial abnormalities,</li> <li>— <b>pregnancy in the bitch</b> endocrinology of pregnancy, diagnosis of pregnancy,</li> <li>— <b>diseases of pregnancy</b> abortions, embrional mortality, prolonged pregnancy, large litters/hypoglycemia,</li> </ul>	<b>20</b>	-	<b>4</b>	<b>24</b>

	<p>torsion of pregnant uterus, extrauterine pregnancy,</p> <ul style="list-style-type: none"> <li>— <b>parturition and puerperium in the bitch</b> maternal dystocia, fetal dystocia, obstetrical assistance, puerperium, postparturient prolapse of the uterus, puerperal metritis, retained membranes, subinvolution placental sites, puerperal eclampsia, uterine inertia, uterine hemorrhagia, care and diseases of the newborn,</li> <li>— <b>pregnancy in the queen</b> endocrinology, diagnosis of pregnancy,</li> <li>— <b>diseases of pregnancy</b> superfecundation, abortions, large litters/hypoglycemia, extrauterine pregnancy, torsio of the pregnant uterus,</li> <li>— <b>parturition in the queen and puerperium</b> maternal dystocia, fetal dystocia, obstetrical assistance, care of the newborn, puerperium, postparturient prolapse of the uterus, uterine inertia, uterine hemorrhagia, retained membranes,</li> <li>— <b>diseases of mammary gland</b> mastitis, neoplasia, pseudopregnancy in the bitch, fibroadenomathosis in the queen,</li> <li>— <b>artificial insemination</b> prediction of ovulations time, collection and evaluation of the semen, nonsurgical and surgical insemination,</li> <li>— <b>biotechnology of reproduction</b> general view.</li> </ul>				
17.	<p><b>Neonatology:</b></p> <ul style="list-style-type: none"> <li>— physiology of neonates,</li> <li>— losses of neonates in early postnatal period,</li> <li>— diseases of puppies and kittens ( asphyxia, hypothermia, hypoglycemia, dehydration, weak puppies, haemorrhagic syndrome, haemolytic jaundice, umbilicis, sepsis of neonates, toxic milk syndrome, fading puppy syndrome, diarrhoea, constipation),</li> <li>— artificial puppy and kitten feeding,</li> </ul>	<b>4</b>	-	-	<b>4</b>

	— diseases of mammary gland ( mastitis, neoplasia).				
<b>18.</b>	<b>The principles diagnostics and the treatment of ophthalmic diseases:</b> — diagnostics of eye diseases, — ocular emergencies, — diseases of eyelid and conjunctiva, — diseases of cornea, — the rules of conservative therapy and principles of surgical therapy.	<b>8</b>	-	-	<b>8</b>
<b>19.</b>	<b>Principles of surgical interventions</b> — principles of local and general anasedthesia, — emergency cases treatment, — urethrolithiasis in male dogs, — urethrolithiasis in male cats, — diseases and surgery of anus region, — surgery of the chest, — surgery of the abdomen, — injuries of long bones and joints, — male’s castration, — wounds treatment.	<b>12</b>	-	<b>4</b>	<b>16</b>
<b>20.</b>	<b>Clinical cases</b>	<b>8</b>	-	-	<b>8</b>
<b>21.</b>	<b>Organization, management and marketing of veterinary practice:</b> <b>Basic act related to veterinary profession:</b> — Act of veterinary profession and veterinary chambers — Act of veterinary treatment units with executory instructions — Act of animal heath protection and eradication of animal infectious diseases — Act of pharmaceutical law — Act of drug habit eradication — Code of ethics of veterinary profession  <b>Civil and professional veterinary surgeon responsibility.</b>  <b>Basics of veterinary practice management:</b>	<b>8</b>	-	-	<b>8</b>

	<ul style="list-style-type: none"> <li>— How to calculate cost of activity?</li> <li>— How to create prices for veterinary services</li> <li>— Good service – what does it mean for the client?</li> <li>— Quality and standards of veterinary service</li> <li>— Basics of personnel management</li> <li>— Staff work organization in veterinary practice</li> </ul>				
<b>22.</b>	<b>Basics of intensive care of dogs and cats:</b> <ul style="list-style-type: none"> <li>— emergency situations,</li> <li>— shock,</li> <li>— anesthesia – critical situations,</li> <li>— one-minute diagnose ABC – diagnostic procedure,</li> <li>— basics of critical care therapy.</li> </ul>	<b>4</b>	-	-	<b>4</b>
	<b>TOTAL HOURS</b>	<b>200</b>	<b>8</b>	<b>24</b>	<b>232</b>
	<b>Internship in the specialized clinics – Faculties of Veterinary Medicine and authorized clinic</b>				<b>160</b>