**Aristotle University of Thessaloniki**

Faculty of Helath Sciences

School of Veterinary Medicine

School approved by EAEVE (European Association for Establishment of Veterinary Education)

# SUBJECT GUIDE

**OF POSTGRADUATE COURSE**

**for a postgraduate specialisation diploma**

***Field of Specialisation:* Companion Animal Medicine**

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## Academic Year 2015-2016

**Thessaloniki**

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**Introduction**

**School of Veterinary Medicine**

The Faculty of Veterinary Medicine of Aristotle University of Thessaloniki was founded in 1950 with the Law Number (L.N.) 1510/50 that was certified with Law (L.) 1776/51. In accordance to L. 1268/82, the Faculty of Veterinary Medicine was converted to School, whereas with the Presidential Decree (P.D.) the Faculty of Geotechnical Sciences was formed, under which the following Schools were included: a) Veterinary Medicine, b) Agriculture and c) Forestry and Natural Environment. In 2005 after application of the ministerial decree 27905/B1 (Government Gazette (G.G.) 398/28-2-2005), the School of Veterinary Medicine was converted to an Individual Faculty. In 2013 after application of the ministerial decree 98 (Government Gazette (G.G.) 134/5-6-2013) the Faculty of Health Sciences was formed, under which the following Schools were included: a) School of Medicine, b) School of Veterinary Medicine, c) School of Dentistry and d) School of Pharmaceutical Science.

**Postgraduate studies in the School of Veterinary Medicine**

A Department of Postgraduate Studies was formed in the School of Veterinary Medicine with the P.D. 799/75 with the following specialisations: a) Animal Husbandry and Nutrition of Farm Animals, b) Technology of Food of Animal Origin, c) Food Hygiene, d) Artificial Insemination and Reproduction Medicine, e) Aviculture and Avian Medicine, f) Hog Breeding and Medicine, g) Microbiology and Infectious Diseases, h) Parasitology and Parasitic Diseases, i) Pathology, j) Veterinary Internal Medicine, k) Veterinary Surgery. From the aforementioned only the specialisations of Food Hygiene and Microbiology and Infectious Diseases were eventually implemented; nevertheless their operation was interrupted in 1985 due to insufficiency of technical infrastructure.

During the academic year 2006-2007, the Department of Postgraduate Studies was approved (G.G. 144/8-2-2006) with 5 Specialisations. Only Three specialisations were operational:

Α) the specialisation titled as ‘Breeding and Internal Medicine of Farm Animals with two subcategories: a) Ruminant Breeding and Internal Medicine and b) Hog and Avian Breeding and Internal Medicine

Β) the specialisation titled as: ‘Companion Animal Surgery’.

C) the specialisation titled as ‘Companion Animal Medicine’.

The operation of the specialisation titled as ‘Breeding and Internal Medicine of Farm Animals was interrupted in 2014 due to insufficiency of technical infrastructure

The Department of Postgraduate Studies was renamed as “Department of Postgraduate Studies in Companion Animal Medicine” and is currently operating in two specializations

A) the specialisation titled as: ‘Companion Animal Surgery’.

B) the specialisation titled as ‘Companion Animal Medicine’

The duration of the postgraduate studies in the above specialisation is four (4) semesters.

The specialisation ‘Companion Animal Medicine’ has been operational since the school year 2009-10. Within these six years, 24 veterinary surgeons have been accepted and 15 have graduated so far.

The studies aim to:

1. train and the provide specialised knowledge in the field of companion animal internal medicine and dermatology and
2. provide knowledge in matters of basic and applied research.

The duration of the studies is two years (4 semesters) and includes theoretical training and clinical practice, primarily in companion animal internal medicine and dermatology and secondarily in the fields relevant to it. The clinical practice includes dealing with first and second opinion internal medicine and dermatology cases that present in the Unit of Medicine of the Companion Animal Clinic of the School of Veterinary Medicine. The theoretical training includes courses, seminars and lectures in subjects of clinical nutrition, clinical pathology, diagnostic hematology, diagnostic imaging, intensive care medicine, behavioural disorders and biostatistics and research methodology, as well as journal clubs and clinical presentations by the trainees. The theoretical training is undertaken mostly by professors of the School of Veterinary Medicine of the Aristotle University of Thessaloniki or other universities, and also by accredited Veterinary Surgeons.

The detailed course guide of the specialisation ‘Companion Animal Medicine that follows, includes for each semester: the hourly schedule of the theoretical training and clinical practice for each module, the professors of the module and the credits per module, which are calculated based on the hours of theoretical training, practical training and self-study hours.

**POST-GRADUATE PROGRAMμε in “companion animal medicine and surgery”**

**DISCIPLINE OF “COMPANION ANIMAL INTERNAL MEDICINE AND DERMATOLOGY”**

**1ST YEAR OF POST-GRADUATE STUDIES**

**1st Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Subject | Subject code | Lectures | Laboratory practice | Clinical Practice | Credits |
| 1 | Biostatistics, methodology of research and bioinformatics | ΜΙ.1 | 12 | 10 | - | 2 |
| 2 | Diagnostics in hematology, cytology and clinical biochemistry | ΜΙ.2 | 20 | - | - | 2 |
| 3 | Diagnostic pathology and immunology | ΜΙ.3 | 20 | - | - | 2 |
| 4 | Practice management | ΜΙ.4 | 17 | - | - | 2 |
| 5 | Clinical nutrition | ΜΙ.5 | 17 | - | - | 2 |
| 6 | Clinic work | ΜΙ.6 | - | - | 690 | 27,5 |
|  | **Total of hours** |  | **76** | **10** | **690** | **37,5** |

**2nd Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Subject | Subject code | Lectures | Laboratory practice | Clinical Practice | Credits |
| 1 | Advanced courses in Anesthesiology and Intensive care medicine | ΜΙΙ.1 | 20 | - | - | 2 |
| 2 | Diagnostic imaging | ΜΙΙ.2 | 20 | - | - | 2 |
| 3 | Behavioral disorders of companion animals | ΜΙΙ.3 | 20 | - | - | 2 |
| 4 | Scientific presentations | ΜΙΙ.4 | 52 | - | - | 6 |
| 5 | Clinic work | ΜΙΙ.5 | - | - | 640 | 25,5 |
|  | **Total of hours** |  | **112** | **-** | **690** | **37,5** |

Total of working hours: 1578

**2nd year of post-graduate studies**

**3rd Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Subject | Subject code | Lectures | Laboratory practice | Clinical Practice | Credits |
| 1 | Scientific presentations | ΜΙΙΙ.1 | 70 | - | - | 8 |
| 2 | Clinic work | ΜΙΙΙ.2 | - | - | 740 | 29,5 |
|  | **Total of hours** |  | **52** | **-** | **690** | **37,5** |

**4th Semester**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Subject | Subject code | Lectures | Laboratory practice | Clinical Practice | Credits |
| 1 | Scientific presentations | ΜΙV.1 | 26 | - | - | 3 |
| 2 | Clinic work | ΜΙV.2 | - | - | 300 | 12,5 |
| 3 | Research and writing of thesis | MIV.3 | - | - | - | 22 |
|  | **Total of hours** |  | **26** | **-** | **552** | **37,5** |

Total of working hours: 1320

***curriculum***

**1st semester**

**Biostatistics, methodology of research and bioinformatics**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st | Introduction to the statistical analysis software | Theodosios Theodosiou |
| 2nd | Introduction in data processing | Nikolaos Mittas |
| 3rd | Descriptive statistics | Theodosios Theodosiou |
| 4th | Normal distribution | Nikolaos Mittas |
| 5th | Normal distribution – Comparison of means for dependent/independent samples – Parametric hypotheses testing | Theodosios Theodosiou |
| 6th | Comparison of means for dependent/independent samples – Non parametric hypotheses testing | Theodosios Theodosiou |
| 7th | Test of independence of qualitative variables | Theodosios Theodosiou |
| 8th | Correlation analysis | Nikolaos Mittas |
| 9th | Regression analysis | Nikolaos Mittas |
| 10th | Analysis of Variance (ANOVA) | Nikolaos Mittas |
| 11th | Types of scientific publications | Theodosios Theodosiou |
| 12th | Literature review | C. Koutinas |
| 13th | Presenting scientific findings | C. Koutinas |

**Diagnostics in hematology, cytology and clinical biochemistry**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st | Setting up the hematology, biochemistry and cytology veterinary laboratory. | M. Kritsepi |
| 2nd | Essentials of sampling of blood and other biological materials for hematology and biochemistry examinations. Methods of sample preservation, storage and handling during transportation to the lab. | M. Kritsepi |
| 3rd | Interpreting the erythrocytogram | M. Kritsepi |
| 4th | Interpreting the leukocytogram | M. Kritsepi |
| 5th | Interpretation of the hepatic biochemical profile | Z. Polizopoulou |
| 6th | Interpretation of blood protein abnormalities | Z. Polizopoulou |
| 7th | Laboratory testing and interpretation of coagulation disturbances in the clinical practice | M. Mylonakis |
| 8th | Α) Material collection and methods of preparation of cytology samples.  Β) General categories of cytological diagnosis. | M. Kritsepi |
| 9th | Cytological criteria for malignancy. | M. Kritsepi |
| 10th | Thoracic and peritoneal fluid analysis. | M. Kritsepi |
| 11th | Cytology of the lymph node. | M. Mylonakis |
| 12th | Cytology of the bone marrow. | M. Mylonakis |
| 13th | Cytologic examination of non-neoplastic skin diseases | R. Farmaki |

**Diagnostic pathology and immunology**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st | Essentials of soft tissue and bone biopsy for histopathology. Methods of sample preservation and sample handling during transportation to the lab. | M. Papazoglou/D. Psalla |
| 2nd | Basic principles of endoscopic biopsy. | K. Adamama-Moraitou |
| 3rd | Essentials of skin biopsy | R. Farmaki |
| 4th | Basic principles of immunocytology and immunohistochemistry. | D. Psalla |
| 5th | Histopathologic diagnosis of the most common non-neoplastic skin diseases of the dog. | D. Psalla |
| 6th | Histopathologic diagnosis of the most common cutaneous neoplasms of the dog. | D. Psalla |
| 7th-9th | Essentials of immunology | R. Farmaki |
| 10th | Update on the vaccination protocols of the dog and cat. | M. Mylonakis |
| 11th | Immunomodulating / immunosuppressive medication in the dog and cat | R. Farmaki |
| 12th | The importance of blood type in canine and feline transfusion medicine. | M. Mylonakis |
| 13th | Ensuring safe coexistence between pets and immunocompromised individuals | C. Koutinas |

**Practice management**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st | Legal requirements for beginning a veterinary practice and guidance on how to set up the practice/clinic, the pharmacy and the pet-shop. Essentials on logistics. Professional prospects in the Greek and European marketplace. | Private practitioner |
| 2nd | Selection of work environment (building, space requirements), co-workers, scientific and support staff. Financing prospects. |
| 3rd | Management of private practice/clinic, client management, tips for high quality services. |
| 4th | Professional and scientific societies, availability of continuing education programs |
| 5th | Scientific ethics. Legislature for veterinarian liability, protection of animal rights, euthanasia, laboratory animals, transportation from and to other countries, as well as disposal of cadavers, animal tissues and biological refuse. | A.Komnenou |
| 6th | Reproduction management of the dog and cat. | C.Ververidis |
| 7th | Antisepsis protocols and management of the surgical department | L. Papazoglou |
| 8th | Organizing the hospitalization unit | N. Soubasis |
| 9th | Basic endoscopic equipment | K. Adamama-Moraitou |
| 10th | Setting up the diagnostic imaging unit. Legislature for x-ray protection. | M. Patsikas |
| 11th-12th | Basic principles of biosecurity in the veterinary practice/clinic. | V. Siarkou |
| 13th | Euthanasia in the dog and cat. Client management before, during and after euthanasia. | C. Koutinas |

**Clinical nutrition**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st | Dietary principles in healthy adult dogs and cats | D. Pardali |
| 2nd | Dietary support of neonates | D. Pardali |
| 3rd | Essentials of enteral nutrition | N. Soubasis |
| 4th | Essentials of parenteral nutrition | M. Mylonakis |
| 5th | Nutritional skeletal diseases | Z. Polizopoulou |
| 6th | Nutritional management of gastrointestinal diseases | K. Adamama – Moraitou |
| 7th | Nutritional management of chronic kidney disease | K. Adamama – Moraitou |
| 8th | Nutritional management of urolithiasis in the dog and cat | K. Adamama – Moraitou |
| 9th | Nutritional management of obesity | N. Soubasis |
| 10th | Nutritional management of diabetes in the dog and cat | N. Soubasis |
| 11th | Hypoallergenic diets for the dog and cat | R. Farmaki |
| 12th | Nutritional support in cardiogenic and paraneoplasmatic cachexia | C. Koutinas |
| 13th | Nutritional management of hyperlipidemia | N. Soubasis |

**2nd Semester**

**Advanced courses in anesthesiology and intensive care medicine**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st | Setting up the anesthesiology and intensive care units | I.Savvas |
| 2nd | Sedation for diagnostic handling in aggressive dogs and cats | I.Savvas |
| 3rd | Triage (handling of emergency cases) | G. Kazakos |
| 4th | Cardiorespiratory resuscitation | G. Kazakos |
| 5th | Analgesia | T. Anagnostou |
| 6th | Diagnosing and treating shock | T. Anagnostou |
| 7th | Crystalloid and colloid therapy | I.Savvas |
| 8th | Oxygen therapy | T. Anagnostou |
| 9th | Septicemia and systemic inflammatory response syndrome (SIRS). | G. Kazakos |
| 10th | Emergency treatment of status epilepticus | Z. Polizopoulou |
| 11th | Non-specific treatment of toxicity in the dog and cat | M. Mylonakis |
| 12th | Endocrinology emergencies | N. Soubasis |
| 13th | Emergency treatment of the dyspneic dog and cat | C. Koutinas/K. Adamama Moraitou |

**Diagnostic imaging**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st 2nd | Basic principles of modern machines, ultrasound, CT and MRI | M. Patsikas |
| 3rd 4th | Practical seminar in imaging of the main conditions of the bones and joints | P. Papadopoulou |
| 5th 6th | Practical seminar in imaging of the metabolic bone and joint diseases | M. Patsikas |
| 7th 8th | Practical seminar: Imaging of the main conditions of the heart and great vessels | M. Patsikas |
| 9th, 10th 11th | Practical seminar in imaging of the main conditions of the upper and lower respiratory system | M. Patsikas |
| 12th 13th 14th | Practical seminar in imaging of the main conditions of the pleural and mediastinal space | P. Papadopoulou |
| 15th 16th 17th | Practical seminar in imaging of the main conditions of the gastrointestinal system and accessory digestive glands | P. Papadopoulou |
| 18th 19th | Practical seminar in imaging of the main conditions of the urogenital system diseases | P. Papadopoulou |
| 20th 21st | Practical seminar: Myelographic investigation of the spine | M. Patsikas |

**Behavioral disorders in companion animals**

|  |  |  |
| --- | --- | --- |
| ***Hour*** | ***Subject*** | ***Teaching staff*** |
| 1st – 2nd | General aspects of diagnosis and treatment in veterinary behavioural medicine. | C. Karagiannis |
| 3rd | Medical treatment of canine and feline behavioral disorders | M. Saridomichelakis |
| 4th | Inappropriate elimination in cats | M. Saridomichelakis |
| 5th-6th | Canine aggression. | C. Karagiannis |
| 7th | Feline aggression. | C. Karagiannis |
| 8th | Geriatric behavioural problems. Cognitive dysfunction syndrome. | C. Karagiannis |
| 9th | Separation-related problems in the dog. | C. Karagiannis |
| 10th | Criteria for selecting a puppy.  Preventing behavioural disorders in the dog. | C. Karagiannis |
| 11th | Criteria for selecting a kitten.  Preventing behavioural disorders in the cat. | C. Karagiannis |
| 12th-13th | The role of companion animals in modern society | C. Koutinas |

**Clinic work (clinical practice) – all semesters**

The post-graduate students are trained, under the supervision of the teaching staff, on the following disciplines:

|  |  |
| --- | --- |
| ***Discipline*** | ***Teaching staff*** |
| Neurology | Z. Polizopoulou, N. Soubasis |
| Cardiology | C. Koutinas |
| Disease of the urinary and respiratory tract | K. Adamama – Moraitou, D. Pardali |
| Clinical hematology – oncology | M. Mylonakis |
| Gastroenterology | T. Rallis, K. Adamama-Moraitou, D. Pardali |
| Dermatology | R. Farmaki |
| Endocrine and metabolic disorders | M. Mylonakis, N. Soubasis, K. Adamama-Moraitou, C. Koutinas |
| Infectious and parasitic diseases | M. Mylonakis, N. Soubasis, K. Adamama-Moraitou, D. Pardali, C. Koutinas |
| Behavioral disorders of companion animals | Z. Polizopoulou |

**Scientific presentations – 2nd – 4th semester**

At least once during each semester, post-graduate students are required to prepare and present in pre-arranged scientific meetings, various clinical cases of particular interest, as well as short reviews on a specific disease, under the supervision of the aforementioned clinicians.

**Dissertation**

During the third semester, post-graduate students begin researching and writing their post-graduate thesis, on one of the following disciplines:

1. Neurology
2. Cardiology
3. Respiratory diseases
4. Nephrology – Urology
5. Clinical hematology – oncology
6. Gastroenterology
7. Dermatology
8. Endocrine / metabolic diseases
9. Infectious and parasitic diseases

**TEACHING STAFF INFORMATION**

|  |  |  |
| --- | --- | --- |
| ***Name*** | ***Credentials*** | ***E-mail*** |
| K. Adamama – Moraitou | DVM, PhD, Associate Professor in Companion Animal Medicine | [kadamama@vet.auth.gr](mailto:kadamama@vet.auth.gr) |
| T. Anagnostou | DVM, PhD, Assistant professor in Veterinary Anesthesiology – Intensive Care Medicine | [tanagnos@vet.auth.gr](mailto:tanagnos@vet.auth.gr) |
| Ch. Ververidis | DVM, PhD, Assistant professor in Veterinary Obstetrics – Companion Animal Reproduction Medicine | [harisver@vet.auth.gr](mailto:harisver@vet.auth.gr) |
| Th. Theodosiou | Bachelor in Biology, MSc, PhD in Biostatistics |  |
| G. Kazakos | DVM, PhD, Assistant Professor in Veterinary Surgery – Intensive Care Medicine | [gkdvm@vet.auth.gr](mailto:gkdvm@vet.auth.gr) |
| C. Karagiannis | DVM, Dipl ECAWBM (European College of Animal Welfare and Behavioral Medicine) | [christosdvm@hotmail.com](mailto:christosdvm@hotmail.com) |
| N. Mittas | Bachelor in Mathematics, MSc, PhD in Statistics and Information Technology |  |
| C. Koutinas | DVM, PhD, Assistant professor in Companion Animal Medicine | [quark@vet.auth.gr](mailto:quark@vet.auth.gr) |
| A. Komnenou | DVM, PhD, Associate Professor in Veterinary Surgery and Exotic/Zoo Animal Medicine | [natakomn@vet.auth.gr](mailto:natakomn@vet.auth.gr) |
| M. Kritsepi | DVM, PhD, Associate Professor in Diagnostic and Laboratory Medicine | [mkritsep@vet.auth.gr](mailto:mkritsep@vet.auth.gr) |
| M. Mylonakis | DVM, PhD, Associate professor in Companion Animal Medicine | [mmylonak@vet.auth.gr](mailto:mmylonak@vet.auth.gr) |
| P. Papadopoulou | DVM, PhD, Lecturer in Veterinary Diagnostic Imaging | [vivipap@vet.auth.gr](mailto:vivipap@vet.auth.gr) |
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| Z. Polizopoulou | DVM, PhD, Professor of Veterinary Diagnostic and Laboratory Medicine, Dipl ECVCP (European College of Veterinary Clinical Pathology) | [poliz@vet.auth.gr](mailto:poliz@vet.auth.gr) |
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| M. Saridomichelakis | DVM, PhD, Professor of Companion Animal Medicine, Dipl ECVD (European College of Veterinary Dermatology) | [msarido@vet.uth.gr](mailto:msarido@vet.uth.gr) |
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