

**Aprobat,  
Decan  
Prof.dr Savuța Gheorghe**

## DISCIPLINE FILE

### 1. Program data

1.1 Higher education institution	USAMV Iași
1.2 The Faculty	Veterinary Medicine
1.3 Department	clinics
1.4 Field of study	Veterinary Medicine
1.5 Cycle of studies	License
1.6 The study program	Veterinary Medicine

### 2. Discipline data

2.1 Name of the discipline	<b>CLINICAL NUTRITION AND NUTRITIONAL PATHOLOGY</b>						
2.2 Course Lecturer	Sef lucr. dr. <b>Hritcu Luminița Diana</b>						
2.3 Title of seminar activities	Sef lucr dr. <b>Hritcu Luminita Diana, sef lucr dr. Boghian Vasile, sef lucr dr. Beschea Sorin</b>						
2.4 Year of study	VI	2.5 Semester	XI	2.6 Type of evaluation	sumativă	2.7 The discipline regime	Ob

### 3. Estimated total time (hours per semester of didactic activities)

3.1 Number of hours per week	5	din care: 3.2 curs	2	3.3 seminar/laborator	3
3.4 Total hours of the curriculum	70	din care: 3.5 curs	28	3.6 seminar/laborator	42
Distribution of Time Fund					ore
Study after manual, course support, bibliography and notes					42
Additional documentation in the library, on the specialized electronic platforms and on the field					20
Seminar training / laboratories, themes, papers, portfolios and essays					20
tutorial					4
examinations					4
Other activities .....					16
<b>3.7 Total hours of individual study</b>	110				
<b>3.9 Total hours per semester</b>	90				
<b>3.10 Number of credits</b>	4				

### 4. Preconditions (where applicable)

4.1 curriculum	Physiology; Pathophysiology; Semiologie; Pharmacology; Pathological Anatomy, Pathology and Medical Clinic •
4.2 skills	Approach and contention of animals, General clinical examination and apparatus, knowledge of drugs, ability to administer treatments, knowledge of nutritional pathology

### 5. Conditions (where applicable)

5.1. course	<ul style="list-style-type: none"> <li>• Students will not attend lectures and clinics with closed cell phones.</li> <li>• It is forbidden to use mobile phones during the course and leaving the classroom students to take personal telephone calls;</li> <li>• The students' delays in the course and clinic will not be tolerated</li> </ul>
5.2. conducting the seminar / laboratory	At the clinic, students will wear protective equipment: a gown, a cap, one-time disposable gloves when needed, and they will get their medical instruments - minimal for examination: a thermometer, a stethoscope. Paraclinical examinations and treatments are only recommended and supervised by teachers.

## 6. Specific skills accumulated

<b>Professional skills</b>	<p>To know the veterinary medical terminology. To perform the clinical examination of diseased animals for the diagnosis of animal diseases, prophylaxis and fight against nutritional diseases</p> <p>To consult and treat by medical means the diseases / syndromes that affect the animals after examining the state of health and establishing the diagnosis.</p> <p>To harvest biological samples, perform and interpret laboratory tests and corroborate them with clinical signs to establish the diagnosis.</p> <p>Understand the importance of case studies.</p> <p>Performing scientific research and didactic activities in the areas of competence.</p>
<b>Transversal skills</b>	<p>Teamwork skills, oral and written communication skills in Romanian, use of information and communication technology - ICT, problem solving and decision making, recognition and respect of diversity and multiculturalism, learning autonomy, entrepreneurship initiative and spirit, openness to learning life course, respect and development of values of professional ethics and deontology</p> <p>Documentation in Romanian and, at least, in an international language for the identification of new knowledge in the field, with the aim of professional and personal development through continuous training.</p> <p>Responsible execution of all tasks and design and presentation of complex projects in the field of veterinary medicine.</p> <p>To participate in scientific and professional development projects, compatible with the requirements of integration into the European market</p>

## 7. The objectives of the discipline (based on the specific skills grid)

7.1 The general objective of the discipline	<ul style="list-style-type: none"> <li>- Forming the future veterinarian for both clinical and laboratory practice to prevent, diagnose, and combat nutrition and metabolism.</li> </ul>
7.2 Specific objectives	<ul style="list-style-type: none"> <li>- Initiating students in the performance and interpretation of laboratory tests and their corroboration with clinical signs in order to establish a diagnosis.</li> <li>- Acquiring modes of administration of veterinary medicinal products and the risks of their inappropriate use.</li> <li>- Acquisition of the form and the way of drafting the clinical documentation;</li> <li>- Acquisition of the way animals are nourished according to clinically diagnosed diseases.</li> <li>- Developing communication skills with animal owners and assessing the situation for decision-making in relation to the nature of each clinical case.</li> </ul>

## 8. Contents

8.1 Cours	teaching methods	No. hours
1. General notions on clinical nutrition, nutrition and metabolism.	Interactive Power Point presentation (case studies) and lectures	2
2. Nutritional management according to animal weight problems. Nutritional management in orthopedic disorders		2
3. Nutritional management in dermatological disorders		2
4. Nutritional management in gastrointestinal disorders, exocrine pancreas and hepatobiliary disorders.		2
5. Nutritional management in urinary tract disorders		2
6. Nutritional management in endocrine and oncological diseases		2
7. Nutritional management in cardiovascular diseases		2
8. Nutritional pathology. Genetic metabolic diseases. Disproteinoze Sugar Dismetabolites. Lipid Dismetabolites. Phosphocalcical Dismetabolites. Saturation and excess of sodium and chlorine. Hypobitaminosis Lean anemia Hipervitaminsozele. Complex metabolic disorders		<b>14</b>

<b>Bibliografie</b>		
1. ADAMEȘTEANU I., 1967– Patologia medicală a animalelor domestice. Vol. I și II, Ediția a II-a, Ed. Agro-Silvică, București 2. AMBROSA I., VULPE V., 1997 - Radiologie clinică veterinară, Ed de Erota-Tipo SRL Iași 3. Bârză H., May I., Ghergariu S., Hagi N., 1981, Patologie și clinică medicală, Ed. Didactică și pedagogică București, Reeditat 1992, Ed Știința Chișinău 4. ETTINGER S.J., 1983 – Disease of the dog and cat, Textbook of veterinary internal medicine vol II, Ed bz W.B. Saunders Company – Philadelphia USA 5. GHERGARIU, S., 1984 – Progrese în patologia nutrițională și metabolică a animalelor, Soc. Med. Vet. Din Romania, București. 6. GHERGARIU, S., 1995 – Patologia nutrițională și metabolică a animalelor. Ed. Medicală Vet. București. 7. HRITCU Luminita Diana – 2016 – Patologia nutrițională a animalelor domestic – Ed. Ion Ionescu de la Brad Iasi 8. HRITCU L.D. _ 2018 Ghid practic pentru laboratorul clinic veterinar – Ed Ion Ionescu de la Brad Iasi 9. MIHAI D., 1984 – Bolile de nutriție și metabolism la animale. Ed. Ceres, București. MIHAI D., 1994 – Patologie și clinică medicală veterinară. Ed. Ceres, București., Vol. 2; Bolile aparatului urinar		
<b>8.2 Seminar / Laboratory / Practical work / Internships</b>	<b>teaching methods</b>	<b>Nr. hours</b>
Nutritional changes in the animal body - general characterization The biological role of different ions in the body. Macroelements and microelements Organic substances: carbohydrates, lipids and proteins Organic substances: liposoluble, water-soluble vitamins Factors that condition the balance of vitamin nutrition of animals, Factors influencing the digestibility of nutrients in fodder Feeds used in animal nutrition and their nutritional characteristics. Species of species according to species (cattle, horses, sheep, pigs, dogs, cats, birds). The methodology of diagnosis is the whole of NBM. Nutritional survey. Methodology of diagnosis of genetic diseases of metabolism Metabolic profile in cattle, sheep, pigs, poultry. Protein profile. (urea, creatinine, creatine, uric acid). Carbohydrate profile (glucose, pyruvic acid, lactic acid, ketone bodies). Lipid profile (total lipids, cholesterol, phospholipids, triglycerides and AGL). Vitamin profile Clinical and laboratory diagnosis of myopathies and nutritional dermatopathies. 1. Hematologic and mineral profile. Urinary profile	Clinical examination of animals, paraclinical examinations (laboratory tests, ultrasounds, radiographs, electrocardiographs, electroencephalographs), data analysis, diagnosis, prognosis evaluation, medical treatment, establishment of the hygienic-dietary regime. Communication with animal owners on therapeutic and prophylactic behavior. Comparative analysis of clinical cases (comparisons with archive data) - interpretation of clinical signs, substantiation of clinical diagnosis - Performing paraclinical examinations to diagnose the diagnosis - establishing the prognosis, direct application or recommending therapeutic and prophylactic measures -conducting therapeutic in medical emergencies, as an independent activity (medical guards service)	<b>42</b>
<b>TOTAL ORE SEMINAR</b>		<b>42</b>
<b>Bibliografia obligatorie</b>		
1. ADAMEȘTEANU I., 1967– Patologia medicală a animalelor domestice. Vol. I și II, Ediția a II-a, Ed. Agro-Silvică, București 2. AMBROSA I., VULPE V., 1997 - Radiologie clinică veterinară, Ed de Erota-Tipo SRL Iași 3. Bârză H., May I., Ghergariu S., Hagi N., 1981, Patologie și clinică medicală, Ed. Didactică și pedagogică București, Reeditat 1992, Ed Știința Chișinău 4. ETTINGER S.J., 1983 – Disease of the dog and cat, Textbook of veterinary internal medicine vol II, Ed bz W.B. Saunders Company – Philadelphia USA 5. GHERGARIU, S., 1984 – Progrese în patologia nutrițională și metabolică a animalelor, Soc. Med. Vet. Din Romania, București. 6. GHERGARIU, S., 1995 – Patologia nutrițională și metabolică a animalelor. Ed. Medicală Vet. București. 7. HRITCU Luminita Diana – 2016 – Patologia nutrițională a animalelor domestic – Ed. Ion Ionescu de la Brad Iasi 8. HRITCU L.D. _ 2018 Ghid practic pentru laboratorul clinic veterinar – Ed Ion Ionescu de la Brad Iasi 9. MIHAI D., 1984 – Bolile de nutriție și metabolism la animale. Ed. Ceres, București. 10. MIHAI D., 1994 – Patologie și clinică medicală veterinară. Ed. Ceres, București., Vol. 2; Bolile aparatului urinar		

## 9. Corroborating the content of the discipline with the expectations of community representatives, professional associations and representative employers in the field of the program

In order to improve the content, the choice of the teaching / learning methods, the discipline participants participated in meetings with:

- members of the General Association of Veterinarians from Romania, the College of Veterinarians of Romania,
- European vocational training programs (SOP HRD); as well as
- with other teachers in the field, titled in other higher education institutions in the country and the European Union (Erasmus mobility).
- Meetings aimed at identifying the needs and expectations of employers in the field and coordination with other similar programs within the other higher education institutions in Europe, the profession of veterinary surgeon being regulated by European regulations through specific norms.

## 10. Evaluation

Activity type	Evaluation criterias	Evaluation methods	Weight of the final grade
10.1 Cours	Knowledge of etiopathogenesis, symptomatology, diagnosis, therapeutic and prophylactic behavior in animal nutrition and metabolism diseases	Oral exam	60
10.2 Seminar /lp	application of clinical examination methodology interpretation of clinical signs, substantiation of clinical diagnosis - Performing paraclinical examinations to diagnose the diagnosis - establishing the prognosis, - direct application or recommendation of therapeutic and prophylactic measures -conducting therapeutic in medical emergencies, as an independent activity (on-call duty)	Assessment over time, written and oral	30
	•	practical application	10

## 11. Minimum performance standard

<p><b>Minimum promotion requirements (for note 5):</b> - establishing the diagnosis of a syndrome in nutritional diseases and establishing a therapeutic protocol to treat them</p>	<p><b>Minimum promotion requirements (for note 10):</b> Explanation of pathogenesis, causes, and differential diagnosis between diagnosed conditions</p>
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Date of completion

9. 09.2019

Signature Course Lecturer



Signature Workshop / Seminar

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Date of approval in the department

16.09. 2019

Signature Department Director

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