

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRICULTURAL UNIVERSITY
Department of Veterinary Examination, Microbiology, Zoohygiene and Safety
and Quality of Livestock Products

"I approve"
Head of Department

_____ **Fotina TI**
« _____ » _____ **2019**

CURRICULUM WORKING PROGRAM

PARASITOLOGY AND INVASIVE DISEASES

(code and name of the discipline)

For graduate students in the specialty

21 1 Veterinary medicine

2019 - 2020 academic year

Work program in the discipline " Parasitology and invasive diseases for graduate students with a specialist and 211 Veterinary Medicine

Developers: Berezovsky AV, Doctor of Veterinary Sciences, Professor .

The working program was considered at the meeting of the department " Vetsanekspertiza, microbiology, zoohygiene and safety and quality of livestock products."

Minutes from " 3 " 201 June 9 , № 2 2

Head of the Department "Vetsanekspertiza, microbiology, zoohygiene and safety and quality of livestock products " _____ (Fotina TI)
(signature) (surname and initials)

Agreed:

Dean of the Faculty _____ (Nechiporenko OL)

Methodist of the educational department _____

Registered in the electronic database: date: _ _____ 201 9 p.

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© authors: d.v.n Professor Berezovsky AV 201 9 year

1. Description of the discipline

Name of indicators	Field of knowledge, direction of training and qualification level
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Number of credits - 4	211 Veterinary medicine
Modules - 2	
Content modules : 2	
Total hours: - 1 20	
Weekly hours for full-time study: classroom - 3 independent work of the student - 1	Education level: <i>Doctor of Philosophy</i>

The ratio of hours of classes to separate and individual work is: for full-time in the fall semester - 88 / 3 8.

2. The purpose and objectives of the discipline

Parasitology is a complex science that studies zooparasites, the diseases they cause, and measures to control them. This is one of the main clinical disciplines, which forms a specialist in veterinary medicine. The main role of the discipline is to master the structure and development of pathogens of invasive diseases and treatment and prevention measures in farms of different directions. The main attention is paid to zoonoses - diseases common to humans and animals.

The purpose of studying the discipline of deepening theoretical knowledge of graduate students in the diagnosis, treatment and prevention of invasive animal diseases, their acquisition of practical skills in laboratory work, as well as diagnosis and preparation for independent scientific and practical work. The logic and structure of the course will allow graduate students to acquire the necessary amount of knowledge, which will allow them to achieve a high level of professional competence in the future. The main role of the discipline is to master

the methods of diagnosis, treatment and prevention of invasive animal diseases. The main attention is paid to zoonoses - diseases common to humans and animals.

The main **tasks of** studying the discipline " Parasitology and Invasive Diseases " are: to deepen the theoretical training in general parasitology, as well as global invasive animal diseases; master the methods of parasitological autopsy (techniques of complete and incomplete helminthological autopsy); master the methods of parasitological examination; master modern methods of lifelong and postmortem diagnosis of global parasitic animal diseases; to master methods of parasitological research of intermediate owners and objects of environment; learn to set up scientific experiments and perform their statistical calculations; to gain skills of processing literary sources on the chosen subject.

As a result of studying the discipline the student must:

know : modern and latest research methods of invasive animal diseases;

current laws and other regulations on the safety and spread of invasive animal diseases and the quality of livestock products.

be able to : diagnose invasive animal diseases, differentiate pathogens, conduct research on animals and the environment, develop and implement treatment and prevention measures for invasive animal diseases in farms of various forms of ownership, have modern research methods. Formulate a hypothesis, heuristically evaluate, derive from it empirically tested consequences, compare with the data of experience and practice; apply a systematic method to understand the structure of theories and problems of modern methodology of science; to have methodological tools for conducting research in the field of "Veterinary Medicine", guided by the principles of academic integrity and scientific ethics; conduct critical analysis, evaluation and synthesis of new scientific provisions and ideas on veterinary medicine; initiate, organize and conduct comprehensive research in veterinary medicine, which leads to the acquisition of new knowledge; to formulate a scientific problem taking into account the values of modern society and the state of its scientific development, working hypotheses of the researched problem, which should expand and deepen the state of scientific research in veterinary medicine; present the results of research, including in the form of a dissertation, defend the results of research.

Curriculum of the discipline

The working curriculum is being tested by the Department of Veterinary Examination, Microbiology, Zoohygiene and Safety and Quality of Livestock Products. Protocol № 2 2 of 3 June 201 9 years.

Module 1. Biological features of the parasite-host system in ruminants and pigs

Topic 1 : The relationship of animals and the place of parasites in the animal system

Topic 2: Physiology and immunological factors in the parasite-host system

Topic 3: Biological features of the parasite-host system in trematodes

Topic 4 Biological features of the parasite-host system in cestodes

Module 2 : Biological features of the parasite-host system in horses, birds and carnivores

Topic 5: Biological features of the parasite-host system in nematodes

Topic 6: Biological features of the parasite-host system in acanthocephalus

Topic 7: Biological features of the parasite-host system in insects and mites

Topic 8: Biological features of the parasite-host system in protozoa

3. The structure of the discipline

Names of content modules and topics	Number of hours	
	Full-time	
	Total	including
1	2	3
Module 1. Biological features of the parasite-host system in ruminants and pigs		
Topic1 The relationship of animals and the place of parasites in the animal system	11	4
Topic 2. Physiology and immunological factors in the parasite-host system	11	4
Topic 3. Biological features of the parasite-host system in trematodes	11	4
Topic 4. Biological features of the parasite-host system in cestodes	11	4
Together for module 1	44	16
Module 2. Biological features of the parasite-host system in horses, birds and car		
Topic 5 . Biological features of the parasite-host system in nematodes	11	4
Topic 6 . Biological features of the parasite-host system in acanthocephalus	11	4
Topic 7 . Biological features of the parasite-host system in insects and mites	11	4
Topic 8 . Biological features of the parasite-host system in protozoa	11	4
Topic 9: General characteristics of the simplest. Piroplasmidosis of animals.	11	4
Topic 10: X sparrows caused by prokaryotes	11	4
Topic 11: General characteristics of the class Insecta. Pest diseases of animals.	11	4
Together with module 2	77	28
Total hours	120	44

5. Topics of lectures

№ s / n	Name topics
1	Topic 1 : The relationship of animals and the place of parasites in the animal system
2	Topic 2: Physiology and immunological factors in the parasite-host system
3	Topic 3: Biological features of the parasite-host system in trematodes
4	Topic 4 Biological features of the parasite-host system in cestodes
5	Topic 5: Biological features of the parasite-host system in nematodes
6	Topic 6: Biological features of the parasite-host system in acanthocephalus
7	Topic 7: Biological features of the parasite-host system in insects and mites
8	Topic 8: Biological features of the parasite-host system in protozoa
9	Topic 9: General characteristics of the simplest. Piroplasmidosis of animals.
10	Topic 10: X sparrows caused by prokaryotes
11	Topic 11: General characteristics of the class Insecta. Pest diseases of animals.
	Together

5. Topics of practical classes

№ s / n	Name topics
1	Study of modern methods of diagnosis and treatment of trematodes and cestodes
2	Improvement of methods for diagnosis, treatment and prevention of ruminant nematodosis
3	Study of methods of diagnosis, treatment and prevention of ruminant entomoses
4	Study of the distribution, diagnosis, treatment and prevention of acarosis of ruminants
5	Study of methods for diagnosing protozoa of ruminants
6	Study of the peculiarities of the spread, diagnosis, treatment and prevention of helminthiasis of ruminants
7	Improvement of modern methods of diagnosis, treatment and prevention of entomoses of ruminants
8	Study of the prevalence, diagnosis, treatment and prevention of equine helminthiasis
9	Improvement of modern methods of diagnosis, treatment and prevention of entomoses of horses
10	Study of methods for diagnosing avian helminthiasis
11	Improving methods of diagnosis, treatment and prevention of bird entomoses and helminthiasis
12	Improving methods of diagnosis, treatment and prevention of avian protozoa
13	Study of features of distribution, diagnostics, treatment and prevention of helminthiasis of birds
14	Strongylidosis of horses. Goose amidostomy.
15	Animal trichuriasis. Trichinosis.
16	Spiruriasis of animals and birds.
17	Acanthocephaly of animals ..
18	Pest diseases of animals.
19	Zoophilic flies.
20	Disgust.
21	Wingless insects.
22	Sarcoptiform mites.
23	Animal psoroptosis. Demodectic mange of animals
	Total

6. Independent work

№ s / n	Name topics
1.	Improvement of modern methods of diagnosis, treatment and prevention of em
2.	Improvement of helminthological methods of research of objects of environme
3.	Basic research methods in helminthology.
4.	Lifetime research methods.
5.	Helminthovoscopic, helminthoscopy, helmintholauroscope.
6.	Quantitative and qualitative research methods.
7.	Intensity of invasion (II), extensiveness of invasion (EI), intensive efficiency (
8.	Postmortem research methods.
9.	Laboratory research methods
10.	General characteristics of trematodes. Fasciolosis of animals.
11.	Paraffistomatosis of ruminants. Dicroceliosis.
12.	Opisthorchiasis of animals. Echinostomatidosis of birds.
13.	Cysticercosis of animals.
14.	Echinococcosis of animals. Cenurosis of sheep.
15.	Moniesiosis, tizaniesiosis of ruminants. Horse anoplocephaly.
16.	Carnivorous dipilidiosis. Hymenolepididosis of birds.
17.	Ascariasis of animals.
18.	Pulmonary strongylidosis.
19.	Gastrointestinal strongylidosis of animals.
	Total

Teaching methods

1. Methods of learning by source of knowledge:

- 1.1. *Verbal* : explanation, story (heuristic and reproductive), lecture, instruction, work with a book (making tables, reference notes).
- 1.2. *Visual* : demonstration, illustration, observation.
- 1.3. *Practical* : laboratory method, production and practical methods.

2. Teaching methods by the nature of the logic of cognition.

2.1. *Analytical*

3. Methods of teaching the nature and level of independent mental activity of graduate students.

3.1. *Problematic*

3.2 *Research*

3.3 *Reproductive*

3.4 *Explanatory and demonstrative*

4. Active teaching methods - the use of technical teaching aids, business and role-playing games, the use of problem situations, excursions, classes, group

research, self-assessment, simulation teaching methods (based on simulations of future professional activity), the use of training and control tests, use of reference notes of lectures)

5. Interactive learning technologies - the use of multimedia technologies, spreadsheets, case-study (method of analysis of specific situations), dialogue learning, student cooperation (cooperation)).

8. Methods of control

1. Rating control according to the 100-point scale of ECTS assessment

2. Carrying out intermediate control during the semester (intermediate certification)

3. Polycriteria assessment of current work of students:

- the level of knowledge demonstrated in practical, laboratory and seminar classes;

- activity during the discussion of issues raised in class;

- independent study of the topic as a whole or individual issues;

- writing essays;

- test results;

- written tasks during tests.

4. Direct consideration in the final assessment of the student's performance of a particular individual task:

- educational and practical research with presentation of results, etc.

9. Distribution of points received by graduate students for credit

Current testing and independent work	
Module 1	Module 2
Meaningful module 1	Meaningful module 2
T1	T2
23	47

10. Assessment scale: national and ECTS

The sum of points for all types of educational activities	ECTS assessment	Score on a national scale
		for exam, course project (
90 - 100	AND	perfectly
82-89	IN	fine
75-81	WITH	
69-74	D	satisfactorily
60-68	IS	

35-59	FX	unsatisfactory with the poss
1-34	F	unsatisfactory with mandat

12. Recommended literature

Basic

1. Galat VF, Berezovsky AV, Soroka NM, Prus MP, Evstafieva VO, Galat MV Parasitology and invasive animal diseases. Textbook / Ed. prof. Galat VF - Poltava: LLC SPE "Ukrpromptorgservice", 2012. - 338 p.
2. Methodical instructions for the diagnosis of helminthiasis in animals / VF Galat, A.W. Berezovsky, NM Soroka. - K.: Vetinform, 2004. - 54 p.
3. Parasitology and invasive diseases of animals / VF Galat, AV Berezovsky, MP Prus, NM Soroka; For order. W. F. Galata. - K.: Higher education, 2003. - 464 p.
4. Workshop on parasitology / VF Galat, Yu. G. Artemenko, MP Prus and others; For order. W. F. Galata. - K.: Урожай, 2001. - 192 с.

Auxiliary

1. Vasilkova ZG Methods of helminthological research (Manual for physicians and biologists). - M.: Medgiz, 1955. - 228 p.
2. Demidov NV Helminthiasis of animals: Handbook. - M.: Agropromizdat, 1987. - 335 p.
3. Ponomar, AA Antipov, Yu. G. Artemenko and others. Lifelong and postmortem diagnosis of helminthiasis of animals: Methodical recommendations for students of the Faculty of Veterinary Medicine and students of the Institute of Postgraduate Training of Heads and Specialists of Veterinary Medicine. - Bila Tserkva, 2003. - 54 p.
4. Kotelnikov GA Helminthological studies of animals and the environment: Handbook. - M.: Колос, 1983. - 208 с.
5. Kotelnikov GA Diagnosis of helminthiasis in animals. - M.: Колос, 1974. - 240 с.
6. Laboratory research in veterinary medicine: Viral, rickettsial and parasitic diseases: Handbook, ed. BI Antonov. - M.: Agropromizdat, 1987. - 24 p.
7. Methodical recommendations for research in helminthology. - M., 1983. - 85 p.
8. Migacheva LD, Kotelnikov GA Methodical instructions for the use of a device for counting helminth eggs in the diagnosis of nematodes of animals // Recommendations of Gosagroprom of the USSR on the introduction of scientific and practical achievements in production. - M., 1987. - № 6. - P. 85–87.
9. Basic methods of diagnosis of helminthiasis: Methodical recommendations for students of the veterinary faculty and students of the faculty of advanced training / Belotserkov. s.-x. in-t; Сост. Yu. G. Artemenko, AA Antipov. - White Church, 1990. - 53 p.
10. Parasitology and invasive diseases of animals / M. Akbaev, AA Vodyanov, NE Kosminkov, etc. - M.: Kolos, 1998. - 743 p.

11. Potemkina VA, Demidov NV Handbook of diagnosis and treatment of helminthiasis in animals. - M.: Selkhozgiz, 1955. - 352 p.
12. Workshop on parasitology / VF Galat, Yu. G. Artemenko, MP Prus and others; For order. W. F. Galata. - K.: Урожай, 1999. - 192 с.
13. Workshop on the diagnosis of invasive diseases / M. Sh. Akbaev, KI Abuladze, VI Tarakanov, etc. - M.: Kolos, 1994. - 255 p.
14. Recommendations for the use of a camera for counting helminth eggs / Ponomar SI - Bila Tserkva. - 2001 - 12 p.
15. Handbook of a veterinary laboratory specialist / NV Korotchenko, Yu. P. Smiyan, AP Adamenko, etc.; Ed. Yu. P. Smiyana. - K.: Урожай, 1987. - 368 с.
16. Gamble HR Trichinellosis. // Office International des Epizooties. Manual of standards for diagnostic tests and vaccines. List A and B diseases of mammals, birds and bees. Fourth edition. - Paris, France, 2000. - P. 322–327.

11. Information resources

1. Parasitic (invasive) animal diseases - UA.TextReferat.com <http://ua.textabstract.com/referat-15185-1.html>
2. Parasitology and invasive animal diseases. Workshop // [gendocs.ru / docs / 33/32191 / conv_1 / file1.pdf](http://gendocs.ru/docs/33/32191/conv_1/file1.pdf)
3. Parasitic (invasive) diseases of animals // www.referatcentral.org.ua ›