

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRICULTURAL UNIVERSITY**

Department of Epizootology and Parasitology

I APPROVE :

Head of the Department of Epizootology and Parasitology
“ — — — ” _____ **2019.**

_____ **Kassich V. Yu.**

CURRICULUM WORKING PROGRAM

Epizootology and infectious diseases

(code and name of the discipline)

For graduate students and specialties

211 In veterinary medicine

Sumy - 2019 year

The working program of discipline " **Epizootolohiya and infectious diseases** " for graduate students by specialty 211 veterinary and medicine

Developers:

Fotina A .A. doctor of veterinary sciences, professor

The working program was considered at the meeting of the Department of Epizootology and Parasitology

Minutes from 6 May 2019 , the number 12

Head of the Department of Epizootology and Parasitology

_____ (_____)

Agreed:

Dean of the Faculty _____ (OL Nechiporenko)

on which the discipline is taught

Methodist academic department _____ (G. A. Baboshyna)

Registered in the electronic database: Date: _____ 2019 g.

1. Description of the discipline

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline	
		Full-time education	
Number of loans - 4.0	Field of knowledge: 211 Veterinary medicine	<i>Professional elective discipline</i>	
Modules - 1	211 Veterinary medicine	Year of preparation:	
Content modules : 1		20 1 9	
		Course	
		2	
		Semester	
Total hours : - 1 2 0		Lectures	
Weekly hours for full-time study: classroom - 3 independent work of the student - 1	Education level: <i>Doctor of Philosophy</i>	Practical, seminar	
		Laboratory	
		Independent work	
		Type of control: or testing, review.	

The ratio of hours of classes to separate and individual work is: for full-time in the spring semester - 73 / 27 .

2 . The purpose and objectives of the discipline

Higher educational institutions (HEIs) of Ukraine occupy a leading place in the system of multilevel training and retraining of scientific and scientific-pedagogical staff. Most of them have established scientific schools, specialized scientific councils for the defense of doctoral dissertations; candidate dissertations, master's degree, postgraduate studies, doctoral studies, system of retraining and advanced training.

Knowledge of methodology, theory, technology, methods and organization of research activities is the basis for graduate students, doctoral students, applicants for research students, employees of research departments of various fields.

The purpose of teaching the discipline is to acquaint postgraduate students with the processes of scientific research, its structure, as well as with deductive , hypothetical-deductive and systematic research methods.

The task of studying the discipline is to develop in graduate students the ability to apply new methods of ecological and biological research, which are based on the ideas and principles of a systematic approach, synergetics and hermeneutics.

3 . CURRICULUM

Module I. Content module 1. *Diseases are common to several species of animals and humans.*

Topic 1. Diseases common to several species of animals cattle, cattle, horses.

Zooanthroponoses (Anthrax. Tuberculosis. Tale. Camel plague and others).

Laboratory diagnostics, measures to control and prevent anthrax. Laboratory diagnosis, prevention and control measures so uberkuloz in . Laboratory diagnosis, prevention and control measures with Kaz in, Disease Aujeszky. Laboratory diagnosis, measures to combat and prevent foot and mouth disease, smallpox vesicular stomatitis. Laboratory diagnosis, measures to control and prevent brucellosis in animals, Infectious epididymitis of sheep (brucellosis infection). Laboratory diagnosis, prevention and control measures leptospiroz in , listeriosis in, tularemia . Laboratory diagnosis, measures to control and prevent infectious diseases of cattle: Plague of camels. Prynin infections. Anthrax, Tuberculosis, Rabies, Aujeszky's disease, Chlamydia in animals and birds, Tetanus, Botulism, Malignant edema. Necrobacteriosis, Brucellosis, Tularemia, Foot-and-mouth disease, Smallpox, Leukemia, Acabane disease, Leptospirosis, Listeriosis, Melioidosis, Actinomycosis, Camel plague. , Trichophytia, Microsporia, Fusariotoxicosis, Aspergillosis, Aspergilotoxicosis

The concept of scientific research and requirements for it.

Science as a system of knowledge. Basic concepts of science. Regularities of functioning and development of science, evolution of its development.

The concept of scientific research, its main features and characteristics. Features of the structure of scientific research, its object, purpose, tasks, basic forms. Requirements for research.

The main types of research. Differences and common features of empirical and theoretical research. The effectiveness of scientific research.

Topic 2 . Infectious diseases of cattle. Prynin infections. Leukemia.

Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures., Laboratory diagnosis, control measures and prevention of infectious diseases caused by pathogenic anaerobes. Laboratory diagnosis, prevention and control measures, the yketsioz s and Chlamydia s . Laboratory diagnosis, measures to control and prevent leukemia, Pasteurellosis, Aujeszky's disease, Emkar, Paratuberculosis, Contagious bovine pleuropneumonia, Cattle plague, Malignant catarrhal.

Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. , Laboratory diagnostics, measures of struggle and prevention of infectious diseases of DRH, Foot - and - mouth disease, Bradzot of sheep. Infectious enterotoxemia of sheep. Infectious agalactia of sheep and goats. Blutang. Infectious pleuropneumonia of goats. Hoof rot DRH. Contagious pustular dermatitis DRH. Infectious epididymitis of sheep. Spring-maedi, scrapes.

Topic 3 . Infectious diseases of horses. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. , Laboratory diagnostics, measures to control and prevent infectious diseases of horses. Chlamydia of animals and birds, Tetanus, Trichophytia, Sap, Myth, epizootic lymphangitis of horses. Horse rhinopneumonia. INAN horses. African horse sickness. Viral arteritis of horses. Infectious equine encephalomyelitis.

Topic 4 . Infectious diseases of pigs .

(CSF) Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. Laboratory diagnosis, measures to control and prevent infectious diseases of pigs (CBT), Botulism, Malignant edema, Leukemia, Melioidosis, Teschen's disease, Actinomycosis, Vesicular stomatitis. Pseudotuberculosis. Fever - Ku. Ryketsiynny keratokon ' yunktyvit. Rickettsial monocytosis. CSF and ASF.

Infectious diseases of pigs (ASF).

Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. , Laboratory diagnostics, measures of struggle and prevention of infectious diseases of pigs,

Brucellosis, Smallpox, Leptospirosis, Listeriosis, Rash, Dysentery, GPS, APP. Infectious diseases of pigs.

Infectious diseases of pigs (PRRS, PVIS, PES).

Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. , Laboratory diagnosis, measures to combat and prevent infectious diseases of young animals: Escherichia coli, salmonellosis.

Topic 5 . Infectious pneumoenteritis of young animals. Factor infections.

Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. . Laboratory diagnosis, measures to control and prevent infectious pneumoenteritis in young animals. Diplococosis, pseudomonosis.

Topic 6. Infectious diseases of poultry.

Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.

Scientific publications . Research and source scientific publications. Monograph , dissertation abstract, preprint, abstracts and materials of the scientific conference, collection of scientific works.

Scientific non-periodicals : book, brochure, scientific collections, journals.

Types of monographs: scientific and practical.

Forms of coverage of the results of scientific work: abstracts, abstracts, abstract. Types of abstracts: informative, extended or summarized, scientific.

Inventive activity . Research results: new technological processes and units, materials and compounds, devices and structures can be the subject of the invention or discovery.

Oral transmission of information about scientific results. Report, announcements at meetings, seminars, symposiums, conferences. Conversations in personal meetings.

4. STRUCTURE OF THE COURSE

Modules	Types of work	Name of modules	Forms of education
Module 1	Classroom work	Module I. Content module 1. Preclinical and clinical studies of drugs.	Lectures, problem lecture
			Training
			Consultations, individual lessons
			Control measures (modular control, offset)
Module 1	Independent work	Module I. Content module 1. Preclinical and clinical studies of drugs.	Summarizing additional topics of the discipline Individual research work

Course structure table

Form	Regulatory data	Control of
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Teaching							educational work
	Course	Everything mestr	Total (hours)	Lecture classes (hours)		Independent work (hours)	Modular control 1 Final control (offset)
				Lectures (hours)	Practical classes (hours)		
Day	2	4	1 2 0	4 4	4	32	4th semester

5 . IN THE REQUIREMENTS FOR KNOWLEDGE AND SKILLS OF POSTGRADUATE STUDENTS (CURRICULUM OBJECTIVES)

	The content of the goal
	<ul style="list-style-type: none"> • The graduate student must know: Veterinary and sanitary measures that promote the effectiveness of animal husbandry, methods of diagnosis, treatment and health measures, disinfection, as well as viral, bacterial, highly contagious and exotic diseases of productive animals and poultry . • Methods of diagnosis, treatment and elimination of viral, bacterial, fungal (including highly contagious and exotic) cattle diseases, principles of veterinary and sanitary and health measures that contribute to the effective management of animal husbandry. • Methods of diagnosis and elimination of viral, bacterial, fungal diseases of small cattle, principles of veterinary and sanitary and health measures; principles of preventive anti-epizootic veterinary-sanitary and health-improving measures in horse breeding; methods of diagnosis, treatment and elimination of viral, bacterial, fungal diseases of horses.
	<p>The graduate student must be able to: analyze a scientific problem and find algorithms for its solution; 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.</p>
	<p>The graduate student must have the skills: summarizing literary sources; public speaking; independent work on studying the materials of the discipline; free possession of the conceptual apparatus; operation of</p>

	terminology during the implementation of educational tasks and speeches at seminars, conferences, etc.
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6 . FORMS OF CONTROL

The specifics of teaching the subject is to use three types of control: current, modular and final.

Current control includes:

- testing (t) - this form of control allows you to check the preparation of graduate students for each lesson; conducted regularly on a selective basis;
- training (t) - is carried out in order to develop skills and abilities of graduate students of practical orientation, the formation of modern scientific thinking, the ability to make responsible and effective decisions;
- independent work (cf) - this form of control allows you to identify the ability to clearly, logically and consistently answer questions, the ability to work independently;
- individual research work of graduate students (IND) - is carried out in order to gain practical skills and abilities to use and process scientific sources, write articles, abstracts, reports, develop presentation material, use theoretical and empirical research methods.

The final control is carried out in the form of a test , which is aimed at testing the knowledge of graduate students .

7 . THEMATIC PLANNING OF THE COURSE

Full-time education

p / p	Name topics	Lecture s (hours)	Practical classe s (hours)	Himself. p turnov er (hours)	Total (hours)	Modula r control
	Module I. Content module 1.					
	Topic 1. Diseases common to several species of animals cattle, cattle, horses	4	4	5	13	4 0
	Topic 2. Infectious diseases of cattle. Prynin infections. Leukemia .	5	5	5	15	
	Topic 3. Infectious diseases of horses.	5	5	5	20	
	Topic 4. Infectious diseases of pigs .	10	10	5	25	
	Topic 5. Infectious pneumoenteritis of young animals. Factor	10	10	10	30	

	infections.					
	Topic 6. Infectious diseases of poultry.	10	10	2	29	
	Individual research work	-	-			
	Total	44	44	32	120	120

8 . PLANNING THE THEORETICAL COURSE

Full-time education

/ p	The name of the course topics, lectures and their content	Number of hours	B ali	Bibliography
Module I. Content module 1.				
	<p>Topic 1. Diseases common to several species of animals cattle, cattle, horses.</p> <ol style="list-style-type: none"> 1. Zooanthroponoses (Anthrax. Tuberculosis. Tale. Camel plague and others). 2. Laboratory diagnostics, measures to control and prevent anthrax. 3. Laboratory diagnosis, measures to combat and prevent leptospirosis, listeriosis, tularemia. 	4		<p>The main years. [3, p. 4-39; 5, p. 6] Appendix. years. [1, p.4-39] [3, p.66-79]</p>
	<p>Topic 2. Infectious diseases of cattle. Prynin infections. Leukemia.</p> <ol style="list-style-type: none"> 1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Pr ofilaktyka and control measures. 3. Laboratory diagnosis, measures to control and prevent rickettsiosis and chlamydia. 4. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures., 	5		<p>The main years. [3, p. 4-39; 5, p. 14] Appendix. years. [1, c.99-119] [1, p. 142-179]</p>
	<p>Topic 3. Infectious diseases of horses.</p> <ol style="list-style-type: none"> 1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures., 3. Laboratory diagnostics, measures to control and prevent infectious diseases of horses. 	5		<p>The main years. [3, p. 4-39; 5, p. 57] Appendix. years. [1, c.223-271] [1, c.272-303] [2, c.337-369]</p>
	<p>Topic 4. Infectious diseases of pigs.</p> <ol style="list-style-type: none"> 1. (CSF) Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 	10	1	<p>The main years. [3, p.4-39; 5, p. 49] Appendix. years.</p>

	<p>2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.</p> <p>3. Laboratory diagnosis, measures to control and prevent infectious diseases of pigs (CBT).</p> <p>4. Infectious diseases of pigs (ASF). Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>5. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity.</p>			<p>[1, c.223-271]</p> <p>[1, c.272-303]</p> <p>[2, c.337-369]</p>
	<p>Topic 5. Infectious pneumoenteritis of young animals. Factor infections.</p> <p>1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.</p> <p>3. Laboratory diagnosis, measures to control and prevent infectious pneumoenteritis in young animals. Diplococosis, pseudomonosis.</p>	0	1	<p>The main years. [3, p.4-39; 5, p. 16]</p> <p>Appendix. years. [1, p. 180-188]</p> <p>[1, p. 189-222]</p>
	<p>Topic 6. Infectious diseases of poultry.</p> <p>1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>2. Laboratory diagnostics. Differential diagnosis.</p> <p>3. Treatment. Immunity. Prevention and control measures.</p>	0	1	<p>The main years. [3, p.4-39; 5, p. 86]</p> <p>Appendix. years. [1, p.64-98]</p> <p>[2, p.75-81]</p>
	Total	4	4	

9 . PLANNING OF PRACTICAL CLASSES

Full-time education

/ p	The name of the course topics, practical classes and their content	Number of hours	B ali	Bibliography
Module I.				
	<p>Topic 1. Diseases common to several species of animals cattle, cattle, horses.</p> <p>1. Zoo feet (Anthrax. Tuberculosis. Tale. Camel plague and others).</p> <p>2. Laboratory diagnostics, measures to control and prevent anthrax.</p> <p>3. Laboratory diagnosis, measures to combat and prevent leptospirosis, listeriosis, tularemia.</p>	4		<p>The main years. [2, p. 7]</p> <p>Appendix. years. [1, p.4-39; 3, c.66-79]</p>
	<p>Topic 2. Infectious diseases of cattle. Prynin infections. Leukemia.</p> <p>1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.</p>	5		<p>The main years. [2, p. 8]</p> <p>Appendix. years. [1, p.99-119; 1, c. 142-179]</p>

	<p>3. Laboratory diagnosis, measures to control and prevent rickettsiosis and chlamydia.</p> <p>4. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.</p>				
	<p>Topic 3. Infectious diseases of horses.</p> <p>1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>1. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.,</p> <p>2. Laboratory diagnostics, measures to control and prevent infectious diseases of horses.</p>	0	5		<p>The main years. [2, p. 11]</p> <p>Appendix. years. [1, c.223-271]</p> <p>[2, c.337-369]</p>
	<p>Topic 4. Infectious diseases of pigs.</p> <p>1. (CSF)</p> <p>Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. 2. Prevention and control measures. Laboratory diagnosis, measures to control and prevent infectious diseases of pigs (CBT).</p> <p>2. Infectious diseases of pigs (ASF). Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>3. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures., Laboratory diagnosis, control measures and prevention of infectious diseases of pigs.</p>	0	1		<p>The main years. [2, p. 12]</p> <p>Appendix. years. [1, c.223-271]</p> <p>[1, c.272-303]</p> <p>[2, c.337-369]</p>
	<p>Topic 5. Infectious pneumoenteritis of young animals. Factor infections.</p> <p>1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures.</p> <p>3. Laboratory diagnosis, measures to control and prevent infectious pneumoenteritis in young animals. Diplococosis, pseudomonosis.</p>	0	1		<p>The main years. [2, p. 14]</p> <p>Appendix. years. [1, pp.180-188]</p> <p>[1, c.189-222]</p>
	<p>Topic 6. Infectious diseases of poultry.</p> <p>1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis.</p> <p>2. Laboratory diagnostics. Differential diagnosis.</p> <p>2. Treatment. Immunity. Prevention and control measures.</p>	0	1	0	<p>The main years. [2, p. 16]</p> <p>Appendix. years. [1, p.64-98]</p> <p>[2, p.75-81]</p>
	Total	4	4		

10 . Planning AEs INDEPENDENT WORK POSTGRADUATES

Full-time education

n / n	The name of the course topics, their content	Number of hours	Bali	Bibliography
Module I. Content module 1.				
	<p>Topic 1. Diseases common to several species of animals cattle, cattle, horses.</p> <ol style="list-style-type: none"> 1. Zooanthroponoses (Anthrax. Tuberculosis. Tale. Camel plague and others). 2. Laboratory diagnostics, measures to control and prevent anthrax. 3. Laboratory diagnosis, measures to combat and prevent leptospirosis, listeriosis, tularemia. 	5		<p>The main years. [1, p. 7] Appendix. years. [1, p.4-39; 3, c.66-79]</p>
	<p>Topic 2. Infectious diseases of cattle. Prynin infections. Leukemia.</p> <ol style="list-style-type: none"> 1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. 3. Laboratory diagnosis, measures to control and prevent rickettsiosis and chlamydia. 4. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures . 	5		<p>The main years. [1, p. 15] Appendix. years. [1, p.99-119; 1, c. 142-179]</p>
	<p>Topic 3. Infectious diseases of horses.</p> <ol style="list-style-type: none"> 1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures., 3. Laboratory diagnostics, measures to control and prevent infectious diseases of horses. 	5		<p>The main years. [1, p. 21] Appendix. years [1, c.223-271] [1, c.272-303] [2, c.337-369]</p>
	<p>Topic 4. Infectious diseases of pigs.</p> <ol style="list-style-type: none"> 1. (CSF) Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. Laboratory diagnosis, measures to control and prevent infectious diseases of pigs (CBT). 2. Infectious diseases of pigs (ASF). Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 3. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures., Laboratory diagnosis, control measures and prevention of infectious diseases of pigs. 	5		<p>The main years. [1, p. 29] Appendix. years. [1, c.223-271] [1, c.272-303] [2, c.337-369]</p>
	<p>Topic 5. Infectious pneumoenteritis of young</p>	1		<p>The main years.</p>

	animals. Factor infections. 1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 2. Laboratory diagnostics. Differential diagnosis. Treatment. Immunity. Prevention and control measures. 3. Laboratory diagnosis, measures to control and prevent infectious pneumoenteritis in young animals. Diplococosis, pseudomonosis.	0		[1, p. 35] Appendix. years. [1, pp.180-188] [1, c.189-222]
	Topic 6. Infectious diseases of poultry. 1. Etiology. Epizootology. Pathogenesis. Clinical signs. Pathological changes. Diagnosis. 2. Laboratory diagnostics. Differential diagnosis. 3. Treatment. Immunity. Prevention and control measures.	2		The main years. [1, p. 42] Appendix. years. [1, p.64-98] [2, p.75-81]
	Individual research work		10	The main years. [2, p. 17]
	Total	2	3	

1 1 . Teaching methods

1. Methods of learning by source of knowledge:

1.1. **Verbal** : story , explanation , conversation (heuristic and reproductive), lecture , instruction , work with a book (reading, translation, writing, drawing up a plan, reviewing, taking notes, making tables, graphs, reference notes, etc.).

1.2. **Visual** : demonstration , illustration , observation.

1.3. **Practical** : laboratory method, practical work, exercise, production-practical methods.

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

2.1. **Analytical** (*essence: the breakdown of the whole into parts in order to study their essential features*).

2.2. **Methods of synthesis** (*essence: connection of the elements or properties of the subject selected by the analysis, the phenomenon in one whole*).

2.3. **Inductive method** (*essence: the study of objects or phenomena from single to general*).

2.4. **Deductive method** (*essence: the study of objects or phenomena from general to individual*).

2.5. **Productive method** (*essence: these are conclusions from the general to the general, from partial to partial, from singular to singular*).

3. Teaching methods by the nature and level of independent mental activity of students.

3.1. **Problem** (*problem-information*)

3.2. **Partial search** (*heuristic*)

3.3. **Research**

3.4. **Reproductive** (essence: the possibility of applying what has been studied in practice).

3.5. **Explanatory and demonstrative**

4. Active teaching methods (for example) - the use of technical means of learning, brainstorming, crossword puzzles, contests, debates, round tables, binary classes, business and role-playing games, talk shows, trainings, use of problem situations, excursions, classes at work, group research, self-assessment of knowledge, simulation teaching methods (based on simulation of future professional activity), use of training and control tests, use of reference notes of lectures *and others*

5. Interactive Technologies teaching (for example) - the use of multimedia technology, interactive whiteboard and spreadsheets, case-study (method of analysis of specific situations) dialog Nav supply, cooperation graduate (cooperation) *and others*.

1 2 . Control methods

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

2. Carrying out of intermediate control during a semester (intermediate certification)

3. Polycriteria assessment of current work of students:

- the level of knowledge demonstrated in practical, laboratory and seminars;
- 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.

Distribution of points received by applicants

Current testing and independent work		Together for modules and VTS	At-estation	Sum
Module	WITH P WITH			
75	15	85 (70 + 15)	15	100

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 (work), practice	for offset

90 - 100	AND	perfectly	credited
82-89	IN	fine	
75-81	WITH		
69-74	D	satisfactorily	
60-68	IS		
35-59	FX	unsatisfactory with the possibility of reassembly	not credited with the possibility of re-assembly
1-34	F	unsatisfactory with mandatory re-study of the discipline	not enrolled with mandatory re-study of the discipline

1 3 . Recommended Books

Basic

- 1 Law of Ukraine "On Scientific and Scientific-Technical Activity" №1977-XII of December 13, 1991, as amended
- 2 Law of Ukraine "On Higher Education" №2984-III of January 17, 2002, as amended
- 3 Bilukha MT Research Methodology: Textbook. - K .: АБУ, 2002. - 480 с.
- 4 Research methodology. A textbook for universities. \ РузавинГ.И. - М., 1999 - 317 p.
- 5 Fundamentals of scientific research. A textbook for universities. \ Narinyan AR - K., 2002 - 112 с.
- 6 Fundamentals of scientific research. A textbook for universities. \ Frumkin RA - Alchevsk., 2001 -201 p.
- 7 Sidenko VM, Grushko IM Fundamentals of scientific research - Kharkiv, Higher School, 2002 - 200 p
8. Filipenko AS Basics of the scientific research. Lecture notes: Manual.-K .: Akademydav, 2004.-208 p.
9. Erina AM Methodology of scientific research: Textbook.- K ..- 2004.- 212 p.
10. Malyuga NM Scientific research in accounting: Textbook.-Zhytomyr PE Ruta, 2003.-476 p.

Auxiliary

1. System of standards for information, library and publishing. Bibliographic record. Bibliographic description. General requirements and rules of compilation (GOST 7.1-2003, IDT): DSTU GOST 7.1: 2006. - [Effective from 2007-07-01]. - K.: Держспоживстандарт України, 2007. - III, 47 с. - (National standard of Ukraine).
2. Introduction of a new standard for bibliographic description DSTU GOST 7.1: 2006. The main differences from GOST 7.1. — 84: New rules of bibliographic description / State Scientific Institution "Book Chamber of Ukraine". - Access mode: <http://www.ukrbook.net>.

3. Antonenko I. Bibliographic description of electronic resources: methodical materials for bibliography / Antonenko I., Barkova O. // Library Bulletin. - 2006. - № 1. - P. 25-27.
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1 4 . Information resources

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