

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

PETRO MOHYLA
BLACK SEA NATIONAL UNIVERSITY

Medical Institute
Department of Hygiene, Social Medicine and Public Health



NMV Ishchenko
2019

CURRICULUM WORK PROGRAM

Epidemiology and principles of evidence-based medicine

Area of knowledge 22 "Health care"
Specialty 222 "Medicine"

Developer
Head of the Department of Developer
Guarantor of the educational program
Director of the institute
Head of NMV

Zyuzin V.O. _____
Zyuzin V.O. _____
Klimenko M.O. _____
Grishchenko G.V. _____
Shkirchak S.I. _____

1. Description of the discipline

Characteristic	Characteristics of the discipline	
Name of discipline	Epidemiology and principles of evidence-based medicine	
Branch of knowledge	22 "Health care"	
Specialty	222 "Medicine"	
Specialization (if present)		
Educational program	Medicine	
Level of higher education	Master	
Discipline status	Normative	
Curriculum	V, 9th semester	
Academic year	2020-2021	
Course structure: – lectures – practical training – hours of independent work of students	Full-time	Correspondence form
	– 10	
	– 30 – 50	
Percentage of classroom load	55%	
Language of instruction	English	
Form of intermediate control (if present)		
Form of final control	Differentiated exam - 9th semester	

2. Purpose, tasks and planned learning outcomes

The purpose of studying the discipline "Epidemiology and principles of evidence-based medicine" is to acquire the necessary knowledge, skills and competencies to use the basic principles of preventive and anti-epidemic measures and the principles of evidence-based medicine to reduce the incidence of infectious diseases and prevent their spread.

Learning objectives: acquisition by students of competencies, knowledge, skills and abilities for the implementation of specialized activities in the specialty:

- definition of epidemiology as a science and industry practical medicine;
- epidemiological classification of infectious diseases;
- methods and means of sanitary education of the population on the prevention of infectious diseases;
- links of the epidemic process, factors that affect its intensity;
- sources of infectious agents, the epidemiological role of various forms of infectious diseases;
- mechanism of transmission of infectious agents, ways and factors of transmission of infectious agents;
- susceptibility to infectious diseases, their contagion;
- determination of the epidemic center and its purpose, the importance of this work in the effectiveness of anti-epidemic measures;
- principles of prevention of infectious diseases;
- anti-epidemic measures on the sources of infectious agents, routes of transmission, persons who have been in contact with the sources of the infectious agent;
- changes in the epidemiological situation in Ukraine;
- changes in the immunological structure of children due to the deterioration of the environmental situation in Ukraine and the world, monitoring of immunoprophylaxis;
- measures to increase the immunity of the population;
- the role of the nurse in conducting anti-epidemic measures;
- current orders and other instructive and normative documents of the Ministry of Health of Ukraine;
- safety rules when working in treatment and prevention facilities;
- definition and benefits of evidence-based medicine;
- determination of RCT (randomized double-blinded placebo-controlled study);
- hierarchy of evidence;
- levels of evidence, the probative value of different types of research;
- systematic review, its advantages and consequences;
- meta-analysis, its advantages and consequences;
- information resources on evidence-based medicine.

Prerequisites for studying the discipline (interdisciplinary links)

Epidemiology and principles of evidence-based medicine as a discipline:

a) is based on students' understanding of the basic principles of knowledge in hygiene, ecology, statistics, evidence-based medicine, microbiology, virology, social medicine and public health and is integrated with other disciplines;

b) creates a theoretical basis for students to master preventive and anti-epidemic measures, patterns of the epidemic process, conditions that contribute to or prevent the spread of infectious diseases and methods of epidemiology, which provides as performance integration with basic medical and preventive disciplines, and the acquisition of in-depth knowledge of evidence-based medicine, the ability to use this knowledge in the process of further training and in the professional activities of the doctor;

c) provides the possibility of anti-epidemic measures for further diagnosis, treatment and prevention of infectious diseases.

Expected learning outcomes. As a result of studying the discipline, students have:

- the ability to exercise their rights and responsibilities as a member of society, to realize the values of civil society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine;
- ability to abstract thinking, analysis and synthesis;
- ability to apply knowledge in practical situations;
- skills of using information and communication technologies;
- certainty and persistence in relation to the set tasks and specified responsibilities;
- ability to make informed decisions;
- ability to evaluate and ensure the quality of work performed;
- ability to interpersonal interaction;
- ability to identify, pose and solve problems, generate ideas;
- ability to act on the basis of ethical considerations;
- ability to adapt and act in a new situation;
- ability to work in a team.

According to the requirements of the educational-professional program, students must

○ **know:**

- professional and legal standards in everyday medical practice;
- signs of health and its changes, illness or disability (assessment, diagnosis), restrictions opportunities for increased life;
- problems of patients with various diseases and conditions;
- professional skills, medical means, interventions and actions in assessing the functional state of disorders;
- preparation of patients for diagnosis and research and collection of biological material for laboratory research;
- principles and methods of preserving one's own health during anti-epidemic measures;
- the importance of laboratory experiments in evidence-based medicine and epidemiology;
- practices of managing infectious patients;
- probative value of laboratory and clinical studies;
- the importance of laboratory and clinical studies for the practice of an epidemiologist.

○ **be able:**

- to be guided in definition of group belonging infectious diseases, features of their epidemiological and clinical characteristics;
- to organize prevention of infectious diseases, spread of infectious diseases, informing and educating patients and members of his family;
- to organize anti-epidemic work on the principle family medicine;
- identify the relationship of clinical manifestations of infectious diseases with the results of evidence-based research methods;
- organize and provide emergency care for infectious conditions;
- to organize and manage the relevant structural unit of the infectious diseases hospital;
- to use in professional activity knowledge of normative-legal, legislative acts of Ukraine and orders of the Ministry of Health of Ukraine, WHO materials;
- use clinical guidelines and management protocols for infectious patients;
- correctly design clinical and epidemiological notebooks;
- evaluate clinical recommendations by probative value and levels of evidence;
- use meta-analysis and systematic reviews of evidence;

○ **have competencies**

- on the application of knowledge of epidemiology and the principles of evidence - based medicine for organizations anti-epidemic measures and prevention of occurrence and development infectious diseases;

- about the basic perspective directions of development of epidemiology and principles evidence-based medicine;

The developed program corresponds to the educational-professional program (OPP) and is focused on the formation of competencies:

general (LC) - LC1-3 OPP:

ZK1. Ability to abstract thinking, analysis and synthesis, the ability to learn and master modern knowledge.

ZK2. Ability to apply knowledge in practical situations.

ZK3. Knowledge and understanding of the subject area and understanding of professional activity.

professional (FC) - FC2-6, FC10, FC15, FC18

FC2. Ability to determine the required list of laboratory and instrumental studies and evaluate their results.

FC3. Ability to establish a preliminary and clinical diagnosis of the disease.

FC4. Ability to determine the required mode of work and rest in the treatment of diseases.

FC5. Ability to determine the nature of nutrition in the treatment of diseases.

FC6. Ability to determine the principles and nature of disease treatment.

FC10. Ability to carry out medical and evacuation measures.

FC15. Ability to plan and carry out preventive and anti-epidemic measures against infectious diseases.

FC18. Ability to keep medical records.

According to the educational-professional program, the expected program learning outcomes (PRN) include the skills of PRN21, PRN26-27, PRN29, PRN31, PRN37-39 OPP:

PRN21. Organize medical and evacuation measures among the population and servicemen, in emergency situations, including in the field, during the detailed stages of medical evacuation, with taking into account the existing system of medical and evacuation support.

PRN26. Implement a system of anti-epidemic and preventive measures in the health care institution, its unit on the basis of data on the health of certain contingents of the population and the impact on the environment, using existing methods, within the primary health care, of:

- organization of rational nutrition, water supply;
- mode of activity and rest;
- formation of a favorable production environment;
- primary prevention of diseases and injuries;
- vaccine prophylaxis;
- prevention of bad habits;
- prevention of unwanted pregnancy;
- promoting a healthy lifestyle.

PRN27. Implement a system of primary prevention measures, based on data on the health status of the population served and the presence of the determinants of health, in the health care facility and outside it using existing methods, within the primary care. sanitary assistance to the population:

- sanitary and educational measures to prevent the occurrence of infectious and non-infectious diseases, injuries and the promotion of a healthy lifestyle;
- organization of rational nutrition, safe social and living conditions, water supply; mode of activity and rest.

PRN29. Plan measures to prevent the spread of infectious diseases (according to list 2) in a health care facility, its unit based on the results of epidemiological surveys of infectious diseases, epidemiological analysis, using existing preventive and anti-epidemic methods.

PRN31. Identify in the conditions of the health care institution, its subdivision using statistical and laboratory methods of risk group, risk areas, time of risk, risk factors and carry out epidemiological analysis of infectious diseases of the population.

PRN37. In the conditions of a health care institution, its subdivision according to standard methods:

- identify negative environmental factors on the basis of a sanitary institution by comparing existing norms and standards;
- to analyze the state of health of a certain contingent on the basis of official data by comparison with average indicators;

determine the relationship between the state of the environment and the state of health of a particular contingent on the basis of data about them;

to develop preventive measures on the basis of data on the relationship between the state of the environment and the state of health of a certain contingent.

PRN38. Carry out analysis of morbidity of the population, identifying risk groups, risk areas, time of risk, risk factors, in the conditions of the health care institution, its subdivision, using statistical and laboratory methods

PRN39. Assess the impact of socio-economic and biological determinants on the health of the individual, family, population, in the service area according to standard methods and on the basis of data epidemiological and medical-statistical research.

3. The program of the discipline

The educational process is organized according to the European Credit Transfer and Accumulation System (ECTS).

The curriculum consists of two blocks.

Block 1. Epidemiology.

Sections:

1. General basics of epidemiology.
2. Preventive and anti-epidemic measures to reduce the incidence of infectious diseases and prevent their spread.
3. Infectious diseases, most of which have no tendency to spread epidemic or are rare.

Block 2. Principles of evidence-based medicine.

Sections:

1. Evidence-based medicine. Components of evidence-based medicine. Aspects of evidence-based medicine.
2. The main provisions of evidence-based medicine.
3. Evidence-based medicine and the quality of medical care.

Block 1. Epidemiology

Section 1. General principles of epidemiology.

Topic 1. Subject and methods of epidemiology. History of epidemiology. The concept of epidemiological surveillance.

Introduction. Subject and method of epidemiology. History of epidemiology. The concept of epidemiological surveillance. The doctrine of the epidemic process. The impact of social and natural conditions on the epidemic process. The subject of epidemiology. Definition of epidemiology as a science. The role and place of epidemiology in health care, economy, defense. The main tasks for the prevention of infectious diseases in modern conditions. Methods of epidemiology. Epidemiological surveillance - a modern and most effective form of preventive and anti-epidemic work: the definition, general purpose and objectives. Epidemiological method of research, epidemiological diagnostics, epidemiological analysis. Epidemic process as a process of occurrence and spread of infectious diseases among the population. Quantitative manifestations of the epidemic process: sporadic and epidemic morbidity (outbreak, epidemic, pandemic). Links of the epidemic process. Sick person as a source of infection. Contagiousness of the patient in certain periods of the disease. Carriers of the pathogen as a source of infection. Media categories. Animals as a source of infectious agents (wild, industrial, domestic). Sapronoses. The mechanism of transmission of infectious agents: fecal-oral, drip (aerosol), transmissible, contact, vertical. Factors of transmission of the pathogen. Ways of spreading the

pathogen. Significance of certain species of insects and arthropods as vectors of infectious diseases. Biological and epidemiological characteristics of lice, mosquitoes, fleas, mosquitoes, flies, mites. The influence of social and natural factors on the epidemic process. The natural focus of infectious diseases. The role of environmental factors in the formation of the epidemic process. The main provisions of the theory of self-regulation of parasitic systems VD Belyakov. Epidemic center. Susceptibility to infectious diseases. The importance of immune testing among the population in the development of the epidemic process.

Topic 2. Classification of infectious diseases. Sanitary and Epidemiological Service in Ukraine. General directions of prevention of infectious diseases.

Fundamentals of epidemiological classification of infectious diseases. Epidemiological characteristics of the main groups of diseases. The main directions of prevention of infectious diseases. Infectious disease accounting and reporting systems. Measures to source infectious agents. Providing the population with outpatient and inpatient care (infectious diseases hospitals), the importance of isolation of infectious patients. The role of the sanitary asset. Sanitary education of the population. Work with bacteriocarriers. Measures for the transmission of infectious agents. Improving the environment. General sanitary measures and their significance. Measures to increase the immunity of the population. Anti-epidemic work at PCSMD. The system of measures to prevent the population and the spread of infectious diseases especially dangerous to people in Ukraine. Legislation on sanitary protection of the territory. International information on exotic infections. Sanitary and Epidemiological Service in Ukraine. Disinfection and sterilization. Tasks and place among anti-epidemic and sanitary-preventive measures. Types of disinfection: preventive, focal (current, final). Disinfection methods and means of its implementation. Disinfection facilities, the content of their work. Basic disinfectants.

Section 2. Preventive and anti-epidemic measures to reduce the incidence of infectious diseases and prevent their spread.

Topic 3. Epidemiological characteristics of different groups of infections. Anti-epidemic measures in foci of infectious diseases. Pest control. Disinsection. Disinfection and sterilization.

Measures to increase the immunity of the population. The place of immunoprophylaxis in the system of preventive and anti-epidemic measures. Active and passive immunization, its features. Types of drugs for vaccination, their features. Methods of administration of immunobiological drugs. The concept of the cold chain. Indications and contraindications to immunoprophylaxis. The procedure for preventive vaccinations in Ukraine. Calendar of preventive vaccinations. Immunization is planned and according to epidemic indications. Post-vaccination reactions and complications. The influence of environmental factors on the formation of natural resistance and artificial immunity. The concept of collective immunity. The concept of immunoprophylaxis monitoring. The role of the nurse in the organization and conduct of specific prevention of infectious diseases.

The concept of rodent control. Types and methods of rodent control. The concept of disinfection. Types and methods of disinfection. The concept of disinfection. Types and methods of disinfection. Classification of disinfectants. Disinfection of the chamber, principles of their device and purpose. Disinfection quality control. The concept of sterilization. Stages of sterilization. Quality control of pre-sterilization treatment.

Topic 4. Infections associated with the provision of medical care. Anti-epidemic measures in foci of infections with fecal-oral transmission mechanism. Infection control systems.

Epidemiological characteristics of the group of intestinal infections. Factors and ways of transmission of specific nosological forms. Manifestations of the epidemic process (level of morbidity, manifestations of morbidity over time, by territory, among different groups of the population and by groups). Preventive and anti-epidemic measures in the centers. Investigation

of outbreaks of intestinal infections. Anti-epidemic protection under the conditions of registration of epidemic centers.

Section 3. Infectious diseases, most of which do not tend to spread epidemic or are rare.

Topic 5. Infections associated with the provision of medical care. Infection control systems.

Epidemiological characteristics of the group of transmissible infections and infections of the outer coverings. Factors and ways of transmission of specific nosological forms. Manifestations of the epidemic process (level of morbidity, manifestations of morbidity over time, by territory, among different groups of the population and by groups). Preventive and anti-epidemic measures in the centers. Criteria for assessing the sanitary and epidemiological condition of troops and the area of their location under the conditions of registration of transmissible infections and infections of the outer coverings.

Topic 6. Particularly dangerous infections. Sanitary protection of the territory. Anti-epidemic measures in emergency situations.

Diseases belonging to THEY. The mode of operation of the ONI laboratory, the rules of taking and transporting material. *Vibrio cholerae*. Classification. Biological properties. Antigenic structure. Resistance to environmental factors. Pathogenesis and clinical manifestations of cholera. Immunity. Rules for taking the material and delivering it to the laboratory. Laboratory diagnostics. General and specific prevention. Treatment.

Topic 7. Features of anti-epidemic measures in cases of emergencies in peacetime under conditions of infections of international importance.

Factors influencing the spread of infectious diseases in emergency areas. Features of the epidemic process during an emergency. Basic principles of planning anti-epidemic and preventive measures in emergency zones. Protection of the population in emergencies. Regime-restrictive measures during observation and quarantine. Collective and individual means of protection of the population.

Sanitary and bacteriological research. The value of sanitary microbiology and its tasks. Conditionally pathogenic and sanitary-indicative microorganisms. Methods of sanitary-bacteriological research. Determination of microbial count, sanitary-indicative and pathogenic microorganisms. Value of GOST of Ukraine, NTD and methodical instructions for sanitary and bacteriological researches. Sanitary and bacteriological researches of objects of environment (water, air, soil), foodstuff. Sanitary and bacteriological control over the quality of sterilization and disinfection. Control over compliance with the regime in treatment and prevention facilities, food units, utilities. Sampling and delivery to the laboratory. Determination of total microbial count (TBM), indicators of microbial contamination, the number of pathogenic microorganisms. Accounting and evaluation of research results.

Block 2. Principles of evidence-based medicine.

Section 1. Evidence-based medicine. Components of evidence-based medicine. Aspects of evidence-based medicine.

Topic 8. Evidence-based medicine - evidence-based medicine, the scientific basis of medical practice.

Globalization of infectious processes in all areas of knowledge and new problems of medicine. Practice of evidence-based medicine. Principles of evidence-based medicine. Individual practical experience.

Topic 9. Components of evidence-based medicine.

Basic pharmacoepidemiological concepts of evidence-based medicine. International experience in the use of evidence-based medicine. Areas of medical science formed in the process of development of evidence-based medicine technologies. The role of evidence-based medicine in physician practice. Definition of evidence.

Topic 10. Aspects of evidence-based medicine.

Medical and ethical aspects. Economic aspect. Legal aspect. Educational aspect. Conditions for the effective functioning of evidence-based medicine.

Section 2. The main provisions of evidence-based medicine.

Topic 11. Principles of evidence-based medicine as a strategic direction of modern medical science and practice.

The principle of using scientific and medical information only the highest level of evidence. The principle of constant updating of information on the achievements of medical science and clinical practice. The principle of constant acquaintance of all participants in the medical field with the achievements of science and practice. The principle of optimal diagnostic expediency. The principle of rational pharmacotherapy. The principle of scientifically sound prognosis of the disease. The principle of continuous improvement of medical safety obstruction. The principle of standardization of medical interventions. The principle of minimizing economic costs. The principle of collective responsibility for the high efficiency of diagnostic and therapeutic technologies. The principle of constant optimization of the national health care system.

Topic 12. Evidence-based medicine and the quality of research.

Testing the efficacy and safety of the target for diagnosis, prevention and treatment in research. Provisions of clinical epidemiology. Controlled clinical trials - efficiency. Randomization method. Stratification method. Evidence rating scale. Meta-analysis.

Section 3. Evidence-based medicine and the quality of medical care.

Topic 13. Quality and efficiency of medical institutions.

The concept of three E in research. Qualification level of medical staff. Quality management and professional leadership skills. Standardization of medical practice.

Topic 14. Quality assurance of medical care. Standardization of medical practice.

Standards of outpatient and inpatient care for adults and children. Problems of standardization of medical practice. Development of comprehensive programs of continuous quality of medical care, the main management tasks. Stages of reforming the quality of health care system.

The structure of the discipline

Block 1. Epidemiology

Name the topics	Full-time				
	<i>Number of hours</i>				
	total	including:			
lectures		practical training	laboratory classes	individual work	
Section 1. General principles of epidemiology					
Topic 1. Subject and methods of epidemiology. History of epidemiology. The concept of epidemiological surveillance.	10	1	4	-	5
Topic 2. Classification of infectious diseases. Sanitary and Epidemiological Service in Ukraine. General directions of prevention of infectious diseases.	10	1	4	-	5
<i>Together under section 1</i>	20	2	8	-	10
Section 2. Preventive and anti-epidemic measures to reduce the incidence of infectious diseases and prevent their spread					
Topic 3. Epidemiological characteristics of different groups of infections. Anti-epidemic measures in foci of infectious diseases. Pest control. Disinsection. Disinfection and sterilization.	10	1	4	-	5
Topic 4. Infections associated with medical care. Anti-epidemic measures in foci of infections with fecal-oral transmission mechanism. Infection control systems.	10	1	4	-	5
<i>Together under section 2</i>	20	2	8	-	10
Section 3. Infectious diseases, most of which are not prone to epidemic spread or are rare					
Topic 5. Infections associated with medical care. Infection control systems.	5	1	1	-	3
Topic 6. Infections are especially dangerous. Sanitary protection of the territory. Anti-epidemic measures in emergency situations.	5	1	1	-	3
Topic 7. Features of anti-epidemic measures in cases of emergencies in peacetime in the context of infections of international importance.	8	-	2	-	6
<i>Together under section 3</i>	18	2	4	-	12
Total hours for block 1	58	6	20	-	32

Block 2. Principles of evidence-based medicine

Name the topics	Full-time				
	<i>Number of hours</i>				
	total	including:			
lectures		practical training	laboratory classes	individual work	
Section 1. Evidence-based medicine. Components of evidence-based medicine. Aspects of evidence-based medicine					
Topic 8. Evidence-based medicine - evidence-based medicine, the scientific basis of medical practice.	5	1	2	-	2
Topic 9. Components of evidence-based medicine.	5	1	2	-	2
Topic 10. Aspects of evidence-based medicine.	4	-	2	-	2
<i>Together under section 1</i>	14	2	6	-	6
Section 2. The main provisions of evidence-based medicine					
Topic 11. Principles of evidence-based medicine as a strategic direction of modern medical science and practice.	4	1	1	-	2
Topic 12. Evidence-based medicine and the quality of research.	5	1	1	-	3
<i>Together under section 2</i>	9	2	2	-	5
Section 3. Evidence-based medicine and the quality of medical care					
Topic 13. Quality and efficiency of medical institutions.	4	-	1	-	3
Topic 14. Ensuring the quality of medical care. Standardization of medical practice.	5	-	1	-	4
<i>Together under section 3</i>	9	-	2	-	7
Total hours for block 2	32	4	10	-	18
Total hours for discipline	90	10	30	-	50
ECTS credits for the discipline - 3.0					

4. The content of the discipline

4.1. Lecture plan

№ n \ n	Topic names	Number of hours
Block 1. Epidemiology		
1.	Topic 1. Subject and methods of epidemiology. History of epidemiology. The concept of epidemiological surveillance.	1
2.	Topic 2. Classification of infectious diseases. Sanitary and Epidemiological Service in Ukraine. General directions of prevention of infectious diseases.	1
3.	Topic 3. Epidemiological characteristics of different groups of infections. Anti-epidemic measures in foci of infectious diseases. Pest control.	1

	Disinsection. Disinfection and sterilization.	
4.	Topic 4. Infections associated with medical care. Infection control system. Anti-epidemic measures in foci of infections with fecal-oral transmission mechanism. Compliance with the rules of safety, labor protection and anti-epidemic regime during the procedures.	1
5.	Topic 5. Infections associated with medical care. Infection control systems.	1
6.	Topic 6. Infections are especially dangerous. Sanitary protection of the territory. Anti-epidemic measures in emergency situations.	1
Total hours per unit 1		6
Block 2. Principles of evidence-based medicine		
7.	Topic 8. Evidence-based medicine - evidence-based medicine, the scientific basis of medical practice.	1
8.	Topic 9. Components of evidence-based medicine.	1
9.	Topic 11. Principles of evidence-based medicine as a strategic direction of modern medical science and practice.	1
10.	Topic 12. Evidence-based medicine and the quality of research.	1
Total hours for block 2		4
Total hours for discipline		10

4.2. Plan of practical classes Block 1. Epidemiology

№ n \n	Topic names	Number of hours
Section 1. General principles of epidemiology		
1.	Topic 1. Subject and methods of epidemiology. History of epidemiology. The concept of epidemiological surveillance.	4
2.	Topic 2. Classification of infectious diseases. Sanitary and Epidemiological Service in Ukraine. General directions of prevention of infectious diseases.	4
Section 2. Preventive and anti-epidemic measures to reduce the incidence of infectious diseases and prevent their spread		
3.	Topic 3. Epidemiological characteristics of different groups of infections. Anti-epidemic measures in foci of infectious diseases. Pest control. Disinsection. Disinfection and sterilization.	4
4.	Topic 4. Infections associated with medical care. Infection control system. Anti-epidemic measures in foci of infections with fecal-oral transmission mechanism. Compliance with the rules of safety, labor protection and anti-epidemic regime during the procedures.	4
Section 3. Infectious diseases, most of which are not prone to epidemic spread or are rare		
5.	Topic 5. Infections associated with medical care. Infection control systems.	1
6.	Topic 6. Infections are especially dangerous. Sanitary protection of the territory. Anti-epidemic measures in emergency situations.	1
7.	Topic 7. Features of anti-epidemic measures in cases of emergencies in peacetime in the context of infections of international importance.	2

Total hours per unit 1	20
-------------------------------	-----------

Block 2. Principles of evidence-based medicine

№ n \ n	Topic names	Number of hours
Section 1. Evidence-based medicine. Components of evidence-based medicine. Aspects of evidence-based medicine		
1.	Topic 8. Evidence-based medicine - evidence-based medicine, the scientific basis of medical practice.	2
2.	Topic 9. Components of evidence-based medicine.	2
3.	Topic 10. Aspects of evidence-based medicine.	2
Section 2. The main provisions of evidence-based medicine		
4.	Topic 11. Principles of evidence-based medicine as a strategic direction of modern medical science and practice.	1
5.	Topic 12. Evidence-based medicine and the quality of research.	1
Section 3. Section 3. Evidence-based medicine and the quality of medical care		
6.	Topic 13. Quality and efficiency of medical institutions.	1
7.	Topic 14. Ensuring the quality of medical care. Standardization of medical practice.	1
Total hours for block 2		10
Total hours for discipline		30

4.3. Tasks for independent work

Block 1. Epidemiology

№ n \ n	Topic names	Number of hours
Section 1. General principles of epidemiology		
1.	Topic 1. Subject and methods of epidemiology. History of epidemiology. The concept of epidemiological surveillance.	5
2.	Topic 2. Classification of infectious diseases. Sanitary and Epidemiological Service in Ukraine. General directions of prevention of infectious diseases.	5
Section 2. Preventive and anti-epidemic measures to reduce the incidence of infectious diseases and prevent their spread		
3.	Topic 3. Epidemiological characteristics of different groups of infections. Anti-epidemic measures in foci of infectious diseases. Pest control. Disinsection. Disinfection and sterilization.	5
4.	Topic 4. Infections associated with medical care. Infection control system. Anti-epidemic measures in foci of infections with fecal-oral transmission mechanism. Compliance with the rules of safety, labor protection and anti-epidemic regime during the procedures.	5
Section 3. Infectious diseases, most of which are not prone to epidemic spread or are rare		

5.	Topic 5. Infections associated with medical care. Infection control systems.	3
6.	Topic 6. Infections are especially dangerous. Sanitary protection of the territory. Anti-epidemic measures in emergency situations.	3
7.	Topic 7. Features of anti-epidemic measures in cases of emergencies in peacetime in the context of infections of international importance.	6
Total		32

Block 2. Principles of evidence-based medicine

№ n \ n	Topic names	Number of hours
Section 1. Evidence-based medicine. Components of evidence-based medicine. Aspects of evidence-based medicine		
1.	Topic 8. Evidence-based medicine - evidence-based medicine, the scientific basis of medical practice.	2
2.	Topic 9. Components of evidence-based medicine.	2
3.	Topic 10. Aspects of evidence-based medicine.	2
Section 2. The main provisions of evidence-based medicine		
4.	Topic 11. Principles of evidence-based medicine as a strategic direction of modern medical science and practice.	2
5.	Topic 12. Evidence-based medicine and the quality of research.	3
Section 3. Section 3. Evidence-based medicine and the quality of medical care		
6.	Topic 13. Quality and efficiency of medical institutions.	3
7.	Topic 14. Ensuring the quality of medical care. Standardization of medical practice.	4
Total		18

Individual tasks for performing VTS

Block 1. Epidemiology

1. Definition of discipline as a science and branch of preventive medicine.
2. Epidemiological classification of infectious diseases.
3. Methods and means of sanitary education of the population on the prevention of infectious diseases.
4. Links of the epidemic process, factors influencing its intensity.
5. Sources of infectious agents, the epidemiological role of various forms of infectious agents.
6. Mechanisms of transmission of infectious agents, ways and factors of transmission of infectious agents.
7. Susceptibility to infectious diseases, their contopiosis.
8. Identification of the epidemic center and its goals, the importance of this work in the effectiveness of preventive measures.
9. Principles of prevention of infectious diseases.
10. Anti-epidemiological measures on the sources of infectious agents, the route of transmission and persons who have been in contact with the source of infectious agents.

11. Changes in the epidemic situation in Ukraine.
12. Changes in the immunological status of children due to the deterioration of the ecological situation in Ukraine and the world, monitoring of immunoprophylaxis.
13. Measures to increase the immunity of the population.
14. The role of the doctor in carrying out anti-epidemic measures.
15. Safety rules when working in treatment and prevention facilities.
16. The concept of epidemiological surveillance.
17. Features of anti-epidemic measures in cases of emergencies under the condition of infections of international importance.

Block 2. Principles of evidence-based medicine

1. History of evidence-based medicine.
2. The main provisions of evidence-based medicine.
3. Evidence-based medicine and the quality of clinical trials.
4. Evidence-based medicine and the quality of medical care.
5. The role of evidence-based medicine in modern medical procedure.
6. Components of evidence-based medicine.
7. Aspects of evidence-based medicine.
8. Principles of evidence-based medicine.
9. Role evidence-based medicine in the medical profession.
10. Definition of evidence.
11. Information resources of evidence-based medicine.
12. Meta-analysis and Conchran database.
13. Introduction of evidence into medical practice and health care.
14. Evidence practice - the integration of evidence, clinical experience and patient choice.
15. Diagnostic methodology and evidence-based approach, or evidence-based diagnosis.
16. Clinical recommendations, medical standards, local clinical protocols for medical care.
17. Evidence-based prevention in health care.

4.4. Ensuring the educational process

1. Verbal methods: lectures, conversations, stories, explanations, work with literature.
2. Visual methods: illustration, demonstration, observation.
3. Practical methods: situational tasks, independent work, research work.
4. Interactive methods: experiments, work in small groups, brainstorming, case method, business game.
5. Exam tickets.

5. Final control

List of test questions

Block 1. Epidemiology

1. Subject and tasks of epidemiology.
2. The main stages of development of epidemiology.
3. Epidemic process and its components.
4. Sections of the doctrine of the epidemic process.
5. Driving forces of the epidemic process.
6. Features of the epidemic process in anthroponoses and zoonoses. The concept of sapronosis.
7. Quantitative and qualitative manifestations of the epidemic process.
8. Anti-epidemic measures in foci of infectious diseases.
9. The focus of infectious disease. Directions of epidemiological examination of the center.

10. What determines the boundaries of the source of infectious disease? Give examples.
11. The purpose and objectives of the epidemiological survey of the cell.
12. How are infectious patients identified and reported?
13. Source and reservoir of infectious agents.
14. Sick person and carrier and their epidemiological significance.
15. Categories of carriers of infectious diseases.
16. Measures for disinfection of patients and carriers as sources of infectious diseases.
17. Epidemiological significance of animals (rodents, domestic animals, etc.).
18. The concept of rodent control, types and methods.
19. Theory of the mechanism of transmission of infectious diseases LV Gromashevsky. Definition of the transmission mechanism, its links. Factors and ways of transmission of infectious diseases.
20. The basic law of the theory of transmission mechanism.
21. Types of mechanisms of transmission of human infectious diseases.
22. Epidemiological significance of arthropods as vectors of infectious diseases. Types and methods of disinfection.
23. Definition of disinfection, its types and methods. Disinfection quality control.
24. Disinfection chambers, principles of their installation and purpose.
25. Sterilization and its stages, quality control.
26. Calendar of preventive vaccinations of Ukraine. Legal aspects of vaccine prophylaxis.
27. Drawing up a plan for preventive vaccinations.
28. Filling in the accounting documentation for vaccinations.
29. Basic normative documents in the field of epidemiology.
30. Epidemiological method of research, its structure.
31. Descriptive and evaluative methods of the epidemiological method.
32. Epidemiological, social and economic significance of infectious diseases.
33. Levels of evidence in medicine.
34. Epidemiological diagnostics as a basis of preventive and anti-epidemic work.
35. Operational epidemiological analysis.
36. Methods of retrospective epidemiological analysis.
37. Analysis of long-term and annual dynamics of morbidity.
38. Manifestations of the epidemic process in the long-term dynamics of morbidity and the reasons that cause them.
39. Analysis of the territorial distribution of morbidity.
40. Manifestations of the epidemic process in the annual dynamics of morbidity and the reasons that cause them.
41. The structure and level of morbidity of the population by groups, groups and nosological forms.
42. The concept of territory, groups, time and risk factors.
43. The importance of the social factor in the development of the epidemic process.
44. The value of a natural factor in the development of the epidemic process.
45. Analytical and experimental methods of epidemiological research method.
46. The essence of analytical research such as "case-control".
47. The essence of cohort analytical research.
48. Definition of an epidemiological experiment.
49. Content and purpose of a controlled epidemiological experiment.
50. Content and purpose of an uncontrolled epidemiological experiment.
51. Content and purpose of a natural epidemic experiment.
52. Forecasting the manifestations of the epidemic process.
53. The purpose and features of the organization of screening surveys of the population.
54. Methods of mathematical modeling in epidemiology and their significance.
55. Planning of anti-epidemic and preventive measures.

Block 2. Principles of evidence-based medicine

1. Evidence-based medicine. Definition of the concept.
2. The main provisions of evidence-based medicine.
3. Evidence-based medicine and the quality of research.
4. Evidence-based medicine and the quality of medical care.
5. The role of evidence-based medicine in modern medical practice.
6. Components of evidence-based medicine.
7. Aspects of evidence-based medicine.
8. Principles of evidence-based medicine.
9. The role of evidence-based medicine in physician practice.
10. Definition of evidence.
11. Information resources of evidence-based medicine.
12. Meta-analysis and Cochrane database.
13. Introduction of evidence into medical practice and health care.
14. Evidence-based medicine - the integration of evidence, clinical experience and patient choice.
15. Diagnostic methodology and evidence-based approach or evidence-based diagnosis.
16. Clinical recommendations, medical standards, local clinical protocols for medical care.
17. Evidence-based prevention in health care.

"0" version of the credit card

Black Sea National University
named after Peter the Great
Educational qualification level - master
Field of knowledge: 22 "Health care"
Specialty 222 "Medicine"
Academic discipline

"Epidemiology and principles of evidence-based medicine"

Option № 0

1. Epidemic process and its components. (Maximum number of points - 20).
2. The basic law of the theory of transmission mechanism. (Maximum number of points - 20).
3. Determination of the epidemiological process. (Maximum number of points - 20).
4. Principles of evidence-based medicine. (Maximum number of points - 20).

*Approved at a meeting of the Department of Hygiene, Social Medicine and Public Health.
Protocol № ____ dated _____ 2020*

The head of the department

Professor Zyuzin V.O.

Examiner

Professor Zyuzin V.O.

6. Evaluation criteria and tools for diagnosing learning outcomes

Control methods

- Survey (testing of theoretical knowledge and practical skills)
- Test control
- Writing a review of scientific literature (abstracts), performing individual tasks, their defense

Current control. Testing in practical classes of theoretical knowledge and mastery of practical skills, as well as the results of independent work of students. Supervised by teachers of the department in accordance with the specific purpose of the curriculum. Assessment of the level of student training is carried out by: interviewing students, solving and analyzing situational tasks and test tasks, interpreting the results of experimental and medical and biological research, monitoring the acquisition of practical skills.

Intermediate control. Checking the possibility of using students for medical and social analysis of theoretical knowledge and practical skills on all topics studied, as well as the results of independent work of students. Carried out in the last lesson on the block by passing practical skills, solving situational problems and testing.

Final control work is held upon completion of the study of all topics of the block at the last test session of the semester.

In order to assess the results of training in "Epidemiology and principles of evidence-based medicine" is also a final control in the form of a differentiated test.

Students who have attended all the classes provided by the curriculum and program, performed full independent work and in the process of learning scored the number of points, not less than the minimum - 70 points are allowed to the final control.

Distribution of points received by students

A positive assessment in each practical session can be from 4.7 to 8 points. A score below 4.7 points means "unsatisfactory", the lesson is not credited and is subject to practice in the prescribed manner. On the test, a student can get a maximum of 80 points. The test is considered passed if the student scored at least 50 points.

Assessment of student performance

Type of activity (task)	Maximum number of points
Practical classes from the 1st to the 15th	8 points for each practical lesson
Together for the current educational activity	120
Differentiated credit	80
The total amount of points for the discipline	200

Criteria for assessing knowledge

Score of 8 points in the practical lesson and 71 - 80 points in the test (A on the ECTS scale and 5 on the national scale) the student's answer is evaluated if he demonstrates a deep knowledge of all theoretical positions and the ability to apply theoretical material for practical analysis and there are no inaccuracies.

Score of 6-7 points in the practical lesson and 61 - 70 points in the test (B and C on the ECTS scale and 4 on the national scale) the answer is evaluated if it shows knowledge of all theoretical provisions, the ability to apply them in practice, but some fundamental inaccuracies are allowed.

Grade 4.7-5 points in the practical lesson and 50 - 60 points in the test (D and E on the ECTS scale and 3 on the national scale) the student's response is evaluated provided that he knows the main theoretical principles and can use them in practice.

7. Recommended sources of information

7.1. Basic

1. Andreychin MA, Kopcha VS Epidemiology: - Ternopil: Ukrmedknyha, 2000. - 372 p.
2. Infectious diseases / MB Titov, VA Herasun, LV Shevchenko and others / Ed. MV. Titov. K.: Higher school 1995. - 567 p.
3. Sinyak KM, Girin VM Epidemiology with the basics of medical parasitology. K.: Health, 2001. - 461 c.
4. Chornovil OV Clinical nursing in insectology: a textbook. - K.: Medicine, 2010. - 408 c.

7.2. Additional

1. Album A., Norell S. Introduction to modern epidemiology. - Tallinn, 1996. - 122 p.
2. Vlasov VV Introduction to evidence-based medicine. - M.: Media Sphere, 2001. - 392 c.
3. Voizanova JI Infectious and parasitic diseases. - K.: Health, 2001. - 854 c.
4. Greenhalkh T. Fundamentals of evidence-based medicine: lane. with English - M.: GEOTAR - MED, 2004.- 240 p.
5. Denisenko OV Infectious diseases in modules: textbook. way. - K.: BCB «Medicine», 2011. - 168 c.
6. Epidemiological methods of studying non-communicable diseases / V.M. Lehan, Yu.V. Вороненко, О.П. Maksymenko and others. - D.: ART - PRESS, 2004. - 184 p.
7. Zaritsky AM Disinfection. - Zhytomyr: Ruta, 2001. - 196 p.
8. Kasyanenko AM, Pavlov AV, Sinyak KM Handbook of epidemiology. - K.: Health, 1989. - 108 c.
9. Sinyak KM, Girin VM Epidemiology. - K.: Health, 1998. - 270 c.
10. Fletcher R., Fletcher S., Wagner E. Clinical epidemiology. Fundamentals of evidence-based medicine. - M.: Media Sphere, 1998. - 352 c.

7.3. Information resources on the Internet

1. Medical library. DNU Library named after O. Gonchar. <http://library.dnu.dp.ua/>
2. http://www.library.univ.kiev.ua/ukr/for_lib/publik-2018.php3
3. <http://www.google.com/search?q=epide%D0%BC%D1%96%>
4. <http://library.Zsmu.edu.ua/cgi/irbis64r14/fulltext/Jepidemiologija/DykyjBM06Epidem.pdf>