# MINISTRY OF HEALTH OF UKRAINE KHARKIV NATIONAL MEDICAL UNIVERSITY

### Department of Public Health and Health Management

Academic year 2021-2022

#### SYLLABUS OF THE EDUCATIONAL COMPONENT

# SOCIAL MEDICINE, PUBLIC HEALTH

(name of the discipline)

Normative or selective educational component Normative

Normative

Form of education

Full-time

Branch of knowledge

22 «Health care»

Specialty

222 «Medicine»

Educational and professional program (educational and scientific program) «Medicine»

Specialization (if available)

The second (master's) level of higher education

(code and name of the specialty)

Course

3-d, 4-th

Educational and professional program

Syllabus of the discipline was approved at the meeting of the department public health and health management

Approved by the methodical commission of KhNMU on public health problems

Protocol from. "27" august 2021 № 13

Protocol from. "01" September 2021 № 2

Head of Department

Head s

(signature)

prof. Ohnev V.A.

(signature)

prof. Ohnev V.A. (surname and initials)

#### **SYLABUS DEVELOPERS:**

- 1. Ohnev V.A.-d. med. s., professor, head of the Department of Public Health and Health Management;
- 2. Сокол К.М. c. med. s., professor of the Department of Public Health and Health Management;
- 3. Usenko S.G. c. med. s., associate Professor of Public Health and Health Management;
- 4. Nesterenko V.G. c. med. s., associate Professor of Public Health and Health Management;

Data on teachers who teach educational component

Name,	Ohnev Victor Andreevich, d. med. s., professor, head of the
father's	Department of Public Health and Health Management;
	Department of Fublic Health and Health Management,
name,	
surname of	
teacher	
Professiona	Public health, Fundamentals of public health, Evidence-based medicine
1 interests,	with the basics of modern epidemiology, Biostatistics, Organization of
links to the	medical and social research, Health communication
teacher's	University
profile (on	website:http://www.knmu.kharkov.ua/index.php?option=com_content&
the	view=article&id=232%3A2011-05-19-08-08-34&catid=7%3A2011-05-
university	05-09-09-08&Itemid=27⟨=uk
website.	AMS: http://31.128.79.157:8080//profile
Departmen	Moodle: http://distance.knmu.edu.ua/course/view.php?id=4918
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ns	
Location	Audience of the Department of Public Health and Health Management
(Full-time)	
(Full-time)	

Name,	Usenko Svitlana Georgievna, c. med. s., associate Professor of Public
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teacher	
Professiona	Public health, International organizations in the health care system,
1 interests,	Evidence-based medicine with the basics of modern epidemiology,
links to the	Biostatistics. Socially significant non-communicable diseases
teacher's	University
profile (on	website:http://www.knmu.kharkov.ua/index.php?option=com_content&
the	view=article&id=232%3A2011-05-19-08-08-34&catid=7%3A2011-05-
university	05-09-09-08&Itemid=27⟨=uk
website.	AMS: http://31.128.79.157:8080//profile
Departmen	Moodle: http://distance.knmu.edu.ua/course/view.php?id=791

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Moodle	Scopus:
system and	https://www.scopus.com/authid/detail.uri?authorId=57218347171
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Name,	Sokol Konstantin Mikhailovich, c. med. s., professor of the
father's	Department of Public Health and Health Management;
name,	
surname of	
teacher	
Professiona	Public health, Evidence-based medicine with the basics of modern
1 interests,	epidemiology, Biostatistics.
links to the	University website:
teacher's	http://www.knmu.kharkov.ua/index.php?option=com_content&view=ar
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the	09-08&Itemid=27⟨=uk
university	ACУ: http:// http://31.128.79.157:8080//profile
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Departmen ts, in the	Moodle: http://distance.knmu.edu.ua/user/profile.php?id=141
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teacher	
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(Full-time)	

Name,	Nesterenko Valentina Gennadievna
father's	
name,	
surname of	
teacher	
Professiona	Public health, public health, health management, project management;
1 interests,	University
links to the	website: <a href="http://www.knmu.kharkov.ua/index.php?option=com_content&amp;">http://www.knmu.kharkov.ua/index.php?option=com_content&amp;</a>
teacher's	view=article&id=232%3A2011-05-19-08-08-34&catid=7%3A2011-05-
profile (on the	05-09-09-08&Itemid=27⟨=uk
university	ACУ: <u>http://31.128.79.157:8080/profile</u>
website.	AC 9. http://31.126.79.137.6060/profile
Departmen	Moodle: http://distance.knmu.edu.ua/user/profile.php?id=1039
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schedule	
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ns	
Location	Audience of the Department of Public Health and Health Management
(Full-time)	

#### INTRODUCTION

**Syllabus of the discipline** "Social Medicine, Public Health" is compiled in accordance with the educational-professional program (hereinafter OPP) and the Standard of Higher Education of Ukraine (hereinafter – the Standard), the second (master's) level, field of knowledge 22 "Health", specialty 222 "Medicine.

**Description of the discipline (annotation)** provides mastering of biostatistics by higher education students, which provides for the definition and analysis of basic biostatistical indicators and criteria based on the principles of evidence-based medicine.

**Subject** of study of the discipline is modern principles of evidence-based medicine, theoretical and methodological foundations of biostatistics, patterns of public health.

**Interdisciplinary links**: "Social medicine, public health" as a discipline:

- is based on the study by students of academic disciplines: history of medicine, computer science, ethics, hygiene and ecology, epidemiology, sociology and medical sociology, the basics of economic theories;

The discipline is a compulsory subject.

The syllabus is organized with the application of modern pedagogical principles of organization of the educational process of higher education.

**Prerequisites** for the study of the following sections: health care organization, ie the activities of the system to ensure the preservation, strengthening and restoration of public health, including the organization of health care and public health; economic foundations of the health care system based on the study of organizational and legal principles of health care institutions in market conditions, economic analysis and methods of assessing financial and economic activities in the field of health care, will take place in the 6th year within the discipline "Social Medicine, public health".

**Post-requisites**: the study of the discipline contributes to the formation of preventive activities of future doctors, taking into account the possible impact on public health of factors of various origins, risk assessment in the development of comprehensive medical and social measures in conjunction with the public health system; provides a study of the legal and organizational principles of health care; lays the foundations for the study of the organization of the medical-diagnostic process, as well as the assessment of its scope and quality in the study of clinical disciplines.

To successfully complete the course, applicants must complete all the tasks of the teacher in a timely manner, if you find questions or problems with their implementation, contact the teacher in advance.

The study of the discipline ends with an exam, so in the process of studying various topics, it is advisable for applicants to pay attention to the exam issues.

# Link to the discipline page in MOODLE

http://distance.knmu.edu.ua/course/view.php?id=49

http://distance.knmu.edu.ua/course/view.php?id=791

#### 1. PURPOSE OF THE COURSE AND TASKS OF THE COURSE

1.1. The purpose of studying the discipline is mastering by higher education students the necessary knowledge, skills and acquisition of competencies in research, analysis and evaluation of public health indicators, organization, resources and activities of the health care system, development of evidence-based medicine recommendations for prevention and elimination of harmful effects on health and to improve the organization of medical care and public health.

# 1.2. The main tasks of studying the discipline are

- mastering the theoretical foundations of biostatistics;
- mastering modern principles of evidence-based medicine;
- acquaintance with methods of definition and analysis of the basic biostatistical indicators and criteria;
- mastering the methodological and theoretical foundations of the formation of statistical aggregates for their further adequate analysis;
- mastering the methods of determining, analyzing and evaluating the main indicators of population health according to individual criteria and in relation to the factors that affect it;
  - mastering the patterns and features of the formation of population health;
- mastering the principles of developing measures to preserve and strengthen the health of the population and its individual contingents;
- mastering the basics of health promotion, outreach, communication and social mobilization in the field of public health.
- **1.2. Competences and learning outcomes,** mastering by higher education students the necessary knowledge, skills and acquisition of competencies in research, analysis and evaluation of public health indicators, organization, resources and activities of the health care system.
  - 1.3.1. The study of the discipline provides mastery by students

## competencies:

### integral

Ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.

#### – general:

- Ability to apply knowledge in practical situations.
- Knowledge and understanding of the subject area and understanding of the profession.
- Ability to self-regulate and lead a healthy lifestyle, the ability to adapt and act in a new situation.
- Ability to choose a communication strategy; ability to work in a team; interpersonal skills.
- Information and communication technology skills.
- Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained.
- Ability to evaluate and ensure the quality of work performed.

- Definiteness and perseverance in terms of tasks and responsibilities.
- Ability to act socially responsible and socially conscious.
  - special (professional, subject):
- Ability to carry out sanitary and hygienic and preventive measures.
- Ability to conduct a health examination.
- Ability to keep medical records.
- Ability to process state, social, economic and medical information.
- Ability to take measures to organize and integrate health care.
- Ability to conduct epidemiological and medical-statistical studies of public health.
- Ability to assess the impact of the environment on the health of the population (individual, family, population).
- Ability to assess the impact of socio-economic and biological determinants on the health of the individual, family, population.
- **1.3.2** The study of the discipline ensures that students acquire the following program **learning outcomes**:
- **PLO 1** have general and special fundamental and professionally-oriented knowledge, skills, abilities, competencies necessary to perform typical professional tasks related to activities in the medical field in the relevant position.
  - **PLO 11** to carry out sanitary and hygienic and preventive measures.
  - **PLO 16** assess the impact of the environment on the health of the population.
- **PLO 17** to be able to keep medical records, process state, social and medical information.
- **PLO 18** to assess the state of human health and provide its support for the impact of the environment and other health factors.
- **PLO 19** to assess the sanitary and hygienic condition of the environment in order to determine the sanitary and hygienic and preventive measures.
- **1.3.3**. The study of the discipline provides students with the following **social skills** (**Soft skills**):
  - Social skills
  - Leadership qualities
  - Ways of thinking.

Training allows you to acquire social skills through professional educational components that include social elements to work in the main discipline, a block of elective disciplines (which contribute to the development and improvement of ways of thinking, professional, ideological, social qualities, moral and ethical values) and and through internships, during which students learn to demonstrate tolerance, empathy, the ability to cooperate with the patient / client, colleagues, to show leadership, to work in critical conditions and to think logically and systematically.

#### 2. INFORMATION SCOPE OF THE COURSE

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline full-time education	
Number of credits – 6	Direction of training  22 «Health care»  (code and name)	Normative	
		Year of p	reparation:
Total number of hours	Specialty:	3-d	4-th
- 180	222 "Medicine"	Sen	nester
- 100	(code and name)	6-th	7-th
		Lectures	
		20 h.	10-h.
		Practica	ıl, seminar
	T-1 .' 1 1	30 h.	30 h.
Hours for full-time (or	Education level:	Laboratory	
evening) study: classroom – 90	The second master's	h.	h.
	degree	Individ	lual work
independent work of the student – 90		40 h.	50 h.
uic student – 90		Individual task: h.	
		Type of control: credit,	
		exam	

# 2.1. Description of the discipline

# **2.2.1.** Lectures

No॒	Name of topic	Number of hours	Types of lectures
	Section 1 Біостатистика		
1	Social medicine and public health as a	2	Offline,
	science, tasks, methods. History of		On-line
	formation.		
2	Theoretical and methodical bases of	2	Offline,
	medical statistics.		On-line
3	Relative values, their characteristics and	2	Offline,
	graphical methods of analysis.		On-line
4	Characteristics and analysis of statistical	2	Offline,
	data. Average values. Indicators of		On-line
	variation.		
5	Assessment of the reliability of statistical	2	Offline,
			On-line

	studies. Analysis of the relationship		
	between the studied parameters of statistical		
	populations.		
6	Fundamentals of modern epidemiology and	2	Offline,
	their features.		On-line
7	Design of empirical epidemiological	2	Offline,
	research methods.		On-line
8	Design of experimental epidemiological	2	Offline,
	research methods.		On-line
9	Fundamentals of evidence-based medicine	2	Offline,
	and the relevance of its implementation in		On-line
	modern practice.		
10	Information and methodological support of	2	Offline,
	epidemiological research based on		On-line
	evidence-based medicine.		
	Total	20	
	Section 2 Public Health		
1	Medical and social problems of public	2	Offline,
	health and methodology of its study		On-line
2	Population health: main determinants (risk	2	Offline,
	factors)		On-line
3	Medical and social problems of	2	Offline,
	demographic processes		On-line
4	Morbidity of the population as a medical	2	Offline,
	and social problem		On-line
5	Prevention and cross-sectoral cooperation in	2	Offline,
	the public health system		On-line
	Together by section	10	
	Total for discipline	30	

# 2.2.3. Practical classes

No	Name of topic	Number	Teaching	Forms of
		of	methods	control
		hours		
	Section 1 Biostatistics			
1	Social medicine and public health as	2	Presentation,	CC: Oral,
	a science and teaching subject.		conversation,	written
	Medical statistics. Methodological		story-	survey, test
	foundations of the organization of		explanation,	control,
	statistical research in the health care		business game,	individual
	system.		process	tasks

			modeling, case method	Final control: credit, exam
2	Organization, planning and implementation of statistical (epidemiological) research.  Development of a plan and program for statistical research.	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
3	Relative values, method of calculating them. Graphical representation of statistical data.	4	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
4	Variation series. Average values, methods of their calculation.	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
5	Characteristics of the diversity of the sign. Methods for assessing the degree of heterogeneity of the trait being studied.	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
6	Parametric methods for assessing the reliability of statistical data and hypothesis analysis.	2	Presentation, conversation, story- explanation, business game, process	CC: Oral, written survey, test control, individual tasks

			modeling, case method	Final control: credit, exam
7	Nonparametric methods for assessing the reliability of statistical data and hypothesis analysis.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
8	Analysis of the relationship between the studied parameters of statistical aggregates (correlation-regression analysis).	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
9	Standardization method, its application in statistical research.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
1 0	Time series. Types and methods of their analysis	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
1	Design of epidemiological studies: case-control, cohort, randomized clinical trials. Gold standard.	2	Presentation, conversation, story- explanation, business game, process	CC: Oral, written survey, test control, individual tasks

			modeling, case method	Final control: credit, exam
1 2	The role of anamnestic technologies in obtaining primary information in statistical research. Screening. Methodology for assessing the sensitivity and specificity of screening tests.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
1 3	Risk factors and their detection.  Methodology for calculating and analyzing risk indicators.	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
1 4	Registration of the results of statistical research. Basics of preparing a scientific publication.	1	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
1	Final lesson	1		Test
5				control,
	Together by section	30		survey
	Section 2 Public Health			
1	Assessment of the health and well-being of the population	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit,

				exam
2	Methods of studying and estimating the main demographic indicators (Population statistics)	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
3	Methods for studying and assessing the main demographic indicators of the natural movement of the population (Population dynamics). Demographic analysis.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
4	Methods of studying and assessing infant mortality rates.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
5	Methods of studying and assessing the morbidity of the population.	4	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
6	Methods for studying and assessing morbidity indicators for the most important socially significant diseases.	2	Presentation, conversation, story- explanation,	CC: Oral, written survey, test control,

7	Methodological framework for research on the burden of disease. Implications of the results for the public health system.	2	business game, process modeling, case method  Presentation, conversation, story-explanation, business game, process modeling, case method	individual tasks Final control: credit, exam CC: Oral, written survey, test control, individual tasks Final control: credit, exam
8	Medical and social aspects of disability. Methods of calculation and analysis of disability indicators.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
9	Comprehensive assessment of public health.	2	Presentation, conversation, story-explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit, exam
1 0	Methodology for analyzing the causes of social inequality in health and health care.	2	Presentation, conversation, story- explanation, business game, process modeling, case method	CC: Oral, written survey, test control, individual tasks Final control: credit,

				exam
1	Outreach activities (advocacy) as an		Presentation,	CC: Oral,
1	integral part of medical prevention.		conversation,	written
			story-	survey, test
			explanation,	control,
		2	business game,	individual
		2	process	tasks
			modeling, case	Final
			method	control:
				credit,
				exam
1	Health promotion. Types, forms and		Presentation,	CC: Oral,
2	methods.		conversation,	written
			story-	survey, test
			explanation,	control,
		2	business game,	individual
		2	process	tasks
			modeling, case	Final
			method	control:
				credit,
				exam
1	Communication and social		Presentation,	CC: Oral,
3	mobilization for health. Press		conversation,	written
	releases and media relations.		story-	survey, test
			explanation,	control,
			business game,	individual
		2	process	tasks
			modeling, case	Final
			method	control:
				credit,
				exam
1				Test
4	Final lesson	2		control,
				survey
	Together by section	30		
	Total for discipline	60		
Ь	***************************************		<u>l</u>	<u> </u>

# 2.2.5. Independent work

№	Name	of topic			Number	Teaching	Forn	ns of
					of	methods	con	trol
					hours			
	Section B	Biostatis	tics					
1	Organization,	planni	ng	and	2	Lecture,	Current	control:
	implementation	of	statis	tical		presentation,	Oral,	written

	(:-1:-1)		: 1	
	(epidemiological) research.  Development of a plan and program for statistical research. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic.		videos	survey, test control, individual tasks Final control: credit, exam
2	Relative values, methods of their calculation. Graphic representation of statistics. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
3	Characteristics and analysis of statistical data. Average values. Indicators of variation. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
4	Characterization of the diversity of the trait. Methodology for assessing the degree of heterogeneity of the studied trait. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
5	Estimation of reliability of statistical researches. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
6	Parametric methods for assessing the reliability of statistical data and hypothesis analysis. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
7	Nonparametric methods for assessing the reliability of	2	Lecture,	Current control:
	assessing the reliability of		presentation,	Oral, written

	statistical data and beyondhoods		: do o o	
	statistical data and hypothesis		videos	survey, test
	analysis.Elaboration of educational			control,
	literature. Drawing up a detailed			individual tasks
	plan of answers to questions of the			Final control:
	topic. Variable performance of			credit, exam
	individual tasks.			
8	Analysis of the relationship	2	Lecture,	Current control:
	between the studied parameters of		presentation,	Oral, written
	statistical populations (correlation		videos	survey, test
	and regression			control,
	analysis). Elaboration of educational			individual tasks
	literature. Drawing up a detailed			Final control:
	plan of answers to questions of the			credit, exam
	topic. Variable performance of			
	individual tasks.			
9	Standardization method, its	2	Lecture,	Current control:
	application in statistical research.		presentation,	Oral, written
	Elaboration of educational		videos	survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of the			individual tasks
	topic. Variable performance of			Final control:
	individual tasks.			credit, exam
1	Time series. Types and methods of	2	Lecture,	Current control:
0	their analysis.Elaboration of		presentation,	Oral, written
	educational literature. Drawing up a		videos	survey, test
	detailed plan of answers to			control,
	questions of the topic. Variable			individual tasks
	performance of individual tasks.			Final control:
				credit, exam
1	Fundamentals of modern	2	Lecture,	Current control:
1	epidemiology and its features.		presentation,	Oral, written
	Elaboration of educational		videos	survey, test
				control,
	literature. Drawing up a detailed			individual tasks
	plan of answers to questions of the			Final control:
	topic. Variable performance of			credit, exam
	individual tasks.			
1	Design of empirical	2	Lecture,	Current control:
2	epidemiological research methods.		presentation,	Oral, written
	Elaboration of educational		videos	survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of the			individual tasks
	topic. Variable performance of			Final control:
	individual tasks.			credit, exam
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1 3	Design of experimental epidemiological research methods. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	1	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
1 4	Design of epidemiological studies: case-control, cohort, randomized clinical trials. Gold standard. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	1	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
1 5	The role of anamnestic technologies in obtaining primary information in statistical research. Screening. Methodology for assessing the sensitivity and specificity of screening tests. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
1 6	Risk factors and their detection.  Methodology for calculating and analyzing risk indicators.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
7	The basics of evidence-based medicine and the relevance of its implementation in modern practice. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	1	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
1 8	Information support of epidemiological and clinical research. Systematic reviews and	1	Lecture, presentation, videos	Current control: Oral, written survey, test

1	meta-analysis. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.  Review of modern methods of	1	Lecture,	control, individual tasks Final control: credit, exam  Current control:
9	statistical analysis (variance, multifactor, cluster). Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.		presentation, videos	Oral, written survey, test control, individual tasks Final control: credit, exam
2 0	Medical statistics, role in the analysis of public health and the health care system. Electronic document management. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	1	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
2 1	Public health databases. Organizing and conducting statistical surveys in public health.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
2 2	Using knowledge of biostatistics in the daily practice of a doctor. Statistical research software and the procedure for submitting scientific papers.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Variable performance of individual tasks.	2	Lecture, presentation, videos	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
2 3	Registration of the results of statistical research. Basics of preparing a scientific publication. Elaboration of educational	2	Lecture, presentation, videos	Current control: Oral, written survey, test control,

literature. Drawing up a detailed		individual tasks
plan of answers to questions of the		Final control:
topic. Variable performance of		credit, exam
individual tasks.		
Together by section	40	
Section Public Health		

	Name of topic	Number	Teaching	Forms of
		of	methods	control
		hours		
1	Assessment of the health and	2	Lecture,	Current control:
	well-being of the population.		presentation	Oral, written
	Elaboration of educational			survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic. Variable performance			Final control:
	of individual tasks.			credit, exam
2	Population health: main	2	Lecture,	Current control:
	determinants (risk factors).		presentation	Oral, written
	Elaboration of educational			survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic. Elaboration of			Final control:
	normative-legal documents.			credit, exam
	Variable performance of			
	individual tasks.			
3	Methods of studying and	2	Lecture,	Current control:
	estimating the main		presentation	Oral, written
	demographic indicators			survey, test
	(population statistics).			control,
	Elaboration of educational			individual tasks
	literature. Drawing up a detailed			Final control:
	plan of answers to questions of			credit, exam
	the topic. Elaboration of			
	normative-legal documents.			
	Variable performance of			
	individual tasks.			
4	Methods for studying and	2	Lecture,	Current control:
	assessing the main demographic		presentation	Oral, written
	indicators of the natural			survey, test
	movement of the population			control,
	(Population dynamics).			individual tasks
	Elaboration of educational			Final control:
	literature. Drawing up a detailed			credit, exam

				Ī
	plan of answers to questions of			
	the topic. Elaboration of			
	normative-legal documents.			
	Variable performance of			
	individual tasks.			
5	Population aging. Analysis of	1	Lecture,	Current control:
	indicators of ALE and		presentation	Oral, written
	demographic load.			survey, test
	Elaboration of educational			control,
	literature. Drawing up a detailed			individual tasks
	plan of answers to questions of			Final control:
	the topic. Variable performance			credit, exam
	of individual tasks.			
6	Life as a value. Attitude to death	1	Lecture,	Current control:
	as a moral problem.		presentation	Oral, written
	Elaboration of educational		P	survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic.			Final control:
	the topic.			credit, exam
7	Methods of studying and	2	Lecture,	Current control:
'	assessing infant mortality rates.	2	presentation	Oral, written
	Elaboration of educational		presentation	survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic. Elaboration of			Final control:
	normative-legal documents.			credit, exam
	1			cicuit, exam
	Variable performance of individual tasks.			
8		2	Lagtura	Current control:
0	Morbidity of the population as a	<u> </u>	Lecture,	
	medical and social problem.  Elaboration of educational		presentation	Oral, written
				survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic. Elaboration of			Final control:
	normative-legal documents.			credit, exam
	Variable performance of			
	individual tasks.		<b>T</b> .	
9	Methods of studying and	2	Lecture,	Current control:
	assessing the incidence of the		presentation	Oral, written
	population. Elaboration of			survey, test
	educational literature. Drawing			control,
	up a detailed plan of answers to			individual tasks
	questions of the topic.			Final control:
	Elaboration of normative-legal			credit, exam

	documents. Variable			
	performance of individual tasks.			
10	Methods of studying and assessing the incidence of the most important socially significant diseases.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
11	Methods of study and assessment of morbidity with temporary disability. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	1	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
12	Methodological bases of research of burden of diseases. Significance of results for the public health system. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
13	Medical and social aspects of disability. Methods of calculation and analysis of disability indicators. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam

1.4	Commobansive assessment of		Lagtuma	Cumant control
14	Comprehensive assessment of	2	Lecture,	Current control:
	public health.		presentation	Oral, written
	Elaboration of educational			survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic. Elaboration of			Final control:
	normative-legal documents.			credit, exam
	Variable performance of			
	individual tasks.			
15	Analysis of indicators of	1	Lecture,	Current control:
	physical development.		presentation	Oral, written
	Elaboration of educational		Prosentation	survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
				Final control:
	the topic. Elaboration of			
	normative-legal documents.			credit, exam
	Variable performance of			
4 -	individual tasks.		<b>T</b>	
16	Providing strategic leadership	2	Lecture,	Current control:
	for health and well-being.		presentation	Oral, written
	Elaboration of educational			survey, test
	literature. Drawing up a detailed			control,
	plan of answers to questions of			individual tasks
	the topic.			Final control:
				credit, exam
17	Methodology for analyzing the	2	Lecture,	Current control:
	causes of social inequality in		presentation	Oral, written
	health and health care.		1	survey, test
	Elaboration of educational			control,
	literature. Drawing up a detailed			individual tasks
	plan of answers to questions of			Final control:
	the topic. Elaboration of			credit, exam
	normative-legal documents.			cicuit, cxaiii
	_			
	Variable performance of			
10	individual tasks.	1	T	Common to the state of the stat
18	Environmental public health.	1	Lecture,	Current control:
	Ensuring the protection of public		presentation	Oral, written
	health, including safety of the			survey, test
	environment, labor, food, etc.			control,
	Elaboration of educational			individual tasks
	literature. Drawing up a detailed			Final control:
	plan of answers to questions of			credit, exam
	the topic.			
19	Public health emergencies.	1	Lecture,	Current control:
	Bioterrorism.		presentation	Oral, written
	1			

20	Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic.  Stress and conflict. Mechanisms to protect people from stress. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic.	1	Lecture, presentation	survey, test control, individual tasks Final control: credit, exam Current control: Oral, written survey, test control, individual tasks Final control:
21	Moral, ethical and legal aspects of health interventions. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic.	2	Lecture, presentation	credit, exam Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
22	Prevention and cross-sectoral cooperation in the public health system.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
23	Screening programs for early detection of diseases and risk factors.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	1	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
24	Awareness-raising activities (advocacy) as an integral part of medical prevention.  Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam

	individual tasks.			
25	Health promotion. Types, forms and methods. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
26	Communication and social mobilization for health. Press releases and media relations. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
26	Public health informatization. Medical information systems in the world and in Ukraine. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
26	the topic.  Visualization and effective presentation of health data. Dissemination and use of results. Elaboration of educational literature. Drawing up a detailed plan of answers to questions of the topic. Elaboration of normative-legal documents. Variable performance of individual tasks.	2	Lecture, presentation	Current control: Oral, written survey, test control, individual tasks Final control: credit, exam
27	Final lesson	2		Test control
	Together by section	50		
	Total for discipline	90		

# 3. EVALUATION CRITERIA

**3.1.** Evaluation of the academic performance of education of students is carried out on the basis of the current "Instructions for evaluating the educational activities of students of KhNMU", approved by the order of KhNMU № 181 from 21.08.2021.

The current educational activity of applicants for higher education is controlled by the teacher of the academic group, after the students have mastered each topic of the discipline and grades are set using a 4-point (national) system. At the end of the semester, the teacher automatically receives the average grade (to the nearest hundredth) for CEA using an electronic journal of the AMS system.

Recalculation of the average grade for current activities is carried out in accordance with the current "Instructions for assessing the educational activities of students of KhNMU", approved by the order of KhNMU № 181 from 21.08.2021.

The final score for CEA in the semester is defined as the arithmetic mean of national grades for each lesson and FL, rounded to 2 decimal places. According to the specified Instruction, recalculation of an average estimation for current educational activity (CEA) in a multi-point scale, for the disciplines coming to the end of examination is carried out according to table 1.

Table 1
Recalculation of the average score for current activities in a multi-point scale
(for disciplines that end with a DC or an exam)

4-point scale	120- point	4-point scale	120- point
1	scale	1	scale
5	120	3.91-3,94	94
4.95-4,99	119	3.87-3,9	93
4.91-4,94	118	3.83- 3,86	92
4.87-4,9	117	3.79- 3,82	91
4.83-4,86	116	3.74-3,78	90
4.79-4,82	115	3.7- 3,73	89
4.75-4,78	114	3.66- 3,69	88
4.7-4,74	113	3.62- 3,65	87
4.66-4,69	112	3.58-3,61	86
4.62-4,65	111	3.54- 3,57	85
4.58-4,61	110	3.49- 3,53	84
4.54-4,57	109	3.45-3,48	83
4.5-4,53	108	3.41-3,44	82
4.45-4,49	107	3.37-3,4	81
4.41-4,44	106	3.33- 3,36	80
4.37-4,4	105	3.29-3,32	79
4.33-4,36	104	3.25-3,28	78
4.29-4,32	103	3.21-3,24	77
4.25- 4,28	102	3.18-3,2	76
4.2- 4,24	101	3.15- 3,17	75
4.16- 4,19	100	3.13- 3,14	74
4.12- 4,15	99	3.1-3,12	73
4.08- 4,11	98	3.07- 3,09	72
4.04- 4,07	97	3.04-3,06	71
3.99-4,03	96	3.0-3,03	70
3.95- 3,98	95	Less than 3	Not enough

The final lesson (FL) is held by schedule, on the last lesson.

The final lesson includes test tasks, which are carried out on final lesson and should be considered in full in practical classes with an explanation of their educational essence, and so on.

Assessment of the familiarization of practical skills are given in Table 2 "Criteria for assessing the learning outcomes of students in disciplines", in particular the assessment of practical skills that are added.

Table 2 Criteria for assessing the learning outcomes of students in disciplines

Rating Evaluation criteria		
«Perfectly»	The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations.	
«Very good»	The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standard situations, independently corrects mistakes, the number of which is insignificant	
«Good»	The student is able to compare, summarize, systematize information under the guidance of the teacher; as a whole to apply it independently in practice; control their own activities; to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions	
«Satisfactorily»	The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic principles; with the help of the teacher can analyze the educational material, correct mistakes, among which there are a significant number of significant ones	
«Enough»	Student possess educational material at a level higher than the initial, a significant part of it reproduces at the reproductive level	
«Unsatisfactorily» with the possibility of re-assembling the semester control	Student possess educational material at a level individual fragments that make up a small part of the training material	
«Unsatisfactorily» with mandatory re- examination of the	Student possess educational material at a level elementary recognition and reproduction of individual facts, elements, objects	

credit	

Conducting and assessing the exam

The discipline exam is a process during which the results obtained during the course (semester) are checked:

- level of theoretical knowledge;
- development of creative thinking;
- skills of independent work;
- competencies the ability to synthesize the acquired knowledge and apply them in solving practical problems. The exam provides the following control element:
- 1. Solving a package of test tasks in the last or penultimate lesson of the semester, which includes test tasks from the ITI base "Krock-2" of the Testing Center at the Ministry of Health of Ukraine for the previous 5 years. Evaluation criterion 90% of correctly solved tasks (test tasks submitted for semester control (SC) must be considered in full in practical classes with an explanation of their educational essence);
- 2. Tasks for assessing theoretical knowledge on all topics of the discipline according to tables: 3, and 3;
- 3. Assessment of the acquisition of practical skills during the exam by tables 2 and 3:

Table 3
Assessment of theoretical knowledge and practical skills, if they are presented in one ticket

Number of questions	«5»	«4»	«3»	Answer for tickets, which include the theoretical and	For each answer the student receives from 10 to 16 points,
1	16	13	10	practical part of the discipline	which corresponds to:
2	16	13	10		«5» - 16 points;
3	16	13	10		«4» - 13 points;
4	16	13	10		«3» - 10 points.
5	16	13	10		
	80	65	50		

For the session, a schedule is set, approved by the rector of KhNMU, indicating the specific dates of the exams. If the exam is not passed, the dates of rescheduling during the holidays are set, until the beginning of the next semester.

Taking into account the peculiarities of the discipline, the exam is conducted in the form of assessing the acquisition of practical skills and theoretical knowledge on all topics of the discipline on the day of the exam.

The department has chosen an approach to assessing the development of practical skills and theoretical knowledge. Exam tickets include four questions to control theoretical knowledge and one practical task to control the acquisition of practical skills.

Since the discipline is studied for 2 or more semesters, the grade for the discipline is defined as the arithmetic mean of the current educational activities scores for both semesters during which the discipline was studied, which are

transferred to the 120-point ECTS scale (Table 1) with the addition of points obtained directly on the exam.

The maximum number of points that a student can score for studying a discipline is 200 points, including the maximum number of points for current educational activities - 120 points, as well as the maximum number of points based on the exam results - 80 points. The minimum number of points is 120, including the minimum current educational activity - 70 and according to the exam results - 50 points.

The correspondence of the grades for the 200 point scale, the four-point (national) scale and the ECTS scale is shown in table 4.

KhNMU evaluation scale

Table 3

Score on the Score on a four-Score on a 200point scale ECTS scale point (national) scale 180-200 Perfectly Α 160-179 В Good 150-159  $\mathbf{C}$ Good 130-149 D Satisfactorily 120-129 E Satisfactorily Less than 120 F, Fx Unsatisfactorily

The grade in the discipline is given only to students who have passed all the final classes, credits and exam.

Students who do not meet the requirements of the curriculum of the disciplines are given an  $F_X$  grade, if they were admitted to the differentiated test or exam, but did not pass it. A grade of F is given to students who are not allowed to take a test or exam.

Grades " $\mathbf{F}_{\mathbf{X}}$ " or " $\mathbf{F}$ " ("unsatisfactory") are given to students who are not credited with the study of the discipline, the form of control of which is credit.

#### 3.2. Questions for credit and exam:

#### **BIOLOGICAL STATISTICS**

- 1. History of origin and development of biostatistics, its main stages.
- 2. The first and second stages of development of biological statistics. Indicate the features of the formation of statistics at this stage. The main achievements and founders of these areas.
- 3. The third and fourth stages of development of biological statistics. The main achievements and founders of these areas.
- 4. The fifth and sixth stages of development and formation of biostatistics. The main achievements and founders of these areas.
- 5. The seventh and eighth stages of development and formation of biostatistics. The main achievements and founders of this area.
- 6. Define medical statistics as a section of biological statistics? Sections of medical statistics and its tasks.

- 7. Modern epidemiology as an independent science, definitions and main tasks. Varieties (directions) of epidemiology.
- 8. Define epidemiology. List the tasks solved by the epidemiology of non-communicable diseases.
- 9. What is the design of an epidemiological study, its types, their characteristics?
- 10. Describe descriptive epidemiological studies. What is the peculiarity of "blindness" of epidemiological research.
- 11. What are empirical epidemiological studies, what methods do they include?
- 12. What tasks does analytical epidemiology solve? What is the difference between case-control and cohort epidemiological studies?
- 13. What epidemiological methods do you know depending on the duration of the study? Describe controlled and uncontrolled studies?
- 14. What is a cohort? Describe the classic scheme of cohort epidemiological studies.
- 15. Empirical and experimental epidemiological studies. The "gold standard" of research.
- 16. Basic principles and provisions of clinical epidemiology. Hierarchy of evidence of clinical trials.
- 17. Define anamnestic technologies. Name the types of survey methods.
- 18. Name the components of the questionnaire. What are the stages of the method of conducting survey research, name them and describe each.
- 19. What is a video poll, where and how is it used.
- 20. What is a screening test? The main purpose and objectives of screening technologies.
- 21. Name the types of screening test, give examples? List the main requirements of experts for screening tests.
- 22. What are the differences between the concept of screening test and diagnostic examination. What are conjugation tables and their interpretations.
- 23. What is meant by the sensitivity and specificity of the screening test? Indicate the relationship between sensitivity, specificity and prevalence of pathology.
- 24. ROC-analysis and its tasks. The procedure for constructing ROC -curves and their evaluation.
- 25. Evidence-based medicine, its essence and main tasks.
- 26. Prerequisites for the emergence of evidence-based medicine. The main structural elements of evidence in evidence-based medicine (three whales).
- 27. Reasons for inaccurate results during the epidemiological study.
- 28. Elements of a correctly formulated clinical question (PICOT-question) in evidence-based medicine.
- 29. Randomization, definition, purpose and conditions of providing a randomized study. Gold standard of research.
- 30. Statistical totality, its types, definitions, examples, properties of the statistical totality.
- 31. What is a unit of observation, what features are taken into account, do you know their types, give a definition?
- 32. Methods of forming a sample statistical totality, their characteristics. Features of the sample, the main requirements for its formation.

- 33. Statistical research, definitions, forms and types of statistical research.
- 34. Stages of statistical research. Describe in detail the program and plan of the statistical survey.
- 35. Stages of statistical research. Describe in detail the program and plan of the statistical survey.
- 36. Types of distribution of accounting features, give examples. Types of relative indicators and their characteristics.
- 37. Scales of measurement of variables in epidemiology (scales of measurement) and their features.
- 38. Qualitative (categorical) scale of measurement in epidemiology (categorical scale), their types and characteristics.
- 39. Quantitative (metric scale) measurement in epidemiology, their types and characteristics.
- 40. Composite scale of measurement in epidemiology, their types and characteristics.
- 41. Reliability and authenticity of measurement scales in epidemiology, give examples.
- 42. Intensive indicators: definitions, their types, indicate the necessary data for the calculation of intensive indicators, the formula and graphical representation of the intensive indicators used in the practice of the doctor.
- 43. Extensive indicators: definition, necessary data for calculation, application in practice of the doctor, their graphic representation.
- 44. Proportion indicator: definition, the necessary data for calculation, application in the practice of the doctor, their graphic representation.
- 45. Visibility indicator: definition, necessary data for calculation, the order of calculation, application in practice of the doctor, their graphic representation.
- 46. Distinctive features between intensive and extensive indicators and between intensive and proportion indicators.
- 47. The procedure for determining the basis in intensive and extensive indicators. List the exceptions when choosing a basis. Graphical representations of statistical values, definitions, their elements and basic requirements for building.
- 48. Define the risk factor. Classification of risk factors. What is the difference between risk factors and causes of the disease? What is synergism and antagonism?
- 49. Indicators of quantitative assessment of individual risk of pathology (absolute and relative risk). Methods of their calculation. Basic recommendations for maintaining and strengthening the health of the population.
- 50. Indicators of quantitative assessment of population risk of pathology (additional population risk, additional share of population risk; odds ratio). Methods of their calculation.
- 51. List the methods for determining standardized indicators. What is the essence of the direct method of standardization? Stages of the direct method of standardization.
- 52. For what purpose are standardized indicators used, give examples of their application in the practice of the doctor? Stages of the direct method of standardization. What are the criteria and methods of choosing a standard when calculating standardized indicators?

- 53. Define a dynamic row. What indicators are used for its analysis, methods of their calculation? Methods of dynamic row leveling.
- 54. Variation series, definitions, its elements, types. Rules for constructing an interval variation series.
- 55. Mean arithmetic values, definitions, types of mean values, methods and conditions of calculation. The use of mean values in the practice of the doctor.
- 56. Determination of a simple and weighted mean arithmetic value by the method of moments. Calculation formula, notation. Properties of the mean arithmetic value. In which cases it is recommended to use this method.
- 57. Determination of a simple and weighted mean arithmetic value by the mean arithmetic way. Formulas for calculation, notation. Requirements for calculating the mean arithmetic value. In which cases is it recommended to use this method.
- 58. The variety of the feature, the criteria that characterize it, the method of calculation, formulas, notation?
- 59. Methods of calculating the mean standard deviation, their formulas, the rule of 3 sigma, explain its application?
- 60. Coefficient of variation, method of its calculation. In which cases is it used, the scale for estimating the coefficient of diversity.
- 61. Evaluation of the reliability of statistical research results. Algorithm for conducting the reliability of the study. Random and systematic errors. Indicate the main levels of reliability of statistical material. What form of recording the reliability of the result is used in the design of scientific works?
- 62. Define the error of representativeness. The order of its definition, formula, notation, which affects its value. Explain in which cases the error of representativeness is determined?
- 63. Define the confidence limits of the arithmetic mean and relative values, formulas, symbols, applications. At what value of the reliability criterion, can we say about the reliability of the difference between the results obtained?
- 64. Define the concept of reliability of the difference between the obtained statistical results for the mean arithmetic and relative values, formulas, notations, applications. At what value of the reliability criterion, can we say about the reliability of the difference between the results obtained?
- 65. Significance level and confidence coefficient in statistics. The power of the reliability criterion.
- 66. Statistical errors in the organization and implementation of epidemiological research, their types and characteristics. Ways to eliminate them.
- 67. What groups are divided into methods of nonparametric statistics, list the main methods that apply to a particular group.
- 68. In which cases is the Wilcoxon T-test method used? Methods of its calculation.
- 69. In which cases the method "Van der Warden's X-test" is used. Methods of its calculation.
- 70. In which cases non-parametric methods of statistical processing of material are used. List these methods?
- 71. In which cases non-parametric methods of statistical processing of material are used. List these methods?

- 72. The concept of risk in epidemiological studies. The main risk factors that affect health. Indicator of the ratio of chances, methods of calculation and evaluation.
- 73. The concept of the null hypothesis. Test the statistical hypothesis. Errors of the first and second kind.
- 74. Types of connection between phenomena, definitions, their distinctive feature. Forms of communication, give examples.
- 75. What is a correlation. Methods of representation and calculation of correlation, their advantages and disadvantages. Methods of calculating the correlation coefficient.
- 76. In which cases is the correlation coefficient calculated by the method of ranks (Spearman)? Calculation method.
- 77. The procedure for calculating the correlation coefficient by the method of squares (Pearson). Formula, notation.
- 78. How is the reliability of the correlation coefficient assessed?
- 79. Regression coefficient, what patterns it allows you to detect, the formula for its calculation, explain the notation.
- 80. Basics of preparation of a scientific publication.

#### **Public Health:**

- 1. History of formation and development of social medicine and organization of health care as a science and subject of teaching, definition, sections, purpose, tasks.
- 2. Basic methods of social medicine and health care organization and their application to study the health of the population in the activities of health authorities and institutions.
- 3. Modern target approaches to define the concept of "health". Physical, social and mental well-being of the population.
- 4. List of indicators recommended by WHO experts to assess public health. Their characteristics. Conditional indicators of individual health, their definition.
- 5. Explain the concept of social well-being (individual and social).
- 6. Structural components of social well-being.
- 7. Quality of life of the population. The main provisions of the methodology for assessing the quality of life of the population.
- 8. What is meant by integrated, systematic, comprehensive methods of assessing "social well-being"? List the main ones.
- 9. Methods of studying public health. Comprehensive assessment of public health, its characteristics. Population health groups.
- 10. The main sources of information on population health.
- 11. Assessment of the health of the population of Ukraine. (Comprehensive assessment).
- 12. Coefficient of viability, assessment, main criteria and population level of different countries. Poverty index.
- 13. Human Development Index (UN). Criteria that determine this index. Assessment scales and levels of the human development index in different countries.

- 14. Medical and social demography: definition, application of demographic data in the health care system. The main directions of demography, give them a definition.
- 15. Methods of studying the natural movement of the population, sources of information, indicators.
- 16. The subject and content of demography, the importance of demographic data for health care practice.
- 17. Basic and additional indicators of natural population movement. Their levels in Ukraine. Basic medical records for registration of natural population movement.
- 18. Census as a source of information about the population. History of the census. Requirements and features of the census.
- 19. Population statistics, its main characteristics. Census, characteristics, tasks, requirements for the census and features of its conduct. The value of population statistics for the health care system.
- 20. Mechanical movement of the population, definitions, types, indicators, their quantitative characteristics. Types of age structure of the population. Type of age structure in Ukraine. The value of information about mechanical motion for the health care system.
- 21. The division of the population into age groups on the basis of economic approach and population reproduction. Urbanization, definition, characteristics, significance for public health. The value of this information for the health care system.
- 22. Indicator of demographic load. Definition, calculation method, its level and dynamics in Ukraine. Trends in the age structure of the population of Ukraine.
- 23. Urbanization of the population, definition. Population distribution by place of residence in different continents of the world and in Ukraine. Population structure depending on gender in Ukraine. The value of this information for the health care system.
- 24. Total mortality, methods of its calculation, the leading causes in different regions, individual countries and Ukraine. Features of mortality depending on gender, age and place of residence. Mortality rate and dynamics in Ukraine.
- 25. Fertility: definition, method of calculation, accounting documents. The level and dynamics of this indicator in Ukraine. Factors influencing the birth rate.
- 26. Natural increase (decrease) of the population. Methods for calculating natural increase (decline) based on relative and absolute data. The level and dynamics of natural increase (decline) in Ukraine. Features of natural growth assessment.
- 27. Types of population reproduction. Types of maximum fertility recommended by the UN. Type of maximum fertility in Ukraine.
- 28. Fertility rate, age intervals of childbearing age, total population reproduction rate, gross reproduction rate, net population reproduction rate.

- 29. Mortality. Methods of calculating general and special indicators. Features and causes of mortality in different population groups. Dynamics of this indicator in Ukraine.
- 30. Maternal mortality, calculation methods, types, main causes. The level and dynamics of maternal mortality in Ukraine.
- 31. Infant mortality. Infant mortality rates, their characteristics. The main causes of infant mortality.
- 32. Indicators of life expectancy (WHO). List the age limit. Features of mortality in Ukraine depending on age. Basic medical records for the study of mortality.
- 33. Procedure for registration of infant (infant) mortality. Methods for determining the indicators of general, neonatal, postneonatal infant mortality. Dynamics of infant mortality in recent years in Ukraine compared to countries in Europe and other regions of the world.
- 34. Infant mortality: definition, methods of calculating general and special indicators. Causes of infant mortality. Dynamics and level of this indicator in Ukraine.
- 35. Perinatal, neonatal and postneonatal mortality, their main causes. The procedure for determining the type of infant mortality. Type of infant mortality in Ukraine.
- 36. Infant mortality (infant mortality). Types of infant mortality. Leading causes of infant mortality at different ages of the first year of life.
- 37. Infant mortality, age. The main reasons, factors influencing their formation. Medico-social aspects of reducing infant mortality.
- 38. Average life expectancy (ALE), definition, calculation method, relationship with the Human Development Index (HDI). Trends in the dynamics of coolant in different regions of the world, individual countries and in Ukraine.
- 39. Types of morbidity, the importance of each type for society and health. List the observation units and medical records for each type separately.
- 40. Types of morbidity, their characteristics. Methods of studying morbidity. Sources of information for the study of certain types of morbidity. The level and dynamics of morbidity in Ukraine.
- 41. General morbidity, sources of study, accounting documents, rules of completion.
- 42. Prevalence and morbidity of the population, definition. Structure and level of general and primary morbidity of the population on the territory of Ukraine.
- 43. Morbidity of the population: definitions, types, methods of study, accounting documents. Morbidity levels and dynamics in Ukraine. The main factors influencing the morbidity. Medico-social significance of morbidity for the population.
- 44. Determination of general morbidity. Calculation method. Levels and causes of general morbidity among the population in Ukraine. The structure of general morbidity among children.
- 45. Primary morbidity, definition, calculation method, level and cause of primary morbidity in Ukraine among children.

- 46. Primary treatment (for acute and chronic diseases) in the study of general and primary morbidity. Observation unit and accounting documents. Causes of primary morbidity among the population.
- 47. Methods of studying morbidity. Describe the method of obtaining information about the morbidity of the population on the basis of medical examinations. Note the pros and cons of this method.
- 48. Methods of studying morbidity. Describe the method of obtaining information about the morbidity of the population on the basis of appeals to treatment and prevention facilities for medical care. Note the pros and cons of this method. Factors that affect the reliability of the information obtained on the basis of this method.
- 49. Medical and social significance of infectious diseases. Infectious disease groups, their medical records and statistics.
- 50. Study of general morbidity: unit of observation, accounting documents, rules of their filling. Method of determination. The concept of "treatment" and "visit" of the treatment and prevention institution, the differences that underlie the study of morbidity. The structure of general morbidity among the population of Ukraine.
- 51. Study of morbidity on the basis of medical examination data, unit of observation, accounting documents, positive and negative sides of this method. Types of medical examinations, indicate their purpose by type.
- 52. Study of morbidity on the basis of data on the causes of death. Its general characteristics. Accounting documents. Its pros and cons.
- 53. Hospitalized morbidity: the concept, the feasibility of special accounting, accounting document, key indicators.
- 54. Hospitalized morbidity, the importance of hospitalized morbidity for the health care system, basic medical records, the order of their completion. The main indicators of hospitalized morbidity. The level of hospitalized morbidity in Ukraine. Accounting documents.
- 55. Hospitalized morbidity. Observation unit. Accounting document. Indicators of the analysis of hospital activity. The value of continuity between outpatient and inpatient units.
- 56. Morbidity with temporary disability, definitions, accounting documents, the main causes and indicators of morbidity with temporary disability. For a long time, those who are often ill among the category of workers, its characteristics and criteria.
- 57. Morbidity with temporary disability. Observation unit. What cases belong to this type of disease. What category of population does it characterize? Accounting and reporting medical documents, morbidity rates with temporary disability.
- 58. Infectious diseases, groups of infectious diseases. Specify the unit of infectious disease surveillance, medical records and key indicators.
- 59. International Statistical Classification of Diseases and Related Health Problems (ICD-10), principles of its construction. Its structure. Differences

- from ICD-9. History of its origin and formation. The order of its addition, change and statement, how often it is republished.
- 60. Types of disability, their characteristics. The main causes of disability. Disability groups, factors influencing it. List the main statistical indicators.
- 61. Define and characterize childhood disability and pre-employment disability. Indicate the main causes of primary disability in children.
- 62. Define "Health Promotion" with its main strategies and priorities for health promotion in accordance with the WHO Ottawa Charter.
- 63. Name the main priorities for improving the health of the population in accordance with the WHO Jakarta Declaration.
- 64. Describe the hospitals that promote health, their purpose according to the Budapest Declaration of WHO.
- 65. Describe the schools that contribute to the health of children, list the criteria for these schools in accordance with the report of the WHO Committee of Experts.
- 66. Health promotion. Disease prevention. Types of prevention.
- 67. List the principles of promoting a healthy lifestyle and give them a description.
- 68. Indicate the methods, forms and means of promoting a healthy lifestyle, describe them.
- 69. The main categories that determine the way of life. Standard of living, quality of life, way and style of life, their definition, characteristics.
- 70. Organizational structure of the Health Center, its purpose and objectives. Its interaction with other health care facilities.
- 71. Inequality in public health and protection. Give a definition. Detection of inequality and its reduction.
- 72. The importance of health determinants in fair and equal public health.
- 73. On what principles of justice health care systems are built.
- 74. Define the concept of disease severity. What are the main components of the DALY index?
- 75. What is a global study of the burden of disease. What is the method of global disease burden research.
- 76. Prevention and intersectoral cooperation in the public health system. Types of prevention. Prevention programs in health care. Screening.
- 77. Awareness-raising activities (advocacy) as an integral part of medical prevention.
- 78. Definition of advocacy and advocacy campaign. Types of advocacy.
- 79. What is the "triad of advocacy" in ensuring the health of the population? What are the stages of the advocacy campaign?
- 80. What tools are used in the advocacy campaign? What is an advocacy strategy?
- 81. Strategy and tools of advocacy in ensuring public health.
- 82. Communication and social mobilization for health.
- 83. What are the basic principles and functions of communication, their characteristics?

- 84. Name the forms and types of communication, give examples.
- 85. What is a press release? Name the components of the press release and describe them.
- 86. Tasks and content of the work of public health centers, their structural units for prevention and formation of a healthy lifestyle, interaction with other health care institutions.

### **3.3.** Control questions

#### **Biostatistics:**

- **Topic 1.** Social medicine and public health as a science and a subject of teaching
  - 1. The origin of the term "biostatistics".
  - 2. Development of statistics in ancient Greece.
  - 3. What stages of biostatistics are distinguished?
  - 4. What characterizes the first stage of formation of biostatistics?
  - 5. What characterizes the period of development of descriptive statistics?
- 6. What is the contribution of G. Achenwal and G. Konring in the development of biostatistics?
  - 7. What characterizes the defining stage of development of biostatistics?
  - 8. John Grant's contribution to the development of biostatistics.
- 9. Give a general description of the fundamental stage of development of biostatistics.
- 10. Give a general description of the formalistic stage of development of biostatistics.
  - 11. A. Kettle's contribution to the development of biostatistics.
- 12. Name the representatives of the classical stage of development of biostatistics.
  - 13. R. Fisher's contribution to the development of biostatistics.
- 14. Which Ukrainian scientists participated in the development of biostatistics?
  - 15. Name the first Ukrainian textbooks on biostatistics.
- **Topic 2.** Medical statistics. Methodical bases of organization of statistical research in the health care system.
  - 1. What is "statistics" in the modern sense, its main features?
  - 2. History of statistics.
  - 3. Medical statistics, its tasks.
  - 4. Sections of medical statistics.
  - 5. The concept of statistical population.
  - 6. The concept of statistical features.
  - 7. Classification of statistical features.
  - 8. Types of statistical population.
  - 9. Methods of forming a sample statistical population.
  - 10. Properties of the statistical population.
  - 11. Characteristics of the characteristics of the statistical population.
  - 12. Types of distribution of features in the statistical population.
  - 13. Information and analytical department.
  - 14. What is a statistical study?

- 15. Forms of statistical research.
- 16. Methods of obtaining statistical information.
- 17. Types of statistical research.
- 18. Stages of statistical research.
- 19. What is the purpose of the study?
- 20. What is a research plan, its main elements?
- 21. What is a research program, its types?
- 22. Features of sample research.
- 23. What is a statistical table?
- 24. Types of tables.
- 25. Requirements for the construction of statistical tables.
- **Topic 3.** Organization and conduct of epidemiological research. Development of a plan and program of scientific research.
  - 1. What is a statistical study?
  - 2. Forms of statistical research.
  - 3. Methods of obtaining statistical information.
  - 4. Types of statistical research.
  - 5. Stages of statistical research.
  - 6. What is the purpose of the study?
  - 7. What is a research plan, its main elements?
  - 8. What is a research program, its types?
  - 9. Features of sample research.
  - 10. What is a statistical table?
  - 11. Types of tables.
  - 12. Requirements for the construction of statistical tables.
- **Topic 4.** Relative values, methods of their calculation. Graphic representation of statistics.
  - 1. What is the value of absolute values, in which cases they are used?
  - 2. Definition of relative quantities, their types, values.
  - 3. Methods of calculating the intensive rate.
  - 4. Method of calculating the extensive indicator.
  - 5. What are the differences between intensive and extensive indicators?
  - 6. Method of calculating the ratio.
  - 7. What are the differences between the intensive rate and the ratio?
  - 8. Method of calculating the clarity indicator.
  - 9. In what cases use indicators of intensity, extensiveness, ratio, clarity?
- 10. What relative values can be used to compare phenomena, study phenomena in the dynamics, by region, in individual groups?
- 11. The main errors that are most common in the calculation and analysis of relative quantities.
  - 12. For what purpose is the graphical method used in statistics?
  - 13. What are the main elements of the schedule?
- 14. What are the types of charts and what determines the choice of a particular type of charts?

- 15. How to build a line chart when comparing several homogeneous or interconnected phenomena?
  - 16. Types of plane diagrams and an example of their use?
- 17. What are radial, sector and volume charts and in which cases are they used?
  - 18. What are card diagrams and cartograms?
  - 19. What values are used to build graphics?
- **Topic 5.** Variation series. Average values, methods of their calculation.
  - 1. What is a variation series?
  - 2. What are the components of the variation series?
  - 3. What are the types of variation series
  - 4. What parameters characterize the variation series?
  - 5. What variation series are called simple?
  - 6. What variation series are called grouped?
  - 7. What variation series are called interval?
  - 8. The order of compilation of the interval variation series, its stages?
- 9. What requirements must be met when constructing an interval variation series?
  - 10. What is the average value in statistics?
  - 11. What types of averages do you know?
  - 12. What is "fashion" and "median"?
- 13. What requirements must meet the material of the study, the requirements for the population in determining the average value?
  - 14. What are the main areas of practical application of averages?
  - 15. What are the main properties of the arithmetic mean you know?
  - 16. What is the order of calculation of a simple arithmetic mean?
  - 17. What is the order of calculation of the weighted arithmetic mean?
- 18. What is the order of calculation of the arithmetic mean by the method of moments?
- 19. What is the main property of the arithmetic mean is used to calculate it by the method of moments?
- 20. Why is the most reliable characteristic of the population on the average values is the arithmetic mean?
- 21. Is it possible with the help of averages to compare statistical populations with different variations of the quantitative feature?
- **Topic 6.** Characteristics of the diversity of the sign. Methods for assessing the degree of heterogeneity of the trait being studied.
- 1. What is the variation of the sign, how it is calculated and what is the need to characterize it?
  - 2. What criteria characterize the diversity of the trait?
  - 3. What is the limit and amplitude? In which cases are these values used?
- 4. For what purpose is the standard deviation used, what is its advantage over the limit and amplitude?
- 5. Methods of calculating the standard deviation using the arithmetic mean method in a simple and grouped variation series?

- 6. The method of calculating the standard deviation using the method of moments?
- 7. What is the calculation of the standard deviation based on the method of moments?
  - 8. What is the "3 sigma rule" and what is its practical application?
- 9. The coefficient of variation and its estimation, what is the need for its calculation?
- 10. Areas of application of standard deviation and coefficient of variation in medical practice?
- **Topic 7**. Parametric methods for assessing the reliability of statistical data and hypothesis analysis.
- 1. What is a sample statistical population and what are the requirements for it? What is representativeness?
- 2. For what purpose is the assessment of the reliability of the results of statistical research?
  - 3. Methods for assessing the reliability of research results.
  - 4. Method of determining the average error of the arithmetic mean.
  - 5. Method of determining the average error of relative values.
  - 6. Determination of confidence limits of arithmetic mean and relative values.
- 7. In which cases is the reliability of the difference between average and relative values determined?
- 8. Methods for calculating the reliability of the difference between the results of a statistical study?
- 9. Examples of using the criterion of probability of difference of relative indicators and arithmetic means in medical practice.
- **Topic 8.** Nonparametric methods for estimating the reliability of statistical data and hypothesis analysis.
- 1. In which cases it is advisable to use non-parametric methods of statistical processing of the material?
  - 2. What are the advantages of parametric methods?
- 3. Describe the independent and interrelated phenomena in statistical aggregates.
- 4. List the non-parametric criteria that are used to assess the reliability of the difference between the interrelated results of the statistical study.
- 5. List the non-parametric criteria used to assess the reliability of the difference between the unrelated results of the statistical study.
- 6. Describe the application of the criterion of signs, and the method of its calculation.
- 7. Describe the application of the T-test Wilcoxon (Wilcoxon), and the method of its calculation.
- 8. Describe the application of the X-criterion of van der Warden and the method of its calculation.
- 7. Describe the application of the Kolmogorov-Smirnov criterion and the method of its calculation.

- **Topic 9.** Analysis of the relationship between the studied parameters of statistical aggregates (correlation-regression analysis).
  - 1. Types of relationships between phenomena, their definition.
  - 2. Correlation, ways of its display.
  - 3. Assessment of the direction and strength of the correlation.
  - 4. Methods of calculating the correlation coefficient.
- 5. Method of calculating the correlation coefficient by the method of squares (Pearson's method).
- 6. In which cases is the correlation coefficient determined by the method of ranks (Spearman's method)?
  - 7. Method of calculating the correlation coefficient by the method of ranks.
  - 8. Assessment of the reliability of the rank coefficient
- Topic 10. Standardization method, its application in statistical research
  - 1. Definition of the method of standardization.
  - 2. The practical significance of the method of standardization.
  - 3. Methods of determining standardized indicators.
  - 4. The inverse method of standardization.
  - 5. Definition of a direct method of standardization.
  - 6. Conditions of application of the direct method of standardization.
  - 7. The essence of the direct method of standardization.
  - 8. Stages of the direct method of standardization.
  - 9. The first stage of the direct method of standardization.
  - 10. The second stage of the direct method of standardization.
  - 11. The third stage of the direct method of standardization.
  - 12. The fourth stage of the direct method of standardization.
  - 13. The fifth stage of the direct method of standardization.
- Topic 11. Time series. Types and methods of their analysis.
  - 1. Definition of a time series.
  - 2. What values can be represented by the levels of time series.
  - 3. Types of time series.
  - 4. In which cases is the alignment of time series.
  - 5. Methods of time series alignment.
- 6. Indicators of the time series, methods of their calculation and significance for the analysis of the phenomenon.
- **Topic 12.** Design of epidemiological studies: case-control, cohort, randomized clinical trials. Gold standard.
  - 1. Define epidemiology.
  - 2. List the tasks solved by the epidemiology of non-communicable diseases.
- 3. What are the essential features that distinguish the epidemiology of infectious diseases from the epidemiology of non-communicable diseases?
  - 4. What is the design of an epidemiological study, its types?
- 5. Describe a continuous epidemiological study. Inclusion and exclusion criteria?
  - 6. Give the characteristics and features of a sample epidemiological study?
  - 7. What is randomization? Its main purpose.

- 8. What is the peculiarity of "blindness" of epidemiological research.
- 5. What are empirical epidemiological studies, what methods do they include?
- 6. What epidemiological studies are called experimental and their main methods?
  - 7. Describe the descriptive epidemiological studies.
  - 8. What tasks does analytical epidemiology solve?
- 9. What is the difference between epidemiological studies such as "case-control" and cohort research?
- 10. What epidemiological methods do you know depending on the duration of the study?
  - 11. Describe controlled and uncontrolled studies?
- 12. What is a cohort? Describe the classic scheme of conducting cohort epidemiological studies.
- 13. Describe the classic scheme of epidemiological research such as "case-control".
  - 14. What problems can be solved by experimental research?
  - 15. Describe the classical scheme of controlled experimental studies.
  - 16. What type of clinical trials is considered the "gold standard" today?
  - 17. What is an environmental epidemiological study?
- **Topic 13.** The role of anamnestic technologies in obtaining primary information in statistical research. Screening. Methods for assessing the sensitivity and specificity of screening tests.
  - 1. Define anamnestic technologies.
  - 2. Name the types of survey methods.
  - 3. What is a conversation, interview.
  - 4. Questionnaire and its role in collecting primary information.
  - 5. Define the questionnaire.
  - 6. How are questionnaires developed?
  - 7. Name the components of the questionnaire.
  - 8. Describe the questions that can and should be asked in the questionnaire.
  - 9. Name the types of questionnaires.
- 10. What are the stages of the methodology of survey research, name them and describe each.
  - 11. What is a video survey, where and how it is used.
  - 12. What is a "scientific product activity"? Describe its main types.
- 13. At the expense of what it is possible to improve quality of meaningful filling of a scientific product?
- 14. How are the theoretical, analytical and conceptual parts of a scientific product related?
  - 15. Criteria for evaluating a scientific product.
  - 16. Requirements for the design of a scientific product.
  - 17. General requirements for the content.
  - 18. Requirements for the design of illustrations and tables.
  - 19. Requirements for the style of presentation of materials.
  - 20. Requirements for the list of sources used.

- 21. Features of preparation of scientific articles.
- 22. Features of preparation of abstracts and their presentations for a professional communicative event
- .Topic 14. Risk factors and their detection. Methods of calculating and analyzing risk indicators.
  - 1. Define what is a risk factor.
  - 2. What is the difference between the causes of diseases and risk factors?
  - 3. What phenomenon is called synergism and antagonism?
- 4. How are the causes classified according to the model of the multifactorial nature of the causes of diseases? What are additional, necessary and sufficient risk factors? Give examples.
- 5. List the main groups of risk factors and determine their quantitative contribution to the formation of public health.
  - 6. What frequency indicators are used in epidemiological studies?
- 7. What type of epidemiological studies provide information on the prevalence of diseases?
- 8. What is the difference between the cumulative incidence rate and the incidence rate?
- 9. List the types of risk factors that are calculated from the results of epidemiological studies?
  - 10. What is additional (absolute, attributive risk)?
  - 11. What is the relative risk?
  - 12. What does the value of relative risk less than 1 indicate?
  - 13. What does the value of relative risk above 1 indicate?
  - 14. How is the population additional risk calculated?
  - 15. What is the odds ratio?
  - 16. How is the odds ratio calculated?
- **Topic 15.** Registration of results of scientific research. Basic approaches to preparing a scientific publication
  - 1. What is a "scientific product activity"? Describe its main types.
- 2. At the expense of what it is possible to improve quality of meaningful filling of a scientific product?
- 3. How are the theoretical, analytical and conceptual parts of a scientific product related?
  - 4. Criteria for evaluating a scientific product.
  - 5. Requirements for the design of a scientific product.
  - 6. General requirements for the content.
  - 7. Requirements for the design of illustrations and tables.
  - 8. Requirements for the style of presentation of materials.
  - 9. Requirements for the list of sources used.
  - 10. Features of preparation of scientific articles.
- 11. Features of preparation of abstracts and their presentations for a professional communicative event.
  - 12. The essence and significance of the index method of analysis.
  - 13. The essence of the index.

- 14. The essence of the indexing process.
- 15. Scales in the index method, their application and features of determination.
  - 16. Types of indices and their brief characteristics.
  - 17. General rules for constructing indices.
  - 18. Individual indices: construction, calculation, analysis of results.
  - 19. Consolidated indices and their types.
  - 20. Aggregate indices: construction, calculation, analysis of results.
  - 21. Weighted average indices: construction, calculation, analysis of results.
  - 22. Indices of average values: construction, calculation, analysis of results.
  - 23. Territorial indices: construction, calculation, analysis of results.
  - 24. Relationship of indices.

### **Public Health:**

- 1. History of formation and development of social medicine and organization of health care as a science and subject of teaching, definition, sections, purpose, tasks.
- 2. Basic methods of social medicine and health care organization and their application to study the health of the population in the activities of health authorities and institutions.
- 3. Modern target approaches to define the concept of "health". Physical, social and mental well-being of the population.
- 4. List of indicators recommended by WHO experts to assess public health. Their characteristics. Conditional indicators of individual health, their definition.
- 5. Explain the concept of social well-being (individual and social).
- 6. Structural components of social well-being.
- 7. Quality of life of the population. The main provisions of the methodology for assessing the quality of life of the population.
- 8. What is meant by integrated, systematic, comprehensive methods of assessing "social well-being"? List the main ones.
- 9. Methods of studying public health. Comprehensive assessment of public health, its characteristics. Population health groups.
- 10. The main sources of information on population health.
- 11. Assessment of the health of the population of Ukraine. (Comprehensive assessment).
- 12. Coefficient of viability, assessment, main criteria and population level of different countries. Poverty index.
- 13. Human Development Index (UN). Criteria that determine this index. Assessment scales and levels of the human development index in different countries.
- 14. Medical and social demography: definition, application of demographic data in the health care system. The main directions of demography, give them a definition.
- 15. Methods of studying the natural movement of the population, sources of information, indicators.

- 16. The subject and content of demography, the importance of demographic data for health care practice.
- 17. Basic and additional indicators of natural population movement. Their levels in Ukraine. Basic medical records for registration of natural population movement.
- 18. Census as a source of information about the population. History of the census. Requirements and features of the census.
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- 22. Indicator of demographic load. Definition, calculation method, its level and dynamics in Ukraine. Trends in the age structure of the population of Ukraine.
- 23. Urbanization of the population, definition. Population distribution by place of residence in different continents of the world and in Ukraine. Population structure depending on gender in Ukraine. The value of this information for the health care system.
- 24. Total mortality, methods of its calculation, the leading causes in different regions, individual countries and Ukraine. Features of mortality depending on gender, age and place of residence. Mortality rate and dynamics in Ukraine.
- 25. Fertility: definition, method of calculation, accounting documents. The level and dynamics of this indicator in Ukraine. Factors influencing the birth rate.
- 26. Natural increase (decrease) of the population. Methods for calculating natural increase (decline) based on relative and absolute data. The level and dynamics of natural increase (decline) in Ukraine. Features of natural growth assessment.
- 27. Types of population reproduction. Types of maximum fertility recommended by the UN. Type of maximum fertility in Ukraine.
- 28. Fertility rate, age intervals of childbearing age, total population reproduction rate, gross reproduction rate, net population reproduction rate.
- 29. Mortality. Methods of calculating general and special indicators. Features and causes of mortality in different population groups. Dynamics of this indicator in Ukraine.
- 30. Maternal mortality, calculation methods, types, main causes. The level and dynamics of maternal mortality in Ukraine.
- 31. Infant mortality. Infant mortality rates, their characteristics. The main causes of infant mortality.

- 32. Indicators of life expectancy (WHO). List the age limit. Features of mortality in Ukraine depending on age. Basic medical records for the study of mortality.
- 33. Procedure for registration of infant (infant) mortality. Methods for determining the indicators of general, neonatal, postneonatal infant mortality. Dynamics of infant mortality in recent years in Ukraine compared to countries in Europe and other regions of the world.
- 34. Infant mortality: definition, methods of calculating general and special indicators. Causes of infant mortality. Dynamics and level of this indicator in Ukraine.
- 35. Perinatal, neonatal and postneonatal mortality, their main causes. The procedure for determining the type of infant mortality. Type of infant mortality in Ukraine.
- 36. Infant mortality (infant mortality). Types of infant mortality. Leading causes of infant mortality at different ages of the first year of life.
- 37. Infant mortality, age. The main reasons, factors influencing their formation. Medico-social aspects of reducing infant mortality.
- 38. Average life expectancy (ALE), definition, calculation method, relationship with the Human Development Index (HDI). Trends in the dynamics of coolant in different regions of the world, individual countries and in Ukraine.
- 39. Types of morbidity, the importance of each type for society and health. List the observation units and medical records for each type separately.
- 40. Types of morbidity, their characteristics. Methods of studying morbidity. Sources of information for the study of certain types of morbidity. The level and dynamics of morbidity in Ukraine.
- 41. General morbidity, sources of study, accounting documents, rules of completion.
- 42. Prevalence and morbidity of the population, definition. Structure and level of general and primary morbidity of the population on the territory of Ukraine.
- 43. Morbidity of the population: definitions, types, methods of study, accounting documents. Morbidity levels and dynamics in Ukraine. The main factors influencing the morbidity. Medico-social significance of morbidity for the population.
- 44. Determination of general morbidity. Calculation method. Levels and causes of general morbidity among the population in Ukraine. The structure of general morbidity among children.
- 45. Primary morbidity, definition, calculation method, level and cause of primary morbidity in Ukraine among children.
- 46. Primary treatment (for acute and chronic diseases) in the study of general and primary morbidity. Observation unit and accounting documents. Causes of primary morbidity among the population.
- 47. Methods of studying morbidity. Describe the method of obtaining information about the morbidity of the population on the basis of medical examinations. Note the pros and cons of this method.

- 48. Methods of studying morbidity. Describe the method of obtaining information about the morbidity of the population on the basis of appeals to treatment and prevention facilities for medical care. Note the pros and cons of this method. Factors that affect the reliability of the information obtained on the basis of this method.
- 49. Medical and social significance of infectious diseases. Infectious disease groups, their medical records and statistics.
- 50. Study of general morbidity: unit of observation, accounting documents, rules of their filling. Method of determination. The concept of "treatment" and "visit" of the treatment and prevention institution, the differences that underlie the study of morbidity. The structure of general morbidity among the population of Ukraine.
- 51. Study of morbidity on the basis of medical examination data, unit of observation, accounting documents, positive and negative sides of this method. Types of medical examinations, indicate their purpose by type.
- 52. Study of morbidity on the basis of data on the causes of death. Its general characteristics. Accounting documents. Its pros and cons.
- 53. Hospitalized morbidity: the concept, the feasibility of special accounting, accounting document, key indicators.
- 54. Hospitalized morbidity, the importance of hospitalized morbidity for the health care system, basic medical records, the order of their completion. The main indicators of hospitalized morbidity. The level of hospitalized morbidity in Ukraine. Accounting documents.
- 55. Hospitalized morbidity. Observation unit. Accounting document. Indicators of the analysis of hospital activity. The value of continuity between outpatient and inpatient units.
- 56. Morbidity with temporary disability, definitions, accounting documents, the main causes and indicators of morbidity with temporary disability. For a long time, those who are often ill among the category of workers, its characteristics and criteria.
- 57. Morbidity with temporary disability. Observation unit. What cases belong to this type of disease. What category of population does it characterize? Accounting and reporting medical documents, morbidity rates with temporary disability.
- 58. Infectious diseases, groups of infectious diseases. Specify the unit of infectious disease surveillance, medical records and key indicators.
- 59. International Statistical Classification of Diseases and Related Health Problems (ICD-10), principles of its construction. Its structure. Differences from ICD-9. History of its origin and formation. The order of its addition, change and statement, how often it is republished.
- 60. Types of disability, their characteristics. The main causes of disability. Disability groups, factors influencing it. List the main statistical indicators.
- 61. Define and characterize childhood disability and pre-employment disability. Indicate the main causes of primary disability in children.

- 62. Define "Health Promotion" with its main strategies and priorities for health promotion in accordance with the WHO Ottawa Charter.
- 63. Name the main priorities for improving the health of the population in accordance with the WHO Jakarta Declaration.
- 64. Describe the hospitals that promote health, their purpose according to the Budapest Declaration of WHO.
- 65. Describe the schools that contribute to the health of children, list the criteria for these schools in accordance with the report of the WHO Committee of Experts.
- 66. Health promotion. Disease prevention. Types of prevention.
- 67. List the principles of promoting a healthy lifestyle and give them a description.
- 68. Indicate the methods, forms and means of promoting a healthy lifestyle, describe them.
- 69. The main categories that determine the way of life. Standard of living, quality of life, way and style of life, their definition, characteristics.
- 70. Organizational structure of the Health Center, its purpose and objectives. Its interaction with other health care facilities.
- 71. Inequality in public health and protection. Give a definition. Detection of inequality and its reduction.
- 72. The importance of health determinants in fair and equal public health.
- 73. On what principles of justice health care systems are built.
- 74. Define the concept of disease severity. What are the main components of the DALY index?
- 75. What is a global study of the burden of disease. What is the method of global disease burden research.
- 76. Prevention and intersectoral cooperation in the public health system. Types of prevention. Prevention programs in health care. Screening.
- 77. Awareness-raising activities (advocacy) as an integral part of medical prevention.
- 78. Definition of advocacy and advocacy campaign. Types of advocacy.
- 79. What is the "triad of advocacy" in ensuring the health of the population? What are the stages of the advocacy campaign?
- 80. What tools are used in the advocacy campaign? What is an advocacy strategy?
- 81. Strategy and tools of advocacy in ensuring public health.
- 82. Communication and social mobilization for health.
- 83. What are the basic principles and functions of communication, their characteristics?
  - 84. Name the forms and types of communication, give examples.
- 85. What is a press release? Name the components of the press release and describe them.
- 86. Tasks and content of the work of public health centers, their structural units for prevention and formation of a healthy lifestyle, interaction with other health care institutions.

### **3.3.** Control questions

**Topic 1.** Assessment of the health and well-being of the population.

- 1. Explain the concept of social well-being (individual and social).
- 2. The history of the formation of the concept of social welfare.
- 3. How do you understand the welfare state and its essence?
- 4. The role and importance of economic approaches in shaping social well-being.
- 5. Structural components of social well-being.
- 6. What is meant by integrated, systematic, comprehensive methods of assessing "social well-being"? List the main ones.
- 7. Human Development Index (HDI), its indicators, evaluation.
- 8. International Happiness Index (Happy Planet Index).
- 9. Regional features of the state of social welfare in the world.
- 10. Factors that determine social well-being.
- 11. The role of health, success and happiness of the population in ensuring social well-being.
- 12. The main provisions of the methodology for assessing the quality of life.
- 13. The concept of social cohesion and its main purpose.
- 14. Human success and its role in social welfare.
- 15. Man's idea of happiness.
- 16. What defines social well-being as a strategic goal of society. 1. Define what is social medicine and the organization of health care and what sections it includes?
- 17. History of the origin and development of social medicine. Outstanding figures of social medicine and health care organizations.
- 18. Formation and development of social medicine and health care organization in Ukraine.
- 19. Methods of social medicine and health care organization, its role in studying the health of the population and the health care system.
- 20. The purpose of social medicine and health care organization, its role in studying the health of the population and the health care system.
  - 21. What are the main tasks of social medicine?
  - 22. Sections of social medicine and health care organization as a subject.
- 23. The current state of the discipline "Social Medicine" as a science and a subjec

# Topic 2. Comprehensive assessment of public health.

- 1. Definition of the concept of individual, group, regional and population health.
  - 2. The main methods of studying the state of health of the population.
- 3. What is meant by a comprehensive method of studying the "health" of the population?
- 4. What is meant by integrated methods of studying the "health" of the population? List the main integrated methods.
  - 5. Name the sources of population health studies.
  - 6. Regional features of the state of health of the population of Ukraine.
  - 7. Assessment of public health based on the coefficient of viability.

- 8. Human Development Index (HDI), its indicators and evaluation.
- 9. Life expectancy up to a certain age (up to 1, 5, 15, 45 and 65 years).
- 10. The essence of population health assessment based on the DALY Index.
- 11. The main provisions of the methodology for assessing the quality of life.
- 12. Medico-social significance of infant mortality and its role in population health assessment.
- 13. Medico-social significance of the average life expectancy of the population and its role in assessing population health.
- 14. Name the risk factors that are involved in shaping the health of the population. Their classifications.
- 15. Name the health groups, the importance of allocating health groups for practical health care.
- 16. General trends in the main indicators of health of the population of Ukraine.
- 17. Name the criteria for achieving a certain level of health for the population of Ukraine, defined by WHO experts.
  - 18. Define "Physical Development"
  - 19. What criteria relate to biological development?
  - 20. What are the standards of biological development?
  - 21. What criteria relate to morpho-functional development?
  - 22. What are the standards of morpho-functional development?
  - 23. By what methods the analysis of the received data is carried out?
  - 24. What are the patterns of physical development of children in Ukraine?
  - 25. What is the deterioration of physical development?
  - 26. How can these indicators be improved?
  - 27. How did the process of acceleration in the second half of XX century?
  - 28. How has the timing of puberty changed?
  - 29. How have the processes of ossification changed?
  - 30. What are the acceleration processes discussed?
- 31. What problems does the process of acceleration pose to modern physicians?
- **Topic 3.** Methods of studying and assessing the main demographic indicators (population statics).
  - 1. What is demography, its main sections?
  - 2. What characterizes the statics of the population?
- 3. How is the census conducted and the basic requirements for its organization and conduct?
  - 4. What are the main features of the population in the world and in Ukraine?
  - 5. Population density and regional features.
  - 6. Gender and age characteristics of the population in the world and in Ukraine.
  - 7. Type of age structure, the order of its definition.
  - 8. Features of population distribution by place of residence.
  - 9. Population aging and its importance for health care.
  - 10. Indicator of "demographic load". Method of calculation.
  - 11. What is urbanization?

- 12. What are the demographic features in Ukraine?
- 13. The importance of statics for health care.

**Topic 4.** Methods of studying and assessing the main demographic indicators of natural population movement (population dynamics). Analysis of the demographic situation. Methods of studying and assessing infant mortality rates.

- 1. What is demography, its main sections?
- 2. What characterizes the dynamics of the population?
- 3. What is "migration" and what are the types of migration?
- 4. How is the analysis of migration processes?
- 5. What is the natural movement of the population?
- 6. What indicators characterize the natural movement of the population?
- 7. Depopulation as a medical and social problem of society.
- 8. Sources of studying the indicators of natural movement.
- 9. Fertility and methods of determining fertility rates, their types.
- 10. Special birth rates and their importance for the analysis of demographic processes.
  - 11. Factors affecting the birth rate.
- 12. How and on the basis of which documents is the registration of born citizens of Ukraine?
  - 13. Trends that are characteristic of the birth rate in Ukraine.
  - 14. General and special mortality rate. Methods of their calculation.
- 15. How and on the basis of which documents is the registration of deceased citizens of Ukraine?
  - 16. Causes of mortality in different sex and age groups.
- 17. Natural increase (natural decline) of the population, features of the analysis of demographic processes on the basis of natural increase (natural decline).
  - 18. Average life expectancy, its regional and national features.
  - 19. Characteristics of the current demographic situation in Ukraine.
  - 20. Define infant mortality.
  - 21. What are the periods of infant mortality?
  - 22. What factors affect the formation of infant mortality?
  - 23. What is perinatal mortality?
  - 24. What are the types of perinatal mortality?
  - 25. Describe neonatal and early neonatal mortality.
  - 26. Describe the late neonatal and postneonatal mortality.
  - 27. What are the causes of infant mortality?
  - 28. Name the causes of death of children in the 1st month of life.
  - 29. How is the infant mortality rate calculated?
  - 30. What are the types of infant mortality?
  - 31. What type of infant mortality is best and why?
  - 32. Describe the mortality of boys and girls in the first year of life.
  - 33. What are the regional features of infant mortality?
  - 34. Describe the dynamics of infant mortality in Ukraine.
- 35. Describe the mortality of children under 5 years of age, the value of this ratio.

- 36. Define the concept of "infant mortality".
- 37. Define maternal mortality.
- 38. Types of maternal mortality.
- 39. What are the main causes of maternal mortality?
- 40. What concepts does the WHO propose to consider to improve the accounting of deaths from obstetric causes?
  - 41. Describe the regional features of maternal mortality.
- **Topic 5.** Methods of studying and assessing morbidity (methods of studying morbidity).
  - 1. Medical and social significance of morbidity.
  - 2. Methods of studying the morbidity of the population, their characteristics.
  - 3. Advantages and disadvantages of each method.
- 4. The study of morbidity on the basis of appeals of the population to treatment and prevention facilities.
  - 5. The study of morbidity according to preventive examinations.
  - 6. Study of morbidity according to the causes of death.
  - 7. The study of morbidity by survey.
  - 8. Study of morbidity by special sample studies.
  - 9. Types of morbidity.
- **Topic 6.** Methods of study and assessment of morbidity (types of morbidity and ICD-10).
  - 1. Medical and social significance of morbidity.
  - 2. Methods of studying the morbidity of the population, their characteristics.
  - 3. Advantages and disadvantages of each method.
- 4. The study of morbidity on the basis of appeals of the population to treatment and prevention facilities.
  - 5. The study of morbidity according to preventive examinations.
  - 6. Study of morbidity according to the causes of death.
  - 7. The study of morbidity by survey.
  - 8. Study of morbidity by special sample studies.
  - 9. Types of morbidity.
  - 10. Medical and social significance of morbidity.
  - 11. Types of morbidity.
- 12. History of the emergence and improvement of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
  - 13. Principles of construction of ICD-10.
  - 14. Distinctive features of ICD-10 from ICD-9.
  - 15. Features of the process of revision of ICD-11
- **Topic 7.** Methods of studying and assessing the incidence of the most important socially significant diseases.
  - 1. Define the concept of individual, group, regional and population health.
  - 2. Name the main methods of studying the health of the population.
  - 3. What is a comprehensive method of studying the health of the population?
- 4. What are integrated methods of studying the health of the population? List them.

- 5. Name the sources of population health studies.
- 6. What are the regional features of the health of the population of Ukraine?
- 7. Assessment of the population on the basis of the coefficient of viability.
- 8. Human Development Index (HDI), its indicators, evaluation.
- 9. Life expectancy up to a certain age (up to 1, 5, 15, 45 and 65 years)
- 10. The essence of population health assessment based on the "DALY" index.
  - 11. The main provisions of the methodology for assessing the quality of life.
- 12. Name the health groups for the adult population, the importance of allocating health groups for practical health care.
- 13. Name the health groups for children, the importance of allocating health groups for practical health care.
- 14. General trends in the main indicators of health of the population of Ukraine
- 15. Name the criteria for achieving a certain level of health for the population of Ukraine, defined by WHO experts.
- 16. Define the concept of "socially significant diseases" and the history of its occurrence.
- 17. Describe the "non-epidemic" and "epidemic" types of pathology of the population.
  - 18. Name the main features of the concept of "socially significant disease".
- 19. What determines the medical and social significance of socially significant diseases?
  - 20. Name the factors of the problem of socially significant diseases.
  - 21. List the main socially significant diseases.
- 22. Describe the diseases of the circulatory system as a medical and social problem.
  - 23. Describe malignant neoplasms as a medical and social problem.
  - 24. Describe the problem of injury.
  - 25. Describe the problem of diabetes.
  - 26. Describe the problem of obesity.
  - 27. Describe the problem of mental disorders.
  - 28. Describe the problem of tuberculosis.
  - 29. Describe the problem of HIV / AIDS.
  - 30. Describe the problem of drug addiction.
  - 31. Describe the problem of alcoholism.
  - 32. Describe the problem of nicotine addiction.
  - 33. Name measures to reduce the social significance of diseases.
- 34. Name the Global Goals in line with the WHO Global Plan of Action for the Prevention and Control of Noncommunicable Diseases for 2013-2020.
- **Topic 8.** Methodological foundations of the study of the burden of disease. Significance of results for the public health system.
  - 1. Define the concept of disease burden.
  - 2. What are the main components of the DALY index?
  - 3. What is the global study of the burden of disease.

- 4. What is the method of global study of the burden of disease.
- 5. How the DALY index is determined at the population level.
- 6. What are the main changes in the global health of the world in recent decades.
- 7. What are the leading causes of mortality and morbidity affecting DALY in the world as a whole and in individual countries.
- 8. What are the main trends and forecasts of the WHO on the main indicators affecting DALY.
- 9. The value of the results of the study of the burden of disease for the public health system.
  - 10. List what indices (indicators) are used to assess public health.
- 11. What are the main characteristics that determine the severity of the disease in Ukraine.
- 12 Key organizational and economic measures for the prevention of non-communicable diseases.
- **Topic 9.** Communication and social mobilization for health. Press releases and media relations.
  - 1. The importance of communication in the interests of health
  - 2. The origin and definition of the terminology "communication"
  - 3. What is the purpose of communication?
  - 4. What are the basic principles of communication?
  - 5. What are the functions of communication?
  - 6. Name the forms and types of communication, give examples.
  - 7. Name the levels of communication impact.
  - 8. Models of health communication.
  - 9. Subjects and main components of the communication process.
  - 10. Problems of the communication process in the field of health care
  - 11. What is a press release?
  - 12. Name the components of the press release and describe them.

**Topic 10.** Methodology for analyzing the causes of social inequality in health and health care.

- 1. What does equality and equity in health care mean?
- 2. Define what is economic inequality?
- 3. What are the manifestations of economic inequality?
- 4. What does health inequality mean?
- 5. Define what are the determinants of health.
- 6. List the determinants of public health.
- 7. List what can affect the determinants of health.
- 8. List the groups of determinants that determine health.
- 9. Decipher what is included in the concept of "socio-economic factors"?
- 10. Decipher what is included in the concept of "physical factors" and "personal behavior (lifestyle)"?
  - 11. Decipher what is included in the concept of "genetic factors"?
  - 12. Decipher what is included in the concept of "biological factors"?
  - 13. Decipher what is included in the determinant "health care system"?

- 14. Name three general policy recommendations to reduce social inequalities in health.
  - 15. Name three main approaches to reducing social inequalities in health.
  - 16. List the principles of justice that the state should provide.
- 17. List the principles of inequality in health, which WHO supplements with thesis formulations.
  - 18. What are the targets of the policy "Health 2020"?
  - 19. Give examples from world practice on unfair and unequal health policies.
- **Topic 11.** Awareness-raising activities (advocacy) as an integral part of medical prevention.
  - 1. Definition of advocacy and advocacy campaign?
  - 2. Types of advocacy?
  - 3. What is the "advocacy triad"?
  - 4. What are the stages of the advocacy campaign?
  - 5. How is the main problem for the advocacy campaign formed?
  - 6. The main elements that define advocacy?
  - 7. What tools are used in the advocacy campaign?
  - 8. What is an advocacy strategy?
  - 9. How are the results of the advocacy campaign evaluated?
  - 10. Describe the steps of the advocacy campaign?

## **Topic 12.** Health promotion. Types, forms and methods.

- 1. Define the concept of "health promotion", its main strategies.
- 2. Name the main priorities for improving public health in accordance with the WHO Ottawa Charter.
- 3. Name the main priorities for improving the health of the population in accordance with the Jakarta Declaration of the WHO.
  - 4. Describe the hospitals that promote health, their goals.
- 5. Describe the schools that contribute to the health of children, the criteria of WHO experts for these schools.
- 6. Areas of health care and medical prevention, their characteristics, types, etc.
  - 7. Describe medical examinations, their types and purposes.
  - 8. Types of prevention programs to ensure public health;
  - 9. The main types (models) of prevention programs.
  - 10. Sanitary education and medical prevention: their characteristics and types.
  - 11. Describe medical examinations, their types and purposes.
  - 12. Define a system for promoting a healthy lifestyle.
  - 13. Goals and objectives of HLS propaganda.
  - 14. List and describe the principles of promoting a healthy lifestyle.
- 15. Describe the target groups by age, health status and other criteria for differentiated HLS.
- 16. Name the institutions that are part of the system of promoting a healthy lifestyle, their structure, function.
  - 17. Organizational structure of the system of promoting a healthy lifestyle.

- 18. List and give a brief description of the main methods of promoting a healthy lifestyle.
- 19. List the main forms of the method of individual health education. Their characteristics.
- 20. List the main forms of the method of group health education. Their characteristics.
- 21. List the main forms of the method of mass health education. Their characteristics.
  - 22. List the main groups of means of health education.
  - 23. What is the difference between a lecture, a report and a conversation?
- 25. Basic requirements for organizing and conducting a health education lecture among the population.
- 26. Features of the organization of promotion of a healthy way of life by doctors in polyclinic.
- 27. Features of the organization of promotion of a healthy way of life by doctors in hospitals.
  - 28. Define the concept of "sanitary culture".
- 29. Are the concepts of "hygienic knowledge", "hygienic skills", "sanitary culture" the same in meaning? Justify your answer.

**Topic 13.** Medical and social aspects of disability. Methods of calculation and analysis of disability indicators.

- 1. Define the concept of "disability".
- 2. Medico-social significance of disability?
- 3. List the reasons that contribute to the growth of disability?
- 4. Define the term "disabled".
- 5. What is a "restriction of life"?
- 6. What are the degrees of limitation of life?
- 7. What is "social inadequacy"?
- 8. What are the disability groups and their characteristics?
- 9. Types of disability depending on the cause
- 10. What are the most important indicators of disability?
- 11. The main trends in disability in Ukraine among the adult population and working age?
  - 12. Child disability as a medical and social problem of modern society.
  - 13. Causes of childhood disability.
  - 14. Age structure of children with disabilities?
  - 15. The main trends in child disability indicators?

### 3.4. Individual tasks

Individual work of higher education students under the guidance of a teacher of the discipline "Social Medicine, Public Health" is carried out during the semester in the form of: study of literature sources recommended for mastering topics and problems and preparing reports on them; study of normative documents of state institutions and organizations recommended for studying various topics of the discipline; solving situational problems and practical exercises on various topics of the discipline.

Individual creative work (ICW) is performed by applicants for higher education independently with the advice of a teacher, if necessary. The implementation of the work involves the search and processing of higher education theoretical, analytical and statistical material on research, its study and systematization, generalization of the results, implementation of generalizations and formulation of sound conclusions. The task for individual creative work is selected by the applicant of higher education from the list offered by the teacher

### 3.5. Rules for appealing the assessment

The rules of appeal are set out in the "Regulations on the appeal of the results of the final control of students of Kharkiv National Medical University" №35 / 2020 from 30.09 2020.

Appeal - appeal by students of the results of the final control.

Appeal of the results of the final control of knowledge of students is part of the organizational support of the educational process. Consideration of the appeal is carried out in order to determine the objectivity of the assessment. The main task of the appeal procedure is to overcome the elements of subjectivism in assessing the knowledge of students, to avoid misunderstandings and disputes, to create favorable conditions for the development and real protection of the legal rights and interests of students.

Applicants for higher education have the right to appeal the final grade, then set out of the discipline. Unsatisfactory grades obtained by the applicant in the absence of the final control without good reason (in accordance with the procedure established by the university). not subject to appeal.

Disputes concerning the marks obtained during the certification are considered by the examination commission.

### The order of creation and composition of the appeal commission

The Appeals Commission is established to resolve disputes that have arisen during the final control, and to consider the appeal of students of KhNMU.

The appeal commission includes a vice-rector for scientific or scientific-pedagogical work, director of the educational-scientific institute of quality of education, head of the educational-methodical department, head of the dean's office, institute, head of postgraduate, doctoral and clinical residency, guarantor of educational program, scientific-pedagogical employees who are involved in the implementation of the educational program (including those who teach the discipline, the assessment of which is controversial, but did not conduct final control of the applicant), representatives of student government. The composition of the appeal commission is not less than 5 people.

## The procedure for filing an appeal

Prior to the final control, the head of the relevant dean's office, institute, head of postgraduate, doctoral and clinical residency shall inform the students of the content of its Regulations.

Submission of the application for appeal (hereinafter - the application) is carried out by the applicant in person in writing no later than the next day after the announcement of the results of the final control

The applicant submits an application to the relevant dean's office, institute, department of postgraduate studies, doctoral studies and clinical residency in

which he studies. The head of this unit registers the application in the educational and methodical department and submits it for the signature of the rector, prepares a draft order on the composition of the appeal commission, notifies the education and the date and place of the appeal commission.

If the student who is challenging the results of the final control wants to add additional documents to the application, he must do so when submitting the application (written works are not provided).

The application must be considered at the meeting of the Appeals Commission no later than the next two working days after its submission.

### Order of consideration of applications

Applications are considered during the meeting of the appeal commission. Several applications may be considered at one meeting of the Appeals Commission.

The applicant who has applied has the right to be present at all meetings of the appeal commission when considering the application. In case of his absence, the secretary of the commission shall make an appropriate entry in the minutes of the meeting.

For consideration of the application, the head of the relevant dean's office, institute, head of postgraduate, doctoral and clinical residency submits to the appeal commission originals of written works of the student on final control, printed version of computer testing, journals of academic group, etc.

When considering an application for final control, which was conducted in writing, re-examination of the applicant by the Board of Appeal is prohibited. The Appeals Commission reviews and analyzes the written work guided by the evaluation criteria of the discipline.

When considering the application for final control, which was conducted orally, the student, by decision of the Appeals Commission, may be given the opportunity to re-take the final control during the meeting of the Appeals Commission for a new ticket, a set of tickets for the discipline. For objectivity and transparency, the ticket, for which the applicant for the first time made the final control, is removed from the set.

Decisions of the Appeals Commission shall be taken by a majority vote of the total membership of the Commission. In case of equal number of votes "for" and "against" the decision which is supported by the chairman of the commission is accepted.

As a result of consideration of the application "adoption by the Appeals Commission of one of two decisions:

- preliminary assessment of the student's knowledge on the final control corresponds to the level of quality of his knowledge in this discipline and does not change;
- preliminary assessment of the student's knowledge at the final control does not correspond to the level of quality of his knowledge of this discipline and deserves a different assessment (indicate a new assessment in accordance with the current scale of evaluation of the results of final control), but not lower than obtained at the final control application submitted.

If, as a result of consideration of the application, the Appeals Commission decides to change the previous results of the final control, the new assessment of the student's knowledge is set in accordance with the scale of assessment of the final control of success and record book (individual curriculum) by the applicant.

### **COURSE POLICY**

The policy of the course is to adhere to the Code of Ethics concluded by the university community, which defines the basic moral principles (Code of Corporate Ethics of KhNMU is presented on the website http://knmu.edu.ua)

According to the current "Guidelines for the evaluation of educational activities in the European credit transfer system for the organization of the educational process" students for higher education must receive an assessment for each topic of the discipline. If the student has missed a training lesson, he must complete it in accordance with the "Regulations on the procedure for training of students of the Kharkiv National Medical University". Working off are conducted daily to the duty teacher of the department.

If the applicant did not pass the individual task on time for a good reason, it is necessary to notify the teacher of this situation and set a new deadline. If the student does not have time to complete an individual task, he can ask the teacher to postpone the deadline justifying the reason for late performance (the teacher decides in each situation whether it makes sense to extend the deadline and for how long).

In case of non-fulfillment of tasks during training lessons, or non-fulfillment of a part of such lesson, the teacher gives an unsatisfactory grade, which the student must reassign to the teacher in free time of teacher and the student, that should be appointed in advance.

During the lecture, students of higher education are recommended to keep a synopsis of the lesson and keep a sufficient level of silence.

During the practical classes a sufficient level of preparedness of students for them and active participation in the work and performance of the tasks set by the teacher is expected. In particular, active participation is expected during the discussion in the audience, students must be ready to understand the material in detail, ask questions, express their views, discuss. During classes are important:

- respect for colleagues, politeness and politeness,
- tolerance for others and their experiences,
- susceptibility and impartiality,
- ability to disagree with the opinion, but to respect the personality of the opponent  $/\ s$ ),
- careful argumentation of one's opinion and courage to change one's position under the influence of evidence,
- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions,
  - obligatory acquaintance with primary sources, readiness for lesson.

A creative approach in its various manifestations is welcome. Students from higher education are expected to be interested in participating in various scientific and communicative activities in the subject profile.

Successful completion of the course requires adherence to academic integrity, knowledge and ability to use in preparation for classes and tasks Regulations on the examination of text documents at Kharkiv National University - dissertations, research reports, scientific publications, materials of scientific forums, educational literature, educational and methodical publications and teaching aids for the presence of text borrowings.

## Behavior in the audience Basic "yes" and "no"

It is important for higher education students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms. Applicants must wear medical gowns (professional clothing) during classes.

During classes it is allowed:

- leave the audience for a short time if necessary and with the permission of the teacher:
  - drink water:
  - take photos of presentation slides;
  - take an active part in the class.
  - forbidden:
  - eat (except for persons whose special medical condition requires another in this case, medical confirmation is required);
- smoking, drinking alcohol and even low-alcohol beverages, beverages other than water, as well as drugs;
- to use obscene language or use words that offend the honor and dignity of colleagues and faculty;
  - gaff;
- damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);
- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

### **5. ACADEMIC INTEGRITY**

### 1. General provisions

1.1. The Code of Academic Integrity of Kharkiv National Medical University, approved by the order of KhNMU dated August 27, 2019 № 305 (hereinafter - the University) was developed to support the idea of integrity and decent relationships between participants in the academic process; promoting the importance of academic integrity; resolved issues related to raising the quality of higher education; promoting the development of a positive reputation; raising the rating of teachers and the competitiveness of university graduates; development of skills of conscientious and correct work with sources of information; compliance with the requirements of scientific ethics and respect for the intellectual property of others; activation of independence and individuality in the creation of their own works, as well as increasing the responsibility for violating the generally accepted rules of citation.

The main tasks of implementing the policy of academic integrity at the University are: prevention and elimination of cases of academic fraud among students and teachers of the University, education of negative attitudes to plagiarism, constant purposeful work on the development of academic integrity in students.

This Code establishes the principles of academic integrity in the educational process, the rights and responsibilities of participants in the academic process, the types of violations of academic integrity and the procedure for their elimination.

Teachers, researchers and students who show a desire for academic integrity should be a role model and raise the standard of educational and research activities in general. Violations of the rules of academic integrity should not adversely affect the reputation of the University and reduce the value of educational and scientific degrees obtained at the University.

The Code is developed on the basis of current legislation: on the basis of the Constitution of Ukraine, Laws of Ukraine "On Education", "On Higher Education", "On Scientific and Scientific-Technical Activity", "On Copyright and Related Rights", "On Prevention of Corruption" . In forming the document, the legal framework of the Cabinet of Ministers of Ukraine, information from international publications of the Council of Europe were used; the recommendations of the Ministry of Education and Science of Ukraine on the implementation of codes of ethics in Ukrainian HEI are taken into account.

The purpose of this Code, within the educational process and research activities, is to promote the principles of academic integrity among employees and applicants for higher education.

The basic principles of academic integrity in the educational process are:

Legality. In their activities to comply with the Constitution of Ukraine, laws and regulations.

Scientific. Objectively cover scientific facts, concepts, scientific achievements, get acquainted with scientific methods.

Honesty and decency. Do not allow the use of false statements.

Mutual trust. Free exchange of ideas and information.

Politeness and tolerance. Treat others with respect and kindness, their thoughts, views, beliefs.

Fairness and objectivity. Impartial attitude to each other, objective assessment of the results of educational, research and work activities, impartial consideration of debatable issues, without personal preferences or gain.

Competence and professionalism. Transmission of analytical health, moral qualities, internal culture, emotional intelligence, knowledge of the etiquette, high organization of practice.

Conscientiousness and reliability. To take responsibility for the results of their activities, to fulfill their obligations..

Partnership and mutual assistance. Perception of all participants in the educational process as equal parties.

Security and well-being. The activities of participants in the educational process should not endanger their lives, health and property of the University.

Social justice and equality. Equal access to education regardless of race, gender, gender identity, sexual orientation, political, religious beliefs, ethnic, social origin, health status.

Democratic governance. The management of the higher education system and the University should be carried out with the involvement of all relevant participants in the educational process in the ethical implementation of the university management of its powers at all levels.

Quality education. Self-improvement and improvement of the education system. All participants in the academic process support the idea of the highest possible quality of education, making every effort to continuously improve the educational system, including through their own professional development.

#### RECOMMENDED LITERATURE

#### **Basic literature**

- 1. Громадське здоров'я / За ред. В.Ф Москаленка. Вінниця: «Нова книга», 2012.-560 с.
- 2. Соціальна медицина і організація охорони здоров'я (для студентів стоматологічних факультетів вищих медичних навчальних закладів України IV рівня акредитації / За заг. ред. В.Ф. Москаленка. К.: Книга плюс, 2010, 328 с.
- 3. Програмні тестові питання з соціальної медицини та організації охорони здоров'я /За ред. Ю.В. Вороненка. Тернопіль: Укрмедкнига, 2001. 316 с.
- 4. Посібник із соціальної медицини та організації охорони здоров'я /За ред. Ю.В. Вороненка. К.: «Здоров'я», 2002. 359 с.
- 5. Методичні вказівки за темами дисципліни, розроблені колективом авторів кафедри громадського здоров'я та управління охороною здоров'я ХНМУ (представлені в Репозитарії ХНМУ, бібліотеці ХНМУ та бібліотеці кафедри).

#### Additional literature

- 1. Біостатистика / За заг. ред. В.Ф. Москаленка. К.: Книга плюс; 2009. 184 с.
- 2. Власов В.В. Введение в доказательную медицину. М. : Медиа Сфера,  $2001.-392~\mathrm{c}.$
- 3. Гланц С. Медико-биологическая статистика. М. : Практика, 1999. 459 с.
  - 4. Гринхальх Т. Основы доказательной медицины: пер. с англ. М. :

- ГЭОТАР-МЕД, 2004. 240 с.
- 5. Доклад о состоянии здравоохранения в Европе 2012. Курс на благополучие. ВОЗ, 2013.-190 с.
- 6. Доклад о состоянии здравоохранения в мире 2013 г. BO3, 2013. 206 с. (режим доступу: <a href="www.who.int/whr/2013/report/ru">www.who.int/whr/2013/report/ru</a>).
- 7. Епідеміологічні методи вивчення неінфекційних захворювань / В.М. Лехан, Ю.В. Вороненко, О.П. Максименко та ін. Д.:АРТ-ПРЕС, 2004. 184 с.
- 8. Здоровье 2020- основы европейской политики и стратегии для XXI века. BO3, 2013.-232 с.
- 9. Методи соціальної медицини / під ред. О.М. Очередько, О.Г. Процек. Вінниця: Тезис, 2007. 410 с.
- 10. Москаленко В.Ф. Системы здравоохранения: современный контекст . К.: «Книга-плюс», 2012. 320 с.
- 11. Москаленко В.Ф., Грузєва Т.С., Іншакова Г.В. Право на охорону здоров'я у нормативно-правових актах міжнародного та європейського рівня. Контраст, 2006. 296 с.
- 12. Населення України. Демографічний щорічник. К.: Держкомстат України. (режим доступу: www.ukrstat.gov.ua).
- 13. Общественное здоровье и здравоохранение : учебник // В.А. Медик, В.К. Юрьев. 2-е изд. испр. и доп. М.: ГЭОТАР-Медиа, 2012.-608 с.
- 14. Общественное здоровье и здравоохранение : учебник для студентов учреждений высшего профессионального образования // Ю.П. Лисицын, Г.Э. Улумбекова. 3-е изд., перераб. и доп. М.: ГЭОТАР-Медиа, 2011. 544 с.
- 15. Первинна медико-санітарна допомога/сімейна медицина / за ред. В.М. Князевича. К., 2010.-404 с.
- 16. Попченко Т.П. Реформування сфери охорони здоров'я в Україні: організаційне, нормативно-правове та фінансово-економічне забезпечення. К. : HICД, 2012. 96 с.
- 17. Посібник із соціальної медицини та організації охорони здоров'я. К. : «Здоров'я», 2002. 359 с.
- 18. Сімейна медицина / За ред. проф. В.Б. Гощинського, проф. Є.М. Стародуба ТДМУ, Тернопіль: Укрмедкнига, 2005. 810 с.
- 19. Сімейна медицина. Книга I «Організаційні основи сімейної медицини / За ред. В.Ф. Москаленка, О.М. Гиріної. Підручник. К.: «Медицина», 2007. 392 с.
- 20. Современные подходы к управлению качеством медицинской помощи на различных иерархических уровнях / Под ред. О.П. Щепина. М., 2012. 164 с.
- 21. Стародубов В.И., Щепин О.П. Общественное здоровье и здравоохранение. Национальное руководство. М.: ГЭОТАР-Медиа, 2013. 619 с.
- 22. Щорічна доповідь про стан здоров'я населення, санітарно-епідемічну ситуацію та результати діяльності системи охорони здоров'я України. 2016 рік / МОЗ України, ДУ «УІСД МОЗ України». Київ, 2017. 516 с.
- 23. Oxford Textbook of Global Public Health, 6 edition. Edited by RogesDetels, Martin Gulliford, QuarraishaAbdoolKarimand ChorhChuan Tan. Oxford University Press, 2017. 1728 p.
  - 24. Medical Statistics at a Glance Text and Workbook. Aviva Petria, Caroline

- Sabin. Wiley-Blackwell, 2013. 288 p.
- 25. Jekel's epidemiology, biostatistics, preventive medicine and public health. Fourthedition. DavidL. Katz, Joann G. Elmore, Dorothea M.G. Wild, Sean C. Lucan. ELSEVIER., 2014. 405 p.
- 26. Oxford Handbook of Public Health Practice, Fourth Edition. Charles Guest, Walter Ricciardi, Ichiro Kawachi, Iain Lang. Oxford University Press, 2012. 656 p.
- 27. Primer of Biostatistics, Seventh Edition. Stanton A. Glantz McGraw-HillEducation, 2012.-320~p.

#### **Information Resources**

- 1. Всесвітня організація охорони здоров'я www.who.int
- 2. Державна науково-педагогічна бібліотека України ім. В.О. Сухомлинського -- <a href="http://www.dnpb.gov.ua/">http://www.dnpb.gov.ua/</a>
- 3. Европейская база данных «Здоровье для всех» www.euro.who.int/ru/home
  - 4. Журнал British Medical Journal www.bmj.com
  - 5. Журнал Evidence-Based Medicine www.evidence-basedmedicine.com
  - 6. Канадський центр доказів в охороні здоров'я <u>www.cche.net</u>
  - 7. Кохрейнівська бібліотека www.cochrane.org
  - 8. Кохрейнівський центр доказової медицини <u>www.cebm.net</u>
- 9. Населення України. Демографічний щорічник. К.: Держкомстат України. (режим доступу: www.ukrstat.gov.ua ).
- 10. Наукова бібліотека Харківського національного медичного університету http://libr.knmu.edu.ua/
- 11. Научная педагогическая библиотека им. К.Д. Ушинского Российской академии образования -- <a href="http://www.gnpbu.ru/">http://www.gnpbu.ru/</a>
- 12. Національна бібліотека України ім. В.І. Вернадського -- <a href="http://www.nbuv.gov.ua/">http://www.nbuv.gov.ua/</a>
- 13. Національна медична бібліотека США MEDLINE www.ncbi.nlm.nih.gov/PubMed
- 14. Національна наукова медична бібліотека України -- <a href="http://www.library.gov.ua/">http://www.library.gov.ua/</a>
- 15. Українська база медико-статистичної інформації «Здоров'я для всіх»: <a href="http://medstat.gov.ua/ukr/news.html?id=203">http://medstat.gov.ua/ukr/news.html?id=203</a>
- 16. Харківська державна наукова бібліотека ім. В.Г. Короленка http://korolenko.kharkov.com/
  - 17. Центр громадського здоров'я MO3 України www.phc.org.ua
  - 18. Центр контролю та профілактики захворювань <u>www.cdc.gov</u>
- 19. Центральная библиотека Пущинского научного центра РАН -- <a href="http://cbp.iteb.psn.ru/library/default.html">http://cbp.iteb.psn.ru/library/default.html</a>
- 20. Центральная научная медицинская библиотека Первого Московского государственного медицинского университета им. И.М. Сеченова -- <a href="http://elibrary.ru/defaultx.asp">http://elibrary.ru/defaultx.asp</a>
- 21. U.S. National Library of Medicine Національна медична бібліотека США <a href="http://www.nlm.nih.gov/">http://www.nlm.nih.gov/</a>

#### 8. OTHER

Корисні посилання:

Положення про запобігання, попередження та врегулювання випадків, пов'язаних із сексуальними домаганнями і дискримінацією у XHMУ <a href="http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog-sex.doc">http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog-sex.doc</a>

академічну доброчесність та про Положення етику академічних взаємовідносин в Харківському національному медичному університеті http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_ad\_etyka\_text.pdf

Порядок проведення занять з поглибленого вивчення студентами Харківського національного медичного університету окремих дисциплін понад

обсяг навчального плану <a href="http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/nak-poriad-pogl-vyv-">http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/nak-poriad-pogl-vyv-</a>

Положення про Комісію з академічної доброчесності, етики та управління конфліктами XHMУ http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_komis\_ad\_text.

pdf

Положення про визнання результатів неформальної освіти в Харківському національному медичному університеті

http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_neform\_osv.pdf ІНКЛЮЗИВНА ОСВІТА:

http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=710 8%3A2021-03-10-14-08-02&catid=12%3A2011-05-10-07-16-

32&Itemid=33&lang=uk

АКАДЕМІЧНА ДОБРОЧЕСНІСТЬ:

http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=252 0%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-

17&Itemid=40&lang=uk