

SYLLABUS

1. General information on discipline

Full course name	Hygiene and Ecology. Public Health
Full official name of higher educational institution	Sumy State University
Full name of a structural unit	Medical Institute. Department of Public Health
Author(s)	Yasenok Viktoriia Oleksandrivna, Smiianov Vladyslav Anatolyovich, Smiianova Olha Ivanivna
Cycle/higher educational level	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
Semester	2 weeks during the 12th semester
Workload	The volume is 5 credits, 150 hours, of which 60 hours is contact work with the teacher (60 hours of practical classes)
Language(s)	English

2. Place in the study program

Relation to curriculum	Compulsory course available for study programme "Medicine"
Prerequisites	Krok-1; required knowledge of: Latin language and medical terminology, medical biology, medical computer studies, physiology, histology, cytology and embryology, biological and bioorganic chemistry, microbiology, virology and immunology, pathology, pathophysiology, hygiene and ecology, radiology, public health, management in health care system
Additional requirements	There are no specific requirements
Restrictions	There are no specific restrictions

3. Aims of the course

The aim of studying the discipline "Hygiene and ecology. Public Health" is to prepare highly qualified medical specialists capable to solve complex problems in the field of health with understanding of the basic principles of preventive medicine and public health, as well as the skills of independent decision-making in providing high-quality medical care to different categories of the population in the functioning conditions of the modern health system.

4. Contents

Module 1. Hygiene and ecology

Topic 1 Legislative basis of organization and supervision of sanitary conditions of environmental and human health.

Legislative basis of organization and supervision of sanitary conditions of environmental and human health. Method of compiling and maintaining the basic reporting documentation of the regional laboratory center of Ministry of Healthcare of Ukraine (MHC).

Topic 2 Influence of environmental factors on the human body and public health

Comprehensive assessment of the environment. Hygienic assessment of the potential risk of environmental factors influence on the human body and public health. Physical and chemical environmental factors. Principles of hygienic normalization. Instrumental methods of hygienic research.

Topic 3 Hygiene of drinking water and water supply.

Methods of sanitary inspection of sources of water supply and sampling for bacteriological and sanitary-chemical analysis. Method of drinking water assessment. Methods and means of water purification.

Topic 4 Diseases, emerging with water as risk factor.

Diseases, emerging with water as risk factor, their classification. Prevention of communicable and non-communicable diseases transmitted with water in the population.

Topic 5 Sanitary protection of soil and cleaning of settlements.

Sanitary protection of soil and cleaning of settlements. Prevention of communicable and non-communicable diseases, that may be spreaded by soil, in the population.

Topic 6 Hygiene of settlements

Hygiene planning in settlements. Hygiene of residential and public buildings. Hygienic value of physical factors in populated areas.

Topic 7 Nutrition in preventive medicine. Dietary therapy.

Theoretical aspects of prevention of alimentary and alimentary-caused diseases. Hygienic bases of medical-dietary and healthful nutrition

Topic 8 Sanitary and hygienic control of public catering. Food poisoning.

Sanitary and hygienic control of public catering. Food poisoning as a hygienic problem. Method of investigation of cases of food poisoning. Organization of catering service in medical institutions and industrial enterprises.

Topic 9 Hygiene of children and adolescents

Methods of research and evaluation of environmental factors impact on health of children and adolescents. Physical development as an important criterion for assessing health state of children and adolescents. Methods of hygienic assessment of studying conditions in children and adolescents and organization of educational process in educational institutions.

Topic 10 Occupational health

Legislative basis for sanitary supervision of occupational hygiene. Hygienic assessment of factors of working process and production environment. Hygiene and health care of medical workers. Methods of investigation of cases of acute and chronic occupational poisoning and diseases.

Topic 11 Hygiene of medical institutions

Features of hygienic requirements for the planning and working of medical institutions. Hygienic assessment of patients in conditions of medical institutions.

Topic 12 Healthcare-associated infections

Modern problems of healthcare-associated infections (HAI). Causes that increase morbidity and provoke spreading of HAI. The main sources of pathogens of HAI. Etiological factors of HAI. Microbiological monitoring at medical institutions. Complex of hygienic measures for the prevention of HAIs, strategy to stop spreading of HAIs in Ukraine and around the world.

Topic 13 Radiohygiene

Norms of formation of radiation dose for a person in places of residence, its hygienic assessment and ways of decreasing. Radiation hazard and anti-radiation protection at the objects using radiation-nuclear technologies. Hygienic assessment of anti-radiation protection in medical workers and patients` radiation safety when using radionuclides and other sources of ionizing radiation in medical institutions.

Topic 14 Organization of hygiene practices during emergency recovery.

Organization of hygiene practices during emergency recovery. Features of temporary placement of the affected communities and rescue groups` formations. Organization of sanitary food and water supply control in emergency conditions.

Topic 15 Module continuous assessment

Module 2. Public Health

Topic 16 Public health

Public health in the context of international and national policy. Basic principles and regulations. Tasks of public health, its components. The main operational functions of public health. History of public health. Modern definitions and terms of public health. Main international documents in public health.

Topic 17 The concept of health and disease. Integral assessment of public health state.

The concept of health and disease. Individual and public health. The concept of health and disease. Determination of health by the WHO. Individual, group and public health. The concept of the public health potential. Health resources. Integral assessment of public health:

- DALY, Disability Adjusted Life Years;
- ALE, Average Life Expectancy;
- HALE, Healthy Life Expectancy;
- QALE, Quality Adjusted Life Expectancy;
- HDI, Human Development Index.

Topic 18 Methods of study and evaluation of demographic indicators.

Methods of studying of demographic indicators. Demography as a science. Mechanical and natural movement of population. Regional features of fertility in Ukraine and modern world. Total mortality, its main causes in different regions, certain countries and Ukraine. Gender-age and territorial characteristics of mortality indicators. Natural population growth. Documents used to study the natural population movement. Procedure of births` and deaths` registration in Ukraine. Average life expectancy. Infant mortality (newborn mortality). Maternal mortality. The value of demographic indicators to assess the state of health in population.

Topic 19 Population morbidity, methods of its study.

The concept of morbidity, aim of its studying. Medical and social significance of morbidity as a main cause of temporary and permanent disability, mortality. Types of morbidity studied in Ukraine. The concept of primary, general, infectious, important non-epidemic morbidity and admission rate. Sources of information in studying certain types of morbidity. International statistical classification of diseases, injuries and causes of death, principles of its formation and meaning. Method of determination of indicators of mentioned types of morbidity, their assessment, regional features. Dynamics of morbidity indicators.

Topic 20 Global disease burden.

Epidemiology of major non-communicable diseases. Global burden of diseases in Ukraine in the world. Modern views on the most important socially significant diseases. Consequences of the most important diseases for public health. Characteristics the most influential diseases in the XXI century. The impact of civilization (globalization) diseases on morbidity and mortality of the population in Ukraine and around the world. Diseases of the circulatory system. Diabetes. Tuberculosis. HIV/AIDS. Neoplasms. Problems of overweight and obesity. Chronic obstructive pulmonary disease (COPD). Ecological health. Problems of international health.

Topic 21 Risk factors for major non-communicable diseases. Modern problems of communicable diseases.

Factors provoking the emergence of civilization (globalization) diseases, the main factors leading to their development. Social, biological and psychological problems of their occurrence. Modern problems of communicable diseases, factors of their occurrence and spreading. Ways to protect population from communicable diseases. Economic costs associated with diseases of the population. The public health system as the main instrument of the state's influence controlling population`s state of health.

Topic 22 The concept of lifestyle. Healthy lifestyle. Promotion of health.

The concept of a healthy lifestyle. Promotion of health. Formation and organization of a healthy lifestyle and its importance for preservation and promotion of public health. Sanology and valeology. Tasks and content of public health centers, their interaction with healthcare institutions. Methods and means of medical and hygienic training and education of population.

Topic 23 The concept of prevention. The main types of prevention. Population periodical health examination (dispensary). Screening.

The concept of prevention. Levels of prevention. The main types of prevention. Development of preventive programs. Legal principles of preventive programs for public health in Ukraine. Dispensary method and its value. Purpose and tasks of dispensary. Organization of dispensation for different population groups. Medical examinations. Types of medical examinations. The concept of screening. Screening criterion. Requirements for screening tests.

Topic 24 Types and levels of medical care.

Organization and content of work of different types of medical institutions. Nomenclature of medical institutions. Types and levels of medical care. Organization of work of primary health care centers. Organization of outpatient and polyclinic institutions. Organization of hospitals' work. Emergency medical care. Palliative and hospice care. State Blood Service.

Topic 25 Problems of women's and children's health. Reproductive health.

The main problems of women's health. State of women's health in Ukraine and world. Organization of medical care for prospective mothers. Medical institutions providing medical care to women. Determination of reproductive health. The value of reproductive health for the processes of reproduction in population. Reproductive health problems. Cognitive and psychological background of reproductive health. Family planning. Influence of socio-economic factors on the state of reproductive health. Health problems of children and adolescents. State of children and adolescent health in Ukraine. Organization of medical care for children and adolescents. Medical institutions that provide medical care to children. Preventive orientation of the work of medical institutions that provide medical care to children. Forming of health-supporting behavior. System of preventive education in students.

Topic 26 Medical examination. Organization of examination of temporary and permanent disability.

The purpose of various types of medical examination, institutions that carry it out. The concept of temporary and permanent disability. Organization and procedure of examination of temporary and permanent disability. Types of temporary and permanent disability. Medical institutions conducting examination of temporary and permanent disability. The main documents used in the examination disability. Modern rules and features of issuing disability leaves. Disability of the population. Basic principles of conducting an examination of persistent disability. Disability groups. Structure of population disability. The concept of rehabilitation, its types.

Topic 27 Basic healthcare systems

Healthcare systems in the world. State health care system, based on Beveridge and Semashko models. Insurance model of medical service of the population, based on the example of Bismarck model. Market (private) healthcare model. Sources of funding for various models of healthcare systems. Advantages and disadvantages of existing models of healthcare system. Development of the national health care system in Ukraine. Program of medical guarantees to the population of Ukraine. National healthcare strategies and role of the World Health Organization in their formation. Transformation and modernization of healthcare systems in the world. Medical and social insurance.

Topic 28 Management in healthcare. Quality management of medical care.

Management of medical institution. Management of health care institution. Healthcare Project Management. Financial management of healthcare institutions. Analysis of economic activities of health care institutions. Payment for the work of medical personnel in modern conditions. Business plan of a medical institution. Marketing of medical services. The concept of market in healthcare. Information systems and technologies in medicine. The concept of quality of medical care (QMC). QMC management models: professional, bureaucratic, industrial. Quality control in healthcare. Licensing of healthcare facilities. Accreditation of medical institutions. Certification and standardization in healthcare based on ISO 9000 system. The quality system of medical care in a healthcare institution. The concept of clinical audit. Internal audit as a quality management tool for medical care. Benchmarking.

<p>Topic 29 Behavioral approaches in healthcare. Module continuous assessment History of behavioral economics development. Methods of behavioral economics. Psychological types "humane" and "economical". The theory of "nudges". Behavioral factors in preservation of health and occurrence of diseases. Typical examples of people`s behavior associated with health threats. Methods of behavioral economics in prevention of chronic non-communicable diseases. Behavioral economics and donation. Behavioral economics and healthy diet.</p>
<p>Topic 30 Final module control Final module control</p>

5. Intended learning outcomes of the course

After successful study of the course student will be able to:

LO1	Ability to perform sanitary and preventive measures, epidemiological and medical statistical studies of public health; conduct epidemiological and medical-statistical research of public health; ability to process governmental, social, economic, and medical information, including electronic forms.
LO2	Ability to assess the influence of environment, socio-economic and biological determinants on the health of a person, family, or population.
LO3	Ability to analyze activity of a doctor, department, or healthcare institution; to carry out measures for providing healthcare quality and to increase the efficiency of medical resources.
LO4	Ability to demonstrate the ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches.
LO5	Ability to solve complex health problems in a broad or multidisciplinary context, organize public medical care and marketing of medical service.

6. Role of the course in the achievement of programme learning outcomes

Program Learning Outcomes achieved by the course

For 222 Medicine:

PO7	To determine an appropriate work and rest mode in the treatment of diseases (according to the List 2) at a healthcare institution, at patient's home and during medical evacuation (including in the field), based on the provisional clinical diagnosis and observing the relevant ethical and legal norms, by making a reasonable decision according to existing algorithms and standard procedures.
PO16	To plan and implement a system of sanitary and preventive measures against the occurrence and spread of diseases among the population.
PO17	To analyze epidemiological situation and carry out measures of mass and individual, general and local prevention of infectious diseases.
PO18	To search for the necessary information in the professional literature and databases; to analyze, evaluate, and apply this information. To apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex health problems.

PO19	To assess environmental impact on public health.
PO20	To formulate goals and define the structure of personal activity based on the analysis of social and personal needs.
PO21	To organize an appropriate level of individual safety (own and of those cared for) in case of typical dangerous situations in the individual field of activity.
PO22	To communicate one's knowledge, conclusions, and arguments on health issues and related concerns clearly and unambiguously to professionals and non-specialists, in particular to students.
PO23	To manage healthcare workflows that are complex, unpredictable and require new strategic approaches; to organize conditions for work and professional development of staff.
PO25	To make effective healthcare decisions assessing resources and considering social, economic, and ethical implications.

7. Teaching and learning activities

7.1 Types of training

<p>Topic 1 Legislative basis of organization and supervision of sanitary conditions of environmental and human health.</p>
<p>Pr.tr.1 “Legislative basis of organization and supervision of sanitary conditions of environment and human health” (full-time)</p> <p>Legislative basis of organization and supervision of sanitary conditions of environmental and human health. Method of compiling and maintaining the basic reporting documentation of the regional laboratory center of Ministry of Healthcare of Ukraine (MHC).</p>
<p>Topic 2 Influence of environmental factors on the human body and public health</p>
<p>Pr.tr.2 “Influence of environmental factors on the human body and public health” (full-time)</p> <p>Comprehensive assessment of the environment. Hygienic assessment of the potential risk of environmental factors influence on the human body and public health. Physical and chemical environmental factors. Principles of hygienic normalization. Instrumental methods of hygienic research.</p>
<p>Topic 3 Hygiene of drinking water and water supply.</p>
<p>Pr.tr.3 “Hygiene of drinking water and water supply” (full-time)</p> <p>Methods of sanitary inspection of sources of water supply and sampling for bacteriological and sanitary-chemical analysis. Method of assessment of drinking water. Methods and means of water purification.</p>
<p>Topic 4 Diseases, emerging with water as risk factor.</p>

<p>Pr.tr.4 “Diseases, emerging with water as risk factor” (full-time)</p> <p>Diseases, emerging with water as risk factor, their classification. Prevention of communicable and non-communicable diseases of the population spread by water.</p>
<p>Topic 5 Sanitary protection of soil and cleaning of settlements.</p>
<p>Pr.tr.5 “Sanitary protection of soil and cleaning of settlements” (full-time)</p> <p>Sanitary protection of soil and cleaning of settlements. Prevention of communicable and non-communicable diseases of the population, that may be spreaded by soil.</p>
<p>Topic 6 Hygiene of settlements</p>
<p>Pr.tr.6 “Hygiene of settlements” (full-time)</p> <p>Hygiene planning in settlements. Hygiene of residential and public buildings. Hygienic value of physical factors in populated areas.</p>
<p>Topic 7 Nutrition in preventive medicine. Dietary therapy.</p>
<p>Pr.tr.7 “Nutrition in preventive medicine. Dietary therapy” (full-time)</p> <p>Theoretical aspects of prevention of alimentary and alimentary-caused diseases. Hygienic bases of medical-dietary and healthful nutrition</p>
<p>Topic 8 Sanitary and hygienic control of public catering. Food poisoning.</p>
<p>Pr.tr.8 “Sanitary and hygienic control of public catering. Food poisoning” (full-time)</p> <p>Sanitary and hygienic control of public catering. Food poisoning as a hygienic problem. Method of investigation of cases of food poisoning. Organization of catering service in medical institutions and industrial enterprises.</p>
<p>Topic 9 Hygiene in children and adolescents</p>
<p>Pr.tr.9 “Hygiene in children and adolescents” (full-time)</p> <p>Methods of research and evaluation of environmental factors impact on health of children and adolescents. Physical development as an important criterion for assessing health state of children and adolescents. Methods of hygienic assessment of studying conditions in children and adolescents and organization of educational process in educational institutions.</p>
<p>Topic 10 Occupational health</p>
<p>Pr.tr.10 “Occupational health” (full-time)</p> <p>Legislative basis for sanitary supervision of occupational hygiene. Hygienic assessment of factors of working process and production environment. Hygiene and health care of medical workers. Methods of investigation of cases of acute and chronic occupational poisoning and diseases.</p>
<p>Topic 11 Hygiene of medical institutions</p>
<p>Pr.tr.11 “Hygiene of medical institutions” (full-time)</p> <p>Features of hygienic requirements for the planning and working of medical institutions. Hygienic assessment of patients in conditions of medical institutions.</p>
<p>Topic 12 Healthcare-associated infections</p>

Pr.tr.12 “Healthcare-associated infections” (full-time)

Modern problems of healthcare-associated infections (HAI). Causes that increase morbidity and provoke spreading of HAI. The main sources of pathogens of HAI. Etiological factors of HAI. Microbiological monitoring at medical institutions. Complex of hygienic measures for the prevention of HAIs, strategy to stop spreading of HAIs in Ukraine and around the world.

Topic 13 Radiohygiene

Pr.tr.13 “Radiohygiene” (full-time)

Norms of formation of radiation dose for a person in places of residence, its hygienic assessment and ways of decreasing. Radiation hazard and anti-radiation protection at the objects using radiation-nuclear technologies. Hygienic assessment of anti-radiation protection in medical workers and patients` radiation safety when using radionuclides and other sources of ionizing radiation in medical institutions.

Topic 14 Organization of hygiene practices during emergency recovery.

Pr.tr.14 “Organization of hygiene practices during emergency recovery” (full-time)

Organization of hygiene practices during emergency recovery. Features of temporary placement of the affected communities and rescue groups` formations. Organization of sanitary food and water supply control in emergency conditions.

Topic 15 Module continuous assessment

Pr.tr.15 “Module continuous assessment” (full-time)

Module continuous assessment

Topic 16 Public health

Pr.tr.16 “Public health” (full-time)

Public health in the context of international and national policy. Basic principles and regulations. Tasks of public health, its components. The main operational functions of public health. History of public health. Modern definitions and terms of public health. Main international documents in public health.

Pr.tr.17 “The concept of health and disease. Integral assessment of public health state” (full-time)

The concept of health and disease. Individual and public health. The concept of health and disease. Determination of health by WHO. Individual, group and public health. The concept of the public health potential. Health resources. Integral assessment of public health:

- DALY, Disability Adjusted Life Years;
- ALE, Average Life Expectancy;
- HALE, Healthy Life Expectancy;
- QALE, Quality Adjusted Life Expectancy;
- HDI, Human Development Index.

Pr.tr.18 “Methods of study and evaluation of demographic indicators” (full-time)

Methods of studying of demographic indicators. Demography as a science. Mechanical and natural movement of population. Regional features of fertility in Ukraine and modern world. Total mortality, its main causes in different regions, certain countries and Ukraine. Gender-age and territorial characteristics of mortality indicators. Natural population growth. Documents used to study the natural population movement. Procedure of births` and deaths` registration in Ukraine. Average life expectancy. Infant mortality (newborn mortality). Maternal mortality. The value of demographic indicators to assess the state of health in population.

Pr.tr.19 “Population morbidity, methods of its study” (full-time)

The concept of morbidity, aim of its studying. Medical and social significance of morbidity as a main cause of temporary and permanent disability, mortality. Types of morbidity studied in Ukraine. The concept of primary, general, infectious, important non-epidemic morbidity and admission rate. Sources of information in studying certain types of morbidity. International statistical classification of diseases, injuries and causes of death, principles of its formation and meaning. Method of determination of indicators of mentioned types of morbidity, their assessment, regional features. Dynamics of morbidity indicators.

Pr.tr.20 “Global disease burden” (full-time)

Epidemiology of major non-communicable diseases. Global burden of diseases in Ukraine in the world. Modern views on the most important socially significant diseases. Consequences of the most important diseases for public health. Characteristics the most influential diseases in the XXI century. The impact of civilization (globalization) diseases on morbidity and mortality of the population in Ukraine and around the world. Diseases of the circulatory system. Diabetes. Tuberculosis. HIV/AIDS. Neoplasms. Problems of overweight and obesity. Chronic obstructive pulmonary disease (COPD). Ecological health. Problems of international health.

Pr.tr.21 “Risk factors for major non-communicable diseases. Modern problems of communicable diseases” (full-time)

Factors provoking the emergence of civilization (globalization) diseases, the main factors leading to their development. Social, biological and psychological problems of their occurrence. Modern problems of communicable diseases, factors of their occurrence and spreading. Ways to protect population from communicable diseases. Economic costs associated with diseases of the population. The public health system as the main instrument of the state's influence controlling population`s state of health.

Pr.tr.22 “The concept of lifestyle. Healthy lifestyle. Promotion of health” (full-time)

The concept of a healthy lifestyle. Promotion of health. Formation and organization of a healthy lifestyle and its importance for preservation and promotion of public health. Sanology and valeology. Tasks and content of public health centers, their interaction with healthcare institutions. Methods and means of medical and hygienic training and education of population.

Pr.tr.23 “The concept of prevention. The main types of prevention. Population periodic health examination (dispensary). Screening” (full-time)

The concept of prevention. Levels of prevention. The main types of prevention. Development of preventive programs. Legal principles of preventive programs for public health in Ukraine. Dispensary method and its value. Purpose and tasks of dispensary. Organization of dispensation for different population groups. Medical examinations. Types of medical examinations. The concept of screening. Screening criterion. Requirements for screening tests.

Pr.tr.24 “Types and levels of medical care” (full-time)

Organization and content of work of different types of medical institutions. Nomenclature of medical institutions. Types and levels of medical care. Organization of work of primary health care centers. Organization of outpatient and polyclinic institutions. Organization of hospitals` work. Emergency medical care. Palliative and hospice care. State Blood Service.

Pr.tr.25 “Problems of women's and children's health. Reproductive health” (full-time)

The main problems of women's health. State of women's health in Ukraine and world. Organization of medical care for prospective mothers. Medical institutions providing medical care to women. Determination of reproductive health. The value of reproductive health for the processes of reproduction in population. Reproductive health problems. Cognitive and psychological background of reproductive health. Family planning. Influence of socio-economic factors on the state of reproductive health. Health problems of children and adolescents. State of children and adolescent health in Ukraine. Organization of medical care for children and adolescents. Medical institutions that provide medical care to children. Preventive orientation of the work of medical institutions that provide medical care to children. Forming of health-supporting behavior. System of preventive education in students.

Pr.tr.26 “Medical examination. Organization of examination of temporary and permanent disability” (full-time)

The purpose of various types of medical examination, institutions that carry it out. The concept of temporary and permanent disability. Organization and procedure of examination of temporary and permanent disability. Types of temporary and permanent disability. Medical institutions conducting examination of temporary and permanent disability. The main documents used in the examination disability. Modern rules and features of issuing disability leaves. Disability of the population. Basic principles of conducting an examination of persistent disability. Disability groups. Structure of population disability. The concept of rehabilitation, its types.

Pr.tr.27 “Basic healthcare systems” (full-time)

Healthcare systems in the world. State health care system, based on Beveridge and Semashko models. Insurance model of medical service of the population , based on the example of Bismarck model. Market (private) healthcare model. Sources of funding for various models of healthcare systems. Advantages and disadvantages of existing models of healthcare system. Development of the national health care system in Ukraine. Program of medical guarantees to the population of Ukraine. National healthcare strategies and role of the World Health Organization in their formation. Transformation and modernization of healthcare systems in the world. Medical and social insurance.

<p>Pr.tr.28 “Management in healthcare. Quality management of medical care” (full-time)</p> <p>Management of medical institution. Management of health care institution. Healthcare Project Management. Financial management of healthcare institutions. Analysis of economic activities of health care institutions. Payment for the work of medical personnel in modern conditions. Business plan of a medical institution. Marketing of medical services. The concept of market in healthcare. Information systems and technologies in medicine. The concept of quality of medical care (QMC). QMC management models: professional, bureaucratic, industrial. Quality control in healthcare. Licensing of healthcare facilities. Accreditation of medical institutions. Certification and standardization in healthcare based on ISO 9000 system. The quality system of medical care in a healthcare institution. The concept of clinical audit. Internal audit as a quality management tool for medical care. Benchmarking.</p>
<p>Pr.tr.29 “Behavioral approaches in healthcare. Module continuous assessment” (full-time)</p> <p>History of behavioral economics development. Methods of behavioral economics. Psychological types "humane" and "economical". The theory of "nudges". Behavioral factors in preservation of health and occurrence of diseases. Typical examples of people`s behavior associated with health threats. Methods of behavioral economics in prevention of chronic non-communicable diseases. Behavioral economics and donation. Behavioral economics and healthy diet.</p>
<p>Pr.tr.30 “Final module control” (full-time)</p> <p>Final module control</p>

7.2 Learning activities

LA1	Preparation for practical studies
LA2	Preparation for first and final module control
LA3	Case studies
LA4	Solving open-type tasks, using online technologies
LA5	E-learning in systems (Zoom, MIX.sumdu.edu.ua)
LA6	Self-education
LA7	Solving individual computational and analytical tasks
LA8	Preparation for KROK-2 testing
LA9	Preparation for an Objective Structured Clinical Examination
LA10	Watching the tutorial videos
LA11	Individual research project (student`s scientific paper, article, thesis)
LA12	Reviewing manuals and relevant informational resources
LA13	Preparation and presentation of the report

8. Teaching methods

Course involves learning through:

TM1	Team-based learning (TBL)
TM2	Case-based learning (CBL).

TM3	Research-based learning (RBL).
TM4	Brainstorming
TM5	Think-pair-share method
TM6	Educational discussion / debates
TM7	Role play

Discipline learning is proceeded using modern educational methods (CBL, TBL, RBL), which promote the development of professional abilities and stimulate the creative and scientific activities; they are aimed at training practical-oriented specialists.

Soft skills: 1. Ability to abstract thinking, analysis, and synthesis. 2. Ability to learn, master modern knowledge, and apply the knowledge in practice. 3. Knowledge and understanding of the subject area and professional activity comprehension. 4. Ability to adapt and act in a new situation. GC 5. Ability to make reasoned decisions; teamwork ability; interpersonal skills. 7. Ability to use information and communication technologies. 8. Determination and persistence on the tasks and commitments undertaken. 10. Ability to maintain and multiply moral, cultural, scientific values and achievements of society based on understanding the history and development patterns of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies using different types and forms of physical activity for active recreation and a healthy lifestyle.

9. Methods and criteria for assessment

9.1. assessment criteria

ECTS	Definition	National scale	Rating scale
	Outstanding performance without errors	5 (Excellent)	170 < RD < 200
	Above the average standard but with minor errors	4 (Good)	140 < RD < 169
	Fair but with significant shortcomings	3 (Satisfactory)	120 < RD < 139
	Fail – some more work required before the credit can be awarded	2 (Fail)	0 < RD < 119

9.2 Formative assessment (FA)

FA1	Recitation with further feedback from teacher, depending on its results
FA2	Teacher guidance through the process of practical studies
FA3	Defence of the project based on the individual research project
FA4	Peer assessment
FA5	Solving case studies` tasks by students during practical studies with further discussion
FA6	Testing
FA7	Revising and assessment of open-type tasks

FA8	Cases` solving
FA9	Solving case problems from the KROK-2 testing

9.3 Summative assessment

SA1	Current assessment (written tasks, recitation, testing and case-studies results)
SA2	Conducting a practice-oriented differentiated test

Form of asseement

12 semester		200 scores
SA1. Current assessment (written tasks, recitation, testing and case-studies results)		120
	Oral recitation, solving practical and case tasks, computer-based testing	120
SA2. Conducting a practice-oriented differentiated test		80
	Response to theoretical task	40
	Solving practical task	40

Form of assessment (special cases):

12 semester		200 scores
SA1. Current assessment (written tasks, recitation, testing and case-studies results)		120
	In the case of quarantine restrictions, classes are provided online, using platforms Mix.sumdu.edu.ua, Zoom, Google meet.	120
SA2. Conducting a practice-oriented differentiated test		80
	In the case of quarantine restrictions, test is passed online; using platforms Zoom, Google meet.	80

When studying materials of the module, student receives maximum of 5 points for each practical lesson (the score is set in traditional 4 point assessment system). At the end of the cycle, the arithmetic mean of student`s academic achievement is calculated. The maximum of points a student can get during practical classes of all course is 120.

The number of student points is calculated by the formula: 120 times the arithmetic mean and divided into 5. The form of final control of the course is the final module control (FMC). FMC is conducted after studying all topics and ending of all practical classes in writing with further oral discussion. FMC issues include control of student theoretical knowledge. Students are allowed to pass FMC, if all types of activities from educational program of the discipline completed, namely: • attended all classes; • worked out all missed classes in-time; • scored the minimum number of points for course achievement (not less than 72, that equals "3" in the national scale). • The maximum number of points a student can get for FMC is 80. • The minimum number of points a student must score for FMC is 48.

10. Learning resources

10.1 Material and technical support

MTS1	Information and communication system
MTS2	Library collection
MTS3	Computers, computer-based systems and nets
MTS4	Medical establishments/buildings and equipment (clinics, hospitals, etc.)
MTS5	Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, screens)
MTS6	Software (for distance learning, online-testing/questioning, virtual laboratories, visiting virtual patients, creating computer graphics, modeling, etc.)
MTS7	Equipment (measuring instruments, portable mini-laboratories, etc.)

10.2 Information and methodical support

Essential reading

1	Hygiene and ecology: Textbook / Edited by VG Bardova. - Vinnytsia: Nova Kniga, 2020. - 720 p.
2	https://phc.org.ua/
3	World Health Organization http://www.who.int/en/ .
4	Zdrowie publiczne / Marian Sygit. – Warszawa: Wolters Kluwer, 2017. – 689 p.

Supplemental reading

1	Oxford Textbook of Global Public Health, 6th edition. Edited by Roger Detels, Martin Gulliford, Quarraisha Abdool Karim, Chorh Chuan Tan. – Vol. 1. OxfordUniversity Press. Published: 2015. - 364 p.
2	Oxford Textbook of Global Public Health, 6th edition. Edited by Roger Detels, Martin Gulliford, Quarraisha Abdool Karim, Chorh Chuan Tan. – Vol. 2. OxfordUniversity Press. Published: 2015. - 541p.
3	Oxford Textbook of Global Public Health, 6th edition. Edited by Roger Detels, Martin Gulliford, Quarraisha Abdool Karim, Chorh Chuan Tan. – Vol. 3. OxfordUniversity Press. Published: 2015. - 737 p.
4	Ministry of Ecology and Natural Resources of Ukraine http://www.menr.gov.ua/ .

