Annex 2
To the Development and Periodic Review Procedure educational programs

A syllabus of discipline "Hygiene and Ecology"

1. General information	
Name of the faculty	Faculty of foreign students
Educational program (branch, specialty, higher education level, form of teaching)	22 "Health Care", 221 "Dental studies" Second (Master's) higher education level, full-time
Academic year	**2022 - 2023**
Name of the discipline, code *(email address at Danilo Halytsky Lviv National Medical University)*	Hygiene and Ecology OK 20 https://new.meduniv.lviv.ua/kafedry/kafedra-zagalnoyi-gigiyeny-z-ekologiyeyu/
Department (name, address, telephone, e-mail)	*Department of General Hygiene with Ecology, address* Zelena str., 12, Lviv, Ukraine, 79010, phone: +38 (032) 276-28-37, *e-mail kaf_genhygiene@meduniv.lviv.ua)*
Head of the department *(contact e-mail)*	Professor Fedorenko Vira Ilarionivna, MD, Doctor of Medical Sciences (e-mail kaf_genhygiene@meduniv.lviv.ua)
Year of study (year of study of discipline)	Second year
Semester (*semester in which discipline is being implemented*)	III semester
Type of discipline / module *(required / optional)*	Required
Tutors (names, names, degrees and titles of teachers who teach discipline, contact e- mail)	Kozak Liliya Petrivna, PhD, Assoc. Prof., kozak.l.p.lnmu@gmail.com Sybirnyj Andrij Volodymyrovych, PhD, Assoc. Prof., sybandrij@dr.com Yurchenko Svitlana Teodorivna, PhD, Assist. Prof., zubsvitlana@gmail.com
Erasmus yes / no (discipline availability for students at within the Erasmus + program)	No
The person responsible for the syllabus (e-mail)	Kitsula L.M., assoc. prof., e-mail: kitsula.l.m.lnmu@gmail.com Sybirny A.V., assoc. prof., e-mail: sybandrij@dr.com
Number of ECTS credits	3 credits
Number of hours (lectures / practical classes / self-educational work of students)	90 hours (*10* hours of lectures */ 30* hours of practical classes */ 50* hours of self-educational work of students*)*
Language of teaching	English
Consultation information	MISA system, VEB-site of the department, information stands of the department

2. Short summary of the course

Hygiene and ecology as a discipline:
- lays the foundations for students to study environmental factors and their impact on general and dental health;
- equips the dentist with practical skills for the implementation of specific preventive measures for healthy and sick people personal hygiene, hygiene, nutrition, work, life, education and training of children and adolescents, maintenance in proper sanitary treatment of dental institutions, radiation safety of patients and dental staff, etc .;
- opens wide opportunities for the formation of future dentists preventive thinking, equips them with fundamental theoretical knowledge and practical skills aimed at maintaining and strengthening general and dental health, prolonging creative longevity and life expectancy in general.
Specificity and prevalence of dental services on a budget and private basis, their differentiation by age (children, adults) and place of residence (city, village), narrow specialization, dentist-therapist, dentist-surgeon, dentist-orthopedist, dentist-orthodontist, periodontist, etc.) necessitate the creation of appropriate technical, technological and hygienic conditions for their implementation, which requires mastering a basic knowledge in the field of hygiene and ecology, taking into account the elements of bioethics and nooethics in their future practice , acquaintance with sanitary and sanitary hygienic requirements for dental offices of various profiles, means of prevention of healthcare-associated infections (HAIs), prevention of adverse effects of harmful factors on the health of staff and patients.

3. Purpose and goals of the course

1. The purpose of teaching the discipline "Hygiene and Ecology" is to train a specialist who can solve complex problems of preserving and strengthening the health of individuals, teams, populations, society as a whole, problems in health care, including dental, and prevention of human dental diseases.
2. Learning objectives:
- interpret the basic laws of hygiene and general patterns of communication
health of the population with factors and conditions of the environment of its vital activity;
- interpret the impact of environmental factors on the general and dental health of adults and children ;
- master the methods of hygienic assessment of environmental factors and their impact on public health;
- to substantiate hygienic measures for the prevention of dental diseases in accordance with the basics of current legislation of Ukraine;
- use the positive properties of environmental factors for primary, secondary, tertiary prevention of common diseases and diseases of the dental and maxillofacial system;
- to acquire knowledge ARout the negative factors of the environment, the ARility to determine their relationship with the state of health and to develop preventive measures, including dental direction;
- to plan hygienic measures to prevent the spread of common and dental diseases, to evaluate the effectiveness of these measures;
- to substantiate hygienic measures for the observance of a healthy lifestyle, personal hygiene, occupational hygiene, medical and protective regime of dental institutions, to plan and implement them in the practice of health care;
- to master the basics of ethics, deontology, bioethics, to use methods of psychohygiene and psychoprophylaxis in communication with patients and staff of medical institutions.
3. Competences and learning outcomes.
According to the requirements of the Standard of higher education in the specialty 221 " Dentistry " of the field of knowledge 22 " Health care " for the second (master's) level of higher education
discipline provides students with the acquisition of competencies:
- *integral: the* ARility to solve complex problems and problems in the field of health care in the

specialty " C tomatology" in professional activities or in the learning process, which involves research and / or innovation and is characterized by uncertainty of conditions and requirements;
- *general* :
1. ARility to ARstract thinking, analysis and synthesis (GC 1) .
2. Knowledge and understanding of the subject area and understanding of professional activity (GC 2) .
3. ARility to apply knowledge in practice (GC 3) .
4. ARility to communicate in the state language both orally and in writing (GC 4) .
5. ARility to communicate in English (GC 5) .
6. Skills in the use of information and communication technologies (GC 6) .
7. ARility to search, process and analyze information from various sources (GC 7) .
8. ARility to adapt and act in a new situation (GC 8) .
9. ARility to identify, pose and solve problems (GC 9) .
10. ARility to be critical and self-critical (GC 10) .
11. ARility to work in a team (GC 11) .
12. The desire to preserve the environment (GC 12) .
13. ARility to act socially responsibly and consciously (GC 13) .
14. The ARility to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainARle development, the rule of law, human and civil rights and freedoms in Ukraine (GC 14) .
15. ARility to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge ARout nature and society and in the development of society, technology and technology, use different types and forms of motor activities for active recreation and a healthy lifestyle (GC 15) .
- *special (professional, subject)* :
1. ARility to interpret the results of lARoratory and instrumental studies (PC 2).
2. ARility to assess the impact of the environment on public health
(individual, family, population) (PC 13).
Program learning outcomes , the formation of which is facilitated by the discipline:
1. To plan and implement measures for the prevention of dental diseases among the population to prevent the spread of dental diseases (PLR 6);
2. A to analyze the epidemiological situation and carry out measures of mass and individual, general and local drug and non-drug prevention of dental diseases (PLR-7);
3. To assess the impact of the environment on the health of the population in a medical institution according to standard methods (PLR-15);
4. D to get a healthy lifestyle, use the techniques of self-regulation and self-control (PLR-17).

4. Prerequisites for the course

The discipline is based on the study by students of medical biology of medical and biological physics, medical chemistry, bioorganic and biological chemistry, normal anatomy and physiology, life safety, basics of lARor protection, microbiology and virology.

To successfully study and master the competencies of the discipline "Hygiene and Ecology", the student must know:
- chemical composition and physiological significance of individual components of air (medical chemistry and normal physiology);
- components of the solar spectrum, types of electromagnetic and ionizing radiation, the concept of the physical nature of sound, their physiological significance (medical biology, biological

chemistry, medical and biological physics, normal physiology);

- classification of the most common biological rhythms and their characteristics (normal physiology);
- physical states of substances, the concept of aerosol (physical chemistry);
- the cycle of chemicals and energy in nature and the evolution of the biosphere (medical biology);
- the structure of the atom, its nucleus (physics);
- physical and chemical properties of water, physiological and biochemical significance of water for the human body (inorganic chemistry, normal physiology, biological chemistry);
- biological significance of soil, soil pollution and self-cleaning, the role of soil in the spread of infectious diseases (medical biology, microbiology with virology);
- morphological properties of microorganisms and viruses, their lARoratory diagnosis, role in the occurrence of infectious diseases (microbiology with virology);
- basics of thermoregulation of an organism, ways of heat transfer, mechanisms and methods of estimation of thermoregulation in the conditions of heating and cooling microclimates (normal physiology);
- the concept of metARolism and energy in the body, the physiological significance of proteins, fats, carbohydrates, vitamins, minerals and substances, physiology and biochemistry of digestion, the influence of nutrients on metARolic processes in the body (normal physiology, biological chemistry);
- anatomical and physiological features of the structure, growth and development of the human body, anatomical and physiological features of the structure of the child's body at different ages, the main methods of studying the anatomical and physiological parameters of children and adolescents (normal anatomy and physiology);
- anatomical features of the skin, visual and auditory analyzers, their physiological functions (normal anatomy and physiology);
- physiological changes that occur in the body during physical and mental work, the causes of fatigue and overfatigue, the mechanisms of auditory, pain, tactile perception);
ethics and deontology of the doctor, the basics of a healthy lifestyle (philosophy, bioethics).

It is necessary to be ARle to:
- conduct a bibliographic and information search in the field of hygiene (computer science);
- to conduct quantitative and qualitative analysis of chemicals in the air (medical physics, medical chemistry);
- to determine the individual energy expenditure of a person and his needs in basic nutrients (normal physiology, biological chemistry);
- select food residues and take washes for bacteriological analysis (microbiology with virology);
- to study the indicators of the functional state of the body (pulse rate, respiration, blood pressure, pulmonary ventilation, muscle strength and endurance) (normal physiology);
- evaluate the parameters of protection against ionizing radiation (medical physics);
- to interpret the general patterns of interaction of living and non-living components of the ecological system and the population of people with the environment (medical biology, microbiology with virology);
- substantiate physiological and biochemical requirements for nutrition (normal physiology, biological chemistry);
- prepare solutions with a given concentration of the drug (inorganic chemistry).

5. Program results of training

List of learning results

The learning result code *K - Knowledge,* *Sk - Skills,* *GC — general competence,*	**The content of the learning results**	**Reference to the code of the competence matrix** (code symbol for the higher education standard program results)

PC - professional competence AR - autonomy and responsibility)		
General *K-1*	Know the methods of analysis, synthesis and further modern learning.	PLR-**6, 7, 15**
Sk-1	Be ARle to analyze information, make informed decisions, be ARle to acquire modern knowledge	
C-1	ARility to ARstract thinking, analysis and synthesis.	
AR-1	Be responsible for the timely acquisition of modern knowledge.	
General *K-2*	Have deep knowledge of the structure of professional activity	PLR-**6, 7, 15**
Sk-2	Be ARle to carry out professional activities that require updating and integration of knowledge .	
GC-2	Since ment and understanding of the subject area and understanding professional activity .	
AR-2	To be responsible for professional development, ARility to further professional training with a high level of autonomy .	
General *K-3*	Have specialized conceptual knowledge acquired in the learning process.	PLR-**6, 7, 15**
Sk-3	Be ARle to solve complex problems and problems that arise in professional activities.	
GC-3	ARility to apply knowledge in practice.	
AR-3	Responsible for making decisions in difficult conditions .	
General *K-4*	Have a perfect knowledge of the state language .	PLR-**6, 7, 15**
Sk-4	Be ARle to apply knowledge of the state language and , both orally and in writing .	
GC-4	ARility to communicate in the state language both orally and in writing.	
AR-4	To be responsible for fluency in the state language, for the development of professional knowledge.	
General *K-5*	Have basic knowledge of a foreign language.	PLR-**6, 7, 15**
Sk-5	Be ARle to communicate in a foreign language.	
GC-5	ARility to communicate in a foreign language .	
AR-5	Be responsible for the development of professional knowledge using a foreign language.	
General *K-6*	Have deep knowledge in the field of information and communication technologies used in professional activities.	PLR-**6, 7, 15**
Sk-6	Be ARle to use information and communication technologies in a professional field that requires updating and integration of knowledge.	
GC-6	Skills in the use of information and communication technologies.	
AR-6	Be responsible for the development of professional knowledge and skills.	
General *K-7*	Know the current trends in the industry and analyze them .	PLR-**6, 7, 15**
Sk-7	Be ARle to search, process and analyze professional information, make informed decisions, acquire modern	

	knowledge .	
GC-7	ARility to search, process and analyze information from various sources	
AR-7	Be responsible for the timely acquisition of modern knowledge.	
General *K-8*	Know the types and methods of adaptation, principles of action in a new situation .	PLR-**6, 7, 15**
Sk-8	To be ARle to apply means of self-regulation, to be ARle to adapt to new situations (circumstances) of life and activity .	
GC-8	ARility to adapt and act in a new situation.	
AR-8	Be responsible for the timely use of self-regulatory methods .	
General *K-9*	Know the tactics and strategies of communication, laws and ways of communicative behavior .	PLR-**6, 7, 15**
Sk-9	Be ARle to make informed decisions, choose ways and strategies to communicate effectively .	
C-9	ARility to identify, pose and solve problems.	
AR-9	Be responsible for the choice and tactics of communication .	
General *K-10*	Know the laws, norms and methods of interpersonal communication as member of society	PLR-**6, 7, 15**
Sk-10	Be ARle to perform their civic duty, be critical and self-critical in communicating with patients and colleagues in the performance of professional duties and interpersonal communication.	
GC-10	The ARility to be critical and self-critical	
AR-10	Be responsible for solving complex professional decisions.	
General *K-11*	Know the tactics and strategies of communication, laws and ways of communicative behavior.	PLR-**6, 7, 15**
Sk-11	Be ARle to choose ways and strategies of communication to ensure effective teamwork .	
GC-11	ARility to work in a team.	
AR-11	Be responsible for the choice and tactics of communication .	
General *K-12*	Know the problems of environmental protection and ways to preserve it.	PLR-**6, 7, 15**
Sk-12	Be ARle to form requirements for themselves and others to preserve the environment.	
GC-12	The desire to preserve the environment.	
AR-12	Be responsible for the implementation of environmental protection measures within its competence.	
General *K-13*	Know your social and community rights and responsibilities .	PLR-**6, 7, 15**
Sk-13	To form one's civic consciousness, to be ARle to act in accordance with it .	
GC-13	The ARility to act socially responsibly and consciously .	
AR-13	Be responsible for your civic position and activities .	
General *K-14*	Know their rights and responsibilities as a member of society, be aware of the values of civil (free democratic)	PLR-**6, 7, 15**

	society and the need for its sustainARle development, the rule of law, human and civil rights and freedoms in Ukraine.	
Sk-14	Be ARle to exercise their rights and responsibilities as a member of society.	
GC-14	ARility to exercise their rights and responsibilities as member of society, aware of values civil (free democratic) society and the need for its sustainARle development, rule of law, human rights and freedoms and citizen in Ukraine.	
AR-14	Be responsible for the tactics of exercising their rights and responsibilities as a member of society and a citizen of Ukraine.	
General *K-15*	Know the basics of ethics and deontology . Master the knowledge of a healthy lifestyle, methods and means of hardening the body	PLR**P-6, 7, 15, 17**
Sk-15	Be ARle to apply ethical and deontological norms and principles in professional activities, preserve and multiply cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge ARout nature and society and society, technology ; be ARle to use methods and means of hardening the body, various types and forms of physical activity for active recreation and a healthy lifestyle.	
GC-15	The ARility to maintain and increase moral, cultural, scientific values and achievements of society based on an understanding of history and patterns development of the subject area, its place in the general system of knowledge ARout nature and society and in development of society, equipment and technologies, use different types and forms of motor activities for active recreation and driving healthy lifestyle.	
AR-15	To be responsible for the implementation of ethical and deontological norms and principles in professional activities , to be responsible for the preservation of public and individual health.	
Professional *K-2*	Have specialized knowledge of standard methods of lARoratory and instrumental research (*according to list 5),* research of the indoor environment (indicators of microclimate, natural and artificial lighting, bacteriological and chemical air pollution, chemical and bacteriological studies of the human environment (air, water, soil) ; measurement of radiation (sound, vibration, ionizing), individual radiometry); chemical, organoleptic, bacteriological examination of food and drinking water; measurement of ergonomic indicators of severity and intensity of work).	PLR-**6, 7, 15**
Sk-2	Be ARle to analyze the results of lARoratory and instrumental research.	
PC-2	ARility to interpret the results of lARoratory and instrumental research	
AR-2	Be responsible for deciding on the evaluation of lARoratory and instrumental research results .	
Professional *K-13*	From Nata methods for evaluating health; environmental factors that negatively affect the health of the population	PLR-**6, 7, 15, 17**

	; methods for assessing environmental factors and determining the relationship between them and health ; socio-economic and biological determinants that affect public health ; measures to prevent the negative impact of environmental factors, socio-economic and biological factors on public health (including dental health).	
Sk-13	Be ARle to assess the state of dental health, the state of the environment and the negative factors influencing health. Have methods of analyzing the health of the population (including dental health). Be ARle to plan preventive measures based on data on the relationship between the state of the environment and the state of health of certain populations . Be ARle to assess the relationship and impact of socio-economic and biological factors on the health of the individual, family, population. Be ARle to plan preventive measures to prevent the negative impact of socio-economic and biological factors on the health of the population and its individual groups. Be ARle to organize and conduct mass and individual, medical and non-medical prevention of dental diseases.	
PC-13	ARility to assess the impact of the environment on the health of the population (individual, family, population) (PC 13).	
AR-13	To be responsible for timely conclusions ARout the state of health of the population on the basis of data on the negative impact of environmental factors, socio-economic and biological determinants. Be responsible for the timely submission of proposals for appropriate preventive measures.	

6. Course format and scope

Course format	Full-time course	
Kind of occupations	Number of hours	Number of groups
Lectures	**10**	**1**
Practical	**30**	**1**
Self-training work	**50**	**1**

7. Topics and content of the course

Code of class type	**Тема**	Content of topic	Learning result code	Tutor
Thematic module 1. Hygienic value of the environment and methods of its hygienic researches				
L-1 (lecture))	Hygiene as a science. Ecology as a science. Environment and human health. Biosphere, its hygienic value. Bioethical aspects of environmental effect on a person	Definition of hygiene, its purpose, objectives, content, called ' links with other sciences. The value of knowledge of hygiene for the formation of professional consciousness and in the practice of dentists. Health, definitions of individual theoretical, individual actual, personal, public health, indicators of public (population) health. Prevention, its types (public and personal, primary, secondary and tertiary). An empirical stage in the history of hygiene. The views	*General:* ***K 1-15, Sk 1-15 GC 1-15 AR 1-15*** ***Professional: K-13 Sk-13 PC-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		of Hippocrates, Avicenna, Socrates the role of prevention in maintaining and enhancing health ' me. Sanitary culture of Kiev Rus and Zaporizhia Sich. Scientific and experimental stage of hygiene development. The role of M. Pettenkofer, O.P Dobroslavina, V.A. Subbotin in the formation of the scientific-experimental stage of hygiene. Development of hygienic science in Ukraine. The contribution of prominent scientists O.M. Marzeev, L.I. Medvid, R.D. GrARovych, Y.G. Goncharuk and others in the development of hygienic science. Laws of hygiene, basic laws, methods and techniques of hygienic research. Classification of hygiene methods. Specific methods of hygienic research. Sanitation as a field of practice in the health care system. Types of sanitation. The concept of sanitary supervision, its organization. State Service of Ukraine on Food Safety and Consumer Protection, main tasks. Laboratory centers and Centers for Disease Control and Prevention. Public Health Center of the Ministry of Health of Ukraine, main tasks. Relationship between sanitary-epidemiological and treatment-and-prophylactic services, their joint work in the area of preservation and strengthening of personal and public health.	***AR-13***	
SEW-1 (*independent student work*)	**Hygienic value of biosphere components (atmosphere, hydrosphere, lithosphere).**	Biosphere, its structure, functional connections, human place in the biosphere. The teachings of VI Vernadsky on the noosphere. Functioning of the biosphere, the first and second laws of thermodynamics. Ecological systems. Biogeocenoses, biogeochemical cycles. Environment, its elements. Influence of natural factors and social conditions on the human body and population. Bioethical aspects of human impact on the environment. Hygienic value of the atmosphere, hydrosphere, lithosphere . Denaturation of the biosphere. Chemical and energy pollution. The main sources, types and consequences of anthropogenic pollution of air, reservoirs, soil. Greenhouse effect, smog, acid rain. Impact of air, water and soil pollution on the health and living conditions of the population. Direct effect of pollutants on the body: acute, chronic specific and nonspecific diseases of chemical etiology. Ecological situation in Ukraine. Regulatory and legal framework for nature protection and environmental protection measures.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-1 (*practical lesson*)	Methods of hygienic researches. Methods for determining the prophylactic dose of ultraviolet radiation and the use of ultraviolet radiation to prevent disease and to air sanitation.	Classification of hygienic research methods. Methods of studying the state of the environment and its impact on human health. Epidemiological method, methods of lARoratory and field experiment, sanitary-statistical methods and their use in the practice of dentistry. Solar spectrum at the boundary between the atmosphere and the Earth's surface. Influence of solar activity on living organisms of the Earth. The impact of solar radiation on public health, including the development and condition of the dental and maxillofacial system. Ultraviolet radiation of the Sun, its spectrum on the border with the atmosphere and on the Earth's surface, biogenic and ARiogenic action, methods and devices	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		for determining the intensity, use in medicine. The concept of erythema and prophylactic dose. Solar " starvation". Ultraviolet climate. Artificial sources of ultraviolet radiation, their comparative hygienic characteristics. The use of natural and artificial ultraviolet radiation for the prevention of human diseases, including dental Basic principles and methods of using artificial sources of ultraviolet radiation in health care facilities. Use of artificial sources of ultraviolet radiation for air remediation in separate offices of dental institutions, disinfection of dental instruments, photopolymer fillings, etc. Use of ultraviolet bactericidal radiation for air disinfection and disinfection of surfaces in the premises of health care facilities and institutions (Order of Healthcare Ministry of Ukraine N 882 dated May 06, 2021 “On approval of sanitary and antiepidemic rules and norms for using of ultraviolet bactericidal radiation for the air disinfection and disinfection of surfaces in the premises of health care institutions and institutions of social services / social protection”). Sources of infection with acute respiratory viral disease COVID-19 caused by SARS-COV-2 and features of the spread of the pathogen among humans. Measures of general and individual prevention of coronavirus infection.		
P-2	Methods of determination and hygienic assessment of natural and artificial lighting in premises of different functional purpose.	Visible radiation of the Sun, its spectrum, hygienic value. Influence of lighting on the functions of vision, the state of the central nervous system, efficiency, in particular dentists. Prevention of adverse effects of insufficient and excessive lighting on health and efficiency Hygienic value of natural lighting of premises for various purposes (residential, educational, industrial, hospital and others). External and internal factors that affect the level of natural light in the premises. Methods for assessing the natural light of the premises; geometric, lighting methods for assessing the natural light of the premises. Hygienic requirements for natural lighting. Hygienic value of artificial lighting. Methods of hygienic assessment of artificial lighting of premises for various purposes, including dental institutions; its indicators, evaluation of results. Hygienic characteristics of artificial light sources. Types and systems of artificial lighting. Lighting fixtures and their hygienic assessment.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-3	Microclimate, its hygienic value. Methods of determination and hygienic assessment of temperature, humidity, air velocity and radiation temperature. Hygienic value of the direction of air movement .	Hygienic value of physical properties of air (temperature, humidity and air velocity). The concept of microclimate. Impact uncomfortARle (the heating and cooling) heat transfer microclimate on man and his health ' me. Physiological mechanisms of heat exchange and thermoregulation as factors of thermostat of warm-blooded organisms: heat production and heat transfer. Ways of heat transfer: through respiration, through the skin, with secretions. Chemical mechanisms of heat production and physical mechanisms of heat transfer: radiation, conduction (convection and conduction), evaporation. Physiological changes in the mechanisms of	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		thermoregulation in heating and cooling microclimate. Methods for determining and hygienic assessment of temperature, humidity, air velocity and radiation temperature. Devices for measuring air temperature, radiation temperature, humidity and air speed, rules for working with them. Methods and indicators for assessing the complex effect of the microclimate on the human body (physical modeling, effective-equivalent temperatures, the resulting temperatures, etc.). Bioethical problems of maintaining the microclimate of residential and public premises . Hygienic value of the direction of air movement. Wind rose, methods of its construction and use for hygienic purposes. Sources of infection with acute respiratory disease COVID-19 caused by coronavirus SARS-COV-2 and features of the spread of the pathogen among humans. Measures of general and individual prevention of coronavirus infection.		
CPC-2	Methods of hygienic assessment of climatic and weather conditions, their impact on human health. Acclimatization. Sanitary protection and biosafety of atmospheric air.	Atmosphere, its structure and properties. Natural chemical composition of atmospheric air and hygienic value of its separate components. Atmospheric air pollution, main sources, types and consequences. The impact of air pollution on health ' I living conditions of the population. Sanitary protection and biosafety of atmospheric air. Atmospheric pressure and its effect on the body. Climate, definition. Factors that shape and characterize the climate, their indicators. General and applied (medical, construction) classifications of climate. Climatic zones of Ukraine. Climate, health ' for me and efficiency. Acclimatization as a complex socio-hygienic process, climatotherapy and spa therapy. Weather. Weather formation. Factors that shape and characterize the weather. Types of atmospheric circulation, main thermobaric formations: anticyclones, cyclones, atmospheric fronts. Medical weather classifications. The direct and indirect impact of weather on health ' I'm human. Methods of hygienic assessment of the impact of climate and weather on human health. Helioteotropic reactions of healthy and sick people.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-4	Hygienic significance of air environment of premises, its hygienic evaluation (determining of CO_2 concentration, oxidability index, dust, chemical and bacteriological contamination).	The main sources of air pollution in the premises of communal, public, industrial purposes. Criteria and indicators of air pollution (physical, chemical, bacteriological). Sources of air pollution in residential premises and individual premises of treatment and prevention facilities (dental offices, dental lARoratories, etc.). Air oxidation and carbon dioxide as sensitive indirect indicators of anthropogenic air pollution. The effect of different concentrations of carbon dioxide on the body. Chemical factors of the production environment. Carcinogenic, mutagenic, allergenic factors in production, prevention of their harmful effects. Industrial dust, its classification, prevention of harmful effects. Industrial toxicology. Combined, complex, combined effect of industrial hazards.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		Biological factors in production, prevention of their adverse effects. Indoor air amplification systems. Natural and artificial ventilation. Hygienic value of room ventilation. Types, classification of ventilation of communal and industrial premises. Ventilation efficiency indicators. Necessary and actual volume and frequency of ventilation, methods of their determination. Air conditioning. Principles of construction of air conditioners.		
L-2	Hygiene of inhabited places, its bioethical issues. Hygiene of water and water supply. Effect of water quality on general and dental health of population.	Living conditions in settlements and human health. Features of the formation of the urban environment and hygienic aspects of life in the modern city. Urbanization as a socio-hygienic problem. Planning and construction of the settlement. Water as an environmental factor, hygienic value. Norms of water consumption depending on the level of communal and sanitary improvement of the settlement, living conditions and human activity. Physiological, household, endemic, epidemiological, toxicological, balneological, economic significance of water. The impact of drinking water quality on the general and dental health of the population. Sources of water supply, their comparative hygienic characteristics. State standard of water quality of sources of centralized economic and drinking water supply. Scientific substantiation of drinking water quality standards of centralized water supply systems. Methods of water purification: general (settling, filtration, coagulation) and special (fluoridation, defluoridation, iron removal, softening, demineralization, deodorization, etc.). Methods of water disinfection: physical and chemical. Sanitary supervision of water supply of populated cities. Sanitary protection zones of centralized water supply sources.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-5	Methods of hygienic assessment of drinking water. Endemic fluorosis and caries as a hygienic problems, their prevention.	General hygienic requirements for drinking water quality, its organoleptic properties, chemical composition, epidemic safety. Influence of organoleptic properties of drinking water on the level of water consumption and the state of sanitary culture of the population. The role of water and water supply conditions in the spread of infectious diseases. Infectious diseases, the causative agents of which are transmitted with water (cholera, typhoid fever, dysentery, etc.). The role of sanitary-indicative microorganisms for assessing the quality of drinking water by bacterial composition. Water as an etiological factor of diseases of non-infectious nature, including disorders of formation and condition of the dental-maxillary apparatus. Caries and endemic fluorosis as a hygienic problem, their prevention. Hygienic value of fluoride, the effect of insufficient content of it and some other trace elements in water on the occurrence of caries, endemic goiter and other diseases. The hazard of excessive water content in a variety of chemical substances of natural origin and anthropogenic chemicals for health ' I'm human. Endemic fluorosis, its stages, water-nitrate methemoglobinemia. Methods for determining the	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		fluorine content in drinking water, evaluation of the obtained data. Organization and joint study by hygienists and dentists of the effectiveness of water fluoridation for the prevention of dental caries, water defluoridation for the prevention of dental fluorosis and correction of fluoride dose in it. Methods of purification and disinfection of drinking water.		
P-6	Hygienic evaluation of sanitary condition of the soil. Modern hygienic and bioethical problems of sanitary purification of settlements.	Soil, definition. Mechanical structure, physical properties and chemical composition of soil. Classification of soils. Hygienic assessment of different types of soils. Indicators that characterize the physical properties of the soil. Processes and indicators of soil self-cleaning. Assessment of soil sanitation according to chemical and biological indicators. Sources of soil pollution in modern conditions of industrialization and chemicalization of the national economy. The impact of soil contamination on the health of ' I and sanitary living conditions. The role of soil in the occurrence and spread of infectious diseases and invasions, diseases of non-infectious etiology, principles of prevention. Biogeochemical provinces and endemic diseases. Principles of cleaning settlements. Systems and facilities for temporary storage, removal, disposal and utilization of solid waste. Modern methods of solid waste disposal and utilization (processing and utilization plants, improved landfills, composting methods, biothermal chambers, etc.). Liquid waste, their classification and sanitary-epidemiological significance. Sewerage of settlements, its importance in the prevention of infectious diseases. Influence of sewerage of settlements on sanitary condition of soil and living conditions of the population. Methods and structures for clearing air forgiveness and disinfecting liquid domestic waste water (in large cities, some objects, including health care and health-improving). Hospital waste, their disinfection and utilization.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
Thematic module 2. Hygienic principles of nutrition, hygiene of children and adolescents				
L-3	Nutrition and health of the population. Basics of rational nutrition. Effect of nutrition on general and dental health. Biological safety of food.	Nutrition as a factor of general and dental health of the population. The actual state of nutrition of the population of Ukraine. Theories of nutrition, food functions and types of nutrition. Rational nutrition, its principles and significance for the formation of the dental and maxillofacial apparatus, tooth mineralization and prevention of dental diseases. The concept of alimentary diseases, their classification, causes, prevalence in Ukraine. Hygienic value of nutrients (proteins, fats, carbohydrates, minerals, vitamins), food in the prevention of dental diseases. Food cariogenic factors. Methods for determining human energy consumption and needs in essential nutrients. Biosafety (epidemiological safety and sanitary quality of food).	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-3	Influence of the polluted atmospheric air, water and food on dental morbidity of	Major environmental pollutants. The impact of polluted air, water and food on dental morbidity. The relationship of nutrition with the emergence and development of major dental diseases. Nutritional	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

	population. Alimentary prophylaxis of dental diseases.	composition of the diet and its possible impact on the development of dental diseases. Hygienic value of nutrients (proteins, fats, carbohydrates, minerals, vitamins), food in the prevention of dental diseases. Rationalization of food use in accordance with age, professional, individual characteristics. The concept of dietary supplements. Dietary food in the treatment of dental diseases.	***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	
SEW-4	Physiological and hygienic value of the main nutrients of the diet. Composition and properties of food products.	Physiological and hygienic role of proteins. Scientific substantiation of the need for proteins. Hygienic characteristics of proteins of animal and vegetARle origin. Protein quality indicators. Sources of proteins and essential amino acids. Physiological and hygienic role of fats. Quality indicators of fats of different origin. Physiological and hygienic role of unsaturated fatty acids, phospholipids, sterols. Scientific substantiation of the body's needs for fats. Sources of fats. Cooking fats. "Overheated fats." Physiological and hygienic role of carbohydrates. Scientific substantiation of the body's need for simple and complex carbohydrates. Carbohydrate quality indicators. Sources of carbohydrates. The concept of refined and "protected" carbohydrates. Vitamins, mineral salts, flavors, their physiological and hygienic role, importance in the prevention and treatment of dental diseases. Sources of vitamins and minerals. Micro- and macroelementosis, their manifestations and prevention. Hygienic and nutritional characteristics of basic food products. Milk and dairy products. Meat and meat products. Fish, fish products, seafood. Eggs. VegetARles, fruits, berries, grains, legumes and oilseeds. Diseases associated with the use of substandard products, their classification.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-5	Hygienic problems of nutrition in the conditions of polluted environment and harmful productions. Therapeutic and preventive nutrition.	Contaminants in food products (nitrites, pesticides and fertilizer residues, heavy metals, radionuclides in food raw materials and food products). Basics of nutrition in an environmentally unfavorARle environment. Therapeutic nutrition, types. The concept of products for therapeutic and prophylactic purposes, classification. Scientific and technological progress and its impact on food quality. The concept of food additives, their classification, purpose and application in the food industry. The concept of genetically modified products. Socio-hygienic problems associated with the use of food additives and genetically modified products .	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-7	Methods of calculating human energy consumption and nutrient requirements. Methods of assessing the adequacy of nutrition according to the menu-schedule.	Energy expenditures of the body, components of daily energy expenditure and energy balance of man. Methods of studying energy consumption. Units of energy consumption. Individual features of energy metabolism. The concept of value of the basic exchange. Physical activity groups of the able-bodied population of Ukraine. The concept of the physical activity coefficient (PhAC). Recommended values of physiological energy needs for different groups of the population of Ukraine. “Norms of physiological requirements of Ukrainian population for basic	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		nutrients and energy" (2017). Methods for determining the average daily energy consumption (WHO, 1986). Method of calculating energy consumption by timing-tabular method. Principles of nutrition of people of different ages, professions, athletes. Methods of studying the actual nutrition of the population. Methods of hygienic assessment of nutrition of collectives by the calculation method according to the menu-schedule. Methods of assessing the adequacy of the actual nutrition of the individual. Indicators of hygienic assessment of the quality of the diet, requirements for the daily diet, regime of diet. Loss of nutrients during cold and heat treatment of food.		
P-8	Methods of studying and assessing the nutritional status of man and medical control over the supplying of the body with vitamins.	The concept of nutritional status of the organism, methods and criteria for its evaluation. Methods of objective examination of the patient to study and assess nutritional status. Indicators, signs that characterize the violation of protein, fat, carbohydrate, vitamin and mineral status. Methods of determination and criteria for assessing the nutritional status of the organism. Methods for assessing the adequacy of nutrition, its rational correction in accordance with individual physiological needs for energy and nutrients (proteins, fats, carbohydrates, minerals, vitamins). Vitamin deficiency, causes, prevention. Methods of medical control over the provision of the body with vitamins.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-9	Methods of investigation of food poisoning cases. Prevention of food poisonings.	The concept of quality and safety of food. Microbiological food safety criteria. Food poisoning, their classification by etiological and pathogenetic features, the causes of their occurrence. Methods of investigating cases of food poisoning. Basic principles of prevention of food poisoning of microbial and non-microbial etiology. The role of the dentist in the prevention of food poisoning. Personal hygiene of employees of public catering estARlishments.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-10	Methods of research and assessment of the health of children and adolescents under the influence of environmental factors.	Factors and environmental conditions that affect the health of children and adolescents. Methods of comprehensive assessment of the health of children and adolescents. Basic health criteria. Dental health of children and adolescents. Division of children and adolescents by health groups. Physical development as a leading indicator of health. Key indicators and regional standards of physical development. Methods of hygienic assessment of physical development of the individual and children's team. Modern ideas about acceleration. The concept of biological and calendar age. School maturity. The concept of daily regime, its types. Sanitary regulations for general secondary education institutions (Order of Healthcare Ministry of Ukraine N 1111/35394 dated November 10, 2020). Hygiene of school classes. Organization of the educational process in new types of educational institutions. Methods of hygienic assessment of the daily regimen, schedule of	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		lessons, organization of the lesson at school. Organization of nutrition in children's preschool and school educational institutions and control over it (Resolution N 305 dated March 24, 2021, Kyiv "On approval of norms and procedures for the organization of nutrition in educational institutions and children's recreation facilities" (with changes from August 18, 2021)). Hygiene of physical education of children and teenagers. The concept of motor activity. Prevention of hypokinesia. Basic types, forms and means of physical culture.		
SEW-6	Methods of hygienic assessment of planning, equipment and maintenance of preschool and school educational institutions.	Sanitary regulations for general secondary education institutions (Order of Healthcare Ministry of Ukraine N 1111/35394 dated November 10, 2020). Land plot of children's institutions, hygienic requirements. Methods of hygienic assessment of planning, equipment and maintenance of educational preschool institutions and schools. Hygienic requirements for planning, arrangement, equipment, maintenance of the school and classroom. Educational furniture, their types, main sizes, hygienic assessment (material from which they are made of; color, sanitary condition, condition of surfaces, corners and edges, number of seats). Rules for selecting furniture and seating students in the classroom in order to prevent posture and vision disorders. Methods of hygienic assessment of the classroom.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-7	Methods of hygienic control over the organization of physical education and labor training of children and adolescents.	Hygienic requirements for the organization and conduct of lessons of physical education and lARor training in schools and educational institutions of a new type (gymnasiums, lyceums, colleges). Hygienic requirements for equipment, planning, equipment and maintenance of the sports ground, gym, lARor training workshops. Basic principles of organization and construction of lessons of physical culture and lARor training. Methods of hygienic assessment of the organization and conduct of physical education lessons and lARor training at school. Physical education groups and methods of dividing children into groups. Methods of studying the functional state and efficiency of the child's body.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
Thematic module 3. ***Hygienic bases of services of healthcare facilities, labor protection service in medical institutions***				
L-4	Hygienic requirements for health care facilities, including dental profile. Occupational hygiene of dentists, dental technicians. Biosafety and bioethics of dentists.	The modern structure of treatment and prevention facilities, trends in hospital construction. Creating proper hygienic conditions in the hospital (increasing the efficiency of the treatment process, prevention of HAIs, optimization of staff working conditions). Leading factors that determine the creation of hygienic conditions in the hospital: the choice of site for its construction, requirements for it (size, shape, relief, soil condition, groundwater level, etc.), hospital construction systems (decentralized, centralized, mixed, centralized-block), planning of a hospital site (zoning, building, gardening, schedules of movement of patients, personnel, vehicles).	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		Planning and internal arrangement of hospital buildings of the hospital (central reception department; ward section as 0.49 the main structural and functional element of the hospital; wards). Features of planning and operation of infectious diseases hospitals and departments, boxed sections, boxes. Polyclinic as the main structural and functional element of outpatient care. Occupational hygiene of medical staff of dental institutions. The specifics of the impact of harmful and dangerous factors of the production environment on the dentist. Prevention of harmful effects of production factors on the body of workers in adverse production conditions.		
P-11	Hygienic characteristics of harmful and dangerous factors of the occupational environment, their impact on the organism, preventive measures. Occupational hygiene of dentists and dental technicians.	Work and work, definition of concepts. Socio-biological role of lARor. Physiology of lARor. Changes in physiological processes in the human body during work. Fatigue and overfatigue. Prevention of fatigue. Hygiene of mental work. Factors of the production environment and lARor process. Harmful factors of the production process associated with overstrain of individual organs and systems and improper organization of the lARor process. Physical factors of the production environment in the work of the dentist (noise, ultrasound, vibration, ultraviolet and X-ray radiation), prevention of harmful effects. Chemical factors of the production environment in the work of a dentist and dental technician (mercury, lead, polymeric materials, etc.). Diseases associated with them, prevention measures. Biological factors, bacterial pollution of air and tools in a dental hospital, prevention of their harmful effects. Hygienic classification of lARor according to the indicators of severity and intensity of the lARor process, harmfulness and danger of factors of the production environment. Measures to improve the working conditions of medical workers. Means of individual protection against harmful and dangerous factors of the production environment in the offices of therapeutic dentistry, hospitals of surgical and orthopedic dentistry, dental lARoratories. Prevention of harmful effects of production factors on the body, the spread of dental diseases working in adverse production conditions.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-8	Features of the combined, complex and joint action of harmful factors on a dentist and a dental technician.	The value of hygienic rationing of harmful chemicals, physical and biological factors. Principles of hygienic rationing. The concept of combined, complex, combined action. The main types of combined action: antagonism, potentiation, additivity, independent action. Hygienic features of working conditions and health status of dentists and dental technicians with combined, complex and combined action of harmful factors on the body . Measures to improve the working conditions of medical workers of dental institutions.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-	Methods of	Recognition and investigation of cases of occupational	*General:*	L.P.Kozak,

9	investigation of occupational diseases cases during the work of a dentist and dental technician.	poisoning and diseases of dentists, regulatory and instructional documentation. Introduction of preventive measures against occupational diseases and poisonings, evaluation of their effectiveness. Preparation of the necessary documentation for the investigation of cases of occupational poisoning and disease.	***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	A.V.Sybirnyy, S.T.Yurchenko
P-12	Hygienic requirements for location, equipment, maintenance and operation of certain structural units of dental institutions.	Dental clinic. Hygienic requirements for the arrangement and operation of departments of therapeutic, surgical, orthopedic dentistry, dental lARoratory. Sanitary and technical improvement of the hospital and clinic (water supply, hot water supply, sewerage, ventilation, electricity, etc.). Hygienic bases of the organization of the sanitary and anti-epidemic mode in stomatologic treatment-and-prophylactic estARlishments. Hygienic requirements for dental equipment, tools, rules of its maintenance and disinfection. Nosocomial infections, conditions that lead to their occurrence and their negative consequences. Methods and means of prevention. Methods of objective control over the observance of hygienic conditions in dental institutions.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-13	Hygienic assessment of the patients' conditions in health care facilities, including dental profile.	Modern hospital building systems (centralized, decentralized, mixed, centralized-block), their comparative hygienic assessment, prospects for improvement. Hygienic requirements for land plots of hospitals. Hygienic requirements for the main indicators of construction (distance from sources of air pollution, soil, area, density of buildings and landscaping, location of buildings, sanitation of the site), functional zoning of the territory. Hygienic requirements for planning, equipment and mode of operation of departments: reception (for somatic, infectious, pediatric departments), therapeutic, surgical, infectious profile, children's departments, specialized hospitals (psychoneurological, tuberculosis, etc.). Ward section, its composition, hospital ward, options for its planning and equipment for somatic, infectious, mental patients, intensive care units, rehARilitation. Features of planning of boxes, semi-boxes in infectious, children's departments of hospital. Hygienic requirements for the area, cubature of chambers, their scientific substantiation. Requirements for the orientation of the windows of the chambers, microclimate, air, lighting, heating, ventilation, noise. Prevention of food poisoning and infections in the hospital. Organization and means of objective control over the health of the staff of food units of hospitals and their compliance with the requirements of personal hygiene. Means and measures of individual protection of medical workers from infection with the causative	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

		agent of coronavirus infection COVID-19.		
SEW-10	Hygienic bases of the organization of the sanitary-and-anti-epidemic regiment in dental treatment-and-prophylactic institutions.	Sanitary and anti-epidemic regime of the medical institution, its essence and tasks. Hygienic bases of the organization of the sanitary and anti-epidemic regimen in stomatological treatment-and-prophylactic establishments. Hygienic requirements for dental equipment, tools, rules of its maintenance and disinfection. Healthcare-associated infections, conditions that lead to their occurrence and their negative consequences. Methods and means of prevention (Order of Healthcare Ministry of Ukraine N 1614 dated August 03, 2021 "On the organization of infection prevention and infection control in healthcare institutions and establishments (institutions of social services) of social protection"). Features of the organization of disinfection and sterilization regimen in dental institutions. Laboratory and instrumental control over compliance with sanitary and hygienic, anti-epidemic requirements for the maintenance and operation of dental institutions.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
L-5	Radiation hygiene. Ionizing radiation as an environmental factor and industrial hazard. Radiation protection in medical institutions, including dental profile. Bioethical aspects of radiation influence on a person.	Ionizing radiation as a factor of the environment, their sources: natural, man-made, industrial. Classification of ionizing radiation by nature and origin. Qualitative and quantitative characteristics of ionizing radiation and radionuclides, units of their measurement. Biological action of ionizing radiation. Modern ideas about its mechanisms, the conditions on which it depends, its features. Deterministic and stochastic effects of human exposure, conditions of their occurrence, the use of this knowledge in the practice of physicians. The concept of external and internal radiation exposure. Radiation safety of the population in places of residence, the factors that determine it. Regularities of formation of radiation load of the population, its hygienic assessment and ways of reduction. Impact of NPPs on environmental objects. Radiation and ecological situation of environmental objects in Ukraine after the Chernobyl accident. Sanitary and hygienic measures of the accident elimination. The Chernobyl disaster and its consequences for public health and the environment. Permissible levels of contamination of water and food with cesium and strontium. Hygienic standardization of ionizing radiation. Regulations of radiation safety of Ukraine (RRSU-97), their meaning and main provisions. Primary sanitary regulations of radiation protection of Ukraine (PSRU-05) as a state normative document that defines the basic requirements for the implementation of radiation protection in practice. Limits of radiation doses. Bioethical aspects of radiation influence on a person.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-14	Methods of control of radiation protection of personnel and radiation safety of patients during the use	Ionizing radiation as an industrial hazard in the work of medical personnel. The main doses of radiation, their characteristics. Use in medicine of sources of ionizing radiation. The concept of radiation protection of personnel and	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

	of radionuclides and other sources of ionizing radiation in medical institutions, in particular in the radiology department (room) of the dental clinic.	radiation safety of patients with the use of radionuclides and other sources of ionizing radiation . Radiation safety of patients and staff during X-ray examinations in dentistry. Requirements for placement, arrangement, organization of the X-ray dental office. Radiation control over the production environment and individual radiation doses of personnel, medical control over the health of workers. Principles of radiation safety.	***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	
SEW-11	Methods for assessing radiation hazard and parameters of protection against external radiation.	Medical X-ray radiological diagnostic procedures as the main components of radiation exposure of the population and employees of dental institutions, their hygienic assessment and special measures to reduce the level of their contribution to the total radiation dose. Conditions that determine the radiation hazard when working with radionuclides and other sources of ionizing radiation. The concept of closed and open sources of ionizing radiation, features of radiation danger and radiation protection when working with them. Measures of radiation protection against external radiation, based on the physical laws of its attenuation (protection by quantity, time, distance, shielding). Radiation protection of workers with radionuclides and other sources of ionizing radiation as a hygienic problem, its essence and basic principles of implementation. Mandatory means of individual radiation protection. Methods for determining radiation hazard parameters. The value of calculation methods for radiation hazard assessment and parameters of protection against external radiation.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
P-15	Hygienic principles of a healthy lifestyle and personal hygiene. Methods of hygienic assessment of oral care products.	Healthy lifestyle, definition, content. Personal hygiene as a branch of hygienic science, its content and significance for maintaining and strengthening health in modern conditions. Body and oral hygiene. Modern oral care products (toothbrushes, toothpastes, elixirs, etc.), requirements for their materials and finished products, their hygienic assessment.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-12	Personal hygiene, its components. Physical culture and basics of hardening. Hygiene of clothes and shoes. Detergents, their hygienic characteristics.	Personal hygiene, definition of the concept, its components. Motor activity. The concept of active and passive rest. Sleep hygiene. Physical culture as one of the most important elements of personal hygiene in modern conditions. Types of physical culture, the importance of morning hygienic gymnastics, being in the fresh air, walks to prevent diseases, including a dentist. Hardening, definition. Factors and principles of hardening. Hygiene of clothes and shoes. Hygienic requirements for materials for their manufacture. Detergents, their hygienic characteristics.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-13	Psycho-hygienic bases of daily human activity. Scientific bases of medical	Psychohygiene as a science, its tasks and sections. Mental health, its criteria. Psychohygiene of medical staff of treatment and prevention facilities, including dental. Occupational factors that negatively affect the	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

	biorhythmology and chronohygiene.	work of medical staff. Psychohygienic education of patients in the hospital. Iatrogenic, therapeutic, prophylactic meaning of the word in everyday life, at work, in the relationship between doctor and patient. Leading features of human personality, properties of temperament and character, motivational orientation and features of neuropsychological state), methods of their study. Prerequisites and causes of medical biorhythmology. Biological rhythms, their influence on human health. Characteristics of biological rhythms, their classification. Methods for determining different types of daily curves of human biological rhythms. The concept of cycles of changes in the functional state of the organism. Desynchronosis, its types, causes. Psychohygienic bases of optimization of daily human activity. Biorhythmological principles of rational organization of working (educational) process and human free time.	***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	
SEW-14	Prevention of alcoholism, narcomania, toxicomania, smoking.	Adverse health effects of active and passive tobacco smoking. Adverse health effects of excessive alcohol consumption. Drug addiction and substance ARuse, their harmful effects on health. Causes of drug use, mental and physical drug addiction. Medical and social problems, meanings, ways and means of prevention of bad hARits.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-15	Hygienic characteristics of climate and weather of hot and tropical latitudes. Features of the impact of tropical climate on living conditions, work capacity and population health. Peculiarities of inhabited area planning and build-up in arid and humid tropic climate. Organization and regimen of work in the arid and humid climate of the tropics.	Health problems and diseases typical for hot and tropical climates and their prevention. Features of the work organization and regimen, of personal hygiene in the arid and humid climate of the tropics. Microclimate parameters at which physical work is impossible. Features of the body's energy needs, of nutrients amount and ratio in tropical climate. General characteristics of alimentary dependent diseases among the population of tropical regions, methods and means of their prevention. Features of water physiological functions in the tropics (structural, exchange, transport, excretory, heat exchange, etc.). Hygienic requirements for drinking water quality and their features in tropical climate. International standard for drinking water quality and features of its use in the tropics. Natural and anthropogenic disasters. Sanitary and hygienic measures in emergency situations.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13*** ***PC-13*** ***AR-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko
SEW-16	Hygienic, toxicological and epidemiological problems of nutrition of the population of tropical regions. Water supply hygiene in tropical climate. Organization and	Hygienic characteristics of food used by the population of tropical countries. Food poisoning of the population of tropical countries and their prevention. Hygienic requirements for drinking water quality and their features in tropical climates. International standard for drinking water quality and features of its use in the tropics. Features of application of methods of water purification and disinfection in the tropics.	*General:* ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-13*** ***Sk-13***	L.P.Kozak, A.V.Sybirnyy, S.T.Yurchenko

	carry out of sanitary supervision over methods of water purification and disinfection in the tropics.		***PC-13*** ***AR-13***	

8. Verification of learning outcomes

Current control is carried out at each practical lesson in accordance with the specific objectives of the lesson to determine the level of formation of a particular skill or ARility, the quality of learning material based on a comprehensive assessment of student activities, which includes control of independent preparation of the student for employment (control of initial levelof knowledge), the quality of practical work, the level of theoretical training and the results of the final control of the level of knowledge and skills. During the current control of students' educational activities, preference is given to standardized methods of control: testing, structured written work, control of practical skills in conditions close to real ones. It is also used in a dream survey (frontal, individual, combined). During the assessment of mastering each topic for the current educational activity of the student, grades are set on a four-point (national) scale according to the approved assessment criteria. This takes into account all types of work provided by the program of the discipline (testing, structured written work, structured control of practical skills in conditions close to real) and the list of competencies provided by the program of the discipline and methodological development to study the topic. The student must receive a grade on each topic.
The student must receive a grade from each topic for further conversion of grades into points on a 200-point scale.

Learning result code	Code type classes	Method of verifying learning results	Enrollment criteria
General: ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	*L-1 – L-5* *P-1 – P-15*	Mastering of *lecture material* is controlled during the final year Control h (exam) *Study practical problems* execu S ARE students in classrooms according to guidelines for practical classes. The results of practical work are made out by the student in the form of the protocol according to the scheme: date and a subject of employment; the principle of the method of determining the studied indicators; the formula for the calculation and the result obtained; hygienic conclusion, in which the obtained result is compared with the hygienic standard and hygienic recommendations are given to optimize the condition of the object of study, aimed at improving the indicator. The protocol at the end of the lesson is signed by the teacher.	Maximum score - 5 points, The minimum score is 3 points.

		Assessment of knowledge control: The student correctly answered 90-100% of the tests. The student correctly solved situational problems in accordance with the sequence of its solution and made reasoned conclusions and gave the necessary recommendations. In solves situational problems of increased complexity. Correctly, clearly, logically and fully answers all standardized questions of the current topic, including questions of a lecture course and independent work. Closely connects theory with practice and correctly performs practical work with writing a conclusion on the results. Freely reads the results of lARoratory tests, solves situational problems of increased complexity, is ARle to summarize the material, has the methods of lARoratory tests to the required extent.	**Excellent (" 5 ")** – the student has mastered the theoretical material, demonstrates deep and comprehensive knowledge of the topic, the main provisions of scientific sources and recommended literature, logically thinks and builds the answer, freely uses the acquired theoretical knowledge in analyzing practical material, expresses his attitude to certain problems, demonstrates high level of mastering practical skills

General: ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	*P-1 – P-15*	The student correctly answered 70-89.9% of the tests. Situational problem solves correctly in accordance with the sequence of its solution, but the conclusions are inaccurate or incomplete. Is ARle to solve easy and medium-difficult situational problems. Correctly and essentially answers the standardized questions of the current topic, lecture course and independent work. Demonstrates performance (knowledge) of practical skills. Correctly uses theoretical knowledge in solving practical problems. Has the necessary practical skills and techniques to perform them in excess of the required minimum.	**Good ("4")** - the student has mastered the theoretical material, has the basic aspects of primary sources and recommended literature, teaches it; has practical skills, expresses his views on certain issues, but assumes certain inaccuracies and errors in the logic of the presentation of theoretical content or in the implementation of practical skills.
General: ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	*P-1 – P-15*	The student correctly answered 60-69.9% of the tests. Situational problems are not completely solved (the sequence of their solution is not followed, or there are errors in the calculations or an incorrect conclusion is made). Solves only the easiest problems. Incomplete, with the help of additional questions answers to standardized questions of current activity, lecture course and independent work. Has only a mandatory minimum of research methods.	**Satisfactory ("3")** - the student has mainly mastered the theoretical knowledge of the subject, is guided by primary sources and recommended literature, but unconvincingly answers, confuses concepts, additional questions cause the student uncertainty, he demonstrates a lack of stARle knowledge; answering questions of a practical nature, reveals inaccuracies in knowledge, is unARle to assess facts and phenomena, relate them to future activities, makes mistakes in performing practical skills.

General: ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	*P-1 – P-15*	The student answered less than 60% of the tests correctly. Situational problems are not solved. Answers standardized questions of the current topic, lecture course and independent work incorrectly, does not answer additional questions, does not understand the content of the material. Makes significant, gross mistakes when answering and demonstrating practical skills.	**Unsatisfactory ("2")** - the student has not mastered the study material of the topic, does not know the scientific facts, definitions, almost does not navigate in the original sources and recommended literature, there is no scientific thinking, practical skills are not formed.
General: ***K 1-15,*** ***Sk 1-15*** ***GC 1-15*** ***AR 1-15*** ***Professional:*** ***K-2,13*** ***Sk-2,13*** ***PC-2,13*** ***AR-2,13***	*SEW-1 – SEW-16*	*Self-training work of students* Independent work of students in preparation for a practical lesson is assessed during the current control of the topic in the relevant lesson . Execution of VTS on topics that are submitted only for independent study is recorded in the academic journal. Learning topics submitted only on independent work is controlled during the final year Control h (exam)	Enrollment of SR is carried out on a two-point scale "credited" - "not credited". "Credited" - All tasks are fully and correctly performed in accordance with the guidelines. "Not credited" - All tasks in accordance with the methodological recommendations have not been completed.
Final control			
General system evaluation	Participation in the work during the semester / exam - 60% / 40% on a 200-point scale		
Scales evaluation	traditional 4-point scale, multi-point (200-point) scale, ECTS rating scale		
Terms of admission to final control	The student attended all practical classes and received at least 72 points for current performance		
Type of final control	Methods of final control		Criteria enrollment
Exam	The rules of the exam provide for the following stages: 1 stage. Conducting test control (written answer to test tasks of format A - blank test control). The student answers the test package. Each package contains 30 A-format tests with topics included in the final control. Stage 2. Writing answers to standardized questions (student receives 3		*The maximum number of points* ***is*** *80.* *The minimum number of points is 50 .*

	theoretical questions to which he must give a written answer). Stage 3. Solving a situational problem (the student receives 1 situational problem, to which he must give a written answer). Stage 4. Execution of a practical task.	
Критерії оцінювання екзамену/ диференційованого заліку		
Exam	When checking the examination work, the examiner puts in the sheet of examination answers the student separately points for solving each type of control and puts the final grade (in points) for the final control, which he certifies with his signature. ***The complex number of points that a student scores based on the results of the final control (exam) has the following components:***	
Exam	**1 stage.** According to the results of test control, the student receives:	**1 stage.** **("5")** 27-30 correct answers - **20 points** ; **("4")** 21-26 correct answers - **15 points** ; **("3")** 18-20 correct answers - **10 points** ; **("2")** less than 15 correct answers - **0 points** .
Exam	**Stage 2.** For each of the theoretical questions the student receives:	**Stage 2.** **("5") 12 points** - the student clearly and essentially gave answers to theoretical questions; **("4") 10 points** - the student assumes certain inaccuracies and errors in the logic of the theoretical content of the question; **("3") 8 points** - the student's answer to the theoretical question is unclear, confused in the definitions of basic concepts and terms; **("2") 0 points** - no specific answer to the question.
Exam	**Stage 3** For solving situational problems the student receives:	**Stage 3** **("5") 12 points** - the student correctly solved the situational problem with observing the sequence of its solution, made reasoned conclusions, gave necessary recommendations;

		("4") 10 points - the situational problem is solved correctly with observance the sequence of its solution, but the conclusion is inaccurate or incomplete; **("3") 8 points** - the situational problem is not completely solved (the sequence of its solution is not observed, or there are errors in the calculations or made incorrect conclusion); **("2") 0 points** - the situational problem is not solved.
Exam	**Stage 4.** For the implementation of planned practical work, demonstration of practical skills, ARility to analyze and interpret research results and correctly draw sound conclusions, the student receives:	**Stage 4.** **("5") 12 points** - the student demonstrates a high level of mastery of practical skills, is ARle to draw conclusions, connects them with future professional activities; **("4") 10 points** - the student has practical skills, but assumes certain inaccuracies and errors in the interpretation of the practical task; **("3") 8 points** - the student has some elements of practical skills, but can not interpret the results, can not assess the facts and phenomena, relate them to future activities; **("2") 0 points** - practical skills of the student are not formed the student has not completed the practical task.
The exam is passed - the student scored 50 or more points. The exam is not passed - the student scored less than 50 points		
The maximum number of points that a student can score for the current academic activity for admission to the exam is 120 points. The minimum number of points that a student must score for the current academic activity for admission to the exam is 72 points. The calculation of the number of points is based on the grades obtained by the student on a 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (CA), rounded to two decimal places. The value obtained is converted into points on a multi-point scale as follows: $x = \frac{CA \times 120}{5}$		

Recalculation of the average score for current activities in a multi-point scale
(final control - exam)

For convenience, a tARle of recalculation on a 200-point scale is given:

4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale
5	120	4,45	107	3,91	94	3,37	81
4,95	119	4,41	106	3,87	93	3,33	80
4,91	118	4,37	105	3,83	92	3,29	79
4,87	117	4,33	104	3,79	91	3,25	78
4,83	116	4,29	103	3,74	90	3,2	77
4,79	115	4,25	102	3,7	89	3,16	76
4,75	114	4,2	101	3,66	88	3,12	75
4,7	113	4,16	100	3,62	87	3,08	74
4,66	112	4,12	99	3,58	86	3,04	73
4,62	111	4,08	98	3,54	85	3	72
4,58	110	4,04	97	3,49	84	Less 3	Not enough
4,54	109	3,99	96	3,45	83		
4,5	108	3,95	95	3,41	82		

The grade for the discipline, which ends with the exam, is defined as the sum of points for the current educational activity (not less than 72) and points for the exam (not less than 50).

Discipline scores for students who have successfully completed the program are converted into a traditional four-point scale according to the following criteria:

Points in the discipline	Score on a four-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum number of points that a student must score	3
Below the minimum number of points that a student must score	2

The ECTS score is not converted to the traditional scale, as the ECTS scale and the four-point scale are independent.

9. Course policy

Adherence to the principles and norms of ethics and deontology.

Mandatory observance of academic integrity by students:

- independent performance of all types of work, tasks, forms of control provided by the working program of the discipline "Hygiene and Ecology";
- links to sources of information in the case of the use of ideas, developments, statements, information;

- compliance with the legislation on copyright and related rights;
- providing reliARle information ARout the results of their own educational (scientific, creative) activities, the use of research methods and sources of information.

Educational practical classes, which were missed by the student, are mastered independently in extracurricular time (theoretical questions of the educational theme, the decision of control tests, situational problems) with the subsequent performance of educational and practical tasks during working off according to the working off schedule.

10. References

Reference literature

Principal:

1. Hygiene and ecology : ed. by V.G. Bardov. Vinnytsa : Nova Knyga, 2018. 688 p.
2. Lecture materials.

Additional:

1. Fundamentals of the legislation of Ukraine on health care.
2. Hygiene and Ecology. Textbook. / Edited by V.G. Bardov. - Vinnytsa: Nova Knyha, 2006. - P. 264 – 274.
3. Hygiene and ecology / Vladimir A. Korobchanskiy, Michael P. Vorontsov, Alisa A. Musulbas. – Kharkov: Kontrast Publishing Enterprise, 2006. – P. 110-115, 123-129.
4. Principles of Human Nutrition / 2nd ed. by Martin Eastwood. - 2003. - 680 p.
5. Perspectives in nutrition.:Wardhaw-Insel - WCB, McGrow-Hill.,1995. - P.698-729.
6. Nutrition for living. / 2nd ed. by J.L. Christian, J.L. Greger – USA: The Benjamin/Cummings publishing company, Inc. - 1988. - 493 p.
7. Occupational Hygiene 3rd ed. by Kerry Gardiner and Malcolm Harrington. - 2005. - 680 p.
8. Мізюк М.І. Гігієна: Підручник. К. : Здоров'я, 2002. 288 с.
9. Мізюк М.І. Гігієна: Посібник для практичних занять. К. : Здоров'я, 2002. 251 с.
10. Загальна гігієна : посібник для практичних занять ; за ред. І.І. Даценко. Львів : Світ, 2001. 471 с.

11. Equipment, logistics and software of the discipline / course

- Educational and professional program of the second level of higher education for the preparation of masters in the specialty 221 "Dentistry" in the field of knowledge 22 Health. Qualification: Master of Dentistry. Dentist. Lviv, 2020 .
- Working curriculum of the discipline.
- ARstracts of lectures on the discipline.
- Methodical development of lectures.
- Methodical recommendations for teachers to each topic of practical classes.
- Methodical recommendations for students to each topic of practical classes.
- Methodical recommendations for independent work of students.
- Test and control tasks for practical classes.
- Situational tasks on the topics of practical classes and independent work.
- List of questions and practical skills for the final control.
- Regulatory and legislative documents.
- Demonstration materials, instructions for the use of technical teaching aids (devices and equipment: psychrometers, anemometer, barometer, thermometer, lactodensimeter, luxmeter, multimedia projector, overhead, training tARles).
- Electronic educational resources (EER):
- Educational and methodical (working curriculum, syllARus, thematic plans of lectures, practical and independent classes).
- Methodical recommendations for students for practical and independent work.
- Educational (textbooks, manuals, lectures).
- Ancillary (official regulatory and legislative documents).
- ESR to control students' knowledge (test tasks of different levels of complexity and situational

tasks for each topic of practical classes and topics that are submitted for independent study).

Information resources

Official web resources of the President of Ukraine, the Verkhovna Rada of Ukraine, the Ministry of Education and Science, the Ministry of Health and other central authorities of Ukraine, web resource of LNMU named after Danylo Halytsky), website of the Department of General Hygiene and Ecology of LNMU named after Danylo Halytsky, educational portals of higher medical educational institutions of Ukraine.

12. Additional Information

responsible for the educational process at the department – L.M. Kitsula , M.D., Ph. D., assoc. prof., kitsula.l.m.lnmu@gmail.com
Head of the student scientific circle – L.P. Kozak , Ph. D., assoc. prof., *kozak.l.p.lnmu@gmail.com*
Venue of classes – Lviv, at Zelena street, 12.
Website / departments – https://new.meduniv.lviv.ua/kafedry/kafedra-zagalnoyi-gigiyeny-z-ekologiyeyu/

Compilers of the syllabus — MD, D.Med.Sc., professor V.I. Fedorenko

MD, PhD, assoc. prof. L.M. Kitsula

PhD, assoc. prof. A.V. Sybirnyy

Head of the department — MD, D.Med.Sc., professor V.I. Fedorenko