

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
BELARUSIAN STATE MEDICAL UNIVERSITY

Контрольный
экземпляр



APPROVED

by First Vice-Rector, Professor

I.N.Moroz

22. 11. 2022

Reg. # UD-1.722/2223 /edu.

GENERAL HYGIENE

**Curriculum of higher educational institution
in the academic discipline for the specialty:**

1-79 01 07 «Dentistry»

Curriculum is based on the educational program for the specialty 1-79 01 07 «Dentistry», approved 17.11.2022, registration № # УД-Л.722/2223/уч; on the educational plan in the specialty 1-79 01 07 «Dentistry», approved 18.05.2022, registration # L 79-1-7/2223/mf.

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RECOMMENDED FOR APPROVAL:

by the Department of General Hygiene of the educational institution «Belarusian State Medical University»
(protocol №2 of 23.09.2022);

by the Scientific and Methodological Council of the educational institution «Belarusian State Medical University»
(protocol № 9 of 17.11.2022)

EXPLANATORY NOTE

«General Hygiene» - the academic discipline of the module «Medical-prophylactic Module», which contains systematized scientific knowledge and techniques aimed at studying the influence of environmental factors on the human health, revealing the purpose, object, tasks and methods of hygiene as a science, the concept of risk factors as a basis of modern ideas about disease prevention, principles of prevention measures and regulations governing their conduct.

The aim of the discipline «General Hygiene» is the formation of basic professional competencies for organization of preventive, sanitary and hygienic measures in order to preserve and strengthen human health.

The objectives of the academic discipline «General Hygiene» are to form students' scientific knowledge about:

the patterns of the impact of environmental factors on human health;

the concept of risk factors, prenosological hygienic diagnostics;

skills and abilities necessary for the organization of preventive measures aimed at maintaining and strengthening health, increasing working capacity.

The knowledge, skills, and abilities acquired during the study of the academic discipline «General Hygiene» are necessary for successful mastering of the academic disciplines «Radiation Medicine and Ecology» and modules «Medical Prevention in Dentistry», «Public Health and Health Care».

Studying the educational discipline «General Hygiene» should ensure the formation of students' basic professional competencies:.

BPC-1. Use knowledge about the laws of the environmental factors impact on human health, apply methods of hygienic assessment of the human environment to develop basic preventive health-preserving measures.

BPC-2. Use knowledge about the main characteristics of microorganisms that cause human infectious diseases, the laws of the immune system functioning, the mechanisms of disease development during microbiological diagnostics, use knowledge about the basics of oral infections etiopathogenesis during prevention, rational antiseptics and chemotherapy in dentistry.

As a result of studying the discipline «General Hygiene» the student should

know:

elements and factors of the human environment;

hygienic characteristics of the physical factors of the air environment: temperature, humidity, air mobility, thermal radiation;

the chemical composition of the air, hygienic characteristics;

hygienic characteristics of solar radiation and artificial lighting;

physiological and hygienic importance of water, the laws of rational nutrition;

the concept of risk factors as the basis of modern ideas about disease prevention;

general principles of action of harmful occupational factors (dust, noise, vibration, chemical factors, etc.) on the human organism;

be able to:

conduct complex hygienic assessment of environmental factors, impact of the physical factors of the air environment (temperature, humidity, air mobility, thermal radiation) on the human health;

conduct complex hygienic assessment of the quality of drinking water;

conduct hygienic assessment of nutritional status, assess the adequacy of individual nutrition;

assess negative impact of harmful occupational factors on the health of the dentists;

make a plan of preventive measures for prevention specific pathological conditions of the dental system;

assess the health state at the individual, group (collective) and the population levels;

master:

skills in hygienic assessment of microclimate, ventilation, lighting;

methods for determining indicators of physical development, physical fitness.

Total number of hours for the study of the discipline is 80 academic hours. Classroom hours according to the types of studies: lectures – 14 hours (supervised student independent work – 5), practical classes – 36 hours, student independent work (self-study) – 30 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (4 semester).

Form of higher education – full-time.

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name of the specialty	semester	Number of academic hours						Form of intermediate assessment
		total	in-class	including			out-of-class self-studies	
				lectures (including supervised independent work)	supervised student independent work	practical classes		
1-79 01 07 «Dentistry»	4	80	50	14	5	36	30	credit

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures	practical
1. Environment and it's hygienic importance	6	14
1.1. Structure of environment. Health assessment. The concept of risk factors. Models of the major noncommunicable diseases	2	-
1.2. Physical properties and chemical composition of the atmospheric air	2	-
1.3. Hygienic assessment of the quality of drinking water. Hygienic assessment of the soil	2	4
1.4. Hygienic assessment of the impact of microclimate	-	2
1.5. Hygienic assessment of combined effect of meteorological factors on the human organism	-	2
1.6. Hygienic assessment of lighting	-	2
1.7. Hygienic assessment of the impact of ventilation	-	4
2. Hygiene of nutrition	4	16
2.1. Food as an environmental factor	2	-
2.2. Nutrition-related diseases and their prevention	2	-
2.3. Hygienic assessment of the energy significance and nutrient adequacy of the diet	-	4
2.4. Hygienic assessment of nutritional status	-	4
2.5. Hygienic assessment of providing the body with vitamins	-	4
2.6. Prevention of food poisoning	-	4
3. Hygiene of health care institutions	2	2
4. Occupational hygiene	2	4
Total hours	14	36

CONTENT OF THE EDUCATIONAL MATERIAL

1. Environment and it's hygienic importance

1.1. Structure of environment. Health assessment. The concept of risk factors. Models of the major noncommunicable diseases

Definition, purpose, object, tasks, theoretical aspects and methods of hygiene. The importance of hygiene for a dentist. The role of hygiene among other medical sciences. The emergence and development of hygiene. Hygiene in the Ancient world, in the Middle Ages, the Renaissance. The development of experimental hygiene. Development of hygiene in Russia. The largest Belarusian hygienists - A.P.Dobroslavin, F.F.Erisman, G.V.Phopin, V.A.Uglov, A.N.Sysin, F.G.Krotkov, P.E.Kalmykov, SN Cherkinskaya, A.A.Pokrovsky, K.S.Petrovsky, N.F.Koshelev,

M.N.Logatkin, G.I.Sidorenko. V.V. Pashutin, I.P.Pavlov, V.I.Vernadsky contribution to the development of hygienic science. Ideas of preventive measures in the writings of scientists and clinicians M.Ya.Mudrov, N.I.Pirogov, S.P.Botkin, G.A.Zaharin, A.A.Ostroumov. Hygiene in Western Europe: M.Pettenkofer, K.Foyt, M.Rubner, L.Pasteur, R.Koh, E.Adolf, G.Lemann, H.Mitchell, T.Mur. Prominent Belarusian hygienists Z.K.Mogilevchik, P.V.Ostapenya, I.A.Chakhovsky, Kh.Kh.Lavinsky, O.P.Shepelin, M.S.Omelyanchik. Hygiene tasks at the present stage. Differentiation of sanitary science.

Environment as a combination of natural (air, water, soil, radiation, food, biosphere) and social (work, family life, social and economic structure) elements. Properties (factors) of natural (mechanical, physical, chemical, biological). Properties (factors) social elements of the environment: work (severity, intensity, mode, external conditions); life (placement, clothing, food, water, rest); the socio-economic system (social and legal status, material security, education, culture).

Assessment state of the health state at the individual, group (collective) and the population level. Criteria for assessing of an individual health: physical development parameters (somatometric, somatoscopic, physiometric), physical training (speed, strength, endurance), indicators of homeostasis (the functioning of the cardiovascular system, respiratory system, metabolism and energy), higher nervous activity, the immune status. Integral indicators of the individual health: capacity of work (physical, mental, professional), the duration of his employment (creative) activity. Methods and techniques used for solving scientific and practical problems. Hygienic diagnosis: definition, purpose, object, procedures. Prenosological hygienic diagnosis. Premorbid condition of the body, their symptoms, the evaluation criteria.

Primary, secondary prevention, the third stage of prevention. Public health, infrastructure, course of action, the content and the role of inter-sectoral collaboration. Organization of providing sanitary and epidemiological wellbeing of the population.

The main regulatory documents of the Republic of Belarus regulating the issues of public health.

Hygienic standardization of environmental factors. Principles of valuation.

The concept of risk factors as a basis of modern ideas about disease prevention. Classification of risk factors. Classification of risk factors by Y.P.Lisitsyn: lifestyle; genetics (biology); environment, including natural and climatic conditions; health care.

The most productive trends of disease prevention in the field of public health: creating the conditions for a healthy lifestyle; improvement of the environment.

The main noncommunicable diseases and models of their development: environmental, accumulative, ontogenetic and genetic model. Prevention of major noncommunicable diseases. Effect of smoking on homeostasis. Stress as a risk factor. Physical activity is an important factor in maintaining health and prevention of major noncommunicable diseases. The aging process and the associated major noncommunicable diseases.

1.2. Physical properties and chemical composition of the atmospheric air

The structure of the Earth atmosphere, characteristic of the basic properties of the atmosphere. Atmospheric effects on the human body. Hygienic characteristics of the physical factors of the air environment: temperature, humidity, air mobility,

barometric pressure. Electrical state of the air environment, characteristics of the main indicators, the impact on the human health. Air ionization. The notion of heavy and light ions, positive and negative ions. Effect of ionization on the human body.

The chemical composition of the air, it's hygienic characteristics. Effect of various constituents of the air on the nature of biological processes and human health. Sanitary value of carbon dioxide of residential and public buildings. Anthrotoxins in the indoor air: factors promoting their accumulation and the impact on the human health. Hygienic characteristics of the main sources of air pollution in residential areas. Mechanical and gaseous impurities in the air. Features of quantitative and qualitative composition of the atmospheric air impurities and indoor air. Influence of air pollution on the human health. Measures to reduce air pollution. Organization of the atmospheric air monitoring.

1.3. Hygienic assessment of the quality of drinking water. Hygienic assessment of the soil

Physiological and hygienic importance of water. Water cycle and it's hygienic characteristics. Sources of natural water and hygienic characteristics. Diseases associated with changes in salt water and microelement composition. The notion of endemic diseases, the role of various environmental factors in causing these diseases. Biological life of the reservoir, it's hygienic characteristics. The notion of saprobic zones, saprobity reservoirs. Epidemic importance of water. Infectious diseases transmitted with water. Influence of household and industrial activity on the properties of natural waters. Hygienic requirements for drinking water quality.

Methods of research and hygienic assessment of the physical and organoleptic characteristics. Methods of research and hygienic assessment of the content of substances in water, indifferent and positive physiological significance (carbonates, bicarbonates, calcium, magnesium, iron). Methods of research and hygienic assessment of chemical indicators of organic pollution of water (pH, ammonia nitrogen, nitrite, chloride, oxidation).

Methods of water treatment: coagulation, normal doses of chlorination. Advantages and disadvantages of water treatment methods.

The notion of soil, soil-forming factors. Mechanical structure, physical properties of soil, water and air regime, their hygienic characteristics. Self-purification processes of soil, the factors that affect their intensity and completeness. The chemical composition of soil, the impact on the human body. Biogeochemical provinces. Sources of soil contamination and their hygienic characteristics. Soil as the main link in the cycle of xenobiotics in the environment. Types of xenobiotics and their hygienic characteristics. Bacterial composition of soil. Soil as a reservoir and a factor of transmission of infectious and parasitic diseases. Indicators used in the hygienic assessment of soil. Measures for the protection of healthy soil condition. Modern trends in agrohygiene. Purpose, objectives, main achievements and prospects of development of agrohygiene.

1.4. Hygienic assessment of the impact of microclimate

Weather and climate, features and definition. The notion of climatic factors. Seasonal changes in normal climatic and meteorological factors. The influence of climatic factors on the human body. The notion of seasonal and meteo-diseases.

Weather dependence. The value of active prevention, taking into account the influence of weather conditions on the human body. The notion of microclimate. Acclimatization and adaptation as a combination of socio-biological process of human adaptation to the new environment. Physiological changes in the human body, developing during the acclimatization and adaptation to unusual conditions. Significance of terms and conditions of work, leisure, life, nature, nutrition, planning human settlements, physical training and hardening for a more rapid and complete acclimatization and adaptation. Hygienic characteristics of the physical factors of the air environment - temperature, humidity, air mobility, barometric pressure. Methods for measuring the performance. Hygienic regulation of microclimate. Effects on the body high and low atmospheric pressure (decompression and altitude diseases). Electrical state of the air environment, characteristics of the main indicators, the impact on the human health. Windrose, methods of it's preparation and hygienic evaluation.

1.5. Hygienic assessment of combined effect of meteorological factors on the human organism

Assessment methods of combined action of meteorological factors on the human body: catathermometry, effective and the resulting temperature. Methods of research and hygienic assessment of the thermal state of the human body. Measurement indicators characterizing the body's response to the impact of meteorological factors: heatfeelings, efficiency, average body temperature, cold test, potassium iodide method of Minor.

1.6. Hygienic assessment of lighting

The notion of light climate. Solar radiation as a health factor. Quantitative and qualitative characteristics of solar radiation. Hygienic characteristics of the visible part of the solar spectrum. General biological effects of the visible spectrum, a specific effect on eyesight. Influence of various factors on the state of natural light open spaces and indoors. Artificial lighting. Methods of research and hygienic assessment of natural and artificial indoor lighting. Requirements and regulations for lighting in dental clinic.

1.7. Hygienic assessment of the impact of ventilation

Natural and mechanical ventilation. Types and their hygienic characteristics. Concentration of carbon dioxide as sanitary and chemical purity of the indoor air. Methods of research concentration of carbon dioxide in the air. The indicators characterizing the efficiency of ventilation: ventilation volume, ventilation rate, air cube – the principles of calculation and evaluation. Air-conditioning. Features of organization and regulation of air ventilation in main premises of dental clinics.

2. Hygiene of nutrition

2.1. Food as an environmental factor

Definition and content of nutritional hygiene. Nutrition as a social problem.

The impact of nutrition on health. Preventive and therapeutic role of nutrition. Contribution of national and foreign scientists to the development of the science of nutrition.

The laws of rational nutrition. The law of energy adequacy of nutrition. The law of nutrient adequacy of nutrition. The law of biorythmological adequacy of nutrition, rational diet and it's physiological basis. The law of enzyme adequacy of nutrition.

Disorders associated with a change in the chemical composition of food products due to the influence of modern agricultural technologies. Consequences resulting from using hormones, antibiotics, genetic engineering. Hereditary and acquired enzymopathies. The law of biotic adequacy (safety) of food.

Criteria on physiological needs of the organism in nutrition, physiological nutritional standards of the population. Classification of nutrients on the basis of functional purpose and essential principle.

2.2. Nutrition-related diseases and their prevention

Nutrition-related diseases: definition, causes. Qualitative nutritional imbalance, its causes and consequences. Malnutrition. Types, characteristics and consequences of malnutrition. Excess food, its types, symptoms and consequences. Obesity as a social problem: the relationship of overweight with morbidity and mortality. Methods of diagnosis and prevention of energy imbalance.

Modern views about the importance of proteins in human nutrition. The reserves of proteins in the body. The notion of a reference protein and biological value proteins. Complete and defective proteins. Principles for determining the biological value of proteins. Norms of physiological requirements in proteins. The content and quality of proteins, in the basic foodstuffs. Methods for assessing protein security of an organism. The consequences of under- and over-income proteins. Protein-energy malnutrition, nutritional marasmus, kwashiorkor, malnutrition; features, diagnosis, prevention.

Minerals in the diet, classification. The notion of trace elements and microelementoses. Typical microelementoses for the population of the Republic of Belarus. Hereditary and exogenous microelementoses. The role of micro- and macroelements in multiple body functions. Requirements, sources of minerals in human nutrition. Lack and excess minerals in the diet. Correction the imbalance of macro- and microelements.

Hygienic and biological significance of vitamins. Classification of vitamins. Exogenous and endogenous causes of hypo- and avitaminosis. Products - sources of vitamins. Pro-vitamins. Antivitamin. The daily requirement for water and fat-soluble vitamins. The consequences of lack and excess of vitamins in the diet. Norms of physiological requirements for vitamins. Methods of diagnosis of vitamin provision of the organism. Prevention of vitamin deficiency and hypervitaminosis.

2.3. Hygienic assessment of the energy significance and nutrient adequacy of the diet

Criteria on physiological needs of the organism in nutrition, physiological nutritional standards of the population. Methods of determination of the body's energy: colorimetric, chronometer-table, calculated using the coefficient of physical activity. Determination of individual requirements in the body's energy (as described by WHO using the coefficient of physical activity) and nutrients.

Calculation of the actual consumption of nutrients and energy value of the diet with menu-layout of food. Hygienic assessment of the adequacy of individual nutrition.

Features of nutrition in coronavirus infection.

The role of balanced diet in the prevention of dental caries and periodontal disease.

2.4. Hygienic assessment of nutritional status

Theoretical and methodological principles of estimation of nutritional status. Definitions and classification of nutritional status. Criteria of assessing the nutritional status: the parameters of physical development (somatometric, somatoscopic, physiometric), physical training (speed, strength, endurance), indicators of homeostasis (the functioning of the cardiovascular system, respiratory system, metabolism and energy), higher nervous activity of the immune status. Integral indicators of individual health: human capacity of work (physical, mental, professional), the duration of his employment (creative) activity. The main types of nutritional status: normal, optimal, excessive and insufficient. Signs and degree of excess nutritional status. Insufficient nutritional status: the causes, manifestations, prevention. Stages of assessment of nutritional status. Methods of assessing the nutritional status of the individual. The main indicators used to characterize the state of health in connection with the previous dietary intake. Methods of correction of nutritional status disorders. Profile of physical development.

2.5. Hygienic assessment of providing the body with vitamins

Methods of studying the vitamin value of diets: a questionnaire, calculation, weight, chemical-analytical. Methods of studying the body's vitamin status: somatometric, physiometric, clinical, somatoscopic, physiological and biochemical tests, hematological and immunological.

2.6. Prevention of food poisoning

Classification of food poisoning. Microbial food poisoning: types, clinical manifestations, features of foodborne diseases. Bacterial toxicosis: staphylococcal toxemia, botulism. The etiology and prevention of mycotoxin and phycotoxins. Non-microbial food poisoning: poisoning with poisonous mushrooms and plants, chemicals. Chemical intoxication related to the anthropogenic pollution with xenobiotics. Methods of investigation of food poisoning. Measures for prevention of food poisoning. Influence of the endocrine disruptors on the human health.

3. Hygiene of health care institutions

Hygienic requirements for the planning, construction and operation of healthcare organizations of dental profile.

Hygienic requirements to the territory: choosing location, size, zoning, landscaping. Hygienic expertise of projects of health care institutions of dental profile. The internal layout of the dental clinic and laboratory. A set of premises according to the clinics category. Hygienic requirements for functioning, arrangement and equipping of for therapeutic, surgical, orthopedic stomatology departments and dental laboratory. Prevention of nosocomial infections.

4. Occupational hygiene

Goals and objectives of occupational hygiene. Physiological and hygienic and socio-economic notion of labor. Classification of types of labor.

Optimal working conditions, definition. Factors determining the nature and conditions of labor. Notion of occupational diseases. The conditions of labor. Regime, the severity and intensity of work. Classification of labor in severity. The indicators

characterizing the severity of work. Maximum allowable magnitude of energy consumption when working with different duration. The indicators characterizing the intensity of physical and mental labor. Regime of labour. Tiredness and its positive and negative role. Measures to reduce the tension of labor, prevention of fatigue and overwork. Industrial hazards (dust, noise, vibration, toxic substances, etc.). The main directions of prevention of occupational diseases.

Peculiarities of health care workers' labour. Morbidity of health professionals. Hygienic characteristics of conditions of labor of a dentist. Diseases associated with forced posture and excessive strain of separate organs and systems in the work of the dentist; tension of vision; the risk of eye injuries; neuro-emotional stress. Harmful occupational factors of physical (noise, vibration), chemical (mercury, lead, vapors of nitric and hydrochloric acids, amalgam, plastic, epoxy resins, etc.) and biological nature. Occupational hazard when working in dental laboratories (plaster, casting, soldering, polymerization, polishing): gypsum powder, silicon carbide, plastic, porcelain, metal; plenty of water vapor, acid vapors.

Monitoring the health of health care workers. The main directions of prevention of negative effects of occupational hazards on the health of health care workers of dental profile.

ACADEMIC DISCIPLINE CURRICULAR CHART

Section, topic No	Section (topic) name	Number of hours			Self-studies	Form of control
		lectures	supervised student work	practical		
1	Environment and its hygienic importance	6	3	14	11	
1.1	Structure of environment. Health assessment. The concept of risk factors. Models of the major noncommunicable diseases	2	1	-	1	Tests; interviews; essays
1.2	Physical properties and chemical composition of the atmospheric air	2	1	-	1	Tests; interviews; essays
1.3	Hygienic assessment of the quality of drinking water. Hygienic assessment of the soil	2	1	4	3	
	Hygienic assessment of the quality of drinking water. Hygienic assessment of the soil	2	1	-	1	Interviews; essays
	Hygienic assessment of the quality of drinking water. Physical and chemical tests of drinking water	-	-	2	1	Tests; written classroom (home) practical exercises
	Hygienic assessment of the quality of drinking water. Methods of water treatment. Coagulation. Decontamination of normal doses of chlorination	-	-	2	1	Tests; written classroom (home) practical exercises; interviews
1.4	Hygienic assessment of the impact of microclimate	-	-	2	1	Tests; written classroom (home) practical exercises; interviews
1.5	Hygienic assessment of combined effect of meteorological factors on the human organism	-	-	2	1	Tests; written classroom (home) practical exercises; interviews
1.6	Hygienic assessment of lighting	-	-	2	1	Tests; written classroom (home) practical exercises; interviews

1.7	Hygienic assessment of the impact of ventilation	-	-	4	1	16	9	3	1	Tests; written classroom (home) practical exercises; interviews Electronic tests; interviews
	Hygienic assessment of the impact of ventilation	-	-			2	-	2	1	
	Control work: «Hygienic assessment of the impact of microclimate», «Hygienic assessment of combined effect of meteorological factors on the human organism», «Hygienic assessment of lighting», «Hygienic assessment of the impact of ventilation»	-	-			2	-	2	2	
2	Hygiene of nutrition	4	1	4	1	16	9	3	1	Tests; interviews; essays Tests; interviews; essays
2.1	Food as an environmental factor	2	0,5							
2.2	Nutrition-related diseases and their prevention	2	0,5							
2.3	Hygienic assessment of the energy significance and nutrient adequacy of the diet	-	-	-	-	4	2	2	2	Tests; written classroom (home) practical exercises; interviews
	Hygienic assessment of the energy significance and nutrient adequacy of the diet. Calculation of the actual consumption of nutrients and energy value of the diet with menu-layout of food	-	-			2	1	1	1	Tests; written classroom (home) practical exercises; interviews
	Hygienic assessment of the energy significance and nutrient adequacy of the diet	-	-			2	1	1	1	Tests; written classroom (home) practical exercises; interviews
2.4	Hygienic assessment of nutritional status	-	-	-	-	4	2	2	2	Tests; written classroom (home) practical exercises; interviews Tests; written classroom (home) practical exercises; interviews
	Hygienic assessment of nutritional status. Characteristics of nutritional status: normal, optimal, excessive and insufficient.	-	-			2	1	1	1	Tests; written classroom (home) practical exercises; interviews
	Hygienic assessment of nutritional status. Stages and methods of assessing the nutritional status. Recommendations for optimizing nutritional status	-	-			2	1	1	1	Tests; written classroom (home) practical exercises; interviews
2.5	Hygienic assessment of providing the body with vitamins	-	-	-	-	4	3	3	3	Tests; written classroom (home) practical exercises; interviews Electronic tests; interviews
	Hygienic assessment of providing the body with vitamins	-	-			2	1	1	1	Tests; written classroom (home) practical exercises; interviews
	Control work: «Hygiene of nutrition»	-	-			2	2	2	2	Electronic tests; interviews
2.6	Prevention of food poisoning	-	-	-	-	4	2	2	2	Tests; written classroom (home) practical exercises; interviews
	Prevention of microbial food poisoning	-	-			2	1	1	1	Tests; written classroom (home) practical exercises; interviews

	Prevention of non-microbial food poisoning	-	-	2	1	Tests; written classroom (home) practical exercises; interviews
3	Hygiene of health care institutions	2	0,5	2	4	
	Hygiene of health care institutions. Hygienic requirements for the planning, construction and operation of healthcare organizations	2	0,5	-	2	Tests; interviews; essays
	Hygiene of health care institutions. Hygienic expertise of projects of health care institutions of dental profile	-	-	2	2	Tests; written classroom (home) practical exercises; interviews
4	Occupational hygiene	2	0,5	4	6	
	Occupational hygiene	2	0,5	-	1	Tests; interviews; essays
	Occupational hygiene. Hygienic characteristics of conditions of labor of a dentist. Assessment of the impact of toxic substances and physical factors on human health	-	-	2	2	Tests; written classroom (home) practical exercises; interviews
	Final control work: «Environment and its hygienic importance», «Hygiene of nutrition», «Hygiene of health care institutions», «Occupational hygiene»	-	-	2	3	Electronic tests Credit
	Total hours	14	5	36	30	

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Hygiene and ecology : textbook for students of higher medical schools / ed. by V. G. Bardov. - Vinnytsia : Nova Knyha, 2018. - 688 p.

Additional:

2. Бортновский, В. Н. Общая гигиена = General hygiene : учеб.-метод. пособие для студентов по подготовке специалистов для зарубежных стран. с англ. яз. обучения мед. вузов.- Гомель : ГомГМУ, 2017.- 224с.

3. General hygiene : the educational methodical text-book for 2-3nd year English medium medical students of the Faculty of preparation of experts for foreign countries of medical higher educational institutions / V. N. Bortnovsky, A. A. Labuda. – Gome l: GomSMU, 2015. - 224 p.

4. Miklis, N. I. Laboratory classes on hygiene : manual / N. I. Miklis, O. A. Cherkasova. – Vitebsk : VSMU, 2015. – 240 p.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allotted for independent work can be used by students to:

- preparation for lectures, practical classes and seminars;
- preparation for colloquiums, tests and examination on a subject;
- elaboration of topics (questions) submitted for independent study;
- calculating tasks;
- preparation of thematic reports, abstracts, presentations;
- note-taking of educational literature;
- compiling a review of scientific literature on a given topic;
- design of information and demonstration materials (stands, posters, graphs, tables, etc.);
- compilation of a thematic selection of literary sources, Internet sources;
- preparation of tests for the organization of mutual assessment.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF SUPERVISED STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

Main forms of supervised student independent work:

- preparation and presentation of the abstract;
- presentation of reports;
- studying topics and problems that have not been discussed at the lectures;
- taking notes of original sources (sections of anthologies, collections of documents, monographs, textbooks);
- computer testing;
- preparation of tests for the organization of mutual assessment.

Control of supervised student independent work is carried out in the form of:
 final class, testing;
 discussion of abstracts;
 assessment of an oral reply to a question, presentation, report or calculating task;
 checking up notes of original sources, monographs and articles;
 individual interview.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms are used for competences assessment:

Oral form:

interviews;
 credit.

Written form:

tests;
 written classroom (home) practical exercises;
 essays.

Technical form:

electronic tests.

LIST OF AVAILABLE TEACHING METHODS

Traditional method (lecture, laboratory practicals);

Active (interactive) methods:

Problem-Based Learning (PBL).

LIST OF PRACTICAL SKILLS

1. Hygienic assessment of indicators of physical development, physical training.
2. Hygienic assessment of actual diet and nutritional status.
3. Hygienic assessment of indicators, physical and professional working capacity.
4. Hygienic assessment of health at the individual, collective and population levels.
5. Hygienic diagnostics of human health.
6. Hygienic prenosological diagnostics of the premorbid state of the human body.
7. Carrying out hygienic education and upbringing, development of activities, focus of life on the education of a healthy lifestyle.

LIST OF EQUIPMENT USED

1. Multimedia equipment;
2. Instruments:
 «August Psychrometer»;

- «Thermo-anemometer»;
- «Aneroid barometer»;
- «Temperature and Relative Humidity Meter (TKA–PKM/20)»;
- Sets for determining the color, transparency of water;
- Laboratory glassware; chemical reagents;
- 3. Visual aid «Product Portions»;
- 4. Tables: «Occurrence of groundwater», «Zones of saprobity of water bodies», «Chemical composition and calorie content of fish, meat, milk and dairy products», «Chemical composition and calorie content of fruits and berries, vegetables», «Industrial microclimate», «Means personal protection of the hearing organ», «Special clothing against the impact of adverse production factors», «Industrial dust».

LIST OF LECTURES

1. Structure of environment. Health assessment. The concept of risk factors. Models of the major noncommunicable diseases.
2. Physical properties and chemical composition of the atmospheric air.
3. Hygienic assessment of the quality of drinking water. Hygienic assessment of the soil.
4. Food as an environmental factor.
5. Nutrition-related diseases and their prevention.
6. Hygiene of health care institutions. Hygienic requirements for the planning, construction and operation of healthcare organizations.
7. Occupational hygiene.

LIST OF PRACTICAL STUDIES

1. Hygienic assessment of the quality of drinking water. Physical and chemical tests of drinking water.
2. Hygienic assessment of the quality of drinking water. Methods of water treatment. Coagulation. Decontamination of normal doses of chlorination.
3. Hygienic assessment of the impact of microclimate.
4. Hygienic assessment of combined effect of meteorological factors on the human organism.
5. Hygienic assessment of lighting.
6. Hygienic assessment of the impact of ventilation.
7. Control work: «Hygienic assessment of the impact of microclimate», «Hygienic assessment of combined effect of meteorological factors on the human organism», «Hygienic assessment of lighting», «Hygienic assessment of the impact of ventilation».
8. Hygienic assessment of the energy significance and nutrient adequacy of the diet. Calculation of the actual consumption of nutrients and energy value of the diet with menu-layout of food.
9. Hygienic assessment of the energy significance and nutrient adequacy of the diet.

10. Hygienic assessment of nutritional status. Characteristics of nutritional status: normal, optimal, excessive and insufficient.
11. Hygienic assessment of nutritional status. Stages and methods of assessing the nutritional status. Recommendations for optimizing nutritional status.
12. Hygienic assessment of providing the body with vitamins.
13. Control work: «Hygiene of nutrition».
14. Prevention of microbial food poisoning
15. Prevention of non-microbial food poisoning
16. Hygiene of health care institutions. Hygienic expertise of projects of health care institutions of dental profile.
17. Occupational hygiene. Hygienic characteristics of conditions of labor of a dentist. Assessment of the impact of toxic substances and physical factors on human health.
18. Final control work: «Environment and its hygienic importance», «Hygiene of nutrition», «Hygiene of health care institutions», «Occupational hygiene».

**PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS**

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Decision of the department, which designed the curriculum (date, protocol №)
1. Microbiology, Virology, Immunology	Department of Microbiology, Virology, Immunology	No amendments	Recommend for approval (protocol № 2 of 23.09.2022)

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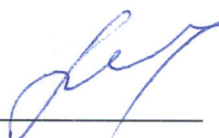
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Curriculum content, composition and the accompanying documents comply with the established requirements.

Dean of the Medical Faculty for International Students of the educational institution «Belarusian State Medical University»

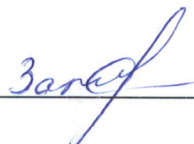
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