

Approved by
Deputy Rector for Academic Affairs

_____ E. V. Konovalova

"16" June 2022, Record No.6

Hygiene

Syllabus

Department	Morphology and physiology
Curriculum	s310501- ЛечДелоИН-21-1.plx Specialty 31.05.01 General Medicine
Qualification	General Practitioner
Form of education	Full time
Total (in credits)	4
Total academic hours	144
including:	
Contact	128
Self-study	16

Control:
Credit, 5th term

Course outline in terms

Academic year (Term)	2 (2.4)		3 (3.5)		Total	
	Cur	Syl	Cur	Syl		
Weeks	17,3		17,3			
Types of classes	Cur	Syl	Cur	Syl	Cur	Syl
Lectures	16	16	16	16	32	32
Practical	48	48	48	48	96	96
Contact	64	64	64	64	128	128
Self-study	8	8	8	8	16	16
Total	72	72	72	72	144	144

The Syllabus is compiled by:

PhD in Medical Sciences (Medicine), Associate Professor Pavlovskaya V.S.

The Syllabus

Hygiene

Developed in accordance with Federal State Educational Standard:

Federal State Educational Standard of higher education in the specialty 31.05.01 General medicine (Order of the Ministry of Education and Science of the Russian Federation on August, 12, 2020. №988)

Based on the Curriculum:

31.05.01 GENERAL MEDICINE

Specialization: General Medicine

Approved by the Academic Council of Surgut State University, “16” June 2022, Record No.6

The Syllabus was approved by the department

Morphology and physiology

Head of Department, Doctor of Medicine, Professor Stolyarov V.V.

1. COURSE OBJECTIVES	
1.1	Elaboration of conscious understanding among students of higher medical schools that human health strongly depends on the environment, living conditions, work activities, etc. This is a necessary prerequisite for their active participation in carrying out scientifically-based and effective therapeutic measures, preventing diseases and promoting a healthy lifestyle.
1.2	To elaborate understanding that it is necessary to consider human health as a category that is formed under the influence of a complex interconnected spectrum of natural, anthropogenic and social factors.
1.3	To provide students with information for mastering the methodology of preventive medicine
1.4	To master hygienic knowledge and skills to assess the impact of environmental factors on human health and population
1.5	To prevent diseases among the population through preventive and anti-epidemic measures
1.6	To train patients to follow basic hygiene measures to prevent diseases and promote health
1.7	To provide favorable conditions for patients' staying and medical personnel working in medical organizations
1.8	To form motivation among the population, patients and their family members aimed at preserving and promotion their health

2. COURSE OVERVIEW	
Course code (in curriculum)	Б1.О.04.06
2.1 Assumed background:	
	Biochemistry
	Hominal Physiology
	Biology
	Physics, Mathematics
	Chemistry
	Medical Informatics
	Biochemistry
2.2 Post-requisite courses and practice:	
	Epidemiology
	Public Health and Healthcare. Economy of Public Healthcare
	Endocrinology
	Paediatrics, Childhood Infections

3. COMPETENCES UPON COMPLETION OF THE COURSE (MODULE)	
GPC-2.2	Knows the strategy of the state in the field of promoting a healthy lifestyle (Order of the Ministry of Health of the Russian Federation No. 8 of 01/15/2020) in the prevention of non-communicable diseases, the formation of a healthy lifestyle, sanitary and hygienic education of the population
GPC-2.3	Able and ready to apply a set of measures aiming to: preserve and strengthen health; promote healthy lifestyle; prevent the occurrence and/or spread of diseases, to conduct their early detection, uncovering causation and progression; eliminate adverse health effects of habitat factors

By the end of the course students must:	
3.1 know:	
3.1.1	Possibilities to use methods of analysis and synthesis of the results obtained, their interpretation in various professional situations
3.1.2	Possibilities for self-development, self-education and self-realization in the educational process
3.1.3	Forming a healthy lifestyle and its hygiene basics
3.1.4	Prevention of emergence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their emergence and development
3.1.5	Harmful effect on human health of environmental factors
3.1.6	Fundamentals of the human interaction with the environment, the role of hygiene in the scientific development of the problem of health promotion, increasing labour efficiency, prolonging the active life, the essence of primary and secondary prevention
3.1.7	Hygienic characteristics of various environmental factors, the mechanisms of their effects and diagnostically significant forms of manifestation of effects at the pre-nosological level
3.1.8	The basics of evidence-based medicine in establishing causal relationships between changes in health state and influence of environmental factors
3.1.9	Hygiene measures for t prevention of hospital-acquired infections and optimization of the conditions of inpatient care

3.2	be able to:
3.2.1	Use abstract thinking, analysis and synthesis methods in solving problems
3.2.2	Use creativity in preparing business games
3.2.3	Work independently with educational, scientific, normative and reference literature, to conduct a search, to turn the obtained data into a means for solving professional tasks
3.2.4	Identify causes and conditions of emergence and spread of diseases
3.2.5	Develop a set of measures aimed at eliminating the harmful influence of environmental factors, preserving and promoting health
3.2.6	Assess the likelihood (identify and characterize the danger) of adverse effects of natural, social and anthropogenic environmental factors in the specific conditions of human activity
3.2.7	Justify the need for adequate treatment and preventive measures according to the hygienic characteristics of working conditions and early changes in health and efficiency, as well as in case of occupational poisoning (occupational diseases)
3.2.8	Make recommendations for water, air, sun quenching and adaptation to adverse climatic and geographical factors while working, traveling, leisure activities, residence changing
3.3	have skills of:
3.3.1	Abstract thinking, analysis, synthesis
3.3.2	Methods of analysis, synthesis when solving situational and professional tasks
3.3.3	Readiness for self-development, self-realization, self-education, use of creative potential in practical classes and in further professional activities
3.3.4	Implementing a set of measures aimed at preserving and health promotion including the formation of a healthy lifestyle, preventing the emergence and (or) spread of diseases, their early diagnosis, identifying the causes and conditions of their emergence and development, as well as aimed at eliminating harmful effects of environmental factors
3.3.5	Hygienic population education about healthy lifestyle and personal hygiene
3.3.6	Methods for the implementation of hygienic control of catering and water disinfection in the field conditions (military hygiene, extreme situations)
3.3.7	Elements of primary and secondary prevention
3.3.8	Methods of hygienic diagnosis
3.3.9	Methods of hygienic examination and development of preventive measures
3.3.10	Forms and methods of sanitary-educational work

4. STRUCTURE AND CONTENTS OF THE COURSE (MODULE)

Class Code	Topics /Class type	Term / Academic year	Academic hours	Competences	Literature	Interactive	Notes
	Module 1. Health and environment						
1.1	The content and objectives of Hygiene. Hygienics as a complex of medical knowledge, history of Hygiene. Methodology /Lecture /	4	2	GPC-2.2 GPC-2.3	1.1	0	
1.2	Water and public health. /Lecture/	4	2	GPC-2.2 GPC-2.3	1.1	0	
1.3	Climate and health. Prevention of diseases associated with the impact of adverse weather conditions. Problems of adaptation and acclimatization. Principles of hygienic regulation /Lecture /	4	2	GPC-2.2 GPC-2.3	1.1	0	
1.4	Microclimate of indoor premises. Air physical properties. Hygiene requirements for ventilation and heating / Practice /	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
1.5	The main indicators of natural lighting. Hygienic requirements for artificial lighting / Practice /	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study

1.6	Hygienic assessment of drinking water and water sources /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
1.7	Methods to improve the quality of drinking water. Endemic diseases. Sanitary protection of reservoirs / Practice /	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
1.8	Soil hygiene and sanitary cleaning of populated areas / Practice /	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
1.9	Hygienic problems of cities. Hygiene of residential and public buildings /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
	Module 2. Hygiene of medical institutions						
2.1	Hygienic requirements for health care facilities. Hygienic measures to ensure optimal conditions for patients in medical institutions. / Lecture /	4	2	GPC-2.2 GPC-2.3	1.1	0	
2.2	Hygienic characteristics of the air environment the influence of physical and biological factors on the human body. Technogenic pollution of the atmospheric air and its effect on the human body. Air protection /Lecture /	4	2	GPC-2.2 GPC-2.3	1.1	0	
2.3	Hygienic requirements for the placement and planning of medical institutions /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
2.4	Hygiene requirements for equipment in medical institutions /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
2.5	The system of sanitary and hygienic measures to create a protective regime and favorable conditions for inpatient care /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
2.6	Hygienic aspects to prevent hospital-acquired infections. /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
	Module 3. Nutrition and human health						
3.1	Nutrition as a health factor. Modern basics of nutrition. Food products, their sanitary and hygienic characteristics /Lecture/	4	2	GPC-2.2 GPC-2.3	1.1	0	
3.2	Food poisoning, its classification. Prevention issues / Lecture/	4	2	GPC-2.2 GPC-2.3	1.1	0	
3.3	Nutrition as a social and hygienic problem. A nutritional and biological role of essential nutrients /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
3.4	Diet. Methods for adequate nutrition assessment /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
3.5	Hygienic characteristics, sanitary and hygienic examination of food products. Classification according to their origin, purpose and quality /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study

3.6	Food quality and safety. Sanitary and hygienic expertise /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
3.7	Food poisoning: classification, prevention /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
3.8	Business game «Investigation and prevention of food poisoning» /Practice/	4	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
	Module 4. Radiation hygiene						
4.1	Organization of a radiation safety system in the radiological hospital departments /Lecture/	4	2	GPC-2.2 GPC-2.3	1.1	0	
	Module 5. Hygiene of children and adolescents						
5.1	The main problems of hygiene of children and adolescents. Patterns of child growth and development as the basis for valuing environmental factors /Lecture/	5	1	GPC-2.2 GPC-2.3	1.1	0	
5.2	Physical development as an indicator of a child's health. Methods for assessing physical development. Assessment of the level of biological development using complex methods /Lecture/	5	1	GPC-2.2 GPC-2.3	1.1	0	
5.3	Health status of children, adolescents and adults. Individual health indicators. Health groups /Lectures/	5	2	GPC-2.2 GPC-2.3	1.1	0	
5.4	Hygienic requirements for the placement, planning and equipment of pre-school and school institutions /Practice/	5	1	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
5.5	Employment types and their regulation according to anatomical and physiological development characteristics. Professional medical consultation and professional selection of adolescents /Practice/	5	2	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
5.6	Age and morpho-functional features of the child's body. Health protection of children and adolescents in Russia, in the Khanty-Mansiysk Autonomous Okrug-Ugra. Methods for assessing the physical development of children and adolescents /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
5.7	Assessment methods of the physical development of children and adolescents /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
5.8	Assessment criteria of the individual health. Assessment factors of the health state of children and adolescents /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
5.9	The indicators characterizing the health state. Health groups. Principles of active rehabilitation of children in school /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study

5.10	The concept of "daily routine" and its physiological basis. Principles of creating daily routine. Hygienic requirements for timetable. /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
5.11	Hygienic requirements for school textbooks, children's books, toys, children's clothing /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
	Module 6. Occupational hygiene and worker health protection						
6.1	Fundamentals of the labour physiology. The physiological basis of fatigue, its prevention. /Lecture/	5	2	GPC-2.2 GPC-2.3	1.1	0	
6.2	Hygienic characteristics of the main occupational hazards /Lecture/	5	2	GPC-2.2 GPC-2.3	1.1	0	
6.3	Some issues of occupational health in the oil and gas extraction and their processing. Hygiene measures for the prevention of occupational diseases /Lecture/	5	2	GPC-2.2 GPC-2.3	1.1	0	
6.4	Fundamentals of legislation on the protection of labor of women and adolescents. Regulatory indicators and documents in hygiene. Organization of preliminary and periodic medical examinations /Lecture/	5	2	GPC-2.2 GPC-2.3	1.1	0	
6.5	Hygienic foundations of a healthy lifestyle. Personal hygiene. Prevention of bad habits /Lecture/	5	2	GPC-2.2 GPC-2.3	1.1	0	
6.6	Physiological and hygienic criteria for assessing the labour severity and intensity. Justification of rational work and rest regimes /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
6.7	Harmful and dangerous factors of the production environment. Hygienic assessment of occupational hazards (noise, vibration, industrial dust, industrial poisons) /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
6.8	Working conditions, occupational diseases and poisoning. The effect of working conditions on the labour burden at industrial enterprises. Methods for studying the health state. Organization and procedure for conducting preliminary and periodic medical examinations /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
6.9	Requirements for sanitary devices at the enterprise. Therapeutic and prophylactic nutrition of workers /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
6.10	General principles of recreational activities in the workplace /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
6.11	Job aspects of a doctor in the workshop. Compilation of the set of hygienic, preventive and health measures at work. Business game /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study Business game

6.12	The biological effect of ionizing radiation. Dosimetry control. Ensuring radiation safety in medical institutions /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
Module 7. Military Hygiene							
7.1	Organizational basics of sanitary and epidemiological supervision of food and water supply of troops in field conditions /Lecture/	5	2	GPC-2.2 GPC-2.3	1.1	0	
7.2	Organizational fundamentals of sanitary and epidemiological surveillance of personnel nutrition /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
7.3	Medical monitoring of working conditions in individual combat arms. Hygiene of the field placement of personnel. Military conditions. Complex of hygienic, preventive and health-improving measures for work in barracks, training camps, field dwellings /Practice/	5	3	GPC-2.2 GPC-2.3	1.1	0	Oral quiz, test, case-study
Module 8.							
8.1	Complex of hygienic, preventive and health measures in manufacturing /Self-study/	4	8	GPC-2.2 GPC-2.3	1.1	0	Essay
8.2	Hygienic requirements for school textbooks, children's books /Self-study/	5	8	GPC-2.2 GPC-2.3	1.1	0	Essay
8.3	Credit/ Mark	5		GPC-2.2 GPC-2.3	1.1	0	Oral quiz, case-study

5. ASSESSMENT TOOLS

5.1. Tests and tasks

Supplement 1

5.2. Topics for written papers

Supplement 1

5.3. Assessment tools

Supplement 1

5.4. Assessment tools

Formative assessment: Oral quiz, test, case-study, essay

Midterm assessment (exam): oral quiz, case-study

6. COURSE (MODULE) RESOURCES

6.1. Recommended Literature

6.1.1. Core

	Authors	Title	Publish, year	Quantity
1.1	Shashina E. A., Makarova V.V.	Educational and methodological textbook for practical classes on hygiene [Electronic resource]	Moscow: GEOTAR-Media, 2020	https://www.studntlibrary.ru/book/ISBN9785970452899.html

6.2. Internet resources

1	http://iprbookshop.ru/
2	http://e.lanbook.com/
3	http://www.znaniy.com

4	http://www.studmedlib.ru/
5	http://www.znanium.com/
6	http://iprbookshop.ru
7	http://e.lanbook.com/
6.3.1 Software	
6.3.1.1	Operational system Microsoft, applied programs pack Microsoft Office
6.3.2 Information Referral systems	
6.3.2.1	"Guarantor", "Consultant region"

8. Course manuals	
Supplement 1	

ASSESSMENT TOOLS

Hygiene

Qualification	Specialist
Specialty	31.05.01 General Medicine
Form of education	Full-time
Designer Department	Morphology and physiology
Graduate Department	Internal diseases

Sample tasks and tests

Stage I: Formative assessment.

1.1 Module 1-7. Points for oral quiz.

Module 1. Health and Environment

1. The subject and tasks of hygienics.
2. Relationships between hygienics and other medical disciplines.
3. The concept of primary and secondary disease prevention.
4. Methods of hygienic research.
5. Structure, types of activities and tasks of the sanitary-epidemiological service.
6. The history of the formation and development of hygienics in Russia. Founders of Hygiene in Russia.

7. Hygiene of children and adolescents. Aim, objectives, research methods.
8. Principles of hygienic regulation. Methodological concepts of hygienic rationing. Types of hygienic standards.
9. Urbanization, its socio-hygienic value.
10. Principles of urban planning. City-forming factors, the functional city organization.
11. Impact of environmental factors on humans. Hygienic rationing. Long-term effects of environmental factors.

12. Hygienic problems of the northern territories.

Module 2. Hygiene of medical institutions

1. Hygienic requirements for the planning and improvement of the hospital land plot, hospital zoning
2. Hygienic requirements for the placement of hospitals and the layout of the hospital site. Hospital building systems.
3. Hygienic requirements for the admission department ward section as a functional basic unit of the hospital.
4. Hygienic requirements for the planning of the ward section. Types of wards.
5. Features of the layout and mode of operation of the therapeutic, obstetric and surgical departments. Events to create a protective regime.
6. Features of the layout and mode of operation of the infectious disease ward. Measures aimed at preventing nosocomial infections.
7. Elements of sanitary improvement of hospitals: heating, ventilation, water supply, sewerage. Sanitary rules for sewage disposal. Utility and disposal of hospital solid waste.
8. Hygienic aspects of the prevention of nosocomial infections. Planning, sanitary and disinfection measures.
9. Hygienic requirements for the placement, planning, equipment and organization of work of hospital kitchens. Types of medical control. Medical records.
10. Patients nutrition as a part of complex therapy and disease prevention. The basic principles of diet food.

Module 3. Nutrition and human health

1. Nutrition value for the health and physical development of the population. Requirements for human nutrition. Principles of rationing power.
2. Assessment methods of the nutrition adequacy of organized groups. Balanced diet. Diet.
3. Alternative theories of nutrition (vegetarianism, raw foods, starvation, and separate meals), their hygienic assessment.
4. Proteins, their nutritional and biological value. Sources of high-grade proteins. Consumption rates.
5. Carbohydrates, their dietary sources and importance in nutrition. The concept of protected carbohydrates, their importance in the prevention of diseases. Consumption rates.
6. Food fats of animal and vegetable origin, the biological value of various fats. Consumption rates.
7. Vitamins, their role in nutrition. Classification of vitamins. Characteristics of fat-soluble vitamins.
8. Characteristics of water-soluble vitamins. Vitaminizing of food rations.
9. Main causes of the development of hypo-and avitaminosis. The danger of hypervitaminosis.

10. Mineral substances, their role in nutrition. The role of nutrition in the provision of the body with microelements. Products are the main sources of minerals.
11. Meat and meat products, their nutritional and biological value. Diseases associated with meat.
12. Value of milk and dairy products in the diet of the population. Epidemiological role of milk. Methods of disinfection and canning. Their hygienic characteristics.
13. Biological value of vegetable oils, the need for them. The nutritional value of margarine. Overheated fats.
14. Cereal products, their importance in nutrition.
15. Value of fruits and vegetables in the diet of the population. Methods of canning, their evaluation.
16. Canned food and concentrates, their nutritional value and importance in the nutrition of children. Food additives, their hygienic assessment.
17. Fish, nutritional and biological value. Diseases associated with fish.
18. Prevention of diseases associated with poor nutrition. Alimentary dystrophy, marasmus, beriberi.
19. Excess nutrition, its role in the formation of the cardiovascular and other pathologies.
20. Nutritional characteristics of children, pregnant women and the elderly.
21. Principles of hygienic evaluation of food. Food classification by origin, purpose and quality. Sanitary food examination.
22. Food toxic infections, causes, clinical features, preventive measures.
23. Bacterio-and mycotoxicosis. Causes, clinical features, preventive measures.
24. Food poisoning of non-microbial etiology (inedible fungi, poisonous and weeds, impurities of chemicals), preventive measures.
25. Doctor methods in diagnosing and investigating the causes of food poisoning. Documentation for the diagnosis of food poisoning.

Module 4. Radiation hygiene

1. Characteristics of the main types of ionizing radiation. Basic concepts and units of measure in radiation hygiene.
2. External exposure, the main biological laws. Principles of protection from external exposure.
3. Hygienic normalization of ionizing radiation.
4. Features of internal exposure. Basics of hygienic regulation of internal exposure.
5. Main sources of public exposure. Dose loads of the population due to cosmic radiation, radiation background of the earth, building materials, medical research.

Module 5. Hygiene of children and adolescents

1. Main problems of hygiene of children and adolescents. Age morphofunctional features of the child's body.
2. Health of children and adolescents. Evaluation criteria and health groups.
3. Physical development of children, as a health indicator. Somatometric and somatoscopic indicators. Assessment methods for child's physical development.
4. Socio-hygienic significance of the rate change age development. Acceleration.
5. Hygienic foundations of the daily routine, the main modalities of pre-pre-school, pre-school and school age children.
6. Hygiene training classes in school. Factors contributing to the development of fatigue, its prevention. Hygienic requirements for lesson organizations.
7. Occupational and industrial hygiene. Professional orientation, medical professional consultation, professional selection.
8. Hygienic foundations of physical education. Medical groups for physical training.
9. Hygienic requirements for the placement, planning, equipment of preschool institutions. Requirements for air-thermal regime, insolation, natural and artificial lighting.
10. Hygienic requirements for the placement, planning, equipment of school institutions.
11. Hygiene requirements for school furniture, textbooks and toys.

Module 6. Occupational hygiene and worker health protection

1. Kinds of professional activity of the person. Physiological reactions to the work performed. Burden and intensity of work. Fatigue, its types and prevention.
2. Factors of the production environment and their classification

3. Occupational hazards, their classification. Comprehensive assessment of working conditions.
4. Dust factor production environment, the classification of dust. Dust properties, determining its pathogenicity. Occupational diseases of dust etiology.
5. Noise and vibration, as harmful factors of the working environment. Effect on the body. Occupational diseases. Prevention measures.
6. Production microclimate. Acute and chronic effects of work in a heating and cooling microclimate. Prevention measures.
7. Production poisons. Classification, pathways, metabolic transformations in the body. Effect on the body.
8. General characteristics of the action of industrial poisons. Prevention of acute and chronic intoxication in the workplace.
9. The influence of low intensity factors on the levels of general non-specific morbidity of industrial workers
10. Hygienic characteristics of the labor of medical workers (surgical and therapeutic profile).
11. Occupational health in X-ray diagnostic rooms. Personnel radiation load.
12. Features of occupational hygiene in physiotherapy rooms and departments of laser therapy.
13. Methods for studying the incidence of workers. General incidence with temporary disability.
14. Preventive medical examinations. Main content of the law number 302 of the Ministry of Health of the Russian Federation. Occupational diseases, order of investigation of cases of acute and chronic occupational diseases.
15. Occupational health in oil and gas production. Features of the incidence.
16. Main directions of recreational activities in the workplace.
17. Hygienic basis of therapeutic and preventive nutrition and its importance in the prevention of occupational diseases.

Module 7. Military Hygiene

1. Research methods and assessment of the quality of drinking water in wartime.
2. Features of the organization of water supply of troops in wartime.
3. Protection of food and prepared food in conditions of use of weapons of mass destruction.
4. Responsibilities of the medical service in the organization of water supply of personnel in wartime.
5. Catering for troops in wartime.
6. Hygienic examination of food when using weapons of mass destruction.
7. Hygienic characteristics of the conditions of personnel in fortifications.
8. Points of water supply and drainage. Appointment, device, sanitary and hygienic characteristics of personnel tools for the extraction and treatment of water
9. Methods of disinfection of individual stocks of water, the characteristic of service means.
10. Methods to improve the quality of drinking water in the field.
11. Labor hygiene in the armored and motorized rifle troops.

1.2 Sample tests for module 1-7.

1. What indicator values of atmospheric air undergo changes during breathing (4 out of 6)?
 - A) temperature
 - B) nitrogen
 - C) humidity
 - D) carbon dioxide
 - D) oxygen
 - E) inert gases

2. The sanitary value of ozone in atmospheric air (2 of 5)?
 - A) is an oxygen oxidizer, helps purify the air
 - B) enriches the air with oxygen
 - C) contributes to the atmosphere aeroionization
 - D) The ozone layer of the stratosphere contributes to the delay of the bactericidal spectrum of ultraviolet radiation.
 - D) forms nitrous oxide in combination with oxygen, which has a drug effect on humans

3. What are ozone holes (2 of 5)?
 - A) the disappearance of the ozone layer in the upper atmosphere
 - B) reducing the ozone concentration in certain parts of the stratosphere

- B) ozone binding by air pollutants
- D) parts of the stratosphere permeable to the bactericidal spectrum of ultraviolet rays
- D) permeable to cosmic rays of the atmosphere

1.3 Sample case-study for module 1-7.

Using the methodological recommendations from "Standards of physiological needs for energy and nutrition", analyze the results and develop recommendations for the nutrition correction in the dispensary.

Reference solution

The nutritional status of the examined before the dispensary is unsatisfactory. It is clearly seen because of the established deviations in the parameters of nutritional status (overweight, clinical and laboratory signs of lack of ascorbic acid, riboflavin, pyridoxine, niacin, as well as laboratory signs of an imbalance of fat and carbohydrates).

These nutrient data patterns of the proposed ration indicate a deficiency of the above-mentioned vitamins. At the same time, the first balance level is disturbed. An energy excess was established (by 29.6%), mainly due to an increased intake of proteins, animal fats and carbohydrates. The ratio of energy-carrying nutrients is also violated due to the predominance of fat and relative carbohydrate deficiency: the percentage of fat in the energy value of the diet is 33.7% and carbohydrates are 2.3%. When assessing the balance within certain nutrient groups, the most serious deviations from the standards were found in the ratio of animal and vegetable fats. Thus, the identified imbalances will not be able to be corrected due to the diet in a dispensary, which is non-optimal.

1.4 Sample business game for module 2 and 6.

When reviewing a typical model of the hospital project, students should conduct a review and sanitary examination of the project in accordance with the attached program below.

Hospital Sanitary Examination Program

General information:

- 1 Type of hospital (by profile and value).
2. Number of beds (by department and total) for which the hospital is designed.
3. Land lot.

Students will have to:

- 1) study the sanitary and hygienic principles of the planning of medical institutions.
- 2) study the hygienic requirements for the location of medical institutions in the settlements and the layout of the hospital site, taking into account the creation of a favorable treatment and anti-epidemic regime, good treatment conditions and improvement of patients' health.
- 3) study the hygienic requirements for the department planning for admission and discharge of patients and the admission features and discharge features in various departments of hospitals.
- 4) study hygienic requirements for the ward section (for example, the layout of the therapeutic department); features of the layout of the children's, obstetric-gynecological, surgical and infectious diseases departments of hospitals.
- 5) study hygienic requirements for the planning of outpatient department.
- 6) submit a revised or newly developed project for consideration to colleagues and a teacher.

1.5 Sample essay topics

1. Problems of water supply in large cities
2. Features of atmospheric air in industrial cities
3. City microclimate
4. Urban noise and prevention of its harmful effects

Stage II: Midterm assessment (Credit/ Mark): 5th term

Midterm assessment is carried out in the form of credit with a mark. Tasks for the credit with a mark include two theoretical points for oral quiz and one case-study.

Tasks for competence assessment «Knowledge»	Task type
<p>List of points for Oral quiz:</p> <ol style="list-style-type: none"> 1. Subject and objectives of hygiene. Hygiene relations with other medical disciplines. Value of hygiene in the professional activities of physicians. 2. Concept of primary and secondary disease prevention. Methods of hygienic research. 3. Hygiene of children and adolescents. Aim, objectives, research methods. 4. History of the formation and development of hygiene in Russia. Founders of hygienic science in Russia. 5. Principles of hygienic regulation. Methodological concepts of hygienic rationing. Types of hygienic standards. 6. Urbanization, its socio-hygienic value. Principles of urban planning. City-forming factors, the functional city organization. 7. Impact of environmental factors on humans. Hygienic rationing. Long-term effects of environmental factors. 8. Hygienic problems of the northern territories. 9. Nutrition value for the health and physical development of the population. Requirements for human nutrition. Principles of rationing power. 10. Assessment methods of the nutrition adequacy of organized groups. Balanced diet. Diet. 11. Alternative theories of nutrition (vegetarianism, raw foods, starvation, and separate meals), their hygienic assessment. 12. Proteins, their nutritional and biological value. Sources of high-grade proteins. Consumption rates. 13. Carbohydrates, their dietary sources and importance in nutrition. The concept of protected carbohydrates, their importance in the prevention of diseases. Consumption rates. 14. Food fats of animal and vegetable origin, the biological value of various fats. Consumption rates. 15. Vitamins, their role in nutrition. Classification of vitamins. Characteristics of fat-soluble vitamins. 16. Characteristics of water-soluble vitamins. Vitaminizing of food rations. 17. Main causes of the development of hypo- and avitaminosis. The danger of hypervitaminosis. 18. Mineral substances, their role in nutrition. The role of nutrition in the provision of the body with microelements. Products are the main sources of minerals. 19. Meat and meat products, their nutritional and biological value. Diseases associated with meat. 20. Value of milk and dairy products in the diet of the population. Epidemiological role of milk. Methods of disinfection and canning. Their hygienic characteristics. 21. Biological value of vegetable oils, the need for them. The nutritional value of margarine. Overheated fats. 22. Cereal products, their importance in nutrition. 23. Value of fruits and vegetables in the diet of the population. Methods of canning, their evaluation. 24. Canned food and concentrates, their nutritional value and importance in the nutrition of children. Food additives, their hygienic assessment. 25. Fish, nutritional and biological value. Diseases associated with fish. 26. Prevention of diseases associated with poor nutrition. Alimentary dystrophy, marasmus, beriberi. 27. Excess nutrition, its role in the formation of the cardiovascular and other 	<p>-theoretical</p>

pathologies.

28. Nutritional characteristics of children, pregnant women and the elderly.

29. Principles of hygienic evaluation of food. Food classification by origin, purpose and quality. Sanitary food examination.

30. Food toxic infections, causes, clinical features, preventive measures.

31. Bacterio-and mycotoxicosis. Causes, clinical features, preventive measures.

32. Food poisoning of non-microbial etiology (inedible fungi, poisonous and weeds, impurities of chemicals), preventive measures.

33. Doctor methods in diagnosing and investigating the causes of food poisoning. Documentation for the diagnosis of food poisoning.

34. Catering services in medical institutions. Hygienic requirements for nutrition as a therapeutic factor.

35. Kinds of professional activity of the person. Physiological reactions to the work performed. Burden and intensity of work. Fatigue, its types and prevention.

36. Factors of the production environment and their classification

37. Occupational hazards, their classification. Comprehensive assessment of working conditions.

38. Dust factor production environment, the classification of dust. Dust properties, determining its pathogenicity. Occupational diseases of dust etiology.

39. Noise and vibration, as harmful factors of the working environment. Effect on the body. Occupational diseases. Prevention measures.

40. Production microclimate. Acute and chronic effects of work in a heating and cooling microclimate. Prevention measures.

41. Production poisons. Classification, pathways, metabolic transformations in the body. Effect on the body.

42. General characteristics of the action of industrial poisons. Prevention of acute and chronic intoxication in the workplace.

43. The influence of low intensity factors on the levels of general non-specific morbidity of industrial workers

44. Hygienic characteristics of the labor of medical workers (surgical and therapeutic profile).

45. Occupational health in X-ray diagnostic rooms. Personnel radiation load.

46. Features of occupational hygiene in physiotherapy rooms and departments of laser therapy.

47. Methods for studying the incidence of workers. General incidence with temporary disability.

48. Preventive medical examinations. Main content of the law number 302 of the Ministry of Health of the Russian Federation. Occupational diseases, order of investigation of cases of acute and chronic occupational diseases.

49. Occupational health in oil and gas production. Features of the incidence.

50. Main directions of recreational activities in the workplace.

51. Hygienic basis of therapeutic and preventive nutrition and its importance in the prevention of occupational diseases.

52. Characteristics of the main types of ionizing radiation. Basic concepts and units of measure in radiation hygiene.

53. External exposure, the main biological laws. Principles of protection from external exposure.

54. Hygienic normalization of ionizing radiation.

55. Features of internal exposure. Basics of hygienic regulation of internal exposure.

56. Main sources of public exposure. Dose loads of the population due to cosmic radiation, radiation background of the earth, building materials, medical research.

57. Organization of water supply of settlements (water sources, water consumption norms).

58. Population diseases due to consumption of poor-quality water. Epidemiological significance of water.

59. Physiological and hygienic significance of water.
60. Hygienic requirements for drinking water.
61. Hygienic requirements for the organization of decentralized water supply.
62. Methods to improve water quality. Methods of drinking water disinfection.
63. Disease of the population associated with the use of poor quality water. Prevention of waterborne epidemics. Rationing qualitative composition, as one of the means of prevention.
64. Prevention of endemic diseases associated with the characteristics of microelement and salt composition of water. Rationing of the qualitative composition of water, as one of the means of preventing diseases.
65. Modern problems of water supply in populated areas. Sanitation and hygiene requirements for the organization of centralized water supply.
66. Sanitary protection of reservoirs. Its value in improving the human environment
67. Chemical composition of atmospheric air sources of pollution. Main directions of sanitary protection of atmospheric air.
68. Physical properties of atmospheric air. Complex effect on the body. Rationing microclimate.
69. Impact of weather conditions on health. Prevention of meteo-tropic diseases.
70. The use of natural climatic factors for health and medical purposes.
71. Solar radiation. Spectral characteristics. Biological effect on the body.
72. Acclimatization to the conditions of the north, desert, high mountains, high atmospheric pressure.
73. Specific sources of air pollution, their impact on the general sanitary conditions of life and public health. Main directions of air protection in cities
74. Hygienic significance of the soil, the composition and properties of the soil. The processes of soil self-cleaning.
75. Natural and man-made biogeochemical provinces. Endemic diseases and their prevention.
76. Characteristics and sources of anthropogenic pollution of the soil. Epidemiological soil significance.
77. Utility and disposal of municipal solid waste.
78. Main problems of hygiene of children and adolescents. Age of morphofunctional features of the child's body.
79. Health of children and adolescents. Evaluation criteria and health groups.
80. Physical development of children, as a health indicator. Somatometric and somatoscopic indicators. Assessment methods for child's physical development.
81. Socio-hygienic significance of the rate change age development. Acceleration.
82. Hygienic foundations of the daily routine, the main modalities of pre-pre-school, pre-school and school age children.
83. Hygiene training classes in school. Factors contributing to the development of fatigue, its prevention. Hygienic requirements for lesson organizations.
84. Occupational and industrial hygiene. Professional orientation, medical professional consultation, professional selection.
85. Hygienic foundations of physical education. Medical groups for physical training.
86. Hygienic requirements for the placement, planning, equipment of preschool institutions. Requirements for air-thermal regime, insolation, natural and artificial lighting.
87. Hygienic requirements for the placement, planning, equipment of school institutions.
88. Hygiene requirements for school furniture, textbooks and toys.
89. Hygienic requirements for the planning and improvement of the hospital land plot, hospital zoning
90. Hygienic requirements for the placement of hospitals and the layout of the hospital site. Hospital building systems.
91. Hygienic requirements for the admission department ward section as a functional

<p>basic unit of the hospital.</p> <p>92. Hygienic requirements for the planning of the ward section. Types of wards.</p> <p>93. Features of the layout and mode of operation of the therapeutic, obstetric and surgical departments. Events to create a protective regime.</p> <p>94. Features of the layout and mode of operation of the infectious disease ward. Measures aimed at preventing nosocomial infections.</p> <p>95. Elements of sanitary improvement of hospitals: heating, ventilation, water supply, sewerage. Sanitary rules for sewage disposal. Utility and disposal of hospital solid waste.</p> <p>96. Hygienic aspects of the prevention of nosocomial infections. Planning, sanitary and disinfection measures.</p> <p>97. Hygienic requirements for the placement, planning, equipment and organization of work of hospital kitchens. Types of medical control. Medical records.</p> <p>98. Patients nutrition as a part of complex therapy and disease prevention. The basic principles of diet food.</p> <p>99. Personal hygiene tasks. Body and skin hygiene, basic hygiene rules for oral care.</p> <p>100. Body hardening. The concept, value, basic principles (gradual, systematic, comprehensive)</p> <p>101. The social and hygienic importance of the prevention of bad habits.</p> <p>102. Therapeutic and prophylactic nutrition of workers in contact with harmful factors of the production process.</p> <p>103. Structure, activities and tasks of the sanitary-epidemiological service</p> <p>104. Hygienic requirements for modern homes. Research methods of air-thermal conditions of the premises.</p> <p>105. Research methods and assessment of the quality of drinking water in wartime.</p> <p>106. Features of the organization of water supply of troops in wartime.</p> <p>107. Protection of food and prepared food in conditions of use of weapons of mass destruction.</p> <p>108. Responsibilities of the medical service in the organization of water supply of personnel in wartime.</p> <p>109. Catering for troops in wartime.</p> <p>110. Hygienic examination of food when using weapons of mass destruction.</p> <p>111. Hygienic characteristics of the conditions of personnel in fortifications.</p> <p>112. Points of water supply and drainage. Appointment, device, sanitary and hygienic characteristics of personnel tools for the extraction and treatment of water</p> <p>113. Methods of disinfection of individual stocks of water, the characteristic of service means.</p> <p>114. Methods to improve the quality of drinking water in the field.</p> <p>115. Labor hygiene in the armored and motorized rifle troops.</p>	
<p>Case – studies:</p> <p>1. Using the methodological recommendations from "Standards of physiological needs for energy and nutrition", analyze the results and develop recommendations for the nutrition correction in the dispensary.</p> <p>2. Using the methodological recommendations from "Hygienic requirements for learning conditions in educational institutions": Analyze the submitted materials. Assess the completeness of the study. Make a list of measures to improve the organization of physical education and the prevention of hypokinesia in schools. Determine the measures of administrative penalties and indicate the procedure for bringing the perpetrators to legal responsibility.</p> <p>3. Using the methodological recommendations from "MPC of harmful substances in the air of the working area"; "Noise at workplaces, in residential, public buildings and on the territory of residential development"; "Guidelines for the hygienic assessment of the factors of the working environment and the labor process. Criteria and</p>	<p>- practical</p>

<p>classification of working conditions "; "Hygienic requirements for the microclimate of industrial premises"; "Hygienic requirements for hand tools and work organization": Give a hygienic assessment of the working conditions in this area. Draw up an order of an official authorized to carry out state sanitary and epidemiological supervision to eliminate the identified sanitary violations. Determine the measures of administrative penalties and indicate the procedure for bringing the perpetrators to legal responsibility.</p> <p>4. On the playground of the summer recreation camp for children and adolescents, located in the forest at a distance of 30 km from the city of B., a sanitary-chemical, helminthological and bacteriological study of the soil was carried out. Samples of 100 g were taken in different parts of the site from a depth of 10 cm and 2 cm (5 samples each). The total weight of the average sample is 1000g. Analysis results: total nitrogen content in 100 g of soil - 20 mg; the nitrogen content of humus - 18 mg; the total number of bacteria in 1 g of soil is 6800; coli bacillus titer - 7.6; titer of helminths – 500. Calculate the sanitary number. Give an opinion on the degree of soil pollution. Is this degree of pollution permissible on the territory of the pioneer camp?</p> <p>5. Machine-building plant, built in 1953. on the outskirts of S., is currently surrounded by residential buildings. Due to air pollution within a radius of 300-500m and complaints from residents of nearby houses about noise, it was decided to move the plant outside the city. On the former factory site, it was proposed to place one of the objects of social and domestic purposes, namely: a grocery store, a store of household goods or a kindergarten. In samples taken from the soil surface, the presence of MPC was found by 8-20 times. Which of the considered objects can be placed on such soil?</p>	
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METHODOLOGICAL GUIDELINES FOR LEARNING OUTCOMES ASSESSMENT

Stage: Formative assessment

Formative assessment is a regular checking of student academic progress during the academic term. It is performed in various oral and written forms (quizzes, essays, checking of home assignments, compilation of cases, self-study, colloquiums, and testing). During formative assessment, the teacher monitors the level of student's academic progress according to the curriculum identifying lack of knowledge, or misunderstanding.

The tasks of formative assessment are aligned with the Curriculum and Syllabus.

1. Guidelines for assessing the oral quiz:

In assessing the teacher takes into account:

- knowledge and understanding of the subject matter;
- activity during the class;
- consistency of presentation;
- argumentation of the answer, the level of independent thinking;
- ability to link theoretical and practical principles with future professional activity.

Assessment criteria:

The results are assessed in a four-grading scale: "excellent", "good", "satisfactory", "unsatisfactory".

Type of the task	Assessed competences	Assessment criteria	Grade
Oral quiz	GPC-2.2 GPC-2.3	The student demonstrates a comprehensive, systematic and in-depth knowledge of the academic material; has learned the required and additional resources. The student demonstrates a consistent and thorough understanding of the required knowledge, concepts, skills of the material learned, and their significance for future profession.	Excellent
	GPC-2.2 GPC-2.3	The student demonstrates a comprehensive knowledge of the academic material; has learned the required and additional resources. The student demonstrates a consistent understanding of the required knowledge, concepts, skills of the material learned, but makes minor errors.	Good
	GPC-2.2 GPC-2.3	The student demonstrates basic knowledge necessary for further study; has learned basic recommended literature. The student operates with inaccurate formulating, has difficulties in the independent answers, makes significant mistakes but is able to correct them under the guidance of a teacher.	Satisfactory
	GPC-2.2 GPC-2.3	The student does not know the obligatory minimum or demonstrates gaps in knowledge of the academic material, makes major mistakes or gives completely wrong answers.	Unsatisfactory

2. Guidelines for case-study assessment:

Assessment criteria:

The results are assessed in a four-grading scale: “excellent”, “good”, “satisfactory”, “unsatisfactory”.

Type of	Assessed competences	Assessment criteria	Grade
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the task			
Case - study	GPC-2.2 GPC-2.3	The student correctly and solves the case-study task, demonstrating deep knowledge. There are no errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained; ways are clearly described.	Excellent
		The student correctly solves the case-study task, demonstrating deep knowledge. There are minor errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described.	Good
		The student correctly solves the case-study task, demonstrating basic knowledge. There are significant errors in logical reasoning and solution. The student demonstrates difficulties, but still is able to solve a case-study task.	Satisfactory
	GPC-2.2 GPC-2.3	The student incorrectly solves the case-study task, makes significant mistakes. The student is not able to solve a case-study.	Unsatisfactory

3. Guidelines for test assessment.

Assessment criteria:

The results are assessed in a four-grading scale: “excellent”, “good”, “satisfactory”, “unsatisfactory”.

Type of the task	Assessed competences	Assessment criteria	Grade
Test	GPC-2.2	80 – 100%	Excellent
	GPC-2.3	66 – 80%	Good
		46 – 65%	Satisfactory
		Less Than 46%	Unsatisfactory

4. Guidelines for the assessment of business game:

Assessment of practical skills based on simulation or participation of third parties may include a demonstration of manipulation, response to the questions of the task;

- assessment of practical skills at the bedside may include a demonstration of detection and / or interpretation of signs, symptoms, methods of examination and treatment;

-the task may include a brief introduction, questions, and list of practical skills for demonstration (according to Curriculum).

In assessing the teacher takes into account:

- knowledge and understanding of the subject matter;
- ability to apply theoretical knowledge into practice;
- the level of formed practical skills;
- reasoning and response style;

Assessment criteria:

The results are assessed in a four-grading scale: “excellent”, “good”, “satisfactory”, “unsatisfactory”.

Type of the task	Assessed competences	Assessment criteria	Grade
<p>Business game</p>	<p>GPC-2.2 GPC-2.3</p>	<p>The student correctly demonstrates practical skills on the model with a deep knowledge of the material. There are no mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described.</p>	<p>Excellent</p>
		<p>The student demonstrates practical skills on the model with slight inaccuracies. There are insignificant mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described.</p>	<p>Good</p>
		<p>The student demonstrates practical skills on the model with inaccuracies. There are significant mistakes in the</p>	<p>Satisfactory</p>

		demonstration and the used technique. The indications and conditions used in this method are clearly described.	
	GPC-2.2 GPC-2.3	The student demonstrates practical skills on the model with significant mistakes. The indications and conditions used in this method are not described.	Unsatisfactory

Essay requirements:

1) Volume: 1500-300 words,

2) Content's structure:

- Introduction
 - prove the relevance of the chosen topic
 - point out the purpose of the essay
 - give a summary of the main points
- Body
 - use information obtained from different sources during the research
 - show inaccuracy of the opposite points of view
- Conclusion
- List of references

The essay assumes usage of several specialized sources (at least 8-10 publications, monographs, the reference media, manuals). Preference is given to the publications in specialized medical journal and monographs including foreign databases.

Assessment criteria:

The results are assessed in a four-grading scale: "excellent", "good", "satisfactory", "unsatisfactory".

Type of the task	Assessed competences	Assessment criteria	Grade
Essay	GPC-2.2	The requirements are fulfilled:	Excellent

	GPC-2.3	<ul style="list-style-type: none"> - the problem is formulated and its relevance is proved; - the various approaches to problem are presented; - conclusions are formulated; - the subject is thoroughly studied; - volume is observed; - design requirements are observed; - correct answers to additional questions are given. 	
	GPC-2.2 GPC-2.3	<p>The main is fulfilled with some mistakes:</p> <ul style="list-style-type: none"> - inaccuracies in material statement; - no logical sequence in judgments; - volume is not observed; - errors in design requirements; - incomplete answers are given to additional questions in the process of defense. 	Good
		<p>There are significant deviations from requirements:</p> <ul style="list-style-type: none"> - topic is only partially explored; - mistakes in contents of the paper; - mistakes in answers to additional questions; - no conclusion is given at the process of defense. 	Satisfactory
	GPC-2.2 GPC-2.3	<p>The essay is not prepared at all.</p> <p>The subject of the essay is not explored, significant misunderstanding of a topic.</p>	Unsatisfactory

Stage II: midterm assessment (Credit/ Mark)

Methodological guidelines for summative assessment (credit with a mark)

Credit with a mark is held in the oral form and includes several stages:

- Oral quiz (the card includes two questions);

- case-study task;

Requirements for the student:

- 1) regularly attend classes; the absence from classes is not allowed without good reason;
- 2) in case of absence from classes the student has to work out passed classes;
- 3) the student has to hand over written papers on time;
- 4) the student has successfully passed all colloquiums provided by the plan;
- 5) in case the student has been negatively assessed on the colloquium, he/she should try to pass it again;
- 6) during the test week the student has to hand over all the tasks.

The students are allowed to take examinations in case of all the tests passed and no academic debts (on the basis of the academic records).

The students are not allowed to take examination:

- with unpassed tests on the discipline;
- with missed classes, debts on the discipline;
- with 5 (five) and more debts for the previous term;
- with one debt for earlier terms for more than a year.

Recommendations for the credit with a mark assessment:

Type of the task	Assessed competences	Assessment criteria	Grade
Oral quiz	GPC-2.2 GPC-2.3	The student demonstrates comprehensive, systematic and profound knowledge of the subject, can independently perform the tasks provided by the program; who has a good knowledge of the main literature and familiar with the additional literature recommended by the program; demonstrates creative abilities in understanding, statement and use of material of the studied discipline, faultlessly	Excellent

		answers not only questions of the card, but also additional questions within the main program, correctly performs a practical task.	
	GPC-2.2 GPC-2.3	The student has good knowledge of material of the studied discipline; can successfully perform the tasks provided by the program; has a good knowledge of the main literature recommended by the program; answers all questions of the card, correctly performs a practical task, but makes some mistakes.	Good
	GPC-2.2 GPC-2.3	The student demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar with the main recommended literature; makes mistakes when performing examination tasks, but has necessary knowledge for their elimination under the supervision of the teacher.	Satisfactory
	GPC-2.2 GPC-2.3	The student demonstrates poor knowledge of the material, makes significant mistakes in performance of the tasks provided by the program.	Unsatisfactory
Case - study	GPC-2.2 GPC-2.3	The student correctly and fully solves the case-study task, demonstrating deep knowledge. There are no errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained; ways are clearly described.	Excellent

	GPC-2.2 GPC-2.3	The student correctly solves the case-study task, demonstrating deep knowledge. There are minor errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described.	Good
	GPC-2.2 GPC-2.3	The student correctly solves the case-study task, demonstrating basic knowledge. There are significant errors in logical reasoning and solution. The student demonstrates difficulties, but still is able to solve a case-study task.	Satisfactory
	GPC-2.2 GPC-2.3	The student incorrectly solves the case-study task, makes significant mistakes answering most of the questions of the case-study. The student is not able to solve a case-study.	Unsatisfactory

Chart of the credit with a mark grade assessment:

Tasks	Assessed competences	Grade	Score
Theoretical point № 1 (Oral answer)	GPC-2.2 GPC-2.3	Excellent	5
		Good	4
		Satisfactory	3
		Unsatisfactory	2
Theoretical point № 2 (Oral answer)	GPC-2.2 GPC-2.3	Excellent	5
		Good	4
		Satisfactory	3
		Unsatisfactory	2
Practical task (case studies)	GPC-2.2 GPC-2.3	Excellent	5
		Good	4
		Satisfactory	3
		Unsatisfactory	2

Total	GPC-2.2	Excellent	15-13
	GPC-2.3	Good	12-10
		Satisfactory	9-6
		Unsatisfactory	5-0