

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION,  
 MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC

Government-run Educational Institution of Higher Professional  
 Education  
 Kyrgyz-Russian Slavic University



## Hygiene

### Course Outline (Module)

Assigned to Academic Curriculum **Hygiene Department**  
 31050150\_18\_131d.pli.xml  
 31.05.01. General medicine

Mode of study **Intramural**  
 Total Credit Value **7 credit points**

Course Hours  
 including:  
 in-class learning  
 Individual work

Scope of Testing Semesters:  
 exams 7  
 credits 6

Course Hours Scheduling (per semester)

Semester Academic Year	6 (3.2)		7 (4.1)		Total	
	18,3		17			
Type of training	AC	CO	AC	CO	AC	CO
Lectures	36	36	18	18	54	54
Practical session	90	90	18	18	108	108
Including Interactive Session	5	5	2	2	7	7
Total In- class Session	12	126	36	36	162	162
Face-to-face Learning	12	126	36	36	162	162
Individual Work	54	54	18	18	72	72
Individual work assement			18	18	18	18
Total	18	180	72	72	252	252

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The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

16.11 2016

The course outline has been revised, considered and endorsed for implementation in 2016-2017 Academic year at the Staff Meeting of Hygiene Department

Record of 5.10 2016, № 3 

Head of the Department cand. med. sci., docent Borsokbaeva S.S.

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The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

16.11, 2017

The course outline has been revised, considered and endorsed for implementation in 2017-2018 Academic year at the Staff Meeting of Hygiene Department

Record of 25.11 2017, № 4 

Head of the Department cand. med. sci., docent Borsokbaeva S.S.

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The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

09.11 2018, № 4 The course outline has been revised, considered and endorsed for implementation in 2018-2019 Academic year at the Staff Meeting of Hygiene Department

Record of 26.11 2018, № 4 

Head of the Department cand. med. sci., docent Borsokbaeva S.S.

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The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

04.09 2019

The course outline has been revised, considered and endorsed for implementation in 2018-2019 Academic year at the Staff Meeting of Hygiene Department


№ 1



Recod of 290/ 2019,  
Head of the Department cand. med. SCI., docent Borsokbaeva S.S.

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. The course outline endorsed for the following academic year Chairman  
of the Educational and Methodological Board

04 09 2020 

The course outline has been revised, considered and endorsed for implementation in 2016-2017 Academic year at the Staff Meeting of Hygiene Department

Recod of 21 09 2020, N!  
Head of the Department cand. med. sci., docent Borsokbaeva S.S.



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The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

04 09 2021

The course outline has been revised, considered and endorsed for implementation 2017-2018 Academic year at the Staff Meeting of Hygiene Department

Recod of 09 2021, Nea  
Head of the Department cand. med. sci., docent Borsokbaeva S.S.



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The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

                     2022

The course outline has been revised, considered and endorsed for implementation in 2018-2019 Academic year at the Staff Meeting of Hygiene Department

Recod of                      2022, №  
Head of the Department cand. med. sci., docent Borsokbaeva S.S.

### 1. COURSE OuTLINE OBJECTIVES

1.1	<p>1.To learning the theoretical foundations of hygiene in order to develop preventive thinking, embrace more in-depth diagnosis of infectious and non-infectious diseases, relevant pathogenetic therapy, general questions of environmental impact on health, work capacity and longevity.</p> <p>2. To master the methodology of preventive medicine, acquire knowledge and skills of assessing the impact of environmental factors on human health. To use , for preventing chronic diseases, potnrnal of dietary and lifestyle factors.</p>
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### 2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM

Educational Program Units:	B1.B
<b>2.1 Students' preliminary Training Requirements:</b>	
2.1.1	Humanitarian, social and economic cycle (history of medicine), the natural science cycle, clinical disciplines.
2.1.2	Hygiene
2.1.3	Biochemistry
<b>2.2 Course Units and Practical Sessions imposing the prior Proficiency:</b>	
2.2.1	Basic knowledge of biology, chemistry, physics, physiology and biochemistry.

### 3. STUDENTS' COMPETENCIES RESULTING FROM THE COURSE UNIT (MODULE)

<b>PK-4: the ability and readiness to use socio-hygienic methods of data collection and biomedical statistical analysis of population health indices</b>	
<b>Knowledge:</b>	
Level 1	The basics of the legislation of the Russian Federation and the Kyrgyz Republic on health protection of the population
Level 2	The main regulatory documents on environmental protection (hygiene of air, water, soil))
Level 3	Population health indices, factors contributing to the formation of human health (occupational, natural-climatic, endemic, social)
<b>Skills:</b>	
Level 1	To implement measures preventing the adverse impact of environmental factors on the human body, to forecast consequences of environmental factors on the human body
Level 2	To conduct hygienic assessment of environmental conditions for patients staying in hospital, to assess occupational hygiene of workers in industrial enterprises, occupational hygiene of medical workers, military personnel, and learning environment of children
Level 3	To assess nutritional status of the population on the basis of rational nutrition requirements and to correct individual nutrition, to prevent digestive system diseases
<b>Expertise:</b>	
Levl 1	Modern methods for assessing public health by the socio-hygienic monitoring method.
Level 2	Interpretation of environmental laboratory data and instrumental analysis results.
level 3	Health education activities targeted at the population in the area of primary disease prevention
<b>PK-15: readiness to educate patients and their relatives about the main hygienic measures to keep good general health</b>	

<b>condition, self-control of the main physiological indices contributing to the preservation and promotion of health and disease prevention</b>	
<b>Knowledge:</b>	
Level 1	Basic hygienic measures for population health promotion
Level 2	Impacts of environmental abiotic factors on human health (solar radiation, temperature, humidity, air velocity, atmospheric gas composition, natural and artificial lighting)
Level 3	Basics of rational nutrition, work and rest regime, prevention of fatigue, demands of personal and public hygiene

<b>Skills:</b>	
Level 1	To use hygienic measures aimed at health promotion
Level 2	To identify cause-and –effect relationships between exposure to environmental factors and health condition
Level 3	To conduct education of patients and relatives about the main health enhancing hygienic measures (considering daily energy expenditures, drawing up of a dietary regime, rest and work regime, considering weather related health )
<b>Expertise:</b>	
Level 1	Theoretical knowledge of all branches of hygiene
Level 2	Practical skills at primary prevention of occupational disease and poisoning, work-related injuries
Level 3	Methods of prevention of cardiovascular diseases, cancer, digestive disorders, weather related diseases, improvement of body resistance, prevention of hypovitaminosis, microelementosis

### Final Students' Competences

<b>3.1</b>	<b>Knowledge:</b>
3.1.1	The basics of the legislation of the Russian Federation and the Kyrgyz Republic, the main normative documents on environmental protection, occupational hygiene, hospital hygiene, hygiene of children and adolescents, military hygiene, nutrition hygiene, prevention of hospital infection
3.1.2	Principles of organizing environmentally related disease prevention measures, morbidity prediction by environmental the relationship between an increase in population morbidity and harmful environmental conditions, occupational hazards, noncompliance with personal and public hygiene rules, dietary deficiency.
<b>3.2</b>	<b>Skills:</b>
3.2.1	To conduct hygienically oriented measures to reduce morbidity, to keep up good health, work ability and longevity. To promote and instill self-control skills in the main physiological parameters related to hygienic non-compliance. To conduct socio-hygienic monitoring and medico-statistical analysis of morbidity, longevity in communities
<b>3.3</b>	<b>Expertise:</b>
3.3.1	Skills of defining adverse environmental factors including climate and weather which contribute to seasonal rise in morbidity. Rational nutrition for prevention of obesity herosclerosis, caries, etc. Analysis and correction of individual nutrition, creation comofotable conditions for medical personnel and patients staying in a hospital with due account for tempetature, humidity, microbial contamination of the atmospheric environment in hospital wards, offices, main and auxiliary rooms, prevention of hospital infection.

**4. COURSE (MODULE) STRUCTURE AND CONTENT**

Class code	Subject Name /Type of Class/	Semester / Academic Year	Hours	Competencies	Literature	Interactive Sessions	Notes
	<b>Unit 1. Hygiene of children and adolescents</b>						
1.1	Hygiene of children and adolescents. Impact of environmental conditions on of children's and adolescent's healths/Lec/	6	2			0	
1.2	Methods for assessing health status, and physical growth parameters in children and adolescents /Pr/	6	5	PK-4 PK-15	L1.1 L2.3 L3.2	0	Methodical guidelines of the department. Visual aids
1.3	Methods for standardization of physical development of children and adolescents /SIW/ (students individual work)	6	3	PK-4 PK-15	L1.1 L2.3 L2.2 L3.2	0	Standards of children's physical development
1.4	Hygienic requirements to learning environment, prevention of fatigue and over fatigue of school-children /Lec/	6	2	PK-4 PK-15	L1.1 L2.3 L3.2	0	Creating a presentation using MS PowerPoint
1.5	Hygienic assessment of the learning process, of organization of class schedules /Pr/	6	5	PK-4 PK-15	L1.1 L2.3 L3.2	0	Methodical guidelines, norms, documents
1.6	Hygienic requirements to school furniture and equipment /SIW/	6	3	PK-4 PK-15	L1.1 L2.3 L3.2	0	Normative documents
1.7	Hygienic assessment of nutrition, physical training of children and adolescents /Lec/	6	2	PK-4 PK-15	L1.1 L2.3 L3.2	0	Creating presentations using PowerPoint
1.8	Hygienic requirements to children's preschool facilities. Organizing daily regimen /Pr/	6	5	PK-4 PK-15	L1.1 L2.3 L3.1 L3.2	0	Methodical guidelines
1.9	Hygienic requirements to the general and site planning of children's preschool facilities, play- and sports grounds /SIW/	6	3			0	
1.10	Organization of nutrition for children and adolescents and physical training classes in preschool educational establishments and schools /Pr/	6	5	PK-4 PK-15	L1.1 L2.3 L3.2	0	Methodical guidelines, norms, documents
1.11	Personal hygiene for children and adolescents /SIW/	6	3	PK-4 PK-15	L1.1 L2.3 L3.2	0	Methodical guidelines
1.12	Hygiene of labour education, learning and vocational training of school-children /Lec/	6	2	PK-4 PK-15	L1.1 L2.3 L3.2	0	Presentations
1.13	Hygienic assessment of children's readiness at school, school learning maturity and occupational guidance /Pr/	6	5	PK-4 PK-15	L1.1 L2.2 L3.2	0	Methodical guidelines
	<b>Unit 2. Hygiene of hospitals</b>						
2.1	Hygienic requirements to the layout design, planning and equipment/outfitting of hospital facilities /Lec/	6	2	PK-4 PK-15	L1.1 L2.2 L3.3	0	Normative documents (Sanitary Rules)
2.2	Hygiene basics of control of medical protective regime and sanitary-maintenance of hospital hygiene /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L2.2 L2.3 L3.2	0	Creating presentations using PowerPoint
2.3	Sanitary-hygienic requirements to the site, water-supply, sewerage drainage system of hospitals /Pr/	6	5	PK-4 PK-15	L1.1 L2.2 L3.3	0	Methodical guidelines, Instructional materials

2.4	Hygienic assessment of health standarts for the hospital stay of patients /SIW/	6	3	PK-4 PK- 15	L1.1 L2.2 L3.3	0	Normal docur
2.5	Hygienic requirements to the somatic (therapeutic), surgical, children's maternity department /Lec/	6	2	PK-4 PK- 15	L1.1 L2.2 L3.3	0	Presen
2.6	Hygienic requirements to the territory, microclimate, natural and artificial lighting, ventilation, interior decor in hospital departments. Examination of hospital departments and making up a protocol on its results: an exercise in Bishkek city hospitals. Interactive sesion /Pr/	6	5	PK-4 PK- 15	L1.1 L2.2 L3.3	5	Exami protoco
2.7	Hygienic requirements to water supply and sewerage system, utilization of medical waste /SIW/	6	3	PK-4 PK- 15	L1.1 L2.2 L3.3	0	Instruc

2.8	Hygienic requirements to specialized medical facilities /Lec/	6	2	PK-4 PK-15	L1.1 L2.2 L3.3	0	Creating a presentation using MS PowerPoint
2.9	Hygienic control of quality, planning, equipment and the sanitary-hygienic regime of the hospital kitchen /Pr/	6	5	PK-4 PK-15	L1.1 L2.2 L3.3	0	Methodical guide of the department
2.10	Organization of personal hygiene and health condition control for hospital kitchen workers /SIW/	6	3	PK-4 PK-15	L1.1 L2.2 L3.3	0	Instructions, requirements, SanRules&Norms
<b>Unit 3. 3. Occupational hygiene of medical personnel</b>							
3.1	Occupational hygiene of medical personnel and auxiliary health personnel in hospitals /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L3.3	0	Creating a presentation using MS PowerPoint
3.2	Organization of health medical control for children and adolescents in children's preschool institutions and schools / SIW/	6	3	PK-4 PK-15	L1.1 L2.2 L3.1 L3.2	0	Methodical works of the staff
3.3	Working conditions and safety of medical personnel in infectious diseases and antituberculosis facilities /Pr/	6	5	PK-4 PK-15	L1.1 L2.1 L3.3	0	Methodical guide
3.4	Personal hygiene of medical personnel in infectious diseases and antituberculosis facilities	6	3	PK-4 PK-15	L1.1 L2.1 L3.3	0	
3.5	Working conditions and work safety of medical personnel in hospital radiological departments and X-Ray rooms /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L3.3	0	Creating a presentation using MS PowerPoint
3.6	Work and rest regime, personal hygiene of X-ray technicians and radiologists /Pr/	6	5	PK-4 PK-15	L1.1 L2.1 L3.3	0	Methodical guide, normative documents
3.7	Occupational diseases of X-ray technicians and radiologists, preventive measures /SIW/	6	3	PK-4 PK-15	L1.1 L2.1 L3.3	0	Methodical works and textbooks of the staff
3.8	Specifics of work and health hazards of medical personnel /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L3.3	0	Creating a presentation using MS PowerPoint
3.9	Occupational hygiene of obstetrician-gynaecologists, surgeons, anaesthesiologists, work in pressure chambers and physiotherapeutic rooms /Pr/	6	5	PK-4 PK-15	L1.1 L2.1 L3.3	0	Methodical guide
3.10	Personal hygiene, nutrition of medical workers /SIW/	6	3	PK-4 PK-15	L1.1 L2.1 L3.3	0	
3.11	Test on module 1 including units 1, 2, 3 /Pr/	6	5	PK-4 PK-15	L1.1 L2.1 L3.3	0	
<b>Division 4. 4. Occupational hygiene and physiology</b>							
4.1	Fundamentals of occupational hygiene and physiology /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L3.5	0	Creating a presentation using MS PowerPoint
4.2	Methods of hygienic assessment of dangerous and hazardous occupational factors /Pr/	6	5	PK-4 PK-15	L1.1 L2.1 L3.5	0	Methodical guide. visual aids

4.3	Physiologic responses in the body of workers under the work process /SIW/	6	3	PK-4 PK-15	L1.1 L2.1 L3.5	0	Research papers of the department
4.4	The main occupational hazards, occupational safety of workers in different industries /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L3.5	0	Creating a presentation using MS PowerPoint
4.5	Occupational hygiene and occupational diseases related to the impact of dust, vibration, noise and laser radiation /Pr/	6	5	PK-4	L1.1 L2.1 L3.5	0	Methodical guide
4.6	Occupational selection in enterprises with harmful labour conditions /SIW/	6	3	PK-4 PK-15	L1.1 L2.1 L3.5	0	
4.7	Prevention of occupational diseases, poisonings and occupational injuries /Lec/	6	2	PK-4 PK-15	L1.1 L2.1 L3.5	0	Creating a presentation using MS PowerPoint
4.8	Labor protection of workers with harmful working conditions (legislative and social aspects) /SIW/	6	3	PK-4 PK-15	L1.1 L2.1 L3.5	0	Instructions
4.9	Industrial poisons, health effects of lead and mercury exposure on workers	6	5	PK-4 PK-15	L1.1 L1.2 L2.1 L3.5	0	Methodical guide, visual aids
<b>Division 5.5. Military hygiene</b>							
5.1	The basics of the organization of sanitary-hygienic measures in troops. The main occupational hazards /lec/	6	2	PK-4 PK-15	L1.2 L2.4 L3.2	0	Creating a presentation using MS PowerPoint
5.2	Troop placement in barracks and in the field /Pr/	6	5	PK-4 PK-15	L1.2 L2.4 L3.2	0	
5.3	Specifics of the field troop placement /SIW/	6	3		L1.2 L2.4 L3.2	0	
5.4	Occupational hygiene in the main branches of the Armed Forces /Lec/	6	2	PK-4 PK-15	L1.2 L2.4 L3.2	0	Creating a presentation using MS PowerPoint
5.5	Water supply of troops in the field /Pr/	6	5	PK-4 PK-15	L1.2 L2.4 L3.2	0	
5.6	Purification and decontamination of water in the field /SIW/	6	3	PK-4 PK-15	L1.2 L2.4 L3.2	0	
5.7	Medical and sanitary-hygienic service of the military /Lec/	6	2	PK-4 PK-15	L1.2 L2.4 L3.2	0	Creating a presentation using MS PowerPoint
5.8	Occupational diseases and their prevention /SIW/	6	3	PK-4 PK-15	L1.2 L2.4 L3.2	0	
5.9	Military nutrition in the field types of military rations /Lec/	6	2	PK-4 PK-15	L1.2 L2.4 L3.2	0	Creating a presentation using MS PowerPoint
5.10	Military nutrition of military personnel in the Russian Federation and the Kyrgyz Republic /SIW/	6	3	PK-4 PK-15	L1.2 L2.4 L3.2	0	
5.11	Summing up session /Pr/	6	5		L1.1 L2.4 L3.2	0	
<b>Unit 6.6. Hygiene of atmospheric air, water, soil</b>							
6.1	Introduction. Hygiene of the environment /Lec/	7	2	PK-4 PK-15	L1.1 L2.2 L3.3	0	
6.2	Methods of hygienic assessment of natural and artificial lighting of residential buildings and hospital facilities /Pr/	7	2	PK-4 PK-15	L1.1 L2.2 L3.3	0	Methodical guide, instruments

6.3	Recommended levels of natural and artificial lighting norms /SIW/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	instruments
6.4	Solar radiation, health effects /Lec/	7	2	PK-4 PK-15	L1.1 L3.2	0	Creating a presentation using MS PowerPoint
6.5	Hygienic assessment of indoor air temperature, humidity /Pr/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Methodical guide, instruments
6.6	Insolation regimes /SIW/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Instruments
6.7	Weather, climate and microclimate, acclimatization processes /Lec/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Creating a presentation using MS PowerPoint
6.8	Hygienic assessment of air movement velocity and atmospheric air pressure levels. Methods for assessing air microbial contamination /Pr/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Methodical guide, instruments
6.9	Hygienic assessment of the direction of troop movement, wind rose /SIW/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Research papers of the department
6.10	Hygienic requirements to drinking water quality of a centralized and decentralized system /Lec/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Creating a presentation using MS PowerPoint
6.11	Methods of ameliorating drinking water quality /Pr/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Methodical guide. visual aids
6.12	Special methods of water treatment /SIW/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Methodical guides and teaching
6.13	Hygiene of soil. Removal of solid and liquid waste in communities /Lec/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Creating a presentation using MS PowerPoint
6.14	Sewerage systems, sewage disposal fields and burying fields. Classification of soil by degree of contamination /Pr/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Methodical guide
6.15	Solid waste utilization /SIW/	7	2	PK-4 PK-15	L1.1 L2.2 L3.2	0	Research and methodical papers of the department
6.16	Sources of environmental pollution. Impact on human health /Lec/	7	2	PK-4 PK-15	L1.1 L2.1 L3.2	0	Creating a presentation using MS PowerPoint
6.17	Global issues of water area pollution and water hunger /SIW/	7	2	PK-4 PK-15	L1.1 L2.1 L3.2	0	
<b>Unit 7. 7. Nutritional hygiene</b>							
7.1	Nutritional hygiene, physiologic norms and dietary status of different population groups /Lec/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	Creating a presentation using MS PowerPoint
7.2	Hygienic control of nutrition adequacy and quality. Role of the main nutrients /Pr/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	Methodical works of the department

7.3	Prevention of hypovitaminoses and microelementoses /SIW/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	Reference materials (methodical works of the department)
7.4	Nutritional, biologic, energy value and chemical composition of the main foods /Lec/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	Creating a presentation using MS PowerPoint
7.5	Hygienic assessment of an individual student's daily diet. Drawing up a protocol and dietary correction (interactive work) /Pr/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	2	Food chemical composition tables, teaching materials of the department
7.6	Food poisonings and their prevention /SIW/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	
7.7	Food contamination by xenobiotics. Genetically modified foods, human health /Lec/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	Creating a presentation using MS PowerPoint
7.8	Prevention of diseases through nutrition /Pr/	7	2	PK-15 PK-4	L1.1 L2.3 L3.4	0	Methodical guide and research papers department
7.9	Medical nutrition /SIW/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	
7.10	Hygiene overview session /Pr/	7	2	PK-4 PK-15	L1.1 L2.3 L3.4	0	

### 5.1. Advancement Questions and Assignments

#### Examination questions

#### To check students' competence

#### Knowledge:

- Hygiene as a subject, its goals, tasks and methods
- The history and the key stages of hygiene, its founders
- Environmental factors and their effect on the population health
- Solar radiation, types of radiation, impact on population health
- Light climate, biologic effect of solar radiation on the human body
- UV radiation, its types and health effects
- Infrared radiation, its type and health effects
- Visible rays, their types and impact on human health
- The structure of atmosphere. Physical properties of the air (humidity, velocity, temperature)
- Decreased and increased atmospheric pressure depending on the terrain elevation and air temperature
- Notion of microclimate, its types, effect of discomfort microclimate on human health
- Weather, medical classification of weather types, meteotropic diseases
- Definitions of climate, climate-forming factors
- Meteotropic diseases, their types and prevention
- Problems of human adaptation and acclimatization to different climatic conditions
- Anthropogenic and technological pollution of atmospheric air of residential areas
- Methods of purification of atmospheric emissions
- The main ecological problems related to atmospheric air pollution.
- Types of water-bodies and water-sources, water-supply systems
- Surface waters and their hygienic assessment
- Ground waters, their hygienic characteristics and potential for drinking water uses
- Underground water-sources, hygienic assessment
- Natural physico-chemical composition of water
- Hygienic role and significance of water, water consumption norms with sewerage system availability and without it
- Physiologic significance of water
- Epidemiologic significance of water

27. Coagulation of water
28. Special methods for improvement of drinking water quality
29. Impact of hard water on human health
30. Global problems related to water –supply to the population
31. Types, composition and properties of soil, its hygienic significance, self-purification processes
32. Sources of anthropogenic pollution of soil
33. Significance of soil in the spread of infectious diseases
34. The role and tasks of nutrition in health promotion and preservation in modern conditions
35. Nutrition as an environmental factor, effect on population health
36. Rational health definition
37. Physiologic nutritional norms for different occupational groups of population
38. Significance and norms of animal protein consumption in a daily diet
39. Essential amino-acids, their physiologic significance
40. Significance and norms of carbohydrate consumption in a daily diet, their energy value
41. Simple and complex carbohydrates, their sources and composition
42. Animal and plant fats, their energetic and biological value
43. Vitamins, their classification, sources and causes of hypo- and hyper-vitaminoses
44. Water-soluble vitamins, consumption norms and significance in human vital activity
45. Fat-soluble vitamins, consumption norms and significance in human vital activity
46. Vitamin-like substances, their physiologic significance
47. Types and significance of microelements in human nutrition, microelementoses, their causes and prevention
48. Nutrition deficiency related diseases (cachexia, kwashiorkor and alimentary marasmus)
49. Alimentary dystrophy, its causes and prevention
50. Diseases of hypernutrition and signs (of obesity, atherosclerosis, diabetes mellitus, cholelithiasis and nephrolithiasis)
51. Vegetables and fruits, their role and significance in human nutrition
52. Food quality and safety (contamination with pesticides, antibiotics, etc.)
53. Gene engineered foods (GMO) and effects of their consumption
54. Morphological and functional specific features of children's development at different age periods
55. Physical development as health criteria, methods of assessment of physical development parameters of children and adolescents
56. The main indices of physical development of children and adolescents
57. Acceleration, modern notions of its causes
58. Hygienic requirements to the design of hospital facilities
59. Hygienic requirements to the site of health care facilities, orientation of buildings and rooms of health-care facilities in accordance with SanPiN (sanitary rules and norms) 2.1.3.003-03
60. Hygienic requirements to the interior planning, equipment and outfitting of the main and auxiliary premises of health care facilities
61. Hygienic requirements to water-supply, sewerage system, heating system of health care facilities
62. Hygienic requirements to lighting, ventilation, microclimate of the main and auxiliary areas of health care facilities
63. Hygienic measures to prevent fatigue and over-fatigue (overstrain)
64. The subject and goals of occupational hygiene and physiology
65. Basics of occupational physiology. Changes taking place in human physiology during work activity
66. Hygienic assessment of work intensity, tension and energy expenditures
67. Hygienic assessment of workers' labor in different climatic conditions
68. Hazardous and harmful physical, chemical, biological, psycho-physiologic occupational factors
69. Notion of occupational hazards, occupational diseases, occupational poisonings and occupational injuries
70. Types of dust, its classification, physicochemical properties and composition
71. Hazardous and harmful physical, chemical, biological, psycho-physiologic occupational factors
72. Notion of occupational hazards, occupational diseases, occupational poisonings and occupational injuries
73. Types of dust, its classification, physicochemical properties and composition
74. Specific and nonspecific diseases related to dust exposure, their consequences and prevention
75. Occupational noise, noise disease and its prevention
76. Occupational vibration, effect on health and its prevention
77. Intoxication with lead, preventive measures
78. Intoxication with mercury, preventive measures
79. Occupational hygiene in the hot shops and at work-sites of heat-power facilities
80. General features of the effect of industrial chemicals on the human body
81. Occupational hygiene in the open air, prevention of work-related trauma and pustular diseases of the skin
82. Occupational hygiene in ore and coal-mining industry
83. Occupational hygiene of laser facilities
84. Occupational hygiene in agriculture (arable farming, crop farming, livestock-breeding). Occupational hygiene and safe use of chemical pesticides and mineral fertilizers
87. Occupational hygiene and hazards in the service sector
88. The content and goals of military hygiene
89. Hygienic requirements to stationary quartering of military personnel in barracks
90. Placement of troops in the field conditions
91. Temporary placement of troops at field exercises

92. Hygienic requirements to placement of troops in tents, dugouts and open fortified structures (trenches)
93. Hygienic assessment of troops, placement of in semi-closed (recessed shelters), closed (refuge) fortified structures (blindage huts, barracks) and other underground structures
94. Occupational hygiene of tankers
95. Occupational hygiene in radar stations
96. Biologic effects of the microwave field of radar stations
97. Occupational hygiene in missile troops
98. Occupation hygiene in artillery
99. Occupational hygiene of military aviators
100. Occupational hygiene in mechanized troops

**Questions to check students' competence:**

**Skills**

1. Determine microclimate, its types, effect of thermal discomfort on human health
2. Definition and medical classification of weather types, impact on human health
3. Determine climatic features and climatic regions on the territory of Kyrgyzstan and Russia
4. Determine the impact of hot weather on human health, measures to prevent body overheating
5. Determine the impact of cold climate on human health, prevention of overcooling and related diseases
6. Determine the impact of high altitude on human health, measures to prevent negative consequences
7. Sources of atmospheric air pollution, health effects, morbidity prevention
8. The main ecological problems related to atmospheric air pollution
9. Determine the possibility of using drinking water by organoleptic parameters of drinking water quality
10. Determine the possibility of using water for water supply of the population by chemical parameters of drinking water quality
11. Determine the possibility of using water for drinking water supply by microbiological parameters of drinking water quality
12. Determine the consequences of non-observance of sanitary protection zones for water sources (a possibility of intentional chemical, microbial contamination)
13. Determine physical and chemical methods of purification and decontamination of drinking water
14. Determine types of water hardness and methods to remove it.
15. Determine diseases related to deficiency of microelements in drinking water
16. Determine diseases related to consumption of poor quality water
17. To assess rural community purification systems and implement educational program for the population on purification, disposal of solid and liquid waste.
18. Assess systems for sanitary cleaning of cities, collection, removal, utilization and treatment of solid waste.
19. Assess the significance of the local and general sewerage system, its arrangement/construction and methods of sewage treatment
20. Educate patients on hygienic principles of healthy life-style.
21. Determine consequences of socially bad habits and their impact on the health of the population, conduct prevention activities among the population.
22. Use basic mental hygiene knowledge to keep you, patients and people near you healthy.
23. Conduct hypodynamia prevention activities and use hygienic methods to fight its consequences
24. Organize a daily regime based on the importance of physical exercise for keeping good health, active and passive rest/recreation and sleep in order to strengthen hygienic skills of the population
25. Redesign your daily routine for an optimal work-life balance a basis for healthy lifestyle and disease prevention.
26. Determine food poisonings of microbial etiology, their types and symptoms
27. Determine non-microbial food poisonings, their types and symptoms
28. Determine poisonous mushrooms and consequences of their consumption
29. Determine poisonings caused by toxins of microscopic fungi (fusariosis, mycotoxicosis, alimentary toxic aleukia)
30. Provide medical aid to victims and participate in the investigation and prevention of food poisonings
31. Determine criteria for dividing children and adolescents into health groups
32. Use basics of hygienic education pre-school aged children in your activity in order to teach in the younger generation personal and public hygiene skills.
33. Use basic elements of the daily hygienic regime, for the prevention of fatigue of schoolchildren, educate parents and keep up and strengthen health of children and adolescents.
34. Conduct hygienic assessment of the learning activities at school
35. Determine school maturity and to conduct vocational guidance of adolescents
36. Use basic hygienic elements for physical education and in your educational activities.
37. Assess requirements to the siting and design of preschool and school establishments from the hygienic point of view.
38. Assess air and temperature conditions, insolation, illumination in children's preschool establishments, their conformance to hygienic requirements
39. Determine preventive and current sanitary control of the siting and exploitation of hospitals
40. Organize and maintain hygienic and infection control regime in polyclinics and non-specialized hospitals (departments, wards, etc.)

41. Use hygienic assessment of work capacity and adaptation to professional activity
42. Use hygienic requirements regarding mental and physical labor in order to prevent overstraining and fatigue
43. Use the main principles of conducting health-improvement measures at work place
44. Perform the control regarding the use of individual and collective protection equipment in order to prevent occupational diseases of workers of industrial enterprises
45. Organize balanced nutrition of industrial workers (5 diets)
46. Assess the main diseases of military personnel staying in open and closed fortification structures, their prevention

#### **Questions to check students' competence**

##### **Expertise**

1. Primary prevention of diseases
2. Secondary prevention of diseases
3. Tertiary prevention of diseases
4. The main ecological issues related to atmospheric air pollution
5. Methods of prevention of respiratory diseases system related to atmospheric air pollution
6. Types and methods of drinking water chlorination
7. The use of mineral waters, their effect on human health
8. Methods of prevention of endemic diseases in geochemical provinces (iodine deficiency, iron deficiency, fluorine deficiency, etc)
9. Hygienic requirements to the design/planning of settlements, the significance of city-forming factors and the structure of a modern city
10. Hygienic assessment of noise, electromagnetic radiation, their impact on the health of residents of large cities, measures to prevent negative effects
11. Hygienic assessment of building and finishing materials
12. Assessment of a system of sanitary cleaning of cities, collection, disposal, utilization and decontamination of solid waste, sorting of solid waste
13. Assessment, analysis, statistical processing of health indices of the population of modern cities
14. The main sources of urban atmospheric air pollution, impact on health, preventive measures
15. Collection, decontamination and utilization of wastewater/sewage and solid domestic waste by different methods
16. Hygiene of rural dwellings, liquid and solid waste disposal
17. Soil protection measures
18. Dental and oral hygiene skills
19. Rules of personal and public hygiene
20. Hygienic requirements to clothes and shoes
21. Techniques of hardening by air, water and sun.
22. Prevention of ultraviolet deficiency
23. Hygienic assessment of synthetic detergents and household chemicals, prevention of their harmful effects
24. Individual assessment of rational nutrition, calculation of daily energy expenditure
25. Methods for the assessment of adequate nutrition
26. Hygienic basic elements of balanced nutrition
27. Determination/definition of /adequate nutrition, method of assessment
28. Organizing rational nutritional regime/a rational diet, managing percent distribution of caloric value in a daily diet
29. Determination nutrition of status and its types
30. Hygienic assessment of bread products
31. Hygienic assessment of meat and meat products, their role and significance in human nutrition
32. Hygienic assessment of milk and milk products, their role and significance in human nutrition
33. Hygienic assessment of vegetables and fruits, their role and significance in human nutrition
34. Assessment of food quality and safety (contamination with pesticides, antibiotics, etc.)
35. Hygienic assessment of equipment and outfitting of pre-school institutions and schools
36. Prevention of musculoskeletal dysfunction, postural disorders and vision disorders children and adolescents
37. Hygienic requirements to rational nutrition of children and adolescents
38. Hygienic control of nutrition provided to patients in hospitals
39. Hygienic control of quality of medical service for patients in polyclinics and in-patient departments
40. Hygienic control of provision of sanitary conditions and conveniences to patients and auxiliary personnel in polyclinics and in-patient departments
41. Organization of hygienic and infection-control regimes in infectious diseases, radiology, surgery departments, maternity homes and other specialized hospitals
42. Organization of hygienic regime of work hours, rest breaks for meal periods and auxiliary personnel in hospitals
43. Work safety of persons working in contact with dangerous and hazardous physical, chemical, biological agents in hospitals.
44. Hygienic control of personal hygiene of medical and service personnel in hospitals

45. Organizing and conducting of prophylactic and periodic medical examinations of medical and auxiliary personnel in hospitals
46. Prevention of hospital infection
47. System of collection, removal, neutralization, decontamination of waste in hospitals
48. Organization of preliminary (when applying for a job ) prophylactic periodic medical examinations of persons working in industrial and agricultural sectors
49. The main methods to detect, treat and rehabilitate patients with occupational diseases and poisonings
50. The main duties of activities of a staff physician at an enterprise
51. The main diseases of military personnel related to their stay in open and closed fortification structures, their prevention
52. Hygienic aspects of water-supply provision to troops in barracks and in the field, choice of sources for water-supply
53. Hygienic assessment of drinking water quality in the field , water-consumption norms
54. Principles of rational nutrition provision to military personnel
55. Occupational diseases and poisoning prevention of the military personnel.

## 5.2. Course Paper Themes

The course paper is not required by the curriculum

## 5.3. Assessment Fund

TEST. See the list of test questions in ANNEX №4

### SITUATIONAL PROBLEM

The place where 4 managers work, is located in the basement area of an office building. They work an 8 hours daily , of which 80% is taken by work on personal computers (their room is equipped with 4 tables with computers on them). The workplace area is 18 square meters. There is no natural lighting in the workplace of the managers, artificial light sources are luminescent lamps, the illuminance of managers' tables in the location area of working documents is 250 lx. The noise level in the room is 65 dBA.

Assess working conditions of the managers.

Answer to the situational problem.

Managers work in conditions not meeting the relevant hygienic norms, because:

1. The workplace is located in a basement of an office building and has no natural lighting, which is impermissible for work involving the use of computers.
2. The workplace with an area of 18 square meters contains 4 tables with computers, therefore, the area per one person work-space is 4.5 square meters. The duration of managers' work involving computers is 80% (6.5 hours) of total working hours, it means an individual work-space should be 6 square meters.
3. The type of lighting fixture to provide artificial illumination in a work place of the managers (luminescent lamps) conforms to hygienic regulations, however, the illumination of the desk surface in the location area of working documents is considerably below the conforming level (300-500 lx).

The list of assignments in APPLICATION № 5

### PAPER WITH PRESENTATION / SHORT ESSAY. Topics:

1. Anthropogenic atmosphere pollution and its impact on population health
2. Climate and health
3. Environmental and hygienic problems of modern cities
4. Health promotion as prevention of meteorotropic reactions
5. Water as a factor in the spread of communicable and non-communicable diseases
6. Environmental problems related to the global pollution of water-sources
7. Environmentally related diseases and their prevention
8. Environmental and hygienic significance of soil

9. Modern problems of the hygiene of children and adolescents
10. Acceleration processes and their effect on the physical and mental development of children and adolescents
11. Occupational hygiene of medical workers
12. Hygienic requirements to the siting and equipment of general health care facilities and specialized hospitals
13. Prevention of fatigue and overfatigue in industrial enterprise workers
14. Labor condition of agricultural workers
15. The basics of physiology, work intensity
16. Topical problems of nutrition hygiene
17. Food products made from GMOs and consequences of their use
18. Organizing the feeding of the military

SETTING QUESTIONS TO THE WHOLE CLASS. The list of questions in section 5.1 (to knowledge)

DRAWING UP A SANITARY EXAMINATION CHART

#### 5.4. List of Assessment Tools

Test ANNEX 4.

Situational problem ANNEX 5.

Drawing up a sanitary examination chart ANNEX 6.

Evaluation of individual nutrition ANNEX 7.

Paper with presentation / Essay ANNEX 8.

Lists of scales of assessment ANNEX 3.

## 6. COURSE (MODULE) METHODOLOGICAL AND INFORMATIONAL SUPPORT

### 6.1. Recommended Reading

#### 6.1.1. Required Reading List

	Authors, Compilers	Title	Book publisher, Year
L1.1	Rumiantsev G.I.	General hygiene: the learning process	Moscow, 2009
L1.2	Melnichenko P.I., Ogarkov P.I., Lizunov Yu.V.	Military hygiene and military epidemiology: textbook for students of higher medical schools	Moscow, 2004

#### 6.1.2. Advanced Reading

	Authors, Compilers	Title	Book publisher, Year
L2.1	Ed. by Yu.P. Pivovarov	Hygiene and the basics of human ecology: textbook for higher medical school students	Moscow: Academia, 2004
L2.2	Pivovarov Yu.P., Korolik V.V., Zinevich L.S.	Hygiene and the basics of human ecology: textbook	Rostov-on-the Don: Phoenix, 2002
L2.3	Kuchma V.R.	Hygiene of children and adolescents: the learning process	Moscow, 2006
L2.4	Lizunov Yu.V., Yerofeev V.G., Kuznetsov S.M.	General and military hygiene: textbook	SpecLit, 2012

#### 6.1.3. Guidance Papers

	Authors, Compilers	Title	Book publisher, Year
L3.1	Borsokbaeva S.S.	Hygiene of nutrition: learning guide	Bishkek: KRSU, 2009
L3.2	Borsokbaeva S.S., Kudayarova M.Zh., Azhimatova M.R.	Military hygiene: learning guide	Bishkek: KRSU, 2017
L3.3	Borsokbaeva S.S.	HYGIENE OF HOSPITALS: hygiene of treatment and prevention facilities: learning guide	Bishkek: KRSU, 2012
L3.4	Borsokbaeva S.S.	Hygiene of nutrition. Learning guide: scientific edition	Bishkek: KRSU, 2007
L3.5	Jumabaev A.	Basics of hygiene and physiology: textbook	Bishkek: KRSU, 2009

### 6.2. Online Resources

E1	The electronic library system IPRbooks — science and educational resource	<a href="http://www.iprbookshop.ru">http://www.iprbookshop.ru</a>
E2	School hygiene [electronic resource]: learning guide	Access: <a href="http://www.iprbookshop.ru/2">http://www.iprbookshop.ru/2</a>
E3	Hygiene and human ecology [electronic resource]: learning guide /I.I. Burak et al.	<a href="http://www.iprbookshop.ru/48002.html">http://www.iprbookshop.ru/48002.html</a> .
E4	Hygiene of children and adolescents [electronic resource]: manual for practical classes / A.G. Setko et al.	Access: <a href="http://www.iprbookshop.ru/2">http://www.iprbookshop.ru/2</a>
E5	Nutrition hygiene adolescents [electronic resource]: manual for practical classes / Novikova V.P.	Access: <a href="http://www.iprbookshop.ru/2">http://www.iprbookshop.ru/2</a>
E6	Hygiene of children and adolescents [electronic resource]: protocols of practical classes for 3 <sup>rd</sup> year students taught in the speciality 060101 Medical care / Novikova V.P.	Access: <a href="http://www.iprbookshop.ru/2">http://www.iprbookshop.ru/2</a>
E7	Occupational hygiene [electronic resource]: protocols of practical classes for 3 <sup>rd</sup> year students taught in the speciality 060101 Medical care / Novikova V.P.	<a href="http://www.iprbookshop.ru/27190.html">http://www.iprbookshop.ru/27190.html</a> .— ЭБС
E8	food sanitation and hygiene [electronic resource]: training manual / Nikitina E.V., Kitaevskaya S.V.	Access: <a href="http://www.iprbookshop.ru/6">http://www.iprbookshop.ru/6</a>
E9	Specialized hospital hygiene, disinfection.	<a href="http://www.iprbookshop.ru/11645.html">http://www.iprbookshop.ru/11645.html</a>
E10	students' training manual "sanitary protection of soil and refuse removal in communities [electronic resource]: training manual / I.L. Karpenko et al.	Access: <a href="http://www.iprbookshop.ru/3">http://www.iprbookshop.ru/3</a>
E11	Test questions, examination questions and situational problems on radiation and military hygiene for preventive medicine students [electronic resource]: / S.Ya. Osian et al.	Access: <a href="http://www.iprbookshop.ru/2">http://www.iprbookshop.ru/2</a>

### 6.3. List of information and Education Technologies

#### 6.3.1 Competence-based Educational Technologies

6.3.1.1	TRADITIONAL EDUCATIONAL TECHNOLOGIES - during practical classes textbooks and methodical works, lectures and additional scientific literature (article, monographs, recommendations, normative documents are used. For students' use instructions and recommendations in the field of hygiene and ecology, development of logical thinking, skills in well-argued presentation of material are provided. Lectures are delivered through multi-media equipment. Electronic versions of lectures and methodical books on different divisions of a discipline are available.
6.3.1.2	INNOVATIVE EDUCATIONAL TECHNOLOGIES – develop the ability of logical thinking, the ability to solve problems in different types of situational tasks, the ability of written and oral communication, systems approach to analysis and critical perception of medical information. These include electronic lectures with presentations. Visual aids, stands.
6.3.1.3	INFORMATION AND EDUCATION TECHNOLOGIES – Include computerized knowledge check systems, internet resources (databases, information and reference systems, repositories of any type of information), multimedia notebook, personal computers, research papers, presentations.

#### 6.3.2 List of Information Reference Systems and Software

6.3.2.1	Electronic library system IPRbooks( <a href="http://www.iprbookshop.ru">www.iprbookshop.ru</a> )
6.3.2.2	Electronic library of the Kyrgyz-Russian Slavic University ( <a href="http://www.lib.krsu.kg">www.lib.krsu.kg</a> )

## 7. COURSE (MODULE) LOGISTICS

7.1	The Department is located in Bishkek, baitik Baatyr Street 34 at the Scientific and Production Centre for Preventive Medicine, research areas of which are hygiene and epidemiology.
7.2	The Department is on the 4 <sup>th</sup> floor: three classrooms with 48 seats
7.3	Head of Department office (402)
7.4	Faculty room (403)
7.5	Laboratory room (401), all rooms are equipped with furniture, light and water equipment, etc.
7.6	A lecture hall of the Scientific and Production Centre for Preventive Medicine with 80 seats
7.7	Portable digital anemometer AP-1 (1 piece)
7.8	propeller-type anemometer (1 piece), luxmeter L 116 (1 piece)
7.9	Luxmeter SMART SENSOR AR823 (1 piece)

7.10	Portable hygrometer SMART SENSOR AR817 (piece.)
7.11	Aspiration hygrometer (1 piece)
7.12	Stationary hygrometer (1 piece)
7.13	Infrared thermometer for measuring body temperature SMART (1 piece)
7.14	Thermometer TH-603 (1 piece)
7.15	Katathermometer (1 piece)
7.16	Floor balance (1 piece)
7.17	Height meter (1 piece)

## The planning sheet of discipline ANNEX 2

### MODULE ASSESSMENT FOR THE DISCIPLINE INCLUDES:

1. Formative assessment: study material learned in classrooms (lectures, practical classes, including of attendance and activity) ' obligatory assignments done as student's individual work
2. Midterm assessment: checking the extent of acquired knowledge and skills regarding a module as a whole. Module test assignments are conducted in written form and are an obligatory component of module assessment.
3. Midpoint assessment – a completed documented part of the discipline studied – testing acquisition of a set of closely related modules in the form of credit.

### THE MAIN REQUIREMENTS FOR MIDPOINT ASSESSMENT

Students coming for a credit should bring with them record books which they give to the examiner at the beginning of a credit. The teacher can give a pass (credit) without asking a student questions from the examination paper students have got more than 60 points during formative and midterm assessments.

At the midpoint test a student should give correct answers to theoretical questions of an examination paper and do situational assignments.

Students can use technical aids, reference and normative literature, visual aids, curricula.

Midpoint test marks:

- min 20 points – KNOWLEDGE questions (if a student formulates the main notions correctly in his answers to questions)
- 20-25 points – assignments to check students' competences skills and Expertise (if a student understands the problem presented in the examination paper and gives recommendations for its solution)
- 25-30 points - assignments to check students' competences skills and Expertise (if a student gives a complete answer on the assignment)

### METHODICAL INSTRUCTIONS ON ORGANIZING THE STUDY OF THE DISCIPLINE:

Learning is comprised of classroom studies (72 hrs), including a lecture course, practical classes and individual work. A total of 108 hours. Methodical recommendations on the study of disciplines are given in methodical books of the department. There are available electronic versions of lectures and methodical instructions books on individual sections of the discipline. Methodical instructions and situational problems are prepared for each lesson (the fund of situational assignments, ANNEX 6). Students familiarize themselves with the Plan of Practical Classes. Practical classes are conducted according to methodical instructions. In preparing for practical classes students have access to the library funds of the University and the Department. Department-compiled methodical books, lectures as well as additional literature (articles, monographs, recommendations, normative documents) are available at the Department Office.

There are interactive assignments for students on selected units and topics, for example, on hygiene of hospitals, nutrition hygiene, recommendations for their performance are given in ANNEX 3. Students perform different assessing individual dietaries, calculating daily energy expenditures, assessing nutritional status. For the subject of hospital hygiene they perform a hygienic assessment of hospital design, dental polyclinics and rooms, make up protocols and reports on sanitary-hygienic study of enteric. Students prepare synopses and presentations on various problems of hygiene and present brief reports at practical classes. To expand knowledge of hygiene, to develop logical thinking, skills in reasoned presentation of an issue, round-table discussions are arranged. Tests are made up to check the final knowledge of the discipline. On passing a knowledge check by tests students are admitted to the take credit. Tests and check questions are given out to students beforehand (the fund of test assignments, ANNEX 1). The Department conducts research work with engagement of students on topical problems of hygiene. The Department's faculty develop and prepare for publication textbooks and teaching materials on different areas of hygiene and ecology. Current academic progress is assessed by topics assigned both to students' classroom work and individual work.

## STUDENTS' INDIVIDUAL WORK

is supposed to be preparation for practical classes and includes the study of special literature on a specific topic (recommended textbooks, teaching aids, consulting materials published in monographs, specialized journals, on recommended medical websites); exploration-and-research studies with an aid of internet resources; preparing notes, making presentations at seminars, preparing brief overviews, multi-media presentations, conducting business games. Independent work is regarded as a kind of learning activity in a discipline and is done within the assigned student individual work hours. Every student is provided access to the training aids and instruction room of the department and to library funds of the university.

For each unit of a discipline, methodical recommendations for students and teaching guides for teachers are prepared.

Student activity in group work nurtures a sense of collectivism, personal responsibility and sociability.

Attention should be given to development of skills in communicating with patients. Work with patients contributes to the development of deontologic behavior, accuracy, discipline.

A starting level of student the knowledge of credit session is determined by testing all topics learnt through computer- or paper-aided testing and by oral questioning on all topics learnt within the cycle. Current assessment of discipline learning is made in the course of practical classes using a variety of activities such as oral questioning, clinical discussions of cases, solving situation problems, photo problems and test assignments.

A sample list of assignments for individual students' work to increase their rating in the discipline is given in ANNEX 6.

**REPORT WITH PRESENTATION.** Preparing and writing:

Report in the form of a speech should not be the retelling of other authors' thought but be an attempt of problematization and conceptualization of a certain, rather narrow and concrete topic. All footnotes in a paper should be thoroughly checked for accuracy and correct references. It is not allowed to include excerpts from works of other authors without referencing them, to retell other work relevant to your topic without referencing to it, to use other people's ideas without indicating a source. The same is good for internet sources. A complete address of a website should be indicated. Any plagiarism should be excluded. At the end of the paper there should be a complete list of all sources used.

Preparing a paper for a class.

The main stages for paper preparation:

- choosing a topic;
- consulting a teacher
- preparing a plan of a paper
- working with sources and literature, collecting material
- writing the text of a paper
- completing the text and giving it to a teacher before presentation, which demonstrates the readiness of a student for delivering a presentation, answering questions.

Topics for presentation are suggested by a teacher in the Fund of Instructive Tools.

Multimedia presentations is a kind of students' individual work on creating visual informational materials produced through of the PowerPoint software. This kind of work requires coordination of student's skills for collecting, systematizing, processing and selecting pieces of material' making a brief representation of the main issues of a topic in the electronic form. Creating presentations expands methods and tools for studying and representing learning materials develops students' computer skills. Presentations are prepared by students in the form of slides using the Microsoft PowerPoint program.

Requirements for students' preparation of a presentation and its defence in a class.

1. The topic of a presentation should be chosen by a student from the recommended list in the Fund of Instructive Tools and should be coordinated with a teacher and be relevant to a studied theme in a class.

## 2. Stages of presentation preparation

Making up a plan of the presentation (task setting; objectives of a given study)

Thinking out each slide (at first it can be written on paper), doing so it is important to answer questions:

- how the idea of this slide can contribute to the main idea of the whole presentation?
- what will be contained on a slide?
- what will be told?
- how will you move on to the next slide?

## 3. Making a presentation with in MS PowerPoint:

- There is a sense in being neat. Slipshod slides (inconsistent fonts and indentions, misprints, typographic errors in formulas) make one suspect that a student is just as much careless about the content of the slides.
- On a title page you introduce to the audience yourself and the topic of your presentation.
- The number of slides should not be more than 30.
- The optimal number of lines in a slide is 6 to eleven.
- It is a widespread mistake to read out a slide word-by-word. It is better that a slide gives detailed written information (definitions, formulas), and the content meaning is presented orally. The information on a slide can be more formal and strictly formulated than in actual speech.
- Optimal switch speed is one slide in 1-2 minutes.
- Using in a presentation more figures, pictures, formulas, graphs, tables is preferred. Animation effects also can be used.
- When explaining tables, you should mention what rows and columns stand for.
- Use only those symbols and notions, without which the main ideas of the presentation cannot be gotten across.
- In a brief report you cannot repeat one and the same idea even in different words – time is dear.
- Any phrase should be spoken with purpose. Then your presentation will be integral and leave a good impression.
- The last slide with conclusions in short presentations should not be pronounced.
- If there are many formulas on a slide, it is recommended to prepare it completely in MS Word (otherwise you will have to arrange and align formulas manually). It is convenient to make a multiplication sample – one slide with a large Word object Insert – Object – MS Word document, with needed dimensions and copy out of it the required number of slides.

The main font in the text and formulas should be changed to Arial or similar fonts, Times font does not look good at a distance. Be sure to set the main font size in MathType that is equal to the main font size in the text.

Never change the formula size by stretching its corner.

4. A student must prepare and deliver his presentation strictly in the time duration set by the teacher and on schedule.

## 5. Instructions to presenters.

- communicate new information;
- use technical aids;
- easily navigate in your topic;
- be able to discuss and answer questions quickly;
- comply with time limits: presentation – 10 min; discussion - 5 min;

It should be kept in mind that a presentation consists of three parts: introduction, the main part and conclusion.

An introduction helps the success of any topic. An introduction should contain:

- title of presentation;
- communicate, the main idea;
- the state of the art on the subject of a topic;
- brief listing of issues under review;
- lively and interesting manner of presentation;

The main part in which the presenter should bring out the essence of the topic under consideration is usually made by the principle of a report. The purpose of the main part is to present sufficient data – make the audience both interested in the topic and eager to get familiar with materials. The logical structure of the theoretical bloc should not be provided without visual aids, audio-visual- and visual media.

The concluding part is a clear-cut generalization and brief conclusions which the audience is always waiting for.

## ESSAY (review paper)

### Methodical recommendations on essay writing

Essay is a short systematic and consistent account of a certain issue or research work. It is a form of interpretation of the original text or several sources, so, essay, unlike notes, is a new independent text. The novelty of essay examination consists of new rendering and systematization of material, a special author's attitude in considering different points of view. Thus, the abstracting on which essay is based presents a coverage of a certain issue on the basis of classification, generalization, analysis and synthesis of one or several sources.

Specific features of the abstracting essay: no comprehensive demonstration, comparisons, discourse or assessments; the abstracting essay gives an answer what the most interesting and important is contained in a given work on the question of concern.

Such an essay should not reflect subjective views of a reviewer on the issue under consideration. An assessment can be allowed only the last concluding part in the form of a summary.

The essay should possess: unity (of content, theme, style, linguistic usage), coherence (logical and formal-linguistic), structural arrangement (an introduction, body and conclusion, their optimum proportionality), content meaning completeness.

#### Stages of essay preparation

- 1.Choice of a problem, its importance' substantiation, formulation
- 2.Study of the main sources on your topic.
- 3.Making up a list of literature
- 4.Making notes of the material studied or its content description by theses.
- 5.Systematization of processed or selected information.
- 6.Defining the range of the main notions of the topic.
- 7.Refining the topic's theme and the main questions for analysis.
- 8.Developing the logics of investigation of the problem, plan design
- 9.Realizing the plan, writing an essay.
- 10.Self-analysis consisting of novelty in assessment , how deep the problem was touched upon, relevance of sources and the volume of your essay.
- 11.Checking the correctness of references.
- 12.Editorial correction of the text.
- 13.Correct formatting of the essay and checking the text for grammar and style.

#### Essay structure and content.

The least volume of the essay (review paper) should be 12 pages on A4 sheets. The number of pages may be less and should be determined depending on the topic.

The theme of the essay should be formulated literar well. The title of the essay should define the theme's distinct framework, not too wide and not too narrow (for instance, "Occupational hygiene" is not an acceptable title. The theme may be across two or more subjects, within one subject, within a programme discipline or it may expand its content (examining the history of the problem, new theories, new aspects of the problem, new sources).

The essay of any type has usually the following structure:

- title page,
- contents with paragraphs and pages,
- introduction,
- body (divided into paragraphs/sections),
- conclusion,
- references,
- annexes (if applicable).

#### Requirements to introduction

Introduction should include a brief background to show importance of the theme of the essay, its scientific and practical interest. It also contains a brief review of literature, analyzes the strengths and weakness of previous studies. In introduction it is also important to indicate the aim of the paper and objectives to work through in order to achieve this aim. Usually one objective is given for one section. The length of introduction is usually 1-1.5 pages.

#### Requirements to the body of the paper

The body of the paper contains material selected by a student to support the key theses of the chosen topic. The content of the essay body should be logical, problem-based and theme-oriented. The essay body structure consists of sections which number and titles are determined by the author and the supervisor. Each section starts with an objective and ends with a conclusion.

References to authors whose attitudes and views are used in the paper should be indicated obligatorily. Citation and references should not replace the attitude and standpoint of the author of the essay. Grandiloquence, abuse of terms, extensive digressions, disproportionate lengthiness of individual sections and divisions are viewed as disadvantages of the essay body.

#### Requirements to conclusion

Conclusion of the essay or the summing-up of the work consists in brief and clear listing of conclusions, analysis of the achievement of the aim and objectives of the paper as set in introduction, it is also indicated here what new personal experience a student has acquired working on the essay. The volume is 1-1.5 pages.

#### Requirements to references

For your essay preparation, materials of modern sources (not less than 5) should be used. Sources should be listed in an alphabetical order. The main requirement to references is accuracy, bibliographic information is provided directly from a document described.

Bibliography should include surname and initials, title of a source, place of publication, year of publication, number of pages.

References should include all documents used in the essay regardless of media, including electronic editions and internet resources.

Various annexes can be put after the list of references (tables, diagrams, graphs, illustrations, etc.). Each annex starts on a new page with the word Annex and its number printed in the upper right-hand corner (e.g. Annex 1). If there is only one annex, it is not numbered. An Annex should have a title which is aligned in the centre and written in upper lettercase and separated from the body of the text. Applications are not counted in the total number of pages. Page numbers are not printed.

#### Technical format of the essay

The essay should be typed using a computer on one side of A4 sheets of paper, 1.5 line interval. The font color should be black, Times New Roman, size 14 pt. The margins should be as follows: top and bottom – 20 mm, left – 30 mm, right – 10 mm. Indentation should be the same throughout the text and equal 1.25 cm. Indentations are recommended to be more frequent, presenting one complete thought in an individual paragraph. Text is aligned by width.

All pages should be numbered continuously throughout. Sheet number is printed in Arabic figures. Page numbering begins with a second page. Page number is not printed on the title page. Page numbers are printed at the bottom centre, without putting a dot.

Every structural part (title page, contents, introduction, section, etc.) starts on a new page. No periods are put at the end of headings aligned in the center. Headings should not be underlined and words in headings should not be hyphenated. The distance between the heading of the section and the following text should be one skipped line. No abbreviations can be used in the text (except the generally known ones).

In the text of an essay references should be made to a source your material was taken from because this shows the culture of treating other persons' thoughts and work. A bibliographic reference can be presented in full or in short form. A short reference intended only for document search (an object of the reference) is cited in the text as a number corresponding to a source in the list of publications and should be given in square brackets. For example, [12].

A reference given to point out an individual passage of the text of a document should include not only the reference number but also page number, where the cited passage can be found. This information is separated by a comma: [11, p. 105].

If the text is cited not by the primary source but by some other document, the reference begins with "Cited in". For example, [Cited in: 14, p. 181].

If there are multiple sources referenced, they are made into one complex bibliographic reference in which information is separated by semicolon with spaces before and after this bloc of information: [3; 14] or [9, c. 123; 15, p. 26].

The paper should be fastened.

The format of the title page is in ANNEX 7

Presentation essay

There are 3 types of the essay defense: classical, individual and creative

1. Classical presentation. Oral presentation of a student is concentrated on the main points:

- research theme and its importance/topicality;
- the range of sources and the main approaches to the problem,
- novelness (study of less known sources, proposing a new version, new approaches to the problem solving, etc.),
- the main conclusions from the content of the essay.

2. Individual defense. It shows personality aspects of student's work on the paper:

- reasons behind the choice of the topic,
- ways of how to work on the paper,
- original findings, personal judgements, interesting moments,
- personal importance of the effort,
- prospects for further research.

3. Creative defense should embrace:

- making a stand with documents and illustrative material on the research topic, providing comments on them,
- showing slides, videorecords, listening to audio-records prepared during information gathering and abstracting,
- vivid, original presentation of a fragment of the main part of the paper, etc.

It is important that a student presentation his paper should be able to tell about the importance of the main issues of the research, the aim and objectives, the literature reviewed, the structure of the main part of the essay, conclusions in the space of 7-10 minutes. Thus, this approach goes away from mechanical recital of the essay to the scientific support of the problem under consideration, after questions are asked on the presented topic.

While preparing for your class, it will be useful to consult the glossary (ANNEX 8)

Drawing up a CHART of sanitary-hygienic examination of health care facilities.