

**Academic programme
component**

**31.05.01 General Medicine
programme**

**Б1.0.23
discipline code**

SYLLABUS

**Discipline
(module)**

Hygiene

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Clarification

Discipline volume: 6 credit points

1. Discipline (module) training results correlated with the indicators of competencies achievement determined by the educational programme

Competency	Indicators of competency achievement	Discipline (module) training results
<p>УК-8 Can ensure safety in professional and everyday life to protect natural environment and promote sustainable development of society, including the situations of impeding emergency and/or armed conflicts</p>	<p>ИД-1УК8 identifies and analyzes natural and man-made factors of harmful effects on the environment and social sphere in everyday life and professional engagement, informs responsible authorities</p>	<p>To know: regulatory documentation, technical standard, legal and legislative documents within professional engagement; - theoretical and organizational foundations of state sanitary and epidemiological surveillance and its maintenance; - main indicators characterizing public health; principles of hygienic regulation of harmful and dangerous causes of the working and natural environment; measures to prevent these harmful causes; - basics of organizing and conducting public sanitary and epidemic control (preventive) measures; - methods of assessing the sanitary and epidemiological situation; To be able to: apply regulatory legal acts of the Russian Federation in the field of ensuring the sanitary and epidemiological public welfare, consumer rights protection in professional engagement; - evaluate the results of laboratory and instrumental studies of habitat objects; determine indicators and analyze the impact of anthropotechnogenic factors on humans and the environment, conduct medical reconnaissance in disease outbreaks; - carry out medical triage according to the principles of decontamination need, medical care need and representing a danger to others; - carry out epidemic control measures and measures to protect the population in the outbreaks of dangerous infections, with a deterioration of the radiation situation and natural disasters; To have: methods of assessing natural and social environmental factors in the development of human diseases; - methods of establishing cause- effect relationships in “working environment – employees’ health” and “habitat – public health” systems; - the fundamentals of preventive measures to prevent the morbidity of the population; the skills of organizing and conducting a set of sanitary and epidemic control measures; - skills of conducting medical reconnaissance in disease outbreaks, skills of medical triage; - skills in organizing and carrying out measures to protect the population in the outbreaks of dangerous infections, with a deterioration of the radiation situation and natural disasters;</p>

<p>ОПК-2 Can implement measures to promote healthy lifestyle and health education and assess their effectiveness</p>	<p>ИД-3ОПК-2 Develops and participates in prevention to improve the level of health and prevent diseases of a patient (population)</p>	<p>To know: causes and ways of spreading infections of different etiology diseases; - techniques and methods to deliver sanitary and hygienic training to the public, to disseminate knowledge about a healthy lifestyle; - principles of conducting sanitary and educational activities within healthy lifestyle; - main directions of preventive measures aimed at improving the health status and preventing public diseases; To be able to: plan epidemic control measures and prevention of infectious diseases; - work out, organize and carry out sanitary and training activities within healthy lifestyle; To have: - techniques and methods to deliver sanitary and hygienic training to the public, to disseminate knowledge about a healthy lifestyle; - skills of conducting preventive measures aimed at improving the health status and preventing public diseases.</p>
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2. Discipline contents

№	Topic	Content
1	Introduction. The Subject and Content of Hygiene.	Development history of hygiene. The history of hygiene in Russia. Organizational and legal structure, scope of activities and tasks of Rospotrebnadzor service of the Russian Federation. Social and hygienic monitoring as a state system of monitoring public health and the impact of environmental factors. Modern-day problems of human hygiene and ecology. Hygienic standardization and prediction.
2	Atmospheric air as the external environment.	The complex effect of meteorological factors on the human body. Meteorotropic diseases. Harmful impurities and aerosols in the air, and their effect on health. Sanitary control of atmospheric air, its contribution to healthy lifestyle management of wide sections of the population.
3	Water as a factor of the biosphere and the cause of diseases.	Hygienic requirements for the quality of drinking water from different sources of water supply. The principles of rationing. Methods for improving the quality of drinking water. Water resources, distribution and the possibility of their use. Sanitary protection. Water in shaping a healthy lifestyle.
4	Soil as an environmental factor.	The role of soil in the occurrence of human diseases. Soil pollution and self-purification. Natural and artificial biogeochemical provinces. Clean-up systems for populated areas. Environmental legislation in the field of soil protection. Soil in shaping a healthy lifestyle.
5	Solar radiation and its biological effects.	The role of the sun in a healthy lifestyle. The biological effect of solar radiation. Types of the insolation regime.
6	Fundamentals of nutrition.	Physiological norms of nutrition. The importance of nutrition for human health, physical development and working efficiency. Biological and environmental problems of nutrition. Nutritional and biological product value. Functional food products. Dietary and therapeutic nutrition. Food quality and safety. Topical issues of the use of food additives. Food poisoning of microbial and non-microbial nature. Main preventive measures. The role of a practitioner in the investigation of food poisoning.
7	Hygiene in medical institutions.	Hygienic requirements for the placement, planning and equipment of medical institutions. The medical and protective regime of these

		institutions. Prevention of hospital infections.
8	Fundamentals of sanitary and hygienic measures arrangement in the event of emergencies in the peace and war times	Evacuation and accommodation of the population in the event of an emergency threat. Arranging water supply, nutrition, epidemic control measures in emergency areas.
9	Occupational hygiene and physiology.	Normative legal documents regulating labor management in the Russian Federation. The work and rest regime. The schedule of the working day. Harmful factors of work in certain professions. Prevention of occupational diseases. Labour protection. Hygienic classification and criteria for assessing working conditions. General principles of health-improving activities. Occupational hygiene when working with radioactive substances and sources of ionizing radiation. Labour grades. Possible adverse effects on the organism. The principles of rationing. Basic protection measures.
10	Hygiene of children and adolescents	Subject, goals and objectives. Age periodization. Patterns of growth and development of the body of a child and an adolescent. Factors influencing growth and development. The concept of health. Criteria for health evaluation. Indicators of individual health of children and adolescents. Health groups. Problems of hygiene adaptation to environmental factors of children and adolescents. Physiological and hygienic principles of arranging a child's daily routine. Hypokinesia in preschool and school-age children, its effect on health. Physical activity as a concept, principles of rationing, quantitative assessment. Pre-employment, career guidance for schoolchildren.
11	Hygiene of housing areas	Urbanization factors and the structure of a modern city. Environmental problems caused by different types of infrastructure in populated areas. Hygiene of residential and public buildings.
12	Sanitary legislation in the Russian Federation.	Certain provisions of the Constitution of the Russian Federation, the Law "On Sanitary and Epidemiological Welfare of the population", the law "On Environmental Protection", the Water Code of the Russian Federation, the Code of Administrative Offences. The role of legislation in optimizing the factors of a healthy lifestyle of the general population.

3. Training support materials

- multimedia presentations on the discipline are available on MAU LMS Moodle;
- methodological guidelines for laboratory/practical/test classes are available on MAU LMS Moodle;
- learning materials are available on MAU official website at «Информация по образовательным программам, в том числе адаптированным».

4. Discipline assessment materials

Discipline assessment materials is a separate document within the educational programme, it includes:

- a list of competencies indicating the stages of their achievement within the discipline;
- formative assessment tasks;
- interim assessment tasks;
- tasks for internal assessment of education quality.

5. The list of main and supplementary literature (printed, electronic and (or) electronic library resources)

Main literature:

1. Korshever, E.N. Gigiena : [12+] / E.N. Korshever, V.N. Shilov ; Nauchnaya kniga. – 2-e izd. – Saratov : Nauchnaya kniga, 2020. – 234 s. – Access: by subscription. – URL:

<https://biblioclub.ru/index.php?page=book&id=578336>. – ISBN 978-5-9758-1937-6. – Текст : электронный.

2. Krymskaya, I. G. Gigiena i ekologiya cheloveka : ucheb. posobie / Krymskaya I. G. - Rostov n/D : Feniks, 2020. - 424 s. (Srednee meditsinskoe obrazovanie) - ISBN 978-5-222-35189-1. - Текст : электронный // EBS "Konsul'tant studenta" : [sait]. - URL : <https://www.studentlibrary.ru/book/ISBN9785222351891.html> (data obrashcheniya: 05.06.2024). - Access: by subscription.

3. Krymskaya, I. G. Gigiena truda i professional'nye bolezni : ucheb. posobie / I. G. Krymskaya. - Rostov-na-Donu : Feniks, 2023. - 544 s. (Srednee meditsinskoe obrazovanie) - ISBN 978-5-222-38545-6. - Текст : электронный // EBS "Konsul'tant studenta" : [sait]. - URL : <https://www.studentlibrary.ru/book/ISBN9785222385456.html> (data obrashcheniya: 05.06.2024). - Access: by subscription.

Supplementary literature:

1. Mel'nichenko P.I., Gigiena / Mel'nichenko P. I., Arkhangel'skii V. I., Kozlova T. A., Prokhorov N. I., Semenovych G. K., Semenovych L. N - M. : GEOTAR-Media, 2014. - 656 s. - ISBN 978-5-9704-3083-5 - Текст : электронный // EBS "Konsul'tant studenta" : [sait]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970430835.html>. - Access: by subscription.

6. Professional databases and information reference systems

1) The state system of legal information – official legal information web portal - URL: <http://pravo.gov.ru>

2) «Единое окно доступа к образовательным ресурсам» information system - URL: <http://window.edu.ru>

3) Jaypeedigital (<https://www.jaypeedigital.com/home>) – online platform of medical resources by Jaypee Brothers Medical Publishers Platform manual (in English): https://disk.yandex.ru/i/K3Q61Zerp_x5Kw

4) S Ebooks (Medical & Science) (<https://eduport-global.com/>) - digital library of medical literature by CBS Publishers & Distributors Pvt. Ltd.

5) Reference legal system. Consultant Plus - URL: <http://www.consultant.ru/>

6) Online University library <https://biblioclub.ru> Access is provided until May 29th, 2025

7) Digital library system «Юрайт», Access is provided until 30 Dec. 2024

8) «Лань» digital library system e.lanbook.com Access is provided until October 1st, 2024 (to be extended).

9) Digital library system «Консультант студента», <http://www.studentlibrary.ru/> Access is provided until May 25th, 2025 to «[Медицина. Здравоохранение \(ВО\)](#)» by «ГЭОТАР-Медиа» and «[Медицина \(ВО\) ГЭОТАР-Медиа. Books in English](#)» Publishers.

7. A list of licensed and free software including domestic software

1. Microsoft Windows Vista Business Russian Academic OPEN OP, license № 44335756 dated 29.07.2008 (contract №32/379 dated 14.07.08)

2. Microsoft Office 2007 Russian Academic OPEN office software suite, license № 45676388 dated 08.07.2009 (contract 32/224 dated 14.0.2009)

3. Microsoft Office 2010 Russian Academic OPEN office software suite, license № 47233444 dated 30.07.2010 (contract 32/285 dated 27 July 2010)

4. Optical character recognition system ABBYY FineReader Corporate 9.0 (network version), 2009 (contract ЛИЦ-080000510 dated 28 April 2009)

5. Antivirus software (contract №7689 dated 23.07.2018 for Dr.Web Desktop Security Suite Program)

8. Ensuring mastering the discipline for people with special needs

Students with special needs are provided with printed and (or) electronic educational resources adapted to their needs.

9. The material and technical support of the discipline (module) is presented in the appendix to the academic programme "Material and technical conditions for the implementation of the educational programme" and includes:

- classrooms for conducting training sessions provided for by the specialty programme, fitted with technical equipment;
- spaces for self-study work fitted with computer equipment with the Internet connection and access to MAU LMS Moodle.

10. Study load distribution within the discipline (module) by learning activities

Table 1 - Study load distribution

Type of educational activity	Study load distribution within the discipline (module) by study mode			
	Full-time			
	Semester/year	Semester/year	Semester/year	Total hours
	2/4	3/5		
Lectures	18	16		34
Seminars	48	34		82
Self-study	42	22		64
Preparation for interim assessment		36		36
Total hours on the discipline / in the form of seminars	108	108		216
	48	34		82

Interim and formative assessment

Examination		+		
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The list of topics of practical work

№	Seminar topics
1	2
1	Atmospheric air: hygienic assessment of indoor microclimate
2	Atmospheric air: hygienic assessment of the chemical composition and microbial pollution of indoor air. Calculation of ventilation volume and frequency.
3	Hygiene of water supply: hygienic assessment of the quality of drinking water and water supply sources.
4	Hygiene of water supply: methods for improving water quality. Basic and special. Methods of water disinfection. Comparative characteristics of water supply sources.
5	Hygiene of water supply: Sanitary protection zones of water sources.
6	Illumination: Hygienic assessment of the insolation regime.
7	Illumination: Hygienic assessment method of room natural lighting.
8	Illumination: Hygienic assessment method of room artificial lighting.

9	Nutritional hygiene: characteristics of the physiological norms of nutrition. Methods for assessing food adequacy.
10	Nutritional hygiene: nutritional value and sanitary examination of basic food products (cereals, dairy, meat and fish, vegetables, fruits).
11	Nutritional hygiene: nutrition status as a factor of a healthy lifestyle, methods of determination, evaluation.
12	Nutritional hygiene: food poisoning, classification, prevention. Investigation methods of a foodborne illness outbreak (intestinal infection).
13	Nutritional hygiene: therapeutic, therapeutic and preventive, dietary nutrition. Specified diet formulation.
14	Hygiene of medical facilities: consideration and evaluation of development plans and projects for the construction of facilities.
15	Hygiene of medical facilities: hygienic requirements for equipment, sanitary improvement and conditions of stay in medical institutions.
16	Hygiene of medical facilities: planning and mode of operation of the pediatric, surgical, infectious, obstetric units in hospitals.
17	Occupational hygiene: dangerous and harmful environmental factors and their effects on human life. Examination of water and food for contamination with toxic agents, chemical agents and radioactive agents
18	Occupational hygiene: sanitary assessment of working environment physical factors. Industrial dust.
19	Occupational hygiene: sanitary assessment of working environment physical factors. Industrial noise.
20	Occupational hygiene: sanitary assessment of working environment physical factors. Production vibration.
21	Occupational hygiene: industrial poisons, occupational poisoning, their prevention.
22	Occupational hygiene: sanitary assessment of working environment physical factors. Sources of ionizing radiation.
23	Hygiene of children and adolescents: evaluating children's and adolescents' state of health.
24	Hygiene of children and adolescents: methods for evaluating physical development. Evaluating biological development level.
25	Hygiene of children and adolescents: hygienic requirements for managing of a lesson, school day, week. School schedule.
26	Hygiene of children and adolescents: hygienic assessment of furniture in preschool and school classrooms, their role in shaping a healthy lifestyle.
27	Hygiene of children and adolescents: hygienic assessment of textbooks, children's books, learning aids, toys.
28	Hygiene of children and adolescents: Hygienic requirements for the planning and equipment of preschool facilities.
29	Hygiene of children and adolescents: Hygienic requirements for the planning and equipment of school facilities.
30	Hygiene of children and adolescents: Improving a child's organism's endurance. The concept, meaning, main principles and methodology.
31	Healthy lifestyle and personal hygiene. Personal hygiene as a part of public hygiene.
33	Administrative practices: liability for requirements violation of sanitary legislation. Procedure for preparing the required documentation.