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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY
Head of the Department of
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"14th" of April 2025

SUBJECT GUIDE FOR TEACHERS AND STUDENTS FOR

Б1.О.20 Epidemiology

(Name of discipline)

Specialty	**31.05.01 General Medicine for international students (in English)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)
Mode of study	**Full-time**
Period of mastering the BEP	**6 years** (nominal length of study)
Department	of Epidemiology and Military Epidemiology

Vladivostok, 2025

Subject guide for teachers and students for **Б1.О.20 Epidemiology** is based on:

1) Federal State Educational Standard of Higher Education for the specialty approved by the Order No. 988 of Ministry of Science and Higher Education of the Russian Federation
dated August 12, 2020.
2) Curriculum for the 31.05.01 General Medicine for international students (in English), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system), approved by the Academic Council of FSBEI HE PSMU of the Ministry of Health of Russia, Report No. 8/24-25 dated March 31, 2025.

Subject guide for teachers and students for the discipline was developed by the writing team of the Department of Epidemiology and Military Epidemiology of the FSBEI HE PSMU of the Ministry of Health of Russia, under the guidance of the head of the department Candidate of Medical Sciences, Associate professor Skurikhina Yu.E.

Developed by:

Assistant professor	Candidate of Medical Sciences	Pozdeeva E.S.
(position held)	(academic degree, academic title)	(full name)

1. GENERAL PROVISIONS

Subject guide for **Б1.О.20 Epidemiology** is a set of recommendations and explanations that facilitate to optimal organization of mastering this discipline.

Regular analysis of lecture materials and work with end-of-the-text questions are necessary for better understanding of the material and systematization of knowledge of **Б1.О.20 Epidemiology**. Particular attention should be paid to emerging questions, confusing terms, and conflicts of points of view during the independent review of the lecture material. If necessary, a student should contact the teacher for advice. Lecture material streamlines students' thinking, while practical classes provide deeper insight into the material of the discipline.

Special attention should be paid to the content of the main provisions and conclusions, explanation of phenomena and facts, and clarification of the practical application of theoretic aspects of topic when preparing for a practical class. During this process students should aim to understand and remember the main provisions of the material under consideration, examples provided, as well as understand the illustrative material.

Collections of assessment tools are used to organize independent study of topics of the discipline.

Independent work of students is facilitated by the following:

1. availability and accessibility of the necessary educational and reference material;
2. a system of regular quality control of completed independent work;
3. availability of teacher's advice.

Subject guides for self-study are presented as literary sources. Subject guides for independent work of students include a list of library resources of the educational institution and other materials accessible to students.

Independent work is a type of in-person extracurricular work of teachers and students of **Б1.О.20 Epidemiology**. Control of independent work is conducted by the leading teacher. Evaluation of independent work results is taken into account when conducting interim examination of students throughout the **Б1.О.20 Epidemiology** course.

Continuous assessment during the **Б1.О.20 Epidemiology** course is implemented in order to check indicators of achieving competencies, to stimulate students' academic work, and improve methods of mastering new knowledge. Continuous assessment during the **Б1.О.20 Epidemiology** course is conducted during the semester to assess all types and sections of the academic discipline that encompass the competencies developed by the discipline: classroom questioning, discussions, working with tests, preparing reports, writing research papers, and preparing slides presentations. Continuous assessment of students' knowledge and results of their preparation for practical classes is conducted during every class session.

Interim assessment aims to determine the level of mastery of competency indicators. It is conducted in the pass/fail test format after the student has mastered all sections of **Б1.О.20 Epidemiology** and takes into account learning outcomes for all types of student work over the entire period of mastering the **Б1.О.20 Epidemiology** course.

Time allotted for interim assessment is indicated in the schedule.

Assignments given during practical classes, as well as assignments aimed to prepare students for continuous and interim assessment, are included in the collection of assessment tools for **Б1.О.20 Epidemiology**. If necessary, students should contact the teacher for advice. It is necessary to thoroughly think over questions that need clarification before seeking teacher's advice.

2. SUBJECT GUIDES FOR LECTURE CLASSES

Table 1. Subject Guides for **Б1.О.20 Epidemiology** Lectures

Topic No.1 Introduction to epidemiology	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the role of "epidemiology" as a subject in the formation of general cultural and professional competencies; 2. define the role of the doctrine of the epidemic process as a fundamental basis of epidemiology, based on objective laws discovered and formulated by the classics of epidemiology, supplementing and developing them at the level of modern knowledge from the position of professional competencies; 3. examine methods of analysis of the epidemic process.	
Lecture plan, order of presentation of its sections: - Definition of the concept of "epidemic process" - Definition of the parasitic system as the biological basis of the epidemic process - Three main elements of the epidemic process (source of infection, transmission mechanism and susceptible organism) and their characteristics - The specifics of the development of the epidemic process in various groups of infectious diseases (anthroponoses, zoonoses and sapronoses) - The role of social and natural factors in the development of the epidemic process - Prerequisites and harbingers of worsening epidemiological situation - The main theoretical generalizations of epidemiology, developing the doctrine of the epidemic process developed by L.V. Gromashevsky and his theory of the transmission mechanism (the theory of natural foci of E.N. Pavlovsky, the theory of self-regulation of parasitic systems of V.D. Belyakov and the socio-ecological concept of B.L. Cherkassky, the theory of psychrophilicity of pathogenic bacteria of G.P. Somov) - Manifestations of the epidemic process (in time, space and among different social and age groups of the population)	
Recommended reading: 1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.	
Topic No.2 Epidemiological studies (evidence-based medicine)	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the relevance of epidemiological studies; 2. define epidemiological research (evidence-based medicine); 3. examine the structures of epidemiological studies.	
Lecture plan, order of presentation of its sections: - Relevance of epidemiological studies - The pyramid of evidence - The main statistical values used in conducting epidemiological studies - Classification of epidemiological studies	
Recommended reading: 1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.	
Topic No.3 The state and prospects of disinfection	

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the relevance and history of disinfection;
2. define key terms: disinfection, sterilization, deratization, high level disinfection;
3. examine disinfection and sterilization methods.

Lecture plan, order of presentation of its sections:
- History of disinfection
- Basic concepts in disinfection
- Classification of disinfection preparations and methods
- Stages of disinfection measures in a medical organization

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.4 Status and prospects of immunoprophylaxis

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the relevance and history of creating vaccines;
2. define immunoprophylaxis;
3. examine methods and preparations for vaccine prevention.

Lecture plan, order of presentation of its sections:
- The history of the creation of medications for vaccination
- The relevance of vaccine prevention
- Types of vaccines
- Methods of vaccine administration
- Contraindications to vaccination
- Conditions of transportation and storage of the vaccine

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.5 Peculiarities of the epidemiology of infections with vertical transmission mechanism

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the relevance of parenteral infections: hepatitis B and C, HIV infection;
2. define epidemiological features of hepatitis B and C, HIV infection;
3. examine methods of prevention of parenteral infections.

Lecture plan, order of presentation of its sections:
- The relevance of parenteral infections
- Epidemiological aspects of hepatitis B
- Epidemiological aspects of hepatitis C
- Epidemiology of HIV infection
- Prevention of parenteral infections among the population and in the medical organization

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.6 Healthcare-associated infections

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the relevance of healthcare-associated infections;
2. define healthcare-associated infections;
3. examine the methods of prevention of healthcare-associated infections in medical organizations.

Lecture plan, order of presentation of its sections:
- Relevance of healthcare-associated infections
- Definition and classification of healthcare-associated infections
- Sources of healthcare-associated infections
- Prevention of healthcare-associated infections in medical organizations

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.7 Flu and acute respiratory viral infections

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the relevance and prevalence of influenza and acute respiratory infections;
2. define the epidemiological features of influenza and acute respiratory infections;
3. examine methods of prevention and anti-epidemic measures for influenza and acute respiratory infections.

Lecture plan, order of presentation of its sections:
- The relevance and prevalence of influenza and acute respiratory infections
- Definition and etiology of influenza and acute respiratory infections
- Epidemiological features of influenza and acute respiratory infections
- Methods of prevention of influenza and acute respiratory infections
- Anti-epidemic measures for influenza and acute respiratory infections

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.8 Sanitary protection of the territory

Duration of the lecture (in academic hours):	2

Purpose of the lecture:
1. tell students about the relevance of sanitary protection of the territory;
2. provide a definition and regulatory documents for the sanitary protection of the territory;
3. examine separate infections in which protection of the territory from their import and spread is provided.

Lecture plan, order of presentation of its sections:
- Relevance of sanitary protection of the territory
- Definition of sanitary protection of the territory
- Regulatory documents on sanitary protection of the territory
- Epidemiology and prevention of plague
- Epidemiology and prevention of cholera
- Epidemiology and prevention of hemorrhagic fevers

Recommended reading: 1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.
Topic No.9 Clinical epidemiology
Duration of the lecture (in academic hours): | 2
Purpose of the lecture: 1. tell students about the relevance of clinical epidemiology; 2. define key terms: clinical epidemiology; 3. examine the methods of retrospective epidemiological analysis, meta-analysis.
Lecture plan, order of presentation of its sections: - Relevance of clinical epidemiology - Definition of clinical epidemiology - Methods of retrospective epidemiological analysis - The meta-analysis method
Recommended reading: 1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.
Topic No.10 Organization of anti-epidemic measures in emergency situations
Duration of the lecture (in academic hours): | 2
Purpose of the lecture: 1. tell students about the epidemic process in emergency zones of various types, its features, and the doctor's activities in emergency situations.
Lecture plan, order of presentation of its sections: - Biological (ecological) disaster - Comparative characteristics of damage from epidemics and natural disasters - Anti-epidemic measures in emergency situations - Medical evacuation of patients in emergency situations - Observational activities - Quarantine activities - The work of the sanitary-epidemiological reconnaissance - Features of epidemic outbreaks in terrorist attacks
Recommended reading: 1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

3. SUBJECT GUIDES FOR PRACTICAL CLASSES

Table 2. Subject Guides for Practical **Б1.О.20 Epidemiology** Classes

Topic No.1 Epidemiological approach to the study of human diseases
Duration of the practical class (in academic hours): | 2
Purpose of the practical class: 1. acquire knowledge on: - the specifics of the population level of the organization of living matter

- the essence of the epidemiological approach to the study of morbidity and its difference from the clinical approach
- the definition of epidemiology as a science
- the concept of the cause of the disease, the conditions of its occurrence, risk factors
- epidemiological features of mass infectious and non-communicable diseases, the causes of their occurrence
- the importance of the standard definition of a disease case in epidemiological studies
- the place of epidemiology in the structure of medical sciences and its relation to related disciplines

2. learn to:
- implement an epidemiological approach to identify the causes of the disease
- calculate the main epidemiological indicators characterizing the health of the population
- to assess the health status of the population and determine priorities in conducting scientific research and implementing specific activities

3. master:
- an epidemiological approach for the consideration and study of infectious and non-communicable human diseases
- an epidemiological approach for solving the goals and objectives of clinical medicine

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.2 Basic epidemiological concepts

Duration of the practical class (in academic hours):	2

Purpose of the practical class:
1. acquire knowledge of:
- definition of the parasitic system as the biological basis of the epidemic process
- the main theoretical generalizations of epidemiology that develop L.V. Gromashevsky's theory of the epidemic process and its theory of transmission mechanism (E.N. Pavlovsky's theory of natural foci, V.D. Belyakov's theory of self-regulation of parasitic systems and B.L. Cherkassky's socio-ecological concept, A.A.Yakovlev's concept of integration and competitive development of the epidemic process, the theory of psychrophilicity of pathogenic bacteria G.P. Somova)

2. learn to:
- use knowledge on the classification of infectious diseases in carrying out anti-epidemic measures
- substantiate the leading measures for the prevention and control of certain groups of human infectious diseases
- evaluate the quality and effectiveness of anti-epidemic measures

3. master:
- methods of dynamic monitoring of the determinants of the epidemic process of specific infectious diseases in order to improve prevention measures;
- skills in drawing up an anti-epidemic work plan.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.3 Theories of the epidemic process

Duration of the practical class (in academic hours):	2

Purpose of the practical class:
1. acquire knowledge of:
   - the factors influencing the development of theoretical ideas about the epidemic process
   - definition of the concept of "epidemic process"
   - definition of the parasitic system as the biological basis of the epidemic process
   - the three main elements of the epidemic process (the source of infection, the mechanism of transmission and the susceptible organism) and their characteristics
   - the specifics of the development of the epidemic process in various groups of infectious diseases (anthroponoses, zoonoses and sapronoses)
   - the role of social and natural factors in the development of the epidemic process
   - prerequisites and precursors of the deterioration of the epidemiological situation
   - the main theoretical generalizations of epidemiology that develop L.V. Gromashevsky's theory of the epidemic process and its theory of transmission mechanism (E.N. Pavlovsky's theory of natural foci, V.D. Belyakov's theory of self-regulation of parasitic systems and B.L. Cherkassky's socio-ecological concept, A.A.Yakovlev's concept of integration and competitive development of the epidemic process, the theory of psychrophilicity of pathogenic bacteria G.P. Somova)
   - manifestations of the epidemic process (in time, space and among various socio-age groups of the population)
   - the content of preventive and anti-epidemic measures and the principles of practical epidemiology
   - leading measures in the management of the epidemic process of certain groups of infectious diseases
   - approaches to the study, criteria for evaluating the effectiveness and quality of anti-epidemic measures
   - theoretical prerequisites for the elimination of infectious diseases
   - the algorithm of anti-epidemic work in an epidemic outbreak
   - the structure and fundamentals of the management of the anti-epidemic system
2. learn to:
   - substantiate the leading measures for the prevention and control of certain groups of human infectious diseases
   - evaluate the quality and effectiveness of anti-epidemic measures
3. master:
   - methods of dynamic monitoring of the determinants of the epidemic process of specific infectious diseases in order to improve prevention measures
   - methods of identifying the prerequisites and precursors of the intensification of the epidemic process
   - skills in drawing up an anti-epidemic work plan.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.4-6 Epidemiological studies (descriptive, analytical, experimental), its organization. Epidemiological statistics. Epidemiological method. Descriptive epidemiological studies, Their organization. Analytical epidemiological studies (cohort, case-control, correlation), their organization

Duration of the practical class (in academic hours):	6

Purpose of the practical class:
1. acquire knowledge of:
   - the content of preventive and anti-epidemic measures and principles of practical epidemiology
   - leading measures in the management of the epidemic process of certain groups of infectious diseases
   - approaches to the study, criteria for evaluating the effectiveness and quality of anti-epidemic measures
   - theoretical prerequisites for the elimination of infectious diseases
   - an algorithm for anti-epidemic work in an epidemic outbreak
   - the structure and fundamentals of the management of the anti-epidemic system
2. learn to:
   - substantiate the leading measures for the prevention and control of certain groups of human infectious diseases
   - evaluate the quality and effectiveness of anti-epidemic measures.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.10-11 Disinfection and sterilization. Classification, basic concepts. Disinfection measures

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. acquire knowledge of:
   - types of disinfection; disinfection methods, methods of application of disinfectants

- characteristics of the main groups of chemicals used in disinfection; spectrum of antimicrobial activity of disinfectants, levels of disinfecting activity
- requirements for ideal (promising) disinfectants
- toxic effect of drugs on humans and warm-blooded animals, aggressive effect on treated objects
- the scope of application of disinfectants
- the importance of pre-sterilization cleaning of medical instruments and their sterilization
- the technique of its implementation
- factors affecting the effectiveness of chemical disinfection
- the organizational structure of the disinfection service, organizers and performers of disinfection
- technical means of disinfection and sterilization

2. learn to:
- formulate and write down the law, definition, describe with sufficient completeness the events, the process, the place and the importance of disinfection in the system of anti-epidemic measures for various infections
- identify objects for disinfection, methods and methods of its implementation
- choose the right specific disinfectants for disinfection based on the characteristics, chemical groups of disinfectants and requirements for the ideal preparation
- use instructional and methodological documents for disinfection and pre-sterilization cleaning
- evaluate the factors influencing the effectiveness of disinfection and pre-sterilization cleaning
- to determine the possibility of disinfection of things in disinfection chambers of various types
- evaluate the quality of disinfection and sterilization

3. master:
- skills in organizing disinfection, depending on the epidemiological characteristics of the infection, the specific epidemic situation and the potential effectiveness of measures.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.12-14 Immunoprophylaxis. Organization and planning. Types and methods of vaccine administration. Contraindications and post vaccination complications. Immunization schedule

Duration of the practical class (in academic hours):	6

Purpose of the practical class:
1. acquire knowledge of:
- the organization of the vaccination in the Russian Federation, the world
- recommendations of WHO and other international medical organizations on vaccination
- clinical manifestations of post-vaccination complications
- registration and accounting of preventive measures
- immunological processes during vaccination

- the essence and goals of immunoprophylaxis
- characteristics of modern immunobiological preparations
- conditions of storage and transportation of medical immunobiological preparations
- indications and contraindications for vaccine prophylaxis
- national schedule of preventive vaccinations and immunization according to epidemic indications
- post-vaccination reactions and complications
- organization of vaccination work
- methods for assessing the quality and effectiveness of immunoprophylaxis
- safety criteria for vaccination of the population
- the methodology of the examination of the children's outpatient clinics on the organization and conduct of vaccination
- legal and ethical foundations of immunoprophylaxis
- features of post-vaccination complications monitoring

2. learn to:
- use legislative and regulatory documents regulating various issues related to immunoprophylaxis
- evaluate the factors influencing the effectiveness and safety of immunoprophylaxis in children and adults
- plan, organize and carry out immunization of children and adults
- conduct an examination of the children's polyclinic for the organization of vaccination work

3. master:
- skills of organization of the vaccination process
- skills of evaluation of the cost-effectiveness of vaccine prevention
- skills of evaluation of the effectiveness of vaccination.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.15-17 Epidemiology of anthroponoses: airborne infections. Epidemiology of anthroponoses: fecal-oral infections. Epidemiology of anthroponoses: contact infections

Duration of the practical class (in academic hours):	6

Purpose of the practical class:
1. acquire knowledge of:
- the epidemiology of individual anthroponotic infections, their spread on the territory, the nature and scope of anti-epidemic measures in the foci
- features of the epidemic process in anthroponoses with different transmission mechanisms
- mechanisms of development and manifestation of the epidemic process in aerosol anthroponoses of bacterial (diphtheria, meningococcal infection, scarlet fever, tuberculosis) and viral etiology (measles)
- mechanisms of development and manifestations of the epidemic process in intestinal anthroponoses (shigellosis, typhoid fever, viral hepatitis A)
- mechanisms of development and manifestations of the epidemic process in parenteral viral hepatitis

- the main anti-epidemic measures carried out in case of anthroponoses with different transmission mechanism
- general characteristics, medical, socio-economic, and epidemiological significance of the main human anthroponoses
- the main normative and methodological documents regulating preventive and anti-epidemic measures in case of anthroponoses
- modern methods and means of prevention of anthroponoses
- methods for evaluating preventive and antiepidemic measures in cases of anthroponoses with various transmission mechanisms

2. learn to:
- use normative and methodological documents regulating preventive and anti-epidemic measures carried out by the medical and preventive service in epidemic foci of anthroponotic infections
- assess the manifestations of the epidemic process of anthroponoses with various transmission mechanisms and identify conditions conducive to their formation
- organize and implement anti-epidemic measures in the centers of anthroponoses
- evaluate the quality and effectiveness of preventive and anti-epidemic measures for leading anthroponoses

3. master:
- skills of assessing the epidemic situation of anthroponoses with different transmission mechanisms
- skills of determining the main list of anti-epidemic measures in the foci of anthroponoses, conducted by specialists of a medical and preventive institution.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.18-19 Epidemiology of zoonoses. Epidemiology of sapronoses

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. acquire knowledge of:
- epidemic foci of infectious diseases, their territorial and temporal boundaries
- the goals and objectives of the epidemiologist's work in epidemic foci
- importance of working in an epidemic outbreak for epidemiological surveillance
- the principle of complexity and the main link in the planning of anti-epidemic measures
- the effectiveness of anti-epidemic work in epidemic foci
- identification of the epidemic focus in zoonotic and sapronous infections
- features of the epidemic process in zoonotic and sapronous infections
- mechanisms of development, risk factors and manifestations of the epidemic process in HFRS, tick-borne encephalitis, anthrax, rabies, ixodes tick-borne borelliosis
- causes of the formation of epidemic foci
- features of the formation of epidemic foci in infections with different transmission mechanisms

- methods used in the epidemiological examination of epidemic foci
- epidemiological diagnosis of the causes of the formation of the lesion
- measures to eliminate epidemic outbreaks
- maintenance and organization of epidemiological surveillance
- general directions of prevention of zoonoses and sapronoses
- the main normative and methodological documents regulating work in the foci of zoonoses and sapronoses

2. learn to:
- determine the territorial and temporary boundaries of the epidemic outbreak
- determine the time of probable infection
- determine the circle of contact persons in the epidemic outbreak
- determine the required amount of laboratory research and establish facilities to be examined in the epidemic outbreak
- determine indications for laboratory examination of contact persons
- fill out the epidemiological survey card of the epidemic outbreak
- plan anti-epidemic measures in an epidemic outbreak

3. master:
- methods of epidemiological examination of an epidemic outbreak
- skills in preparing an anti-epidemic action plan
- skills of working with the public
- skills in tracking epidemic outbreaks
- skills of working with medical documentation and its registration.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.20-21 Healthcare-Associated Infections (HAIs). Prevention of Healthcare-Associated Infections

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. acquire knowledge of:
- infections related to the provision of medical care to the population in a medical and preventive institution (hospital, outpatient clinic)
- features of the epidemic process in cases of infections related to the provision of medical care (hospital infections) in medical treatment and prophylactic organizations (HAIs) of various profiles
- mechanisms of development, risk factors and manifestations of the epidemic process of infections associated with medical care caused by pathogenic and opportunistic microflora
- general characteristics, medical, socio-economic and epidemiological significance of infections related to medical care
- maintenance and organization of epidemiological surveillance for infections related to the provision of medical care
- the main anti-epidemic measures carried out in case of infections related to the provision of medical care

- general directions for the prevention of infections related to the provision of medical care in medical institutions
- main normative and methodological documents regulating preventive and anti-epidemic measures for infections related to the provision of medical care

2. learn to:
- use normative and methodological documents regulating preventive and anti-epidemic measures in case of infections related to the provision of medical care
- assess the manifestations of the epidemic process in infections related to the provision of medical care and identify the conditions contributing to their occurrence
- identify and plan anti-epidemic measures in the (HAIs) in case of infections related to the provision of medical care
- evaluate the quality and effectiveness of preventive and anti-epidemic measures for infections related to medical care

3. master:
- skills required to assess the epidemic situation in case of infections related to the provision of medical care; the algorithm of epidemiological investigation and the skills to determine the main list of anti-epidemic (preventive) measures in the (HAIs).

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.22-23 Epidemiology and prevention of HIV infection, parenteral viral hepatitides. Particularly dangerous infections. Epidemiology and prevention

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. acquire knowledge of:
- biological properties of HIV infection, parenteral viral hepatitides, particularly dangerous infections
- the main links of the epidemic process: sources of infection (patients with acute/chronic form, asymptomatic carriers) and transmission mechanisms (parenteral, sexual, vertical)
- risk groups
- the role of immunoprophylaxis (hepatitis B vaccination) and principles of post-exposure HIV prevention
- current sanitary and epidemiological rules governing the prevention of HIV and hepatitis

2. learn to:
- assess risks: calculate the probability of infection in emergency situations (cut, needle prick) in the treatment room or operating room
- collect an epidemiological history: interview patients for risk factors

3. master:
- algorithms for emergency assistance in case of an accident
- the basics of medical safety
- strictly observe the requirements for instrument sterilization, Class B medical waste management, and disposal rules.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

Recommended reading:
1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

Topic No.24-25 Epidemiology of non-infectious diseases. Cardiovascular diseases. Epidemiology of non-infectious diseases. Oncological diseases

Duration of the practical class (in academic hours):	4

Purpose of the practical class:
1. acquire knowledge of:
   - the theoretical foundations of non-communicable epidemiology
   - goals and objectives of non-communicable epidemiology
   - the main methods used to solve problems in non-communicable epidemiology
   - features of the formation of the incidence of non-communicable diseases
   - distinctive features of the action of risk factors in the formation of morbidity of various non-communicable pathologies
   - the main directions of epidemiological surveillance in relation to non-communicable pathology
   - statistical indicators characterizing the epidemic process and morbidity in non-communicable diseases
   - formal logic techniques
2. learn to:
   - calculate statistical indicators (incidence, prevalence, mortality)
   - formalize the results in the form of graphs, figures, cartograms, tables
   - characterize, describe morbidity over time, by territories and by population groups
   - use standardization methods
   - use the techniques of formal logic when planning DEIS and discussing the results in relation to non-communicable diseases
   - formulate hypotheses about risk factors in the development of oncological, cardiovascular, allergic diseases and traumatological complications
   - plan surveillance measures for oncological, cardiovascular, allergic diseases and traumatological complications
3. master:
   - skills of epidemiological analysis of non-communicable pathology
   - skills of descriptive epidemiological studies in non-communicable diseases.

Practical classes requirements: classrooms equipped with multimedia equipment, blackboards, and subject guides for the discipline.

Independent work of the student: Preparing a report on the topic, working with study materials.

Methods of evaluation of acquired knowledge and skills: classroom questioning, tests, discussion of the reports

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1. Epidemiology: textbook / ed. N. I. Briko. — Moscow : GEOTAR-Media, 2024. — 552 p. : ill.

4. GUIDELINES FOR CONTINOUS AND INTERIM ASSESSMENT

Table 3. Guidelines for Conducting Continuous and Interim Assessment during the **Б1.О.20 Epidemiology** Course

Type of assessment	Assessment format
Continuous assessment	- conducting and evaluating oral or written quizzes during lectures and practical classes; - assessment and evaluation of completion and results of assignments given during practical classes; - assess and evaluate completion and results of individual assignments and exam tasks given during practical classes; - assessment and evaluation of reports, slides presentations, essays, and research paper quality.
Interim certification	is conducted in oral test format; it allows to assess the development of students' competencies correlating with types of professional activity.

5 ASPECTS OF THE IMPLEMENTATION OF THE COURSE FOR STUDENTS WITH DISABILITIES AND SPECIAL NEEDS

5.1. Availability of accessible environment

For students with disabilities and special needs, if a written application is submitted, lectures and practical classes are carried out taking into account health limitations, individual capabilities and medical status (hereinafter referred to as individual characteristics) of the student. Compliance with the following general requirements is ensured: teaching aids for collective and individual use are provided, required technical assistance is provided by an assistant, buildings and premises where lectures and practical classes are taking place meet accessibility requirements, other arrangements lack of which makes it impossible or difficult to master the discipline are made.

5.2. Compliance with general requirements

When lectures and practical classes are carried out at the written application of the student, the following general requirements are met: lectures and practical classes for students with disabilities and special needs take place at the same location as for students who do not have disabilities, if this does not cause difficulties for students; an assistant (assistants), who provide(s) students with the necessary technical assistance taking into account individual characteristics of the student, is (are) provided; necessary teaching aids are provided, taking into account individual characteristics of the student.

5.3. Availability of the internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia to students with disabilities in a form accessible to them.

All internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia concerning the discipline are made available to students with disabilities in a form accessible to them.

5.4. Increase in the duration of interim assessment of students with disabilities and special needs in relation to the established duration

Format of the interim assessment of academic performance within the scope of the discipline for students with disabilities and special needs is selected taking into account individual characteristics (orally, by writing on paper, by typing on a computer, as a test, etc.). The duration of the interim assessment in relation to the established duration is increased at the written application of the student with disabilities. Time limit for the student's preparation for the test is increased by at least 0.5 hours

6. STAFFING REQUIREMENTS OF THE DISCIPLINE

Academic teaching personnel that ensure the implementation of the discipline education process meet the requirements of the Federal State Educational Standard of Higher Education for the 31.05.01 General Medicine specialty; list of the aforementioned personnel is available on the website of the educational organization.