MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
Federal state autonomous educational institution
of higher education
«Far Eastern Federal University»
(FEFU)

SCHOOL OF BIOMEDICINE

«AGREED»
Head of education program
«General medicine»
_____ Khotimchenko Yu.S._____
(signature) (Full name)
«09» of July 2019

«APPROVED»
Director of the Department of Clinical Medicine
_____ Geltser B.I._____
(signature) (Full name)
«09» of July 2019

WORKING PROGRAM OF ACADEMIC DISCIPLINE (WPAD)
«Epidemiology»
Education program
Specialty 31.05.01 «General medicine»
Form of study: full time

year 5, semester 9,
lectures 18 hours
practical classes 36 hours
laboratory works 18 hours
total amount of in-classroom works 72 hours
independent self-work 36 hours
control works ()
pass-fail exam year 5, semester 9
exam not provided

The working program is drawn up in accordance with the requirements of the Federal state educational standard of higher education (level of training), approved by the order of the Ministry of education and science of the Russian Federation from 09.02.2016 № 95.

The working program of the discipline was discussed at the meeting of the Department of fundamental and clinical medicine. Protocol No. 8, 09 of July 2019

Authors: PhD Moreva V.G.

Annotation to the Work Program for the subject
“Epidemiology**”**

The discipline " Epidemiology "is intended for students of the direction 31.05.01" Medical care " and is included in the basic part of the curriculum.
The total complexity of the development of the discipline is 3 credits, 108 hours. The curriculum includes lectures (18 hours), practical classes (54 hours), independent work of students (36 hours). The discipline is implemented in the 5th year in the 9th semester. Evaluation of learning outcomes: credit.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "Medical care" (level of training specialty).

For the successful study of the discipline "Epidemiology" students should be formed the following preliminary competence:
- ability to abstract thinking, analysis, synthesis (GCC-1);
- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)
- the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)
- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7)
- the ability to participate in researches (PC – 21)

The program on epidemiology provides training for a new generation of doctors, who possess the full range of epidemiological studies of both infectious and non-infectious diseases. Epidemiology is considered as a set of specific cognitive and practical activities aimed at protecting public health from infectious and non-infectious diseases, as the sum of epidemiological

knowledge about individual diseases and groups of diseases, as a science of the epidemic process. The main subject of epidemiology is morbidity.

Obtaining professional knowledge and practical skills is carried out through a consistent study of the epidemiological approach to the study of diseases, General epidemiology, epidemiological diagnosis, methods of epidemiological studies, disinfection, sterilization, disinsection and deratization, immunoprophylaxis, private epidemiology of anthroponoses, zoonoses and sapronoses in practice, by self-study of the recommended literature. The solution of situational problems of varying degrees of complexity, as close as possible to the conditions of practical activity, the analysis of materials of outbreaks of infectious diseases allow to develop the ability to assess the epidemic situation, the formulation of conclusions, decision-making, their registration in the form of acts of epidemiological examination, reports of outbreaks of infectious diseases. Students, analyzing the digital material on the incidence of a particular disease in a particular locality, perform individual work aimed at identifying the causal relationship between the incidence and the factors that determine it. An epidemiological diagnosis is formulated and a set of preventive and anti-epidemic measures is developed.

Knowledge control is carried out using the initial, boundary, final test items.

The purpose of the discipline "Epidemiology" - to master the theoretical and methodological foundations of the prevention of infectious and noncommunicable diseases.

Objectives of the discipline:

1. Students acquire knowledge in the field of epidemiology, systematic understanding of the causes and spread of infectious and non-communicable diseases;

2. Formation of practical knowledge, skills and abilities:

- dynamic assessment of the epidemic situation in a certain area on the basis of methodological epidemiological principles;

- epidemiological survey of outbreaks of infectious diseases, methods of diagnosis epidemiological priority nosological forms;

- selection of appropriate epidemic environment of anti-epidemic measures, taking into account their effectiveness and their competent implementation;

- dynamic assessment of the effectiveness of anti-epidemic measures and the quality of work of officials and organizational structures of the anti-epidemic system.

As a result of the study of this discipline in students formed the following professional competence:

Competence code and formulation	**Stages of forming the competence**	
PC-3 - the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation , natural disasters and other emergency situations	Knows	the epidemic process and non-infectious epidemiology, the epidemiology of infectious and parasitic diseases, the implementation of anti-epidemic measures, protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation and natural disasters
	Is able to	to perform preventive, hygienic and anti-epidemic measures
	Possesses	methods to assess the health and physical development of the population, methods of planning and design of biomedical experiments
PC-16 - the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	the basic of a healthy lifestyle as a factor in safe life activity.
	Is able to	to conduct informational, educational and sanitary - educational work; to work independently with educational, scientific and reference literature
	Possesses	techniques of hygienic education and training of the population; skills of organizational and methodical work, health planning

I. STRUCTURE AND CONTENT OF THE THEORETICAL PART OF THE COURSE (18 hours)

Module 1 General epidemiology. (10 hours)

The theme 1 Epidemiology as a general medical science about the epidemic process. Subject and methods. Epidemiological approach to the study of human diseases (2 hours)

The formation of epidemiology in the early stages of development of medicine. The main stages of the development of the theory and practice of epidemiology in the pre-bacteriological period of science. The formulation of the first theoretical concepts about the origin of epi- demiy. Bacteriological discoveries and their influence on the development of the theory and practice of epidemiology. Epidemiology in the system of medical education, the relationship of epidemiology with other medical sciences. The existing definitions of the term "epidemic process". The role of L.V. Gromashevsky in creating a teaching about the epidemic process. Source and reservoir of infection. The transmission mechanism. Phase transmission mechanism. Susceptibility of the population. Manifestations of the epidemic process. Characteristic of epidemics.

The theme 2 Epidemiological studies (2 hours)

Epidemiological studies. Epidemiology, epidemiological analysis. Objectives of epidemiological study. Absolute and relative values. Indicators of morbidity and prevalence (prevalence, pain), area of application. Relative risk, etiological share, epidemiological meaning. Information support of research, content and sources of information. The importance of epidemiology for medicine and health. Types of epidemiological studies. Solid and selective, one-stage (transverse) and longitudinal (long), retrospective case-control, cohort, clinical (experimental) studies. Controlled randomized trials.

The theme 3 Preventive and anti-epidemic measures. Organizational and legal foundations of anti-epidemic activity. Epidemiological surveillance (2 hours)

Preventive and anti-epidemic measures. Measures aimed at the source (reservoir) of infection with anthroponoses, zoonoses, and sapronoses. Identify diagnostics. Insulation measures. Regime - restrictive measures (separation, observation, quarantine). Measures aimed at breaking the transmission mechanism (disinfection, sterilization, disinfection chambers).

Epidemiological surveillance as an information and analytical subsystem in the disease management system. The functions of the medical service of various profiles in the implementation of epidemiological surveillance of diseases. The system of preventive and anti-epidemic measures and means.

The theme 4 The state and prospects of the disinfection case. (2 hours)

Disinfection and its place in the system of anti-epidemic measures. History of disinfection. Disinfection methods: mechanical, physical, chemical. The main groups of chemicals used as disinfectants. Disinsection methods: mechanical, physical, biological, chemical.

The theme 5 The state and prospects of immunization (2 hours)

Definition of the concept of immunization. Infectious diseases, managed by immunoprophylaxis. Types of vaccine preparations, principles for their preparation. Vaccine requirements. Vaccination, the course of the vaccination process. Indications for revaccination. The organization of immunization. Approaches to the immunization of the population. Calendar of vaccinations. Accounting and selection of contingents to be vaccinated.

Module 2 Particular epidemiology (8 hours)

The theme 6. Epidemiology and prevention of aerosol and intestinal anthroponoses (2 hours).

General characteristics of the group of aerosol anthroponoses. Stages of the transfer mechanism. Epidemiological features of infections, determined by the general mechanism of transmission. Classification of aerosol anthroponoses. The degree of resistance of pathogens. Features of the interaction of the pathogen with the host organism. The formation of a strong immunity with most aerosol anthroponoses. Features of the epidemic process. The role of social conditions. The main areas of prevention. Immunization as the main direction of the fight against aerosol anthroponoses.

General characteristics of the group of intestinal infections. Bacterial diseases. Viral diseases. Transmission factors (primary, intermediate, final). Water, powder and contact-household transmission paths. Epidemiological surveillance and its peculiarities in various infectious diseases with a fecal-oral transmission mechanism depending on the degree of their controllability.

The theme 7 Epidemiology and prevention of HIV infection, hemocontact viral hepatitis B, C, D (2 hours)

General characteristics of the disease. Manifestations of the epidemic process (prevalence, risk groups, age structure, morbidity). Characteristics of the causative agents of hepatitis B, C, D and others. Epidemiological surveillance. Definition of the concepts of HIV infection and AIDS. General characteristics of the disease. Epidemiological surveillance. The role of the therapeutic and preventive service in conducting preventive and anti-epidemic measures.

The theme 8 Features of epidemiology and prevention of natural focal infectious diseases (2 hours)

General characteristics of group. Epidemiological classification based on the ecological proximity of pathogens. Zoonoses of domestic and synanthropic animals, zoonoses of wild animals (natural focal diseases). The definition of "natural foci" of infections. Classification of natural focal infections. The division of natural focal zoonoses into transmissible (obligate-transmissible,

optional transmissible) and non-transmissible. Mechanisms, routes and factors of transmission of pathogens from animals to humans. Concepts: reservoir, owner, carrier. Significance of specific and nonspecific carriers in transmissible zoonoses. Concepts: specific and non-specific inoculation; specific and non-specific contamination. Organization of epidemiological and epidemiological surveillance. Sapronoses - definition of the concept. Classification. The study of individual nosological forms.

The theme 9 Epidemiology and prevention of nosocomial infections (2 hours)

Basic concepts of hospital epidemiology. The definition of "nosocomial infections" (NI). The current epidemiological situation. Factors determining the social significance of nosocomial infection. Causes of growth. Classification of nosocomial infections. International Classification. Classification by type of hospital, which joined the hospital infection. The concept of exogenous nosocomial infection. Differences in the epidemic process of traditional and septic nosocomial infections. The specificity of the conditions for the development of the epidemic process in the hospital environment. Manifestations of the GSE epidemic process. Causes and conditions that determine the manifestation of the epidemic process. The concept of sporadic, group and outbreak of morbidity. Epidemic process in various traditional nosocomial infections: sources, factors and routes of infection in acute intestinal, airborne infections, viral hepatitis and HIV infection. Etiological structure of nosocomial infection. Current trends of its changes. Features of the etiological structure of nosocomial infection in various hospitals. Epidemiological characteristics of the most significant groups of microorganisms (gram-positive, gram-negative and non-fermenting bacteria, viruses, fungi). Definitions of the term "hospital strain".

II. THE STRUCTURE AND CONTENT OF THE PRACTICAL PART OF THE COURSE (54 hours)

Topic 1. Epidemiological approach to the study of human diseases. Subject and object of epidemiological study. (4 hours)

1. The subject and methods of epidemiology, its relationship with other disciplines.

2. The role of epidemiology for medical science and public health. The concept of the epidemiology of noncommunicable diseases.

3. The history of the development of epidemiology. The value of the works of D.K.Zabolotny, N.F.Gamalei, L.V. Pavlovsky, V.A. Bashenina, I.I. Mechnikov.

4. Place of epidemiology in the structure of medical disciplines.

Topic 2. Organizing and conducting an epidemiological study (4 hours).

1. Definition and structure of the epidemiological research method.

2. Descriptive and estimated epidemiological methods /descriptive epidemiology /.

3. Analytical epidemiological methods /analytical epidemiology /.

4. Experimental epidemiological methods.

5. The method of mathematical modeling. Quantitative epidemiology.

Topic 3. The study of the epidemic process. Basics of population (epidemiological) diagnosis (4 hours).

1. The study of the epidemic process. Definition of the concept, the intensity of the epidemic process.

2. A brief description of the three links of the epidemic process and their relationship.

3. The definition of the concept of "source of infection." Sources of infection with anthroponoses, zoonoses, sapronoses.

4. The mechanism of transmission of infection. Factors of transmission. Ways of spreading a contagious beginning.

5. Principles of classification of infectious diseases. Evolutionary bases of classification L.V. Gromashevsky (special position of zoonoses in addition to the classification Gromashevsky).

6. The role of social and natural factors in the development of the epidemic process. The doctrine of the natural foci of infectious diseases (E.N. Pavlovsky).

7. Epidemic process, its structure, forms of manifestation.

8. Sources of infection; options for various diseases. Conditions determining their epidemiological significance.

9. The mechanism of transmission of infection. Definitions, options, the concept of ways and factors of transmission.

10. Susceptibility of the population. Immunity and non-specific resistance.

11. The influence of social and natural environment on the development of the epidemic process.

Topic 4. Preventive and anti-epidemic measures and the basics of organizing anti-epidemic work. Epidemiological surveillance of infectious diseases (4 hours)

1. Orientation and organization of anti-epidemic work in the epidemic focus.

2. International System for the Prevention of the Delivery of Infectious Diseases.

3. Organization of sanitary protection of the country.

4. Organization of anti-epidemic measures in emergency situations.

5. Structure and organization of work of the State Sanitary and Epidemiological Surveillance Centers. Sanitary documentation.

Topic 5. Disinfection (4 hours)

1. Modern ideas about disinfection. Types of disinfection and its role in the system of anti-epidemic measures.

2. Chemical disinfection. Characteristics and methods of their use.

3. Mechanical and physical disinfection. Their characteristics, methods of application.

4. Disinsection. Fixed assets and their use.

5. Deratization, its methods and means.

Topic 6. Vaccination (4 hours)

1. Susceptibility to infectious diseases. Types of immunity and its impact on the development of the epidemic process.

2. The main provisions and requirements for the organization and conduct of preventive vaccinations.

3. Characterization of biological preparations belonging to the group of vaccines, toxoids.

4. Characteristics of drugs belonging to the group of sera, immunoglobulins, bacteriophages.

5. The role and importance of immunoprophylaxis. The contribution of domestic scientists in the development of vaccination.

6. Current status and prospects of vaccination.

7. Indications for vaccine prevention.

8. Vaccination schedule in childhood.

Topic 7. Epidemiology and Prevention of Anthroponosis with a Fecal-Oral Transmission Mechanism (4 hours)

1. Anthroponotic intestinal infections.

2. Comparative characteristics of the epidemic process in acute intestinal infections, depending on the transmission route of the pathogen.

3. Preventive and anti-epidemic measures for acute intestinal infections.

4. Epidemiological characteristics of the group of intestinal infections.

5. Organization and conduct of anti-epidemic measures in the foci of intestinal infections.

Topic 8. Epidemiology and prevention of anthroponosis with an aerosol transmission mechanism (4 hours)

1. Epidemiological characteristics of the group of airborne infections.

2. Acute respiratory viral infections, features of the epidemic process in various nosological forms. The content of preventive measures for the prevention of influenza.

3. Features of the epidemic process in aerosol infections with exanthema syndrome / measles, rubella, chicken pox /. Anti-epidemic measures.

4. Organization and holding of anti-epidemic measures in the foci of airborne infections.

Topic 9. Epidemiology and prevention of zoonotic and sapronous infections (4 hours)

1. The concept of the natural focus of an infectious disease. Tanks pathogens.

2. Carriers of pathogens of natural focal diseases. The mechanism of infection of people.

3. Typhus. The main clinical manifestations, epidemiology. Diagnostic methods, anti-epidemic measures.

Topic 10. Epidemiology and prevention of helminthiasis (4 hours)

1. General characteristics of helminthiasis.

2. Etiology and epidemiological features.

3. Pathogenesis.

4. Intestinal picture of helminthiasis.

5. Diagnosis of helminthiasis.

6. Control measures and prevention of helminthiasis.

Topic 11. Epidemiology and prevention of nosocomial infections: features of epidemiology and prevention of GSI in hospitals of various types; epidemiological surveillance of nosocomial infections (4 hours)

1. Basic concepts of hospital epidemiology. The definition of "nosocomial infections" (VBI).

2. Epidemic process in various traditional nosocomial infections: sources, factors and routes of infection in acute intestinal, airborne infections, viral hepatitis and HIV infection.

3. Etiology of nosocomial injections, "hospital" strains of pathogens.

4. Possible sources of infection in nosocomial infections.

5. Ways and factors of transmission in nosocomial infections.

6. Contingents of increased risk of nosocomial infections. Basics of epidemiological surveillance of nosocomial infections.

7. The concept of anti-epidemic hospital mode.

8. Preventive and anti-epidemic measures for the prevention of nosocomial infections.

9. Diagnosis and prevention of hospital (nosocomial) infections in medical institutions.

Topic 12. Epidemiology and prevention of HIV, viral hepatitis B and C, malaria (4 hours)

1. Infections with the blood-contact mechanism of transmission. Epidemiology of HIV infection. Contingents of increased risk of HIV infection. Medical staff safety. Indications for laboratory examination.

2. Epidemiology of viral hepatitis with fecal-oral mechanism (A, E, F). Preventive and anti-epidemic measures in the foci of hepatitis with fecal-oral transmission mechanism.

3. HIV infection: clinical manifestations, diagnosis, treatment guidelines. HIV prevention. Organization of work with seropositive individuals.

4. Epidemiology of viral hepatitis with contact mechanism of transmission (B, D, C). Prevention of viral hepatitis with contact mechanism (B, C, D). Contingents of increased risk of infection with blood-borne hepatitis. Medical staff safety. Indications for laboratory examination. Clinical examination.

Topic 13. Epidemiology of noncommunicable diseases (4 hours)

1. Statement of the problem.

2. Definition of the goal.

3. Technology of the assignment, the solution of situational problems and the interpretation of the results.

Topic 14. The final lesson. Preparation for offset (2 hours)

III. SCHOLASTIC-METHODICAL PROVISIONING FOR THE STUDENTS' INDIVIDUAL WORK

Scholastic-methodical provisioning for the students' individual work in the discipline Epidemiology presented in Supplement 1 and includes:

- schedule for performing individual work in the discipline, including the approximate time to allocate on each task;
- description of the tasks for individual work of students and methodical recommendations for their completion;
- requirements for submission and registration of results of individual work.

IV. CONTROL FOR ATTAINING THE COURSE GOAL

№	Controled sections/topics of the discipline	Codes and stages of forming the competences		Means for evaluation	
				Current control	Half-way attestation
1	**Module 1** General epidemiology **Module 2** Particular epidemiology	PC-3 - the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation , natural disasters and other emergency situations	Knows	PT-1 Test	Offset test questions 1-4
			Is able to	Case study	Case study
			Possesses	EP—3 Report, presentation	Case study
2	**Module 1** General epidemiology **Module 2** Particular epidemiology	PC-16 - the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	PT-1 Test	Offset test questions 5-9
			Is able to	Case study	Case study
			Possesses	EP—3 Report, presentation	Case study

The model tests, methodical materials prescribing procedures for evaluation of knowledge, skills and/or practical experience, as well as criteria and indicators necessary to assess knowledge, abilities, skills and the defined stages of forming competencies in the process of acquiring educational program, are presented in Addition 2.

V. LIST OF EDUCATIONAL LITERATURE AND INFORMATIONAL-METHODICAL REQUIREMENTS FOR THE DISCIPLINE

Primary

1. An Introduction to Mathematical Epidemiology [Electronic resource] / Maia Martcheva, Springer US, 2015

http://link.springer.com/openurl?genre=book&isbn=978-1-4899-7612-3

2. Biostatistics and Epidemiology [Electronic resource] / Sylvia Wassertheil-Smoller, Jordan Smoller, Springer New York, 2015

http://link.springer.com/openurl?genre=book&isbn=978-1-4939-2134-8

3. Handbook of Epidemiology [Electronic resource] / Wolfgang Ahrens, Iris Pigeot, Springer New York, 2014

http://link.springer.com/openurl?genre=book&isbn=978-0-387-09834-0

4. Infectious diseases vol. I / ed. by Jonathan Cohen, William G. Powderly, Steven M. Opal. [Netherlands] : Elsevier, [2016], 811 p.

http://lib.dvfu.ru:8080/lib/item?id=chamo:822044&theme=FEFU

5. Infectious diseases vol. II / ed. by Jonathan Cohen, William G. Powderly, Steven M. Opal. [Netherlands] : Elsevier, [2016], 812 p.

http://lib.dvfu.ru:8080/lib/item?id=chamo:822047&theme=FEFU

6. Viral Infections of Humans [Electronic resource] / Richard A. Kaslow, Lawrence R. Stanberry, James W. Le Duc, Springer US, 2014

http://link.springer.com/openurl?genre=book&isbn=978-1-4899-7448-8

Additional

1. Zoonoses - Infections Affecting Humans and Animals [Electronic resource] / Andreas Sing, Springer Netherlands, 2015

http://link.springer.com/openurl?genre=book&isbn=978-94-017-9457-2

2. Hospital Infection Prevention [Electronic resource] / Chand Wattal, Nancy Khardori, Springer India, 2014

http://link.springer.com/openurl?genre=book&isbn=978-81-322-1608-7

3. Cholera Outbreaks [Electronic resource] / G. Balakrish Nair, Yoshifumi Takeda, Springer Berlin Heidelberg, 2014

http://link.springer.com/openurl?genre=book&isbn=978-3-642-55404-9

4. Neglected Tropical Diseases - Latin America and the Caribbean [Electronic resource] / Carlos Franco-Paredes, José Ignacio Santos-Preciado, Springer Vienna, 2015

http://link.springer.com/openurl?genre=book&isbn=978-3-7091-1422-3

5. Nelson textbook of pediatrics vol 1 / ed. by Robert M. Kliegman, Bonita F. Stanton, Joseph W. St Geme III. [Philadelphia, Pennsylvania] : Elsevier, [2016], 1756 p.

http://lib.dvfu.ru:8080/lib/item?id=chamo:822087&theme=FEFU

6. Pediatric Infectious Disease [Electronic resource] / Christine M. Houser, Springer New York, 2015

http://link.springer.com/openurl?genre=book&isbn=978-1-4939-1329-9

The list of resources of the information-telecommunication network "Internet"

1. Primorsky Krai of Russia: http://www.fegi.ru/PRIMORYE/ANIMALS/bpi.htm
2. Scientific electronic library: http://www.elibrery.ru

3. Central Scientific Medical Library: http://www.scsml.rssi.ru
4. Medical Internet Resources: http://www.it2med.ru/mir.html
5. Publishing House "Medicine": http://www.medlit.ru
6. Scientific Electronic Library: http://elibrary.ru/

LIST OF INFORMATION TECHNOLOGIES AND SOFTWARE

The location of the computer equipment on which the software is installed, the number of jobs	**List of licensed software**
Multimedia auditorium Vladivostok Russian island, Ayaks 10, building 25.1, RM. M723 Area of 80.3 m2 (Room for independent work)	Windows Seven enterprice SP3x64 Operating System Microsoft Office Professional Plus 2010 office suite that includes software for working with various types of documents (texts, spreadsheets, databases, etc.); 7Zip 9.20 - free file archiver with a high degree of data compression; ABBYY FineReader 11 - a program for optical character recognition; Adobe Acrobat XI Pro 11.0.00 - software package for creating and viewing electronic publications in PDF; WinDjView 2.0.2 - a program for recognizing and viewing files with the same format DJV and DjVu.

In order to provide special conditions for the education of persons with disabilities all buildings are equipped with ramps, elevators, lifts, specialized places equipped with toilet rooms, information and navigation support signs.

VI. METHODOLOGICAL RECOMMENDATIONS ON THE COMPLETING THE DISCIPLINE

The main goal to be attained on completion of the discipline is the formation of theoretical and methodological foundations for the prevention of infectious and non-communicable diseases.

Performing by students of extracurricular individual work in extracurricular time, both under the guidance of a teacher and without his direct participation is important in order to achieve this goal.

Students are encouraged to systematically study the teaching material using textbooks, textx and methodical writings in accordance with the study plan, and to perform all task in a timely manner, which is especially important when using grade-rating system for assessing students' knowledge.

The goal of students' individual work is to master fundamental knowledge, professional skills and experiences of their specialty, experience of creative scientific research. Individual work of students promotes the development of autonomy, responsibility and organization, creative approach to solving the problems of the educational and professional level, deepen and broaden knowledge, formation of interest to cognitive activity, mastering the techniques of learning, the development of cognitive abilities.

Individual work of students for the discipline is mandatory for each student, its volume is determined by the federal educational standard and curriculum. It is necessary at the very beginning of the course to carefully plan the time allocated for individual work with the sources and literature on the subject.

Individual work includes:

a) reading textbooks, lectures, methodical recommendations, scientific articles

b) reading and analyzing literature passages of journalistic nature;

c) reading and analysis of literary passages of scientific nature;

g) working with resources posted on the Internet.

The purpose of this types of work is to instill an interest in reading and to teach students to overcome difficulties in reading, extract the necessary information from the text to teach them to use Russian and International sources for self-education and improve their professional skills.

LOGISTICS DISCIPLINE

For practical work, as well as for the organization of independent work, students have access to the following laboratory equipment and specialized classrooms that meet the current sanitary and fire regulations, as well as safety requirements during training and scientific and industrial works:

Name of the equipped rooms and rooms for independent work	**List of main equipment**
The computer class of the School of biomedical AUD. M723, 15 work placts	Screen, electrically 236*147 cm to trim the screen; Projector DLP technology, 3000 ANSI LM, WXGA with 1280x800 resolution, 2000:1 Mitsubishi EW330U; Subsystem of specialized mounting equipment course-2007 Tuarex; Subsystem of videocommunity: matrix switch DVI and DXP 44 DVI Pro advertising; extension cable DVI over twisted pair DVI 201 TX/RX advertising; Subsystem of audiocommentary and sound; speaker system for ceiling si 3ct LP Extron on from; digital audio processor DMP 44 LC the Extron; the extension for the controller control IPL T CR48; wireless LAN for students is provided with a system based on 802.11 a/b/g/N 2x2 MIMO(2SS) access points. Monoblock HP Loope 400 all-in-one 19.5 in (1600x900), core i3-4150t, 4GB DDR3-1600 (1x4GB), 1TB HDD 7200 SATA, and a DVD+ / -RW, GigEth, Wi-Fi and BT, the USB port of roses/MSE, Win7Pro (64-bit)+Win8.1Pro(64-bit), 1-1-1 Wty
690922, Primorsky Krai, Vladivostok, island Russian, the Saperny Peninsula, the village of ayaks, 10, RM. M 421	Multimedia audience: Monoblock Lenovo C360G-i34164G500UDK; projection Screen Projecta Elpro Electrol, 300x173 cm; Multimedia projector, Mitsubishi FD630U, 4000 ANSI Lumen 1920 x 1080; Flush interface with automatic retracting cables TLS TAM 201 Stan; Avervision CP355AF; lavalier Microphone system UHF band Sennheiser EW 122 G3 composed of a wireless microphone and receiver; Codec of videoconferencing LifeSizeExpress 220 - Codeconly - Non-AES; Network camera Multipix MP-HD718; Two LCD panel, 47", Full HD, LG M4716CCBA; Subsystem of audiocommentary and sound reinforcement; centralized uninterrupted power supply
Reading rooms of the Scientific library of the University open access Fund (building a - 10)	Monoblock HP Loope 400 All-in-One 19.5 in (1600x900), Core i3-4150T, 4GB DDR3-1600 (1x4GB), 1TB HDD 7200 SATA, DVD+/-RW,GigEth,wifi,BT,usb kbd/mse,Win7Pro (64-bit)+Win8.1Pro(64-bit),1-1-1 Wty Speed Internet access 500 Mbps. Jobs for people with disabilities equipped with displays and Braille printers.; equipped with: portable reading devices flatbed texts, scanning and reading machines videovelocity with

	adjustable color spectrums; increasing electronic loops and ultrasonic marker
Accreditation-simulation center of the school of Biomedicine	

Annex 1

THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
Federal State autonomous education institution of higher education
«Far Eastern Federal University»
(FEFU)

SCHOOL OF BIOMEDICINE

TRAINING AND METHODOLOGICAL SUPPORT

INDEPENDENT WORK OF TRAINEES

in discipline Epidemiology
Educational program
Preparation for 31.05.01. General Medicine
Form of training full-time

Vladivostok

2016

The schedule execution of independent work on discipline «Epidemiology» (36 hours)

№	Date / deadlines	Type of independent work	Estimated time to complete rules	Form of control
Semester 9				
	1st-6th Week	Preparing of abstract	8 h.	EP—3 Report
	7th-16th Week	Submission of presentations on the theme of the abstract	12 h.	EP—3 Report, presentation
	2th-16th Week	Working with a computer in the classroom	8 h.	TM
	17th-18th Week	Preparing to offset	8 h.	PT-2 colloquium

Guidelines for writing and design of the abstract

Abstract - the creative activity of the student, which reproduces in its structure research activities to solve theoretical and applied problems in a particular branch of scientific knowledge. By virtue of this course work is an essential component of the educational process in higher education.

The abstract, being a model of scientific research, is an independent work in which a student solves a problem of a theoretical or practical nature, applying the scientific principles and methods of a given branch of scientific knowledge. The result of this scientific search can have not only subjective, but also objective scientific novelty, and therefore can be presented for discussion by the scientific community in the form of a scientific report or a message at a scientific-practical conference, as well as a scientific article.

The abstract implies the acquisition of skills for building business cooperation based on the ethical standards of scientific activity. Purposefulness, initiative, disinterested cognitive interest, responsibility for the results of their

actions, conscientiousness, competence - personality traits that characterize the subject of research activities corresponding to the ideals and norms of modern science.

The abstract is an independent educational and research activity of the student. The teacher assists in a consultative manner and assesses the process and the results of the activity. He provides an approximate topic of abstract work, specifies the problem and topic of research with the intern, helps to plan and organize research activities, assigns time and a minimum number of consultations.

The teacher accepts the text of the abstract for verification at least ten days before the defense.

Traditionally there was a certain structure of the abstract, the main elements of which in order of their location are the following:

1. Title page.
2. The task.
3. Table of Contents
4. List of symbols, symbols and terms (if necessary).
5. Introduction.
6. The main part.
7. Conclusion.
8. Bibliographic list.
9. Applications.

The title page lists: educational institution, graduating department, author, teacher, research topic, place and year of the essay.

The title of the abstract should be as short as possible and fully consistent with its content.

The table of contents (content) reflects the names of the structural parts of the abstract and the pages on which they are located. The table of contents should be placed at the beginning of work on one page.

The presence of a detailed introduction - a mandatory requirement for the abstract. Despite the small volume of this structural part, its writing causes considerable difficulties. However, it is a qualitatively executed introduction that is the key to understanding the entire work, which testifies to the professionalism of the author.

Thus, the introduction is a very crucial part of the essay. The introduction should start with a justification of the relevance of the chosen topic. As applied to the abstract, the concept of "relevance" has one feature. From how the author of the essay can choose a topic and how correctly he understands and evaluates this topic from the point of view of modernity and social significance, characterizes his scientific maturity and professional preparedness.

In addition, in the introduction it is necessary to isolate the methodological basis of the abstract, to name the authors, whose works constituted the theoretical basis of the study. A review of the literature on the topic should show the author’s thorough acquaintance with special literature, his ability to systematize sources, critically examine them, highlight the essential, determine the most important in the current state of knowledge of the topic.

The introduction reflects the importance and relevance of the chosen topic, defines the object and subject, purpose and objectives, and the chronological framework of the study.

The introduction ends with a presentation of general conclusions about the scientific and practical significance of the topic, the degree of its knowledge and sources, and the hypothesis being put forward.

The main part describes the essence of the problem, reveals the topic, determines the author's position, factual material is given as an argument and for illustrations of put forward provisions. The author must demonstrate the ability to consistently present the material while analyzing it simultaneously. Preference is given to the main facts, rather than small details.

The abstract ends with the final part, which is called "conclusion". Like any conclusion, this part of the abstract serves as a conclusion, due to the logic of the study, which is a form of synthesis accumulated in the main part of scientific information. This synthesis is a consistent, coherent presentation of the results obtained and their relation to a common goal and specific tasks set and formulated in the introduction. t is here that contains the so-called "output" knowledge, which is new in relation to the original knowledge. The conclusion may include suggestions of a practical nature, thereby increasing the value of theoretical materials.

So, in the conclusion of the abstract should be: a) presents the conclusions of the study; b) theoretical and practical significance, novelty of the abstract; c) indicated the possibility of applying the results of the study.

After the conclusion it is accepted to place the bibliographic list of the used literature. This list is one of the essential parts of the abstract and reflects the independent creative work of the author of the abstract.

The list of sources used is placed at the end of the work. It is made or in alphabetical order (by the name of the author or the name of the book), or in the order in which the references appear in the text of the written work. In all cases, the full title of the work, the names of the authors or the editor of the publication are indicated, if a group of authors participated in writing the book, data on the number of volumes, the name of the city and publisher in which the work was published, year of publication, number of pages.

Methodical recommendations for the preparation of presentations

For the preparation of the presentation it is recommended to use: PowerPoint, MS Word, Acrobat Reader, LaTeX-bev package. The simplest program for creating presentations is Microsoft PowerPoint. To prepare a presentation, it is necessary to process the information collected while writing the essay.

The sequence of preparation of the presentation:

1. Clearly state the purpose of the presentation.

2. Determine what the presentation format will be: live presentation (then how long it will be) or e-mail (what will be the context of the presentation).

3. Select the entire content of the presentation and build a logical chain of presentation.

4. Identify key points in the content of the text and highlight them.

5. Determine the types of visualization (pictures) to display them on slides in accordance with the logic, purpose and specificity of the material.

6. Choose the design and format the slides (the number of pictures and text, their location, color and size).

7. Check the visual perception of the presentation.

The types of visualization include illustrations, images, charts, tables. The illustration is a representation of a real-life visual. The images - as opposed to illustrations - are a metaphor. Their purpose is to cause an emotion and create an attitude towards it, to influence the audience. With the help of well-designed and presented images, information can remain permanently in a person's memory. Chart - visualization of quantitative and qualitative relationships. They are used for convincing data demonstration, for spatial thinking in addition to the logical one. Table - specific, visual and accurate data display. Its main purpose is to structure information, which sometimes facilitates the perception of data by the audience.

Practical tips on preparing a presentation

– printed text + slides + handouts are prepared separately;

– slides - a visual presentation of information that should contain a minimum of text, a maximum of images that carry a meaning, to look visually and simply;

– textual content of the presentation - oral speech or reading, which should include arguments, facts, evidence and emotions;

– recommended number of slides 17-22;

– mandatory information for the presentation: the subject, surname and initials of the speaker; message plan; brief conclusions from all that has been said; list of sources used;

– handout - should provide the same depth and coverage as the live performance: people trust more what they can carry with them than disappear images, words and slides are forgotten, and handouts remain a constant tangible reminder; handouts are important to distribute at the end of the presentation; Handouts should be different from slides, should be more informative.

Criteria for evaluation of the abstract.

The stated understanding of the abstract as a holistic copyright text defines the criteria for its evaluation: the novelty of the text; the validity of the choice of source; the degree of disclosure of the essence of the issue; compliance with the requirements for registration.

The novelty of the text: a) the relevance of the research topic; b) novelty and independence in the formulation of the problem, the formulation of a new aspect of the well-known problem in the establishment of new connections (interdisciplinary, intra-subject, integration); c) the ability to work with research, critical literature, systematize and structure the material; d) the appearance of the author's position, independence of assessments and judgments; d) stylistic unity of the text, the unity of genre features.

The degree of disclosure of the essence of the question: a) the plan compliance with the topic of the abstract; b) compliance with the content of the topic and plan of the abstract; c) completeness and depth of knowledge on the topic; d) the validity of the methods and methods of working with the material; e) the ability to generalize, draw conclusions, compare different points of view on one issue (problem).

The validity of the choice of sources: a) evaluation of the used literature: whether the most famous works on the topic of research are involved (including recent journal publications, recent statistics, summaries, references, etc.).

Compliance with the requirements for registration: a) how correct the references to the used literature, references are; b) assessment of literacy and presentation culture (including spelling, punctuation, stylistic culture), knowledge of terminology; c) compliance with the requirements for the volume of the abstract.

The reviewer should clearly state the remark and questions, preferably with references to the work (possible on specific pages of the work), to research and evidence that the author did not take into account.

The reviewer can also indicate: whether the student has addressed the topic earlier (essays, written works, creative works, olympiad works, etc.) and whether there are any preliminary results; how the graduate conducted the work (plan, intermediate stages, consultation, revision and processing of the written or lack of a clear plan, rejection of the recommendations of the head).

The student submits an essay for review no later than a week before the defense. The reviewer is the teacher. Experience shows that it is advisable to acquaint the student with the review a few days before the defense. Opponents are appointed by the teacher from among the students. For an oral presentation, a student needs about 10–20 minutes (approximately as long as he answers with tickets for the exam).

Grade 5 is set if all the requirements for writing and defending an essay are fulfilled: the problem is indicated and its relevance is justified, a brief analysis of different points of view on the problem under consideration is made and one's own position is logically presented, conclusions are formulated, the topic is fully disclosed, the volume is met, external requirements are met design, given the correct answers to additional questions.

Grade 4 - the basic requirements for the abstract and its protection are met, but there are shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in the judgments; not

sustained volume of the abstract; there are omissions in the design; Additional questions for the protection given incomplete answers.

Grade 3 - there are significant deviations from the requirements for referencing. In particular: the topic is covered only partially; factual errors in the content of the abstract or when answering additional questions; during the protection there is no output.

Grade 2 - the topic of the essay is not disclosed, a significant misunderstanding of the problem is found.

Grade 1 - student's essay is not presented.

Approximate topics of abstracts and presentations

1. Epidemiology of infectious diseases. The history of the formation of the discipline. Objectives, methods of discipline. The epidemic process, its structure, forms of manifestation. Classification of infectious diseases, depending on the source of infection and transmission mechanism.

2. Epidemic process: Sources of infection; options for various diseases. Conditions determining their epidemiological significance.

The mechanism of transmission of infection. Definitions, options, the concept of ways and factors of transmission. Susceptibility of the population. Immunity and non-specific resistance.

3. The influence of the social and natural environment on the development of the epidemic process. Epidemic focus, its structure. Orientation and organization of anti-epidemic work in the epidemic focus.

4. Specific prevention. Organization and tactics of vaccination in the clinic. Indications for vaccine prevention. Comparative characteristics of different types of vaccines.

5. Calendar of preventive vaccinations: in childhood, professional, according to epidemiological indications. Means of passive immunization, indications for their use.

6. Calendar of vaccinations: Vaccinations against tetanus and rabies. Emergency prevention. Antirabies vaccinations: characteristics of drugs, indications for use. Characteristics of drugs, indications for their use. Emergency care for anaphylactic shock

7. The place of epidemiology in the structure of medical disciplines. Retrospective and operational research methods.

8. The definition and structure of the epidemiological research method. Descriptive and estimated epidemiological methods / descriptive epidemiology /. Quantitative epidemiology.

9. Analytical epidemiological methods / analytical epidemiology /. Experimental epidemiological methods. The method of mathematical modeling.

10. Epidemic process with an aerosol mechanism of transmission of infection. The epidemic process of diphtheria in modern conditions. Anti-epidemic measures in the outbreak of diphtheria. Specific prevention of diphtheria in different age groups. Vaccination schedule.

11. Epidemic process with an aerosol mechanism of transmission of infection. Meningococcal infection: a characteristic of the epidemic process. Anti-epidemic measures. Preventive measures for the prevention of carriage and generalized forms of infection.

12. Features of the epidemic process in aerosol infections with exanthema syndrome / measles, rubella, chicken pox, and mumps. Anti-epidemic measures. Specific prevention. Characteristics of vaccines.

13. Acute respiratory viral infections, features of the epidemic process in various nosological forms. The content of preventive measures for the prevention of influenza. Specific prevention.

14. The concept of natural foci and natural focal infectious diseases. Tanks pathogens. Carriers of pathogens of natural focal diseases. The mechanism of infection of people. Tick-borne encephalitis, Lyme disease (borreliosis). The

main clinical manifestations, epidemiology, diagnostic methods, assistance at the hospital stage.

15. Typhus. The main clinical manifestations, epidemiology. Diagnostic methods, anti-epidemic measures. Pediculosis, methods of disinsection

16. The concept of a natural foci of infectious diseases. Tanks pathogens. Carriers of pathogens of natural focal diseases. The mechanism of infection of people. Plague: clinic, epidemiology, diagnostics, epidemiological surveillance. Malaria: clinic, epidemiology, diagnosis.

17. Anthroponotic and zoonotic acute intestinal infections. Comparative characteristics of the epidemic process in acute intestinal infections, depending on the pathways and factors of transmission of the pathogen. Dysentery: main clinical manifestations, epidemiology, anti-epidemic measures, prevention. Salmonellosis: main clinical manifestations, epidemiology, anti-epidemic measures, prevention.

18. Preventive and anti-epidemic measures for acute intestinal infections. Typhoid and paratyphoid A and B: the main clinical manifestations, epidemiology, anti-epidemic measures, prevention. Clinical examination.

19. Preventive and anti-epidemic measures for acute intestinal infections. Cholera: epidemiology, anti-epidemic measures, prevention. Epidemiological surveillance. Botulism: epidemiology, anti-epidemic measures, prevention. Antibotulinic serum, its types and methods of administration.

20. Epidemiology of viral hepatitis with fecal-oral mechanism (A, E, F). Preventive and anti-epidemic measures in the foci of hepatitis with fecal-oral transmission mechanism.

21. Infections with the blood-contact mechanism of transmission. Epidemiology of HIV infection. Contingents of increased risk of HIV infection. Medical staff safety. Indications for laboratory examination.

22. HIV infection: clinical manifestations, diagnosis, treatment guidelines. HIV prevention. Organization of work with seropositive individuals.

23. Epidemiology of viral hepatitis with contact mechanism of transmission (B, D, C). Prevention of viral hepatitis with contact mechanism (B, C, D). Contingents of increased risk of infection with blood-borne hepatitis. Medical staff safety. Indications for laboratory examination. Clinical examination.

24. The concept of nosocomial infections. Etiology of nosocomial injections, "hospital" strains of pathogens. Classification of nosocomial injections.

25. Possible sources of infection in nosocomial infections. Ways and factors of transmission in nosocomial infections. Contingents of increased risk of nosocomial infections. Preventive and anti-epidemic measures for the prevention of nosocomial infections.

26. Basics of epidemiological surveillance of nosocomial infections. The concept of anti-epidemic hospital mode. Disinfection. Methods and methods of application.

27. Basics of epidemiological surveillance of nosocomial infections. Anti-epidemic regime of therapeutic hospitals.

28. Basics of epidemiological surveillance of nosocomial infections. Anti-epidemic regime of surgical hospitals.

29. Basics of epidemiological surveillance of nosocomial infections. Antiepidemic regime in outpatient conditions.

30. Basics of epidemiological surveillance of nosocomial infections. Anti-epidemic regime of hospitals of infectious diseases hospitals.

31. Disinfection. Types and methods. Indications for disinfection. Anti-epidemic regime in ambulance stations.

32. Analysis of nosocomial morbidity. Methods of nonspecific and specific prevention of nosocomial morbidity.

33. Disinsection. Methods and methods. Disinfection means. Storage rules Indications for the use of pest control. Safety when working with disinfection. Providing first aid in case of poisoning by means of disinsection.

34. Deratization. Types, methods and methods of deratization. Deratization means. Storage rules Indications for the use of deratization. Safety when working with means of disinfestation. First aid for poisoning with means of disinfestation.

35. The value of helminths in human pathology. Classification of helminthiasis. The role of Russian scientists Scriabin N.E. and Pavlovsky V.I. in the development of methods for deworming and the study of the parasitosis. Ascariasis: helminth life cycle, epidemiology, clinic, diagnostics. Treatment, prevention.

36. The value of helminths in human pathology. Classification of helminthiasis. The role of Russian scientists Scriabin N.E. and Pavlovsky V.I. in the development of methods for deworming and the study of the parasitosis. Trichocephallosis: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention.

37. The value of helminths in human pathology. Classification of helminthiasis. The role of Russian scientists Scriabin N.E. and Pavlovsky V.I. in the development of methods for deworming and the study of the parasitosis. Enterobiasis: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention.

38. The value of helminths in human pathology. Classification of helminthiasis. The role of Russian scientists Scriabin N.E. and Pavlovsky V.I. in the development of deworming methods and the study of the parasitic cenosis. Diphyllobotriasis: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention.

39. Classification of helminthiasis. Tenioz: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention. Teniarinhoz: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention.

40. Classification of helminthiasis. Echinococcosis: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention. Opisthorchiasis: helminth life cycle, epidemiology, clinic, diagnosis, treatment, prevention.

41. International System for the Prevention of the Importation of Infectious Diseases.

42. Organization of sanitary protection of the country.

43. Organization of anti-epidemic measures in emergency situations. Emergency anti-epidemic commission: composition, tasks, functions and scope of work.

44. Quarantine dangerous infections (cholera, plague, yellow fever, smallpox). Anti-epidemic measures. Quarantine. Sanitary supervision.

45. Especially dangerous zoonotic infections. Anti-epidemic measures. Quarantine. Sanitary supervision. Methods and means of disinfestation.

Annex 2

THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
Federal State autonomous education institution of higher education
«Far Eastern Federal University»
(FEFU)

SCHOOL OF BIOMEDICINE

FUND ASSESSMENT TOOLS

TRAINING COMPLEX OF DISCIPLINE

Epidemiology
Educational program
Preparation for 31.05.01. General Medicine
Form of training full-time

Vladivostok

2016

Passport of assessment fund

Completed in accordance with the Regulations on the Funds of Evaluation Assets of Educational Programs of Higher Education - Bachelor's Programs, Specialties, FEFU Magistrates, approved by order of the Rector No. 12-13-850 of May 12, 2015.

Competence code and formulation	**Stages of forming the competence**	
PC-3 - the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation , natural disasters and other emergency situations	Knows	the epidemic process and non-infectious epidemiology, the epidemiology of infectious and parasitic diseases, the implementation of anti-epidemic measures, protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation and natural disasters
	Is able to	to perform preventive, hygienic and anti-epidemic measures
	Possesses	methods to assess the health and physical development of the population, methods of planning and design of biomedical experiments
PC-16 - the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	the basic of a healthy lifestyle as a factor in safe life activity.
	Is able to	to conduct informational, educational and sanitary - educational work; to work independently with educational, scientific and reference literature
	Possesses	techniques of hygienic education and training of the population; skills of organizational and methodical work, health planning

. CONTROL FOR ATTAINING THE COURSE GOAL

№	Controled sections/topics of the discipline	Codes and stages of forming the competences		Means for evaluation	
				Current control	Half-way attestation
1	**Module 1** General epidemiology **Module 2** Particular epidemiology	PC-3 - the ability and willingness to conduct epidemiological protection, to organize the protection of public	Knows	PT-1 Test	Offset test questions 1-4
			Is able to	Case study	Case study
			Possesses	EP—3 Report,	Case study

		health in the focal points of especially dangerous infections, in case of degradation of the radiation situation , natural disasters and other emergency situations		presentation	
2	**Module 1** General epidemiology **Module 2** Particular epidemiology	PC-16 - the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	PT-1 Test	Offset test questions 5-9
			Is able to	Case study	Case study
			Possesses	EP—3 Report, presentation	Case study

The scale of assessment the level of formation of competences

Code and the wording of competence	**Stages of competence**		**Criteria**	**Indicators**	**Points**
PC-3 - the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation , natural disasters and other emergency situations	Knows	the epidemic process and non-infectious epidemiology, the epidemiology of infectious and parasitic diseases, the implementation of anti-epidemic measures, protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation and natural disasters	problem disclosure	- the problem is not disclosed, there are no conclusions - the problem is not fully disclosed, conclusions are not made and / or conclusions are not justified	65-71
	Is able to	to perform preventive, hygienic and anti-epidemic measures	problem disclosure	- the problem is solved, the problem is analyzed without attracting additional literature. Not all conclusions are made and / or justified.	71-84
	Possesses	methods to assess the health and	problem	the problem is fully disclosed, the	85-100

		physical development of the population, methods of planning and design of biomedical experiments	disclosure	problem has been analyzed with the use of additional literature, the conclusions are substantiated	
PC-16 - the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	the basic of a healthy lifestyle as a factor in safe life activity.	problem disclosure	- the problem is not disclosed, there are no conclusions - the problem is not fully disclosed, conclusions are not made and / or conclusions are not justified	65-71
	Is able to	to conduct informational, educational and sanitary - educational work; to work independently with educational, scientific and reference literature	problem disclosure	- the problem is solved, the problem is analyzed without attracting additional literature. Not all conclusions are made and / or justified.	71-84
	Possesses	techniques of hygienic education and training of the population; skills of organizational and methodical work, health planning	problem disclosure	the problem is fully disclosed, the problem has been analyzed with the use of additional literature, the conclusions are substantiated	85-100

Evaluation tools for intermediate certification

Offset content (9 semester)

1. The subject and methods of epidemiology, its relationship with other disciplines.

2. The role of epidemiology for medical science and public health. The concept of the epidemiology of noncommunicable diseases.

3. The history of the development of epidemiology. The value of the works of D.K.Zabolotny, N.F.Gamalei, L.V. Pavlovsky, V.A. Bashenina, I.I. Mechnikov.

4. Place of epidemiology in the structure of medical disciplines.

5. The definition and structure of the epidemiological research method.

6. Descriptive and estimated epidemiological methods / descriptive epidemiology /.

7. Analytical epidemiological methods / analytical epidemiology /.

8. Experimental epidemiological methods.

9. The method of mathematical modeling. Quantitative epidemiology.

10. The study of the epidemic process. Definition of the concept, the intensity of the epidemic process.

11. Brief description of the three links of the epidemic process and their relationship.

12. The definition of "source of infection." Sources of infection with anthroponoses, zoonoses, sapronoses.

13. The mechanism of transmission of infection. Factors of transmission. Ways of spreading a contagious beginning.

14. Principles of classification of infectious diseases. Evolutionary bases of classification L.V. Gromashevsky (special position of zoonoses in addition to the classification Gromashevsky).

15. The role of social and natural factors in the development of the epidemic process. The doctrine of the natural foci of infectious diseases (E.N. Pavlovsky).

16. Epidemic process, its structure, forms of manifestation.

17. Sources of infection; options for various diseases. Conditions determining their epidemiological significance.

18. The mechanism of transmission of infection. Definitions, options, the concept of ways and factors of transmission.

19. Susceptibility of the population. Immunity and non-specific resistance.

20. The influence of the social and natural environment on the development of the epidemic process.

21. Orientation and organization of anti-epidemic work in the epidemic focus.

22. International System for the Prevention of the Importation of Infectious Diseases.

23. Organization of sanitary protection of the country.

24. Organization of anti-epidemic measures in emergency situations.

25. Structure and organization of work of the State Centers for Sanitary and Epidemiological Surveillance. Sanitary documentation.

26. Modern ideas about disinfection. Types of disinfection and its role in the system of anti-epidemic measures.

27. Chemical disinfectants. Characteristics and methods of their use.

28. Mechanical and physical disinfection. Their characteristics, methods of application.

29. Disinsection. Fixed assets and their use.

30. Deratization, its methods and means.

31. Susceptibility to infectious diseases. Types of immunity and its impact on the development of the epidemic process.

32. The main provisions and requirements for the organization and conduct of preventive vaccinations.

33. Characteristics of biological preparations belonging to the group of vaccines, toxoids.

34. Characteristics of drugs belonging to the group of sera, immunoglobulins, bacteriophages.

35. The role and importance of immunoprophylaxis. The contribution of domestic scientists in the development of vaccination.

36. Current status and prospects of vaccination.

37. Indications for vaccination.

38. Vaccination schedule in childhood.

39. Anthroponotic intestinal infections.

40. Comparative characteristics of the epidemic process in acute intestinal infections, depending on the transmission route of the pathogen.

41. Preventive and anti-epidemic measures for acute intestinal infections.

42. Features of the epidemic process in aerosol infections with exanthema syndrome / measles, rubella, chicken pox /. Anti-epidemic measures.

43. Acute respiratory viral infections, features of the epidemic process in various nosological forms. The content of preventive measures for the prevention of influenza.

44. Epidemiological characteristics of the group of airborne infections.

45. Epidemiological characteristics of the group of intestinal infections.

46. The organization and conduct of anti-epidemic measures in the foci of airborne infections.

47. The organization and conduct of anti-epidemic measures in the foci of intestinal infections.

48. The concept of the natural focus of an infectious disease. Tanks pathogens.

49. Carriers of causative agents of natural focal diseases. The mechanism of infection of people.

50. Typhoid fever. The main clinical manifestations, epidemiology. Diagnostic methods, anti-epidemic measures.

51. Sanitary protection of the territory, quarantine measures, their importance in protecting the state from infectious diseases.

52. The basic concepts of hospital epidemiology. The definition of "nosocomial infections" (VBI).

53. Epidemic process in various traditional nosocomial infections: sources, factors and routes of infection in acute intestinal, airborne infections, viral hepatitis and HIV infection.

54. Etiology of nosocomial injections, "hospital" strains of pathogens.

55. Possible sources of infection in nosocomial infections.

56. Ways and factors of transmission in nosocomial infections.

57. Contingents of increased risk of nosocomial infections. Basics of epidemiological surveillance of nosocomial infections.

58. The concept of anti-epidemic hospital mode.

59. Preventive and anti-epidemic measures for the prevention of nosocomial infections.

60. Diagnosis and prevention of hospital (nosocomial) infections in medical institutions.

61. Epidemiology of viral hepatitis with fecal-oral mechanism (A, E, F). Preventive and anti-epidemic measures in the foci of hepatitis with fecal-oral transmission mechanism.

62. Infections with the blood-contact mechanism of transmission. Epidemiology of HIV infection. Contingents of increased risk of HIV infection. Medical staff safety. Indications for laboratory examination.

63. HIV infection: clinical manifestations, diagnosis, treatment principles. HIV prevention. Organization of work with seropositive individuals.

64. Epidemiology of viral hepatitis with contact mechanism of transmission (B, D, C). Prevention of viral hepatitis with contact mechanism (B, C, D). Contingents of increased risk of infection with blood-borne hepatitis. Medical staff safety. Indications for laboratory examination. Clinical examination.

Scoring criteria on the student competition on the subject «**Epidemiology**»

Points (rating)	**Evaluation offset (standard)**	**Requirements to the formed competences**

86-100	*«credited»*	The rating of «excellent» to the students, if it is deeply and firmly mastered the program material, comprehensively, consistently, accurately and logically sound it sets, can be closely linked theory with practice, freely to cope with questions and other types of application knowledge is not difficult to answer at modification jobs has versatile skills and techniques perform practical tasks.
76-85	*«credited»*	The rating of «good» to the students, if he knows for sure the material correctly and essentially sets out its not allowing significant inaccuracies in answering the question correctly applies the theoretical principles in solving practical issues and challenges, has the necessary skills and techniques for their implementation.
51-75	*«credited»*	The rating of «satisfactory» to the students, if he has knowledge of only the base material, but did not learn his parts, admits inaccuracies, insufficient correct wording violations of logical consistency in the presentation of program material, has difficulty in carrying out practical work.
Less 50	*«fail»*	The rating of «unsatisfactory» to the students, who did not know a large part of the program material, allows substantial errors, uncertainly, with great difficulty performing practical work.

Typical estimates of funds for the current certification

Test papers

1. Residence of three villages with three different types of water supply were asked to participate in a study to identify cholera carriers. Because several cholera deaths had occurred in the recent past, virtually everyone present at the time submitted to examination. The proportion of residents in each village who were carriers was computed and compared. This study is a:

(a) Cross- sectional study

(b) Case-control study

(c) Concurrent cohort study

(d) Non-concurrent

2. The analytical study where population is the unit of study is:

(a) Cross sectional

(b) Ecological

(c) Case-control

(d) Cohort

3. All of the following are true about 'Evidence-based medicine' except:

(a) Aims to apply best available evidence gained from
scientific method to clinical decision making

(b) Research paper is investigated by the tools quoted in
research paper itself to check validity

(c) Opinions of medical professionals and researchers
have been given least importance

(d) Evidence is generated from weak and poor studies

4. Natural history of disease is studied with:

(a) Longitudinal studies

(b) Cross-sectional studies

(c) Trials

(d) None

5. Cause to effect progression is seen in all except:

(a) Case control study

(b) Ecological study

(c) Cohort study

(d) Randomized control trial

6. Father of Evidence Based Medicine is

(a) Sackett

(b) Da vinci

(c) Hippocrates

(d) Tolstoy

7. Hypothesis is a:

(a) Axiom

(b) Verified variable

(c) Established document

(d) Variable to be tested

8. Studying distribution of disease or health related characteristics in human population and identifying the characteristics with which disease seem to associated is:

(a) Descriptive epidemiology

(b) Experimental epidemiology

(c) Analytical epidemiology

(d) Ecological epidemiology

9. Best study of first choice for assessment of UNKNOWN or New disease with no etiological hypothesis?

(a) Cohort study

(b) Case control study

(c) Cross-sectional study

(d) Descriptive epidemiology

10. The following is true about prevalence and incidence:

(a) Both are rates

(b) Prevalence is a rate but incidence is not

(c) Incidence is a rate but prevalence is not

(d) Both are not rates

11. Prevalence is a:

(a) Rate

(b) Ratio

(c) Proportion

(d) Mean

12. Incidence of a disease in a population of 30,000 and 300 new cases is:

(a) 0.1 per 1000

(b) 10 per 1000

(c) 100 per 1000

(d) 1 per 1000

13. For calculation of incidence denominator is taken as:

(a) Mid year population

(b) Population at risk

(c) Total number of cases

(d) Total number of deaths

14. All of the following are true regarding the Ratio except:

(a) Numerator is component of denominator

(b) Numerator is not a component of denominator

(c) Numerator & denominator are not related values

(d) It is expressed as a number

15. True about prevalence:

(a) It is a ratio

(b) Prevalence rate is the ideal measure for studying

disease etiology or causation

(c) Increases with increase in duration of disease

(d) Decreases with decrease in case fatality

16. In WHO recommended Death Certificate, Main Underlying Cause of Death is recorded on:

(a) Line Ia

(b) Line Ib

(c) Line Ic

(d) Line II

17. All are true for Standardized Mortality ratio (SMR) except:

(a) Is a form of direct standardization

(b) Is calculated as Observed deaths/ Expected deaths ×

100

(c) Permits adjustment for age

(d) Can be used for disease as event of occurrence

18. Following can be used as a yardstick for the assessment of standards of therapy:

(a) Specific death rate

(b) Case fatality rate

(c) Proportional mortality rate

(d) Survival rate

19. About direct standardization all are true except:

(a) Age specific death rate is not needed

(b) A standard population is needed

(c) Population should be comparable

(d) Two populations are compared

20. The rate adjusted to allow for the age distribution of the population is:

(a) Peri-natal mortality rate

(b) Crude mortality rate

(c) Fertility rate

(d) Age- standardized mortality rate

21. All of the following statements are true about the childhood mortality rates in India except:

(a) Almost 2/3rd of infant mortality rate (IMR) occurs
in neonatal period

(b) Almost 2/3rd of the under –five mortality
occurs in the first year of life

(c) About one in ten children die before they
reach the age of five years

(d) Neonatal mortality is higher among female
children as compared to males

22. Which is best in order to make a comparison between 2 populations?

(a) Standardized mortality rate

(b) Disease specific death rate

(c) Proportional mortality rate

(d) Age specific death rate

23. At what point in time is the population assessed for calculation of the crude death rate?

(a) 1st Jan

(b) 1st May

(c) 1st July

(d) 31st Dec

24. All are indicators of mortality except:

(a) Case fatality rate

(b) Life expectancy

(c) Duration of sickness

(d) Standardised death rate

25. In an outbreak of cholera in a village of 2000 population 20 cases have occurred and 5 have died. Case fatality rate is:

(a) 1%

(b) 0.25%

(c) 5%

(d) 25%

26. All the statements are true about standardization

except:

(a) Standardization allows comparison to be made

between two different populations

(b) The national population is always taken as the

standard population

(c) For direct Standardization, age specific rates of the

study population are applied to that of the standard population

(d) For Indirect Standardization age specific rates of the standard population are applied to the study population

27. Direct standardization is used to compare the mortality rates between two countries. This is done because of the differences in:

(a) Causes of death

(b) Numerators

(c) Age distributions

(d) Denominators

28. Which one of the following is a better indicator of the severity of an acute disease?

(a) Cause specific death rate

(b) Case fatality rate

(c) Standardized mortality ratio

(d) Five year survival rate

29. Maximum power of destruction of a disease is measured by:

(a) Survival rate

(b) Case fatality rate

(c) Specific death rate

(d) Proportional mortality rate

30. Estimating the burden of particular disease in a community is measured by:

(a) Proportional mortality rate

(b) Disease specific mortality

(c) Crude death rate

(d) Incidence of disease

31. Case fatality rate is a method measuring:

(a) Infectivity

(b) Pathogenicity

(c) Virulence

(d) Average duration of disease

32. Which one is not true of case fatality rate?

(a) It is a ratio

(b) Time interval is non-specified

(c) It may vary from the same disease in different

epidemics

(d) It is useful in chronic diseases

33. The usefulness for "Case Fatality Rate" is very limited in:

(a) Sub-acute illness

(b) Acute illness

(c) Chronic illness

(d) All of the above

34. Direct standardisation is used to compare the mortality rates between two countries. This is done because of differences in:

(a) Causes of death

(b) Numerators

(c) Age distribution

(d) Denominators

35. Most useful parameter to predict the virulence of acute illness is:

(a) Standardised mortality ratio (SMR)

(b) Case fatality rate (CFR)

(c) Secondary attack rate (SAR)

(d) Incidence

36. Standardised mortality rate is standardised for:

(a) Age

(b) Disease

(c) Region

(d) A particular time period

37.Direct standardization is used to compare mortality rates between 2 countries. This is done because there are differences in:

(a) Causes of death

(b) Age distributions

(c) Numerators

(d) Denominators

38. Proportional mortality rate is:

(a) Rate

(b) Ratio

(c) Proportion

(d) None

39. Sullivan's Index:

(a) Measures disability

(b) Measures life years adjusted with death

(c) Measures life expectancy free of disability

(d) Measures life expectancy

40. All are true about standardised mortality rates Except:

(a) Two population can be compared

(b) Age specific data not required

(c) It removes confounding effect of different age group

(d) Age, sex, race adjusted rate can be obtained

41. True statement regarding specific death rates:

(a) Specific for age and sex

(b) Identify particular group or group "at risk for preventive action"

(c) Maybe cause or disease specific

(d) All of the above

42. Which of the following estimating the burden of a disease in the community is:

(a) Disease specific mortality

(b) Proportional mortality rate

(c) Maternal mortality rate

(d) Child mortality rate

43. Case fatality rate is:

(a) Speading power of a disease

(b) Killing power of a disease in a time

(c) Killing power of a disease with no time interval

(d) Resistance of disease

44. Severity of the disease best assessed by:

(a) Disease specific mortality rate

(b) Crude death rate

(c) Age specific mortality rate

(d) Case fatality rate

45. Case fatality rate indicates:

(a) Infectivity of disease

(b) Herd immunity of disease in community

(c) Killing power of disease

(d) Relative importance of disease in community

46. Sullivan index is the measure of:

(a) Disability rate

(b) Pregancy rate

(c) GNP

(d) Literacy rate

47. Killing power of disease is:

(a) Secondary attack rate

(b) Case fatality rate

(c) IMR

(d) MMR

48. Health status of two populations is best compared by:

(a) Standardized mortality

(b) Case fatality rate

(c) Survival rate

(d) Secondary attack rate

49. If a new effective treatment is initiated and all other factors remain the same; which of the following is most likely to happen:

(a) Incidence will not change

(b) Prevalence will not change

(c) Neither incidence nor prevalence will change

(d) Incidence and prevalence will change

50. Improved prevention of an acute, nonfatal disease is likely to:

(a) decrease the prevalence of the disease

(b) increase the prevalence of the disease

(c) decrease the incidence of the disease

(d) increase the incidence of the disease

51. A diagnostic test has been introduced that will detect a certain disease 1 yrs earlier than it is usually detected. Which of the following is most likely to happen to the disease within the 10 yrs after the test its introduced ? (Assumed that early detection has no effect on the natural history of the disease. Also assume that no changes in death certification practices occur during the 10yrs.):

(a) The period prevalence rate will decrease

(b) The apparent 5 yr survival rate will increase

(c) The age adjusted mortality rate will decrease

(d) The incidence rate will decrease

52. If the prevalence is very low as compared to the incidence for a disease, it implies:

(a) Disease is very fatal and /or easily curable

(b) Disease is non-fatal

(c) Calculation of prevalence & incidence is wrong

(d) Nothing can be said, as they are independent

53. The incidence rate of a disease is 5 times greater in women than in men, but the prevalence rates show no sex difference. The best explanation is that:

(a) The case fatality rate for this disease is lower in women

(b) The case fatality rate for this disease is higher for women

(c) The duration of disease is shorter in men

(d) Risk factors for developing the disease are more common in women

54. Prevalence of a disease:

(a) Is the best measure of disease frequency in etiological studies

(b) Can only be determined by a cohort study

(c) Is the number of new cases in a defined population

(d) Describes the balance between incidence, mortality and recovery

55. Pandemics are caused by:

(a) Hepatitis B

(b) Influenza – A

(c) Influenza – B

(d) Influenza – C

56. Measurement of incidence rate of a disease includes:

(a) Number of new cases

(b) Number of new and old cases

(c) Only notified cases

(d) Whole population

57. Incidence rate refers to:

(a) Only old cases (b) Both old and new cases

(c) Only new cases (d) None of the above

58. The relationship between incidence and preva-lence can be expresses as:

(a) The product of incidence and mean duration of disease

(b) The dividend of incidence and mean duration of disease

(c) The sum of incidence and mean duration of disease

(d) The difference of incidence of mean duration of disease

59. Prevalence of cataract at one point of time can be determined by:

(a) Longitudinal study

(b) Cross- sectional study

(c) Surveillance

(d) Cohort study

60. A district has total population 10 lacs, with under-16 population being 30%. The prevalence of blindness is 0.8/1000 among under-16 population. Calculate total number of blind among under-16 population in the district.

(a) 240

(b) 2400

(c) 24000

(d) 240000

61. In a town of population 5000, 500 are already myopic on January 1, 2011. Number of new myopia cases is 90 till December 31, 2011. Calculate incidence of Myopia in the town in 2011.

(a) 0.018

(b) 0.02

(c) 0.05

(d) 18

62. All about incidence are false except:

(a) No affected by duration

(b) More than prevalence

(c) Measures old and new cases

(d) Used for chronic conditions

63. In a population of 5000 number of new cases of TB is 500; old cases in the same population are 150. What is the prevalence of TB

(a) 9%

(b) 12%

(c) 13%

(d) 18%

64. Denominator while calculating the secondary attack rate include:

(a) All the people living in next fifty houses

(b) All the close contacts

(c) All susceptible amongst close contact

(d) All susceptible in the whole village

65. Attack rate is:

(a) Incidence of the disease

(b) Prevalence of the disease

(c) Killing power of the disease

(d) Incubation period of the disease

66. Incidence rate is calculated from:

(a) Case-control

(b) Prospective study

(c) Retrospective study

(d) RCT

67. Incidence rate can be calculated from:

(a) Cohort study (b) Case control study

(c) Cross sectional study

(d) Descriptive study

68. Post exposure vaccination is given in:

(a) Typhoid

(b) Rabies

(c) Mumps

(d) Rubella

69. The secondary attack rate of measles is more than mumps. What is the conclusion?

(a) Measles is more dangerous than mumps

(b) Mumps is more dangerous than measles

(c) Measles is more infectious than mumps

(d) Measles is more common than mumps

70. Which one of the following is an Index of communicability of an Infection?

(a) Carrier rate

(b) Prevalence rate

(c) Secondary attack rate

(d) Primary attack rate

71. High prevalence associated with:

(a) High cure rate

(b) Immigration of healthy people

(c) longer duration of disease

(d) Less Incidence of disease

72. Which one of the following is an Index of communicability of an Infection?

(a) Carrier rate

(b) Prevalence rate

(c) Secondary attack rate

(d) Primary attack rate

73. Changes in occurrence of a disease over long periods of time are known as:

(a) Epidemics

(b) Seasonal trends

(c) Cyclical trends

(d) Secular trends

74. All are true for Point source epidemic except:

(a) Epidemic curve rises and falls sharply

(b) Clustering of cases within a short period of time

(c) Person-to-person transmission

(d) All cases usually develop within one incubation period

75. True regarding point source epidemic is:

(a) Secondary waves occur

(b) There is a rapid rise in the wave which flattens (Pleteau)

(c) All cases occur in a single incubation period of the disease

(d) It is propagative

76. Regarding point source epidemic true:

(a) Rapid rise & fall

(b) Only infectious cause

(c) Explosive

(d) ↑secondary attack rate

(e) No secondary wave

77. True regarding point-source epidemic is/are:

(a) Rapid rise

(b) Rapid fall

(c) Slow rise

(d) Slow fall

(e) No secondary waves

78. Secular trend refers to:

(a) Long term changes

(b) Short term changes

(c) Seasonal changes

(d) Periodical changes

(e) Religion changes

79. Secular trends are:

(a) Progressive changes occurring over a long period of time

(b) Explosion of changes in a limited span of time

(c) Periodic changes occurring over a long period

(d) Sudden epidemic of a new occurring

80. 20 pregnant women were asked about the history of smoking when they came for regular antenatal visit and then followed up to see how many of them had Low birth weight babies. What is the type of study?

(a) Case control

(b) Prospective cohort

(c) Cross sectional

(d) Ecological

81. Bhopal gas tragedy is an example of ?

(a) Point source epidemic

(b) Continuous epidemic

(c) Propagated epidemic

(d) Slow epidemic

82. Seasonal trend is:

(a) Seasonal variation of disease occurrence may be related to environmental conditions

(b) Some diseases occurs in cyclic spread over short periods of time

(c) Some disease occurs in cyclic changes over long period of time

(d) Non infectious conditions never show periodic fluctuations

83. Descriptive epidemiology includes all Except:

(a) Retrospective and prospective study

(b) Disease

(c) Time

(d) Place

84. A graph shows an uniform curve with no secondary curves the following statement is correct:

(a) Multiple exposure

(b) Pointed epidemic

(c) Sporadic

(d) Pandemic

85. All are true about Point source epidemic except:

(a) Secondary Waves are not seen

(b) All the cases occur simultaneously

(c) Plateau is seen

(d) None

86. Food poisoning is an example of:

(a) Common source, single exposure epidemic

(b) Common source, continuous exposure epidemic

(c) Propagated epidemic

(d) Modern epidemic

87. About secular trend, true is:

(a) Changes are seen periodically

(b) Affected by environmental conditions

(c) Changes occurs over decades in particular direction

(d) Vector dynamics is important

88. Rapid rise and fall in epidemic curve without any secondary waves is seen in:

(a) Point source epidemic, single exposure

(b) Propagated epidemic

(c) Point source multiple exposure epidemic

(d) Seasonal trend

89. Secular trend of disease refers to occurrence of:

(a) Annual disease cycles

(b) Bi-annual disease cycles

(c) 10 years or more disease cycles

(d) Consistent change in one direction

90. Disease occurs in cycles over short period of time:

(a) Seasonal trend

(b) Cyclic trend

(c) Secular trend

(d) All

91. All of the following help reduce bias except:

(a) Blinding

(b) Randomization

(c) Ethical considerations

(d) Matching

92. The systematic distortion of retrospective studies that can be eliminated by a prospective design is:

(a) Confounding

(b) Effect modification

(c) Recall bias

(d) Measurement bias

93. The ratio between the incidence of disease among exposed and non-exposed is called:

(a) Causal risk

(b) Relative risk

(c) Attributable risk

(d) Odds ratio

94. Hawthorne effect is seen in:

(a) Case-control study

(b) Cohort study

(c) Cross-sectional study

(d) Retrospective cohort study

95. A study compared 150 children with a particular disease with 300 disease free children to examine past experiences that may contribute to the development of the illness. What kind of study is this ?

(a) Cohort

(b) Controlled clinical trial

(c) Case series

(d) Case control

96. Which of the following is not a cause of bias?

(a) Confounding

(b) Selection

(c) Misclassification

(d) Random error

97. In an investigation to study the effect of smoking on renal cell cancer, it is observed that 30 of the 50 patients were smokers as compared to 10 out of 50 control subjects. The odd ratio of renal cancer associated with smoking will be:

(a) 3.0

(b) 0.33

(c) 6.0

(d) 0.16

98. Matching is done for removal of:

(a) Bias

(b) Known confounding

(c) Unknown confounding

(d) Known confounding + Unknown confounding

99. In a study of 200 smokers & 300 non-smokers were followed up over a period of 10 yrs to find out incidence of hypertension. Out of 200 smokers, 60 developed hypertension, as compared to 600 non-smokers of which 30 developed hypertension. The risk ratio of the study:

(a) 3

(b) 30

(c) 1/3

(d) 6

100. In a study begun in 1965, a group of 3000 adults in Baltimore were asked about alcohol consumption. The occurrence of cancer was studied in the group between 1981 and 1995. This is an example of:

(a) Cross sectional study

(b) Concurrent cohort

(c) Retrospective cohort

(d) Clinical trial

101. The physical examination records of the entire incoming freshman class of 1935 at the University of Minnesota were examined in 1977 to see if their recorded height and weight at the time of admission to university was related to their chance of developing CHD. This is an example of:

(a) Cross sectional study

(b) Concurrent cohort

(c) Retrospective cohort

(d) Clinical trial

102. Retrospective cohort studies are characterized by all the following except:

(a) The study groups are exposed and non-exposed

(b) Incidence rates are compared

(c) The required sample size is smaller than that
needed for a concurrent cohort study

(d) The required sample size is similar to that
needed for a concurrent cohort study

103. At an initial examination in Oxford, Migraine head ache was found in 5 of 1000 men aged 30-35yrs and in 10 of 1000 women aged 30 to 35 yrs. 104.The inference that women have a two times greater risk of developing migraine headache than men in this age group is:

(a) Correct

(b) Incorrect, because a ratio has been used to
compare male and female rates

(c) Incorrect, because of failure to recognize the
cohort effect of age in the two groups

(d) Incorrect, because of failure to distinguish
between incidence and prevalence

104. Disease(s) infectious before onset of symptoms is/are:

(a) Measles

(b) Mumps

(c) Cholera

(d) Hepatitis B

(e) Poliomyelitis

105. All the following are advantages of case control studies except:

(a) Useful in rare diseases

(b) Relative risk can be calculated

(c) Odds ratio can be calculated

(d) Cost-effective and inexpensive

106. A one day census of inpatients in a mental hospital could:

(a) Give good information about the patients in
that hospital at that time

(b) Give reliable estimates of seasonal factors in
admissions

(c) Enable us to draw conclusions about the
mental hospitals of India

(d) Enable us to estimate the distribution of
different diagnosis in mental illness in the
local area

107. The incidence of carcinoma cervix in women with multiple sexual partners is 5 times the incidence seen in those with a single partner. Based on this, what is the attributable risk?

(a) 20% (b) 40%

(c) 50% (d) 80%

108. Several studies have shown that 85% of cases of lung cancer are due to cigarette smoking. It is a measure of:

(a) Incidence rate

(b) Relative risk

(c) Attributable risk

(d) Population attributable risk

109. It is probable that physician have a higher index of suspicion for tuberculosis in children without BCG scar than those with BCG scar. This is so and an association is found between Tuberculosis and not having BCG scar, the association may be due to:

(a) Selection bias

(b) Interviewer bias

(c) Surveillance bias

(d) Non-response bias

110. To investigate effect of tobacco chewed on oral cancer, its observed that 30 out of 50 patients were tobacco chewers as compared to 10 tobacco chewers out of 50 control subjects. The odds ratio of oral cancer associated with smoking will be:

(a) 6.0

(b) 60

(c) 3.0

(d) Insufficient data given for calculation

111. Framingham Heart Study is an example of:

(a) Case control study

(b) Cohort study

(c) Cross-sectional study

(d) Interventional study

112. Which of the following statements is not correct?

(a) A cohort study is more expensive in comparison to case control study

(b) A cohort study starts with people exposed to risk factor or suspected cause while case control study

starts with disease

(c) A long follow-up period often needed with delayed results in a cohort study whereas a case control study yields relatively quick results

(d) A cohort study is more appropriate when the disease or exposure under investigation is rare, in comparison to case control study

113. For a community physician which of the following is more important?

(a) Relative risk

(b) Odds ratio

(c) Attributable risk

(d) Prevalence of the disease

114. Which of the following research methods studies have only people who are initially free of the disease of interest ?

(a) A case – control study

(b) A case series study

(c) A prevalence survey

(d) A cohort study

115. False about Odds Ratio is :

(a) It is always positive

(b) It can be 0.3

(c) It can be 3.0

(d) It is always >1

116. An Odds ratio = 1 indicates that the association between the two factors is:

(a) Is perfect (b) Is low

(c) Is high (d) Does not exist

117. Which of the following bias can be reduced by allowing equal interview time?

(a) Berkesonian bias

(b) Recall bias

(c) Selection bias

(d) Interviewer bias

118. Which of the following is ideal to ensure similarity between experimental & control groups:

(a) Randomization

(b) Matching

(c) Stratified randomization

(d) Cross over study

119. All can be used as controls in a study of genetic condition except:

(a) Hospital Controls

(b) Sibling Controls

(c) Neighbourhood Controls

(d) General Population

120. True about case control studies is –

(a) Minimal problems of bias

(b) Time consuming & expensive to carry out

(c) Easy to measure incidence

(d) Suitable to investigate rare diseases

121. In a double blind clinical drug trial:

(a) Each patient receives a placebo

(b) Each patient receives both (double) treatments

(c) The patients do not know which treatment they are receiving

(d) The patients do not know that they are in a drug trial

122. All the following are true in a randomized control trial (RCT) except –

(a) Baseline characteristics of intervention are similar in

both arms

(b) Investigator's bias is minimized by double blinding

(c) The sample size required depends on the hypothesis

(d) The dropouts from the trial should be excluded from the analysis

123. What is the purpose of a control group in an experimental study?

(a) Its permits an ethical alternative for patients who do not wish to be subjected to an experimental treatment

(b) It allows larger numbers of patients to be used, thus increasing the power of the statistical techniques used

(c) It helps to eliminate alternative explanations for the results of the study

(d) It reduces the likelihood of making a type II error in hypothesis testing

124. What is the purpose of randomization in a clinical trial?

(a) To equalize the effects of extraneous variables, thus guarding against bias

(b) To allow inferential statistics to be used

(c) To guard against placebo effects

(d) To guard against ethical problems in the allocation of patients to experimental and control groups

125. Intention-to-treat analysis is done in

(a) Cohort study

(b) Survival analysis studies

(c) Randomized control trials

(d) Multiple time series studies

126. Random in Randomization in a clinical trial means-

(a) Equal but unknown chance

(b) Unequal and unknown chance

(c) Unequal but known chance

(d) Equal and known chance

127. The major purpose of random assignment in a clinical trial is to:

(a) Help ensure that study subjects are
representative of the general population

(b) Facilitate double blinding

(c) Facilitate measurement of outcome variables

(d) Ensure that the study groups are comparable
on base line characteristics

128. Which one of the following statements regarding prepost clinical trial is most appropriate?

(a) They cannot be randomized

(b) They are useful in studies involving mortality

(c) They use the patient as his or her own control

(d) They are usually easier to interpret than the
comparable parallel clinical trial

129. The heart of randomized controlled trail is

(a) Protocol

(b) Intervention

(c) Randomization

(d) None of the above

130. All of the following are Experimental/Interventional studies except:

(a) Randomised control trials

(b) Field trials

(c) Community trials (d) Ecological studies

131. In a controlled trial to compare two treatments, the main purpose of randomization is to ensure that:

(a) The two groups will be similar in prognostic factors

(b) The clinician does not know which treatment the subjects will receive

(c) The sample may be referred to a known population

(d) The clinician can predict in advance which treatment the subjects will receive

132. In a randomized controlled trial, the essential purpose of randomization is:

(a) To produce double blinding

(b) To decrease the follow- up period

(c) To eliminate the selection bias

(d) To decrease the sample size

133. All are true about Experimental trials except

(a) Can't double blind in animal trials

(b) All animal trials are unethical

134. Infections transmitted to man from vertebrate animals are known as:

(a) Exotic

(b) Anthropozoonoses

(c) Zooanthroponoses

(d) Epizootic

135. 'Endemic Disease' means that a disease:

(a) Occurs clearly in excess of normal expectancy

(b) Is constantly present in a given population group

(c) Exhibits seasonal pattern

(d) Is prevalent among animals

136. Occurrence of a disease in a haphazard and irregular pattern is known as:

(a) Endemic

(b) Epidemic

(c) Sporadic

(d) Pandemic

137. Sentinel surveillance is done to detect

(a) Missing number of cases

(b) Total number of cases

(c) Incidence of disease

(d) Factors affecting occurrence of disease

138. HIV cases are reported from all over the world. This is called as

(a) Endemic

(b) Epidemic

(c) Pandemic

(d) Sporadic

139. Following is part of "Sentinel Surveillance" EXCEPT

(a) Method for identifying the missing cases

(b) Supplementing the notified cases

(c) To estimate the disease prevalence in total population

(d) To estimate the fatality of the disease

140. The ability of an infectious agent to invade and multiply in a host is called

(a) Pathogenicity

(b) Infectivity

(c) Virulence

(d) Communicability

141. Pandemics are caused by:

(a) Hepatitis B

(b) Influenza – A

(c) Influenza – B

(d) Influenza – C

142. Post exposure vaccination is given in:

(a) Typhoid

(b) Rabies

(c) Mumps

(d) Rubella

143. Disease(s) infectious before onset of symptoms is/are:

(a) Measles

(b) Mumps

(c) Cholera

(d) Hepatitis B

(e) Poliomyelitis

Evaluation tools for the current attestation

Control tests are designed for the students studying the course "Epidemiology".

The tests are necessary for the control of knowledge during the current interim attestation, and for theevaluation of knowledge and thus to get credit for course.

While working with tests the student are asked to select one answer from the three - four proposed. At the same time the tests are not identical in their complexity.

Offered tests contain several variants of correct answers. The student must select all the correct answers.

The tests are designed both for individual and collective solving them. They can be used in the process both classroom lessons and independent work. The tests, required for the control of knowledge, are chosen in the process of the intermediate certification by each teacher individually.

The results of the test tasks are evaluated by a teacher on a five-mark grading scale or system of "**credit**" - "**not credit**".

Evaluation of "**excellent**" is got by student at the correct answer to more than 90% of the proposed tests.

Evaluation of "**good**" getting - at the correct answer by more than 70% of tests.

Evaluation of "**satisfactory**" - at the correct answer to 50% of the offered tests.