

## List of elective subjects for the 2022-2023 academic year

1. **Department:** "Department of History of Kazakhstan and Social and Social disciplines»
2. **Level of training:** Bachelor's degree
3. **Bilim bagdarlamalary:** "General Medicine", "Dentistry", "Pharmacy", "Pediatrics", "Nursing»
4. **Course:** 1,2
5. **Name of elective discipline:** Fundamentals of Law and Economics
6. **Number of credits :** 5 credits
7. **Objective:** to form a system of knowledge about the economic and legal laws of the development of society and the problems of its effective functioning.

### 8. **Tasks:**

- mastering the basics of the theory of state and law;
- consideration of the principles and motives of human economic behavior in conditions of limited resources;
- identification of the specifics of economic and legal relations in the Republic of Kazakhstan;
- clarification of the functions and limits of the effectiveness of the market system, as well as the main forms of economic regulation;
- disclosure of political and legal ways to improve Kazakhstan's state-legal mechanism;
- determination of the specifics of the regulatory framework in the field of economics and law.

9. **Содержание дисциплины:**  
The study of the patterns of development of economic and legal relations that arise between market entities at the micro, macro, and mega levels, between the state and market entities, the state and societies, features and priorities of the socially - oriented model of the market economy in Kazakhstan. The system of law and legislation. The Law of the Republic of Kazakhstan "On the health of the people and the health care system". The legal status of pharmaceutical and medical workers, their social security. Market equilibrium. Competition in the medical services market. Development of entrepreneurship of medical services in Kazakhstan. The structure of the national economy. Moral and ethical responsibility for acts of corruption in various spheres. Kazakhstan's participation in global integration processes and international economic organizations. WorldHealthOrganization.

- **10. Justification of the choice of discipline:** This program is designed to provide students with the necessary knowledge, skills and abilities in the discipline, to achieve learning outcomes. In the context of distance learning, the Program is implemented through the automated information system Platonus (hereinafter-AIS Platonus), Zoom, Webex, etc.. For the development of the discipline, the materials that are included in the "Task" module of the Platonus AIS are used.
- **11. Learning outcomes:**
- 1) demonstrate knowledge of the main theoretical views accumulated in the scientific heritage on legal and economic problems;
- 2) conduct research to identify state-legal and economic problems in the professional field and present the results for discussion;
- 3) Demonstrate basic economic and legal knowledge through special terminology in medical practice
- 4) apply and use the acquired knowledge in the field of economics and law in practical classes, professional activities
- 5) analyze the features of legal and economic processes in the context of their role in the modernization of Kazakhstan's society;
- 6) Knows the methods of scientific research and academic writing and applies them in the field of study:

knows and applies the methods of scientific research, develops ideas and develops critical thinking and skills in writing various written works, taking into account the requirements for the structure of the construction and layout of the text, the choice of the style of presentation (journalistic or scientific); is able to make references, quote, paraphrase, build arguments, structure the text, stylistically competently build sentences, correctly design literary sources.

#### **10. Prerequisites: Modern history of Kazakhstan**

#### **11. Post-requirements: Philosophy**

#### **12. Literature:**

##### **In Russian:**

##### **Main:**

1. Альжанова, А. Н. Основы права учеб. пособие / А. Н. Альжанова, К. К. Райханова. - ; Алматы : Эверо, 2014. - 134 с
2. Правоведение: учеб. пособие. - М. : ГЭОТАР - Медиа, 2013
3. Какимова М. Основы теории государства и права: учебник. 2010. - 256 с
4. Айдарханов М.Х. Основы экономической теории. Учебник. 2012.
- 5 . Липсиц, И. В. Основы экономики: учеб. для медицинских училищ и колледжей . - М. : ГЭОТАР - Медиа, 2010. - 336 с.+эл. опт. диск (CD-ROM) .
- 6 . Рахимжанова Н.И. Основы рыночной экономики: учебник. 2010. – 168 стр.
- 7 .Таскымбаева С. М., Каратаева Ф.М. Основы экономической теории: учеб.пособие / - Караганда: АҚНҰР, 2017.

##### **Additional information:**

1. Жанысбеков, М. А. Основы антикоррупционной культуры: учебно-методическое пособие / - Караганда: АҚНҰР, 2016. – 198
2. Шоу М.Н. Международное право = International LAW : т.2 учебник / М.Н. Шоу. - 8-е изд. - [б. м.] : Ұлттық аудармашырысы, 2019. - 716 стр.

##### **Electronic resource:**

1. Основы антикоррупционной культуры [Электронный ресурс] : учебное пособие / под ред. Б. С. Абдрасилова. - Электрон. текстовые дан. ( 702Мб). - Астана : Акад. Гос. упр. при Президенте РК, 2016. - 176 с
2. Экономическая теория (Электронный ресурс): Учебник. Под ред. И.Л.Николаева, 2011.
3. Липсиц И.В. Основы экономики (Электронный ресурс): учебник.-М.: Издательская группа «ГЭОТАР- Медиа», 2010
4. Маами К.А., Рогов И.И., Малиновский В.А. РЕСПУБЛИКА КАЗАХСТАН: хроника утверждения конституционализма. – Алматы: Қазақ университеті, 2019. – 728 с.

##### **Electronic source databases:**

<http://lib.ukma.kz>

- Electronic catalog
  - for internal users <http://10.10.202.52>
  - for external users <http://89.218.155.74>
  - Republican Interuniversity Electronic Library <http://rmebrk.kz/>
  - Electronic source of Legal Information" Law" <https://zan.kz>
  - Scientific Electronic Library <https://elibrary.ru/>
  - «Web of science» (Thomson Reuters)<http://apps.webofknowledge.com>
  - «Science Direct» (Elsevier)<https://www.sciencedirect.com>
  - «Scopus» (Elsevier)[www.scopus.com](http://www.scopus.com)
  - The UMKD is posted on the educational portal ukma.kz
- Electronic library "Student Consultant". Access link: <http://www.studmedlib.ru>, USERNAME ibragim123, PASSWORD Libukma123

1. **Department:** "Department of History of Kazakhstan and Social and Social disciplines»
2. **Level of training:** Bachelor's degree
3. **Bilim bagdarlamalary:** "General Medicine"
4. **Course:** 1
5. **Name of elective discipline:** Fundamentals of Law and Economics
6. **Number of credits :** 5 credits
7. **Objective:** to form a system of knowledge about the economic and legal laws of the development of society and the problems of its effective functioning.
8. **Tasks:**
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  - 5) analyze the features of legal and economic processes in the context of their role in the modernization of Kazakhstan's society;
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2. Правоведение: учеб. пособие. - М. : ГЭОТАР - Медиа, 2013
3. Какимова М. Основы теории государства и права: учебник. 2010. - 256 с
4. Айдарханов М.Х. Основы экономической теории. Учебник. 2012.
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**Additional information:**

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- 2.Шоу М.Н. Международное право = International LAW : т.2 учебник / М.Н. Шоу. - 8-е изд. - [б. м.] : Ұлттық аудармашылары, 2019. - 716 стр.

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2. Экономическая теория (Электронный ресурс): Учебник. Под ред. И.Л.Николаева, 2011.
3. Липсиц И.В. Основы экономики (Электронный ресурс): учебник.-М.: Издательская группа «ГЭОТАР- Медиа», 2010
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  - Scientific Electronic Library <https://elibrary.ru/>
  - «Web of science» (Thomson Reuters)<http://apps.webofknowledge.com>
  - «Science Direct» (Elsevier)<https://www.sciencedirect.com>
  - «Scopus» (Elsevier)[www.scopus.com](http://www.scopus.com)
  - The UMKD is posted on the educational portal ukma.kz
- Electronic library "Student Consultant". Access link: <http://www.studmedlib.ru>, USERNAME ibragim123, PASSWORD Libukma123

**1. Department:** Chemical disciplines

**2. Level of preparation:** bachelor's degree

**3. Specialty:** 6B10101 - General medicine, 6B10102 - Pediatrics, 6B10103 - Dentistry 4. **Course:** 1

**5. Name of the elective discipline:** Chemistry

**6. Number of credits:** 3

**7. Purpose:** The purpose of the discipline is to form a holistic physicochemical, natural science approach to the study of the human body and its environment in students, as well as to substantiate the chemical and physicochemical aspects of the most important biochemical processes and various types of equilibria occurring in a living organism. Formation of a student - dentist of systemic knowledge about the basic physical and chemical laws of the course of biochemical processes (normal and pathological) at the molecular and cellular levels; about the structure and mechanisms of functioning of biologically active compounds; the formation of the natural scientific thinking of specialists in the medical dental profile, as well as the competence and professionally significant personality traits.

**8. Tasks**

- to form an understanding of equilibria in aqueous solutions of strong and weak electrolytes;
- to teach to apply physical and chemical laws to the description of biochemical processes in the body;
- to give an understanding of the basic principles of qualitative and quantitative analysis;
- to teach the use of chemical and physicochemical methods of analysis;
- to study the most important laws of electrochemistry that allow predicting corrosion resistance and optimizing the search for new structural dental materials;
- to form the concept of the relationship between the chemical composition, structure, properties and biological activity of substances;

**9. Rationale for the choice of discipline**

It is well known that in modern conditions the key task of higher education is the fundamental nature of education. Chemistry is a fundamental science and a powerful tool for research and knowledge of processes in living systems. Therefore, students of medical specialties should master well the basic ideas, laws and methods of this science. The program is supposed to consider the basics of the most important topics of the course of inorganic, analytical and physical chemistry. The discipline "Chemistry" prepares a theoretical basis for the development of some sections of biochemistry, molecular biology, physiology, pharmacology, hygiene and provides a broader involvement of the scientific approach and the latest research methods, gleaned from the fundamental sciences, in the study of biomedical, clinical disciplines. The task of profiling the course is an in-depth study of such topics as the composition of bone tissue, the composition of saliva and its mineralizing function, the processes occurring in the oral cavity. The knowledge gained by students during the passage of the topics "Phase equilibria", "Corrosion of metals and alloys", "Surface phenomena. Adsorption" are the physicochemical basis for the subsequent study of orthopedic and therapeutic dentistry. An important task of optimizing higher medical education is the expansion of interdisciplinary connections and the integration of fundamental, biomedical and clinical disciplines.

**10. Outcomes of learning**

	Knowledge (cognitive domain)	Skills and experiences (psychomotor sphere)	Personal and professional competencies (relationships)
	Demonstrates knowledge and understanding: - chemical processes (main types of reactions) in the body, obeying the general laws and laws of chemistry; - general energy and kinetic patterns of chemical processes; - the possibility of using titrimetric analysis to determine the quantitative content of substances in the	- uses calculation formulas (mass fraction, molar concentration, molar concentration equivalent, molar concentration, molar fraction, titer) to determine the quantitative content of substances in a solution, including biological fluids; - prepares the solution by the dilution method; - uses a certain set of chemical utensils, reagents,	- formulates the general theoretical foundations of chemistry for the application of the acquired knowledge, skills and abilities in their subsequent professional activities. - analyzes, systematizes information on the laws and experimental research in the field of chemistry, using computer technology and an information database of

systems under study, including biological fluids; - possible methods for preparing solutions, their quantitative characteristics; - classification, properties and application in medicine of the main classes of organic compounds.	basic instruments and methods of physicochemical measurements used in medicine; - complies with the rules of labor protection and safety measures, has the skills of safe work in a chemical laboratory, knows how to provide first aid.	medical sources. - informs and explains the observed patterns in the field of chemistry on the issues of their application in medicine;
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**11. Prerequisites:** disciplines of secondary general education: chemistry, biology, physics and mathematics.

**12. Post requisites:** medical biochemistry, morphology and physiology.

**13. Literature In Kazakh language:**

**Main:**

1. Сейтеметбетов, Т. С. Химия: оқулық / Т. С. Сейтеметбетов. - Алматы : Эверо, 2010.
2. Ә.Қ. Патсаев, С.А. Шитыбаев, Қ.Н. Дауренбеков. Бейорганикалық және физколлоидтық химия: оқулық/– Алматы: Эверо, 2011. -392б.
3. Ә.Қ. Патсаев, Т.С.Сейтеметбетов, С.А. Шитыбаев, Қ.Н. Дауренбеков. Биоорганикалық химия: оқулық/– Алматы: Эверо, 2012. -449 б.
4. Патсаев Ә.Қ., Дауренбеков Қ.Н. Биоорганикалық химия пәнінен тәжірибелік-зертханалық сабақтарына қолданба: оқу құралы. Алматы, Эверо, 2012.-324б.
5. Патсаев Ә.Қ. Бейорганикалық және физколлоидтық химия пәнінен тәжірибелік-зертханалық сабақтарына қолданба: оқу құралы. Алматы, Эверо, 2013.-316б.
6. Л.М. Түгелбаева, Р.Г. Рысқалиева, Р.К. Ашкеева. Жалпы химия 2013 ж. 6. Тюкавкина Н.А., Бауков Ю.И., Зурабян С.Э., қазақ тіліне аударған ж/е жауапты редакторы С.Т.Сейтеметбетов. Биоорганикалық химия: оқулық / – М : ГЭОТАР – Медиа, 2014. – 400 б.
7. Веренцова Л.Г., Нечепуренко Е.В., Батырбаева А.Ә., Карлова Э.К. Бейорганикалық коллоидты және физикалық химия (студенттердің өзіндік жұмысына арналған оқу құралы) - Алматы, Эверо, 2014. -212 б.
8. Дауренбеков Қ.Н. Органикалық химия: оқулық 1,2том, Ш: Әлем. 2016, 1т.- 500б., 2т.- 432б.
9. Қуатбеков Ә.М., Патсаев Ә.Қ., Бактыбаев Ә.Б. Биоорганикалық химия практикумы: оқу құралы. Алматы, Эверо, 2013.-593б.

**Additional:**

1. Нұрсейітов Ш.Ш., Баймағанбетов Қ.Б. Бейорганикалық химия. Оқу құралы – Алматы: Эверо, 2014. -188 б.
2. Құлажанов Қ.С., Сулейменова М.Ш., Қ.И.Иманбеков Бейорганикалық химия Алматы: Дәуір, 2011. – 256 б.
3. Патсаев Ә.Қ., Туребекова Г.А. Физколлоидтық химия пәнінен зертханалық-тәжірибелік сабақтарының материалдары: оқу-әдістемелік құралы. Алматы, Эверо, 2014.-96б.
4. Патсаев Ә.Қ. Химия пәні бойынша тестілері. I-бөлім. Бейорганикалық, физколлоидтық химия пәні бойынша тестілері. II-бөлім. Биоорганикалық химия пәні бойынша тестілер : тестілер. - Шымкент : Б. ж., 2010.
5. Химия пәнінен электронды оқу құралы [Электронный ресурс] : медициналық колледждерге арналған оқу құралы. - Түркістан : ОҚО, 2012.
6. Усманова, М. Б. Жалпы химия [Электронный ресурс] : оқу құралы . - Электрон. текстовые дан. (19,1 МБ). - Іскемен : "Мультимедия зертханасы", 2007. - эл. опт. диск (CD-ROM).

**Literature In Russian language:**

**Main:**

1. Глинка, Н. Л. Общая химия. Т.1: учеб. пособие для вузов - Алматы : Эверо, 2014

2. Глинка, Н. Л. Общая химия. т. 2 : учеб. пособие для вузов - Алматы : Эверо, 2014
3. Глинка, Н. Л. Общая химия. Т. 3. : учеб. пособие для вузов - Алматы : Эверо, 2014
4. Глинка, Н. Л. Общая химия. т. 4 : учеб. пособие для вузов. - Алматы : Эверо, 2014
5. Жолнин А. В. Общая химия: учебник / А. В. Жолнин ; под ред. В. А. Попкова.- М. : ГЭОТАР - Медиа, 2012
6. Попков В. А. Общая химия : учебник. –М.: ГЭОТАР – Медиа, 2009.

**Additional:**

1. Патсаев, А. К. Тесты по дисциплине "химия". Ч. 1. Тесты по неорганической, физколлоидной химии. Ч. 2. Тесты по биоорганической химии : тесты . - Шымкент : Б . и., 2010
2. 1000 тестов по общей химии для студентов медицинских вузов / Т. И. Литвинова[и др.]. - 2-е изд., испр. и доп. - Ростов н/Д : Феникс, 2007
3. Глинка Н. Л. Задачи и упражнения по общей химии : М.: Интергал-Пресс, 2007.
4. Бабков, А. В. Химия: учебник для мед. училищ и колледжей. - М. : ГЭОТАР - Медиа, 2015. - 352 с. -
5. Жолнин, А. В. Общая химия [Электронный ресурс] : учебник / А. В. Жолнин. - Электрон. текстовые дан. ( 40,9Мб). - М. : ГЭОТАР - Медиа, 2017. - эл. опт. диск
6. Попков, В. А. Жалпы химия [Электронный ресурс] : окулық Электрон. текстовые дан. (54.1Мб). - М. : ГЭОТАР - Медиа, 2014. - 992 б. С

**Literature In English language:**

1. Glinka, N. L. General chemistry. Volum 1. : manual for graduate students / N. L. Glinka, S. S. Babkina. - 27th ed. - Almaty : "Evero" , 2017. - 232 p.
2. Glinka, N. L. General chemistry. Volume 2.: manual for graduate students / N. L. Glinka, S. S. Babkina. - 27th ed. - Almaty : "Evero" , 2017. - 176 p.
3. Glinka, N. L. General chemistry. Volum 3.: manual for graduate students / N. L. Glinka, S. S. Babkina. - 27th ed. - Almaty : "Evero" , 2017. - 248 p.
4. Glinka, N. L. General chemistry. Volum 4.: manual for graduate students / N. L. Glinka, S. S. Babkina. - 27 th ed. - Almaty : "Evero" , 2017. - 176 p.
5. Nazarbekova, S. P. Chemistry: textbook / S. P. Nazarbekova, A. Tukibayeva, U. Nazarbek. - Almaty : Association of hiigher educationalinstitutions of Kazakhstan, 2016. - 304 p.
6. Shokybayev, Sh. A. Teaching methods on chemistry: textbook / Sh. A. Shokybayev, Z. O. Onerbayeva, G. U. Ilyassova. - Almaty : [s. n.], 2016. - 271 p.
7. Манаров, N. T. Computer chemistry: textbook / N. T. Манаров. - Almaty : Association of hiigher educationalinstitutions of Kazakhstan, 2016. - 312 p.

1. **Department:** “Medical Biophysics & Information Technology”

2. **Level of education:** Undergraduate

3. **Educational program:** "General Medicine"

4. **Course:** 2

5. **Name of elective discipline:** "Biostatistics"

6. **Number of credits:** 3

7. **Learning goal:** to form theoretical knowledge of the basics of biostatistics, skills of applying statistical methods for data processing and working with special software, skills of scientific analysis and their practical application.

8. **Discipline content:** Descriptive statistics: frequency distribution, measures of central tendency and scatter. Charts. Testing statistical hypotheses. The difference between two sample means: Student t-tests, Mann-Whitney test, Wilcoxon test. Analysis of variance: F-test, Kruskal-Wallis test. Contingency tables:  $\chi^2$ -test, Yates' correction, McNemar test. Correlation analysis: Pearson correlation coefficient, Spearman's rank correlation coefficient.

9. **Learning objectives:**

- the formation of a knowledge base on modern statistical methods for processing biological and medical data;
- the formation of the basic skills of using modern statistical methods for processing biological and medical data.

#### 10. **Justification of the choice of discipline:**

In health care and clinical medicine, various statistical concepts are often used when making decisions on issues such as: clinical diagnosis, prediction of the possible results of the implementation of certain programs in this group of the population, prediction of the course of the disease in an individual patient, selection of the appropriate program for this group of the population or choice of treatment for a particular patient, etc. Statistics are used in daily laboratory practice.

Knowledge of statistics has become important for understanding and critically evaluating reports in modern medical publications. Thus, knowledge of the principles of statistics is absolutely necessary for planning, conducting and analyzing research on the assessment of various situations and trends in health care, as well as for carrying out scientific research in the field of medical biology, clinics and health care.

Biostatistics is a scientific branch related to the development and use of statistical methods in scientific research in medicine and health care. The introduction of the principles of evidence-based medicine into practice dictates the need of an understanding of biostatistics to a modern medical graduate.

The need to improve the culture of statistical analysis of medical data, both in theoretical studies and in practical activities of a doctor, is dictated, first of all, by modern achievements in the issues of data presentation and systematization. It is especially important for the student to be able to use the statistical software STATISTICA and to adequately interpret the results obtained.

#### 11. **Learning outcomes:**

##### 1) *Knowledge and understanding:*

- demonstrates knowledge and understanding of biostatistical methods when describing medical research data and assessing the significance of differences in derived quantities characterizing the effectiveness of preventive, diagnostic and therapeutic measures and procedures.

##### 2) *Application of knowledge and understanding:*

- applies statistical methods to identify patterns, establish causal relationships, in assessing the significance of differences in indicators;
- uses special software for processing medical data.

##### 3) *Formation of judgment*

- analyzes the results of medical research and screening programs, draws conclusions.

##### 4) *Communication skills*

- knows how to convey information received during the search and processing to other users.

##### 5) *Learning skills and learning ability*

- applies scientific principles, methods and knowledge in medical practice and research;
- capable of continuous self-education and development.

#### 12. Pre-requisites: ICT

#### 13. Post requisites: epidemiology

#### 14. Bibliography:

- **Main**

1. Rosner B. Fundamentals of Biostatistics, 8<sup>th</sup> edition. – Harvard University, USA, 2017. – 927 p.

- **Supplementary**

1. Newman S.C. Biostatistical Methods in Epidemiology. – Wiley, 2017. – 388 p.
2. Petrie A., Sabin C. Medical Statistics at a Glance. – Wiley, 2016. – 168 p.



1. **Department:** "Social health insurance and public health»
2. **Level of training:** Bachelor
3. **Specialty:** " General medicine»
4. **Course:** 2, Term-4
5. **Name of elective discipline:** Public health and public health ethics
6. **Number of credits** – 5/150
7. **Objective:** to define the ethical aspects of specific public health activities, strategies and policies, to apply the basic ethical principles in public health (non-discriminatory approach to the target population and human resource management).

**8. Tasks:**

- To acquaint students with the basics of the organization of medical and preventive care;
- To teach the basics of legal aspects of medical activity;
- To teach the use and analysis of statistical information on the health of the population and the activities of medical institutions.

**9. Rationale for the choice of discipline:** Medical ethics (lat. ethica, from Greek. ethics – the study of morality, morality), or medical deontology (Greek. deon – duty; the term "deontology" was widely used in the domestic literature of recent years), – a set of ethical standards and principles of conduct for medical professionals in performing their professional duties.

Medical ethics studies and determines the solution of various problems of interpersonal relationships in three main areas:

- medical worker – patient,
- health care worker – relatives of the patient,
- medical worker – medical worker.

The four universal ethical principles include mercy, autonomy, fairness, and full medical care.

Some scientists have three overlapping views on health ethics: professional ethics (values that help health professionals act effectively); applied ethics (values that help highlight the challenges of strategic planning and execution in health care); and advocacy ethics (the excess value of public health and social justice).

Professional ethics refers to the ethical dimensions of professionalism and the moral trust that society gives to health professionals to make decisions for the benefit of General well-being. This form of reasoning about ethics emphasizes the special history and traditions of this profession, which are aimed at creating a culture of professionalism among students of educational institutions of health care and practitioners. It instills in professionals a sense of public duty and trust. Professional ethics is role-oriented, helping professionals to act effectively in the performance of their functions.

**10. Learning outcomes (competencies):**

1) Knowledge and understanding (demonstrate knowledge and understanding in the field of study, including elements of the most advanced knowledge in the field):

knows the Constitution of the Republic of Kazakhstan, the Code of the Republic of Kazakhstan and other legislative documents regulating the activities of medical organizations; knows the basic principles and rules of health ethics; knows the health care system and the organization of medical care.

2) **Application of knowledge and understanding** (to apply this knowledge and understanding at a professional level): applies the rules of confidentiality of information about individuals (patients); understands the regulation of individual relations in the field of health; understands the peculiarities of observance of patients' rights to freedom of choice and freedom of action; applies the rules of confidentiality (medical confidentiality).

3) **Formation of judgments** (to formulate arguments and solve problems in the study area): formulates knowledge of the principles of public health policy; formulates the problem of the rights and obligations of patients; resolves conflict situations in compliance with ethical and legal norms.

**4) Skills of training or ability to study** (to collect and interpret information for the formation of judgments based on social, ethical and scientific considerations): able to present personal judgments, formalize in the form of an abstract, presentation, project and present at practical classes, meetings of the student club, student scientific conferences, etc.; interprets the principles of public health policy; interprets the rules of confidentiality of information about individuals (patients); interprets ethical documents in professional activities.

**5) Communication skills** (to communicate information, ideas, problems and solutions, both to specialists and non-specialists): effectively applies the principles of ethics of the relationship between the patient and the doctor, patient and patient, doctor and physician, other medical professionals among themselves with the preservation of medical secrecy; advises on the rights and duties of patients in their professional activities.

**11. Prerequisites:** psychology and cotorage, philosophy.

**12. Post-requisites:** public health.

**13. Literature:**

**Basic:**

1. Rymanov, D. M. Densaulyk staudy Basara ethicity: excellent-distell keshen = management Ethics in healthcare: teaching and metodicheskii complex / - Almaty: Evero, 2015. - 164 Beth. C. 60ex.

2. Campbell, A. Medicinal ethics: excellent Ali: - M.: GEOTAR - Media, 2014. - 368 bet-151 copies.

3. Janybekov, A. M. Biomedicinal DEP: owly "Ontustik printing" BASPA Uyi ISS-I, 2014. - 196 Beth.-300eks.

4. CSU arim-katynas ethicity excellent-distell Wali / K. A. Abdullin; Formazioni yamashiro Zhane the Zhane ekonomikasi DLC alimtar technology. CFR. - Almaty: Evero, 2014. - 134 Beth.-30 copies.

**Additional:**

1. Campbell, A. Medical ethics: studies. allowance: lane with English. - Moscow: GEOTAR - Media, 2010. - 400 p.-20 copies.

2. Yarovinsky, M. Ya. Medical ethics (bioethics): studies. benefit. - M.: Medicine, 2006. - 1 copy.

3. Code of the Republic of Kazakhstan dated September 18, 2009 № 193-IV "On the health of the people and the health care system."

4. Code of the Republic of Kazakhstan "On family". 13.01. 2011.

**Electronic resources:**

1. Lopatin, P. V. Bioethics: a textbook for high schools. - 4th ed., pererab. I DOP. - Electron. text Dan. (36.6 MB). - Moscow: Publishing group "GEOTAR - Media", 2012. - 3 copies.

**1. Department:** "Hygiene and epidemiology"

**2. Level of preparation** (bachelor / internship / magistracy / residency)

**3.Speciality:** "General Medicine "

**4. Course:** 3

**5. Name of elective discipline:** " Hygiene and epidemiology "

**6. The number of credits** - 4

**7. Purpose:** the formation of hygienic thinking necessary for the medical worker in future professional activities.

**8. Tasks:**

- teach how to apply hygienic knowledge for the prevention of diseases, preservation and strengthening of health in healthy people;

- teach to apply hygienic knowledge and skills to improve hygienic literacy of the population.

**9. Justification of the choice of discipline:** General hygiene is one of the fundamental disciplines of basic medical education. Teaching theoretical and practical courses aimed at studying the fundamental principles of public health. The discipline reflects the patterns of influence of environmental factors on the human body and public health in order to substantiate hygienic standards, health regulations, and measures, the implementation of which will ensure the preservation and strengthening of people's health.

**10. Learning outcomes (competencies):**

<b>Knowledge (cognitive sphere)</b>	<b>Skills and abilities (psychomotor sphere)</b>	<b>Personal and professional competencies (relationships)</b>
<ul style="list-style-type: none"> <li>• knows the hygienic value of air. Measures for the prevention of diseases associated with the impact on the human body of physical properties, natural chemical and biological composition and air pollution;</li> <li>• knows the role of water factor and soil in the occurrence and spread of infectious and non-infectious diseases and hygienic measures for their prevention;</li> <li>• knows the hygienic basics of the rational nutrition of various groups of the population,</li> </ul>	<ul style="list-style-type: none"> <li>• interprets the results of the air quality study;</li> <li>• assesses the role of water factor in the development of infectious and non-communicable diseases and take measures for their prevention;</li> <li>• assesses the organization and nutritional value;</li> <li>• assesses the risk of exposure to occupational hazards on the human body;</li> <li>• evaluates the working conditions and the sanitary condition of the work premises;</li> </ul>	<p>perceive new ideas;</p> <ul style="list-style-type: none"> <li>- demonstrate relevant communication skills in the field of hygienic science;</li> <li>- observe the principles of medical ethics when dealing with the public;</li> <li>- master teamwork and leadership skills.</li> </ul>

<p>methods for assessing the nutritional value</p> <ul style="list-style-type: none"> <li>• knows the hygienic value of basic foods. Food poisoning and their prevention;</li> <li>• knows the hygienic characteristics of the most common harmful factors of the labor process and the working environment in industrial plants. Preventive and health measures at work;</li> <li>• knows the hygienic requirements for hospitals;</li> </ul> <p>knows the hygienic basis for the prevention of nosocomial infections.</p>	<ul style="list-style-type: none"> <li>• assesses the physical development of children and adolescents;</li> <li>• evaluates the sanitary and epidemiological regime of hospitals;</li> <li>• implement measures to prevent nosocomial infections;</li> <li>• makes a menu-layouts of dishes according to diets.</li> </ul>	
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**11. Prerequisites: molecular biology and medical genetics, basic physiology.**

**12. Post requisites: Epidemiology with the basics of disinfection.**

**13. Literature:**

1. Bolshakov, A. M. Zhalpa hygiene: - M.: GEOTAR - Media, 2014 y.
2. Hygiene: textbook / M-in education and science of the Russian Federation; by ed. P. I. Melnichenko. -; Rec. GBOU VPO "First Mosk. State Medical University. I.M. Sechenov ". - M.: GEOTAR - Media, 2014. - 656 p.
3. Tokanova, Sh. E. Zhalpy hygiene: Оқуу құралы - Almaty: Evero, 2013
4. Torgautov, B.K. Zhalpy hygiene: / B.K. Torgautov, M. Sh. Seralieva. - Shymkent: "Nırdana - LTD", 2011. - 432 page with. -
5. Torgautov, B.K. Zhalpy hygiene: / B.K. Torgautov, M. Sh. Seralieva. - Shymkent: B. Well., 2009. - 428 page. with.

1. **Department:** "Hygiene and epidemiology"
2. **Level of preparation** (bachelor / internship / magistracy / residency)
3. **Speciality:** "General Medicine "
4. **Course:** 3
5. **Name of elective discipline:** “ Hygiene and epidemiology ”
6. **The number of credits** - 4
7. **Purpose:** the formation of hygienic thinking necessary for the medical worker in future professional activities.

**8. Tasks:**

- teach how to apply hygienic knowledge for the prevention of diseases, preservation and strengthening of health in healthy people;
- teach to apply hygienic knowledge and skills to improve hygienic literacy of the population.

**9. Justification of the choice of discipline:** General hygiene is one of the fundamental disciplines of basic medical education. Teaching theoretical and practical courses aimed at studying the fundamental principles of public health. The discipline reflects the patterns of influence of environmental factors on the human body and public health in order to substantiate hygienic standards, health regulations, and measures, the implementation of which will ensure the preservation and strengthening of people's health.

**10. Learning outcomes (competencies):**

<b>Knowledge (cognitive sphere)</b>	<b>Skills and abilities (psychomotor sphere)</b>	<b>Personal and professional competencies (relationships)</b>
<ul style="list-style-type: none"> <li>• knows the hygienic value of air. Measures for the prevention of diseases associated with the impact on the human body of physical properties, natural chemical and biological composition and air pollution;</li> <li>• knows the role of water factor and soil in the occurrence and spread of infectious and non-</li> </ul>	<ul style="list-style-type: none"> <li>• interprets the results of the air quality study;</li> <li>• assesses the role of water factor in the development of infectious and non-communicable diseases and take measures for their prevention;</li> <li>• assesses the organization and nutritional value;</li> </ul>	<ul style="list-style-type: none"> <li>perceive new ideas;</li> <li>- demonstrate relevant communication skills in the field of hygienic science;</li> <li>- observe the principles of medical ethics when dealing with the public;</li> <li>- master teamwork and leadership skills.</li> </ul>

<p>infectious diseases and hygienic measures for their prevention;</p> <ul style="list-style-type: none"> <li>• knows the hygienic basics of the rational nutrition of various groups of the population, methods for assessing the nutritional value</li> <li>• knows the hygienic value of basic foods. Food poisoning and their prevention;</li> <li>• knows the hygienic characteristics of the most common harmful factors of the labor process and the working environment in industrial plants. Preventive and health measures at work;</li> <li>• knows the hygienic requirements for hospitals;</li> </ul> <p>knows the hygienic basis for the prevention of nosocomial infections.</p>	<ul style="list-style-type: none"> <li>• assesses the risk of exposure to occupational hazards on the human body;</li> <li>• evaluates the working conditions and the sanitary condition of the work premises;</li> <li>• assesses the physical development of children and adolescents;</li> <li>• evaluates the sanitary and epidemiological regime of hospitals;</li> <li>• implement measures to prevent nosocomial infections;</li> <li>• makes a menu-layouts of dishes according to diets.</li> </ul>	
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**11. Prerequisites: molecular biology and medical genetics, basic physiology.**

**12. Post requisites: Epidemiology with the basics of disinfection.**

**13. Literature:**

1. Bolshakov, A. M. Zhalpa hygiene: - M.: GEOTAR - Media, 2014 y.
2. Hygiene: textbook / M-in education and science of the Russian Federation; by ed. P. I. Melnichenko. -; Rec. GBOU VPO "First Mosk. State

Medical University. I.M. Sechenov ". - M.: GEOTAR - Media, 2014. - 656 p.

3. Tokanova, Sh. E. Zhalpy hygiene: Оқу құралы - Almaty: Evero, 2013

4. Torgautov, B.K. Zhalpy hygiene: / B.K. Torgautov, M. Sh. Seralieva. - Shymkent: "Nýrdana - LTD", 2011. - 432 page with. -

5. Torgautov, B.K. Zhalpy hygiene: / B.K. Torgautov, M. Sh. Seralieva. - Shymkent: B. Well., 2009. - 428 page. with.

**1. Department of "Microbiology, Virology and Immunology"**

**2. Level of education:** Bachelor's degree

**3. Educational program:** 6B10101 "General Medicine "

**4. Course:** 3

**5. The name of the elective discipline:** "General immunology"

**6. Number of credits:** 3

**7. Purpose:** the formation of students' modern ideas about the structure and function of the immune system, the nature of immunopathology in adult patients and children, etiology, pathogenesis, methods of clinical, instrumental and laboratory diagnostics, as well as treatment and prevention of immunodeficiency states and allergic pathology.

**8. Content:** Adaptive mechanisms of cellular immunity. Hypersensitivity mechanisms. Autoimmune diseases. Immunodeficiency diseases. Fundamentals of immuno-oncology, modern immunodiagnostics. Possibilities of immunocorrection. Vaccines and vaccine prophylaxis. Opportunities for the prevention of COVID -19.

**9. Learning objectives:**

- Formation of knowledge about the structure and function of the human immune system, its age characteristics, cellular and molecular mechanisms of development and functioning of the immune system, main stages, types, genetic control of the immune response, methods of immunodiagnostics.
- Formation of knowledge and skills in the application and evaluation of the results of laboratory research methods in immunodeficiency states, allergic and other immune-mediated diseases.
- Formation of knowledge about primary immunodeficiency, HIV infection, AIDS and other secondary immunodeficiency conditions.
- Formation of knowledge about blood groups and methods for determining the group affiliation of ABO and Rh.
- Formation of knowledge about hypersensitivity, its classification according to Coombs-Jell, etiology and pathogenesis of I-V types of hypersensitivity, principles of laboratory diagnostics.
- Formation of knowledge about transplant immunity, principles of donor and recipient selection, transplant rejection reactions.
- Formation of knowledge about tolerance and autoimmunity.
- Formation of knowledge about antitumor immunity.
- Formation of knowledge about vaccines and vaccine prevention.

**10. Learning outcomes:**

Knows and understands:

- structure and functions of the human immune system, its age characteristics,
- cellular and molecular mechanisms of the development and functioning of the immune system, the main stages, types, genetic control of the immune response,
- methods of immunodiagnostics,
- methods for assessing the immune status, indications and principles of its assessment,
- normal values of immunogram indices
- immunopathogenesis, methods of diagnostics of the main diseases of the human immune system,

- indications for the use of immunotropic therapy,
- safety regulations and work in the immunological laboratory with the test material, reagents, devices.

Is able to:

- comply with safety regulations and work in the immunological laboratory with the test material, reagents, devices.
- substantiate the need for clinical and immunological examination of the patient
- carry out immunological diagnostics;
- to distinguish by markers the main cellular elements of the immune system
- to evaluate the immunogram in the diagnosis of secondary immunodeficiency
- to determine the group affiliation of the patient's blood (ABO, Rh), as well as the compatibility of the donor's and recipient's blood.

**11. Prerequisites:** physiology, molecular biology and medical genetics, microbiology and immunology.

**12. Postrequisites:** Infectious diseases, childhood infectious diseases.

### **13. Literature:**

#### **In Russian:**

##### **Основная :**

1. Микробиология: учебник / под ред. В. В. Зверева, М. Н. Бойченко. - М. : ГЭОТАР - Медиа, 2012. - 608 с. : ил.
2. Микробиология, вирусология: руководство к практическим занятиям: учебное пособие / под ред. В. В. Зверева. - ; Мин. образования и науки РФ. Рекомендовано ГБОУ ДПО "Российская мед. акад. последипломного образования" Мин. здравоохранения РФ. - М. : ГЭОТАР - Медиа, 2015. - 360 с.
3. Сейтханова Б.Т. Учебное пособие к лабораторным занятиям по частной микробиологии (кишечные инфекции): учеб. Пособие. – Шымкент, 2012 г

#### **In Kazakh language:**

##### **Основная:**

1. Жеке микробиология. 1 бөлім. Медициналық бактериология : оқу құралы / Ғ. Т. Алимжанова [ж/б.]. - Алматы : Эверо, 2016. - 380 бет. с.
2. Жеке микробиология. 2 бөлім. Медициналық протозология, микология және вирусология : оқу құралы / Ғ. Т. Алимжанова [ж/б.]. - Алматы : Эверо, 2016. - 272 бет. с.
3. Медициналық микробиология, вирусология және иммунология : оқулық. 2 томдық. 1 том / қазақ тіліне ауд. Қ. Құдайбергелұлы ; ред. В. В. Зверев. - М. : ГЭОТАР - Медиа, 2016. - 416бет с.
4. Медициналық микробиология, вирусология және иммунология: оқулық. 2 томдық. 2 том / қаз. тіл. ауд. Қ. Құдайбергелұлы. - М. : ГЭОТАР - Медиа, 2016. - 480 бет. с.
5. Нуржанова, А. У. Микробиология және вирусология: оқу құралы / А. У. Нуржанова, М. Ш. Сералиева, Н. У. Абдукасымова. - ; Шымкент мед. колледж. оқу-әдіст. кеңесінде талқыланып, баспаға ұсынған. - Шымкент : "Нұрлы Бейне", 2012. - 272 бет. с.

##### **Дополнительная :**

1. Микробиология, вирусология: руководство к практическим занятиям : учебное пособие / под ред. В. В. Зверева. - ; Мин. образования и науки РФ. Рекомендовано ГБОУ ДПО "Российская мед. акад. последипломного образования" Мин. здравоохранения РФ. - М. : ГЭОТАР - Медиа, 2015. - 360 с.

#### **In English:**

1. Murray P. R., Rosenthal K. S., Pfaller M. A. Medical Microbiology. - Mosby, 2015
2. W. Levinson McGraw-Hill. Review of Medical Microbiology and Immunology, 2014

#### **Электронные ресурсы:**

1. Алимжанова, Ғ. Т. Жеке микробиология. 1-2 бөлім [Электронный ресурс] : оқу құралы / Ғ. Т. Алимжанова. - Электрон. текстовые дан. ( 60.9Мб). - Алматы : Эверо, 2016. - 380 бет. эл. опт. диск (CD-ROM).



## Electronic base

№	Наименование	Ссылка
1	Электронная библиотека ЮКМА	<a href="http://lib.ukma.kz/repository/">http://lib.ukma.kz/repository/</a>
2	Электронный каталог - Для внутреннего пользования - Для внешнего пользования	<a href="http://10.10.202.52">http://10.10.202.52</a> <a href="http://89.218.155.74">http://89.218.155.74</a>
3	Республиканская межвузовская электронная библиотека	<a href="http://rmebrk.kz/">http://rmebrk.kz/</a>
4	Консультант студента	<a href="http://www.studmedlib.ru">http://www.studmedlib.ru</a>
5	«Параграф Медицина» инфармационная система	<a href="https://online.zakon.kz/Medicine">https://online.zakon.kz/Medicine</a>
6	Закон (доступ в справочно-информационном секторе)	<a href="https://zan.kz">https://zan.kz</a>
7	Научная электронная библиотека	<a href="https://elibrary.ru/">https://elibrary.ru/</a>
8	«BooksMed» электронды кітапханасы	<a href="http://www.booksmed.com">http://www.booksmed.com</a>
9	«Web of science» (Thomson Reuters)	<a href="http://apps.webofknowledge.com">http://apps.webofknowledge.com</a>
10	«Science Direct» (Elsevier)	<a href="https://www.sciencedirect.com">https://www.sciencedirect.com</a>
11	«Scopus» (Elsevier)	<a href="http://www.scopus.com">www.scopus.com</a>
12	PubMed	<a href="https://www.ncbi.nlm.nih.gov/pubmed">https://www.ncbi.nlm.nih.gov/pubmed</a>
13	«Акнурпресс» библиотека	Цифровая <a href="https://aknurpress.kz/login">https://aknurpress.kz/login</a>

### 1. Department - Pediatrics 1

### 2. Level of training - Bachelor

### 3. Name of EP - 6B10101 «General medicine»

### 4. Course – 3, amount of of credits-8, amount of of hours-240.

### 5. Name of elective discipline - Propaedeutics of childhood diseases

**Purpose of the discipline:** the formation of a holistic view of the methods of research, the main symptoms and syndromes of diseases of internal organs and systems, as well as ensuring the achievement of the final results of education in propaedeutics of childhood diseases on the basis of its joint study with fundamental disciplines.

#### **Content of the discipline:**

Propaedeutics of children's diseases are the first clinical discipline, in the study of which the student receives the initial skills of examination of the patient and the detection of diseases of the internal organs on the basis of mastering the methods of clinical examination of the patient. In other words, propedeutics of children diseases is the main of clinical medicine, and knowledge of the examination of the patient, first of all, knowledge and skills of questioning and physical examination of the patient, are necessary for the formation of clinical competencies of a doctor of any specialty.

The basic condition for the formation of sustainable knowledge and skills in training a doctor is the combination of knowledge of fundamental disciplines (normal and pathological anatomy, normal and pathological physiology, histology, biochemistry, pharmacology, etc.) with knowledge, practical skills and skills acquired in clinical disciplines.

When studying propaedeutics of children's diseases, the student first realizes the necessity and importance of basic disciplines in the formation of clinical competences of the clinician's doctor, as in the examination of the patient and the diagnosis of diseases of internal organs, the clinician must rely on knowledge of basic disciplines.

#### • **Learning objective:**

- training in the method of primary medical examination of a person;

- training in the technique of performing physical research methods (interrogation, examination, palpation, percussion, auscultation);
- training in drawing up a plan for additional patient studies (laboratory, instrumental);
- training in the skills of substantiating a clinical diagnosis;
- training in interpreting the results of laboratory-instrumental research methods.

#### **Justification:**

The most important requirement of high-quality medical education is continuity and consistency, with a special role in the propaedeutics of children's diseases. This discipline is an integral fundamental part of the clinical training of a young specialist. As a result of its study, the student develops important professional skills in the examination of a sick child, the basics of clinical thinking, as well as biomedetics, since work begins at the bedside of a sick child. Without mastering this discipline perfectly, it is difficult to count on high-quality training of a young specialist.

#### **Learning outcomes (competencies)**

**1) Knowledge and understanding** (demonstrates knowledge and understanding in the field of propaedeutics of Pediatric Diseases):

- data of physical methods of investigation in norm and pathology;
- the main clinical symptoms and syndromes of diseases of internal organs;
- mechanisms for the development of clinical symptoms in the defeat of internal organs based on the integration of knowledge in basic disciplines;
- clinical manifestations, treatment and prevention of diseases of internal organs;
- symptomatology and the basic principles of medical care in certain urgent conditions;

**2) Application of knowledge and understanding** (applies knowledge and understanding on a professional level):

- when using in practice the basic methods of clinical examination of patients with respiratory, cardiovascular, digestive, genitourinary, endocrine, musculoskeletal, hematopoietic, nervous systems of the body;
- when identifying the main symptoms and syndromes of diseases of internal organs;
- when drawing up a plan for laboratory and instrumental examination of the patient with diseases of the internal organs, as well as in interpreting widely used paraclinical methods of examination (clinical studies of blood, urine, sputum, biochemical blood test, chest radiography, ECG, echocardiography, ultrasound of organs abdominal cavity, endoscopic examination of the esophagus, stomach, intestines);
- when developing a treatment plan for the main pathological syndromes and diseases of internal organs based on the principles of evidence-based medicine, taking into account the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan;
- when working with regulatory documents that regulate the activity of medical workers.

**3) Formation of judgments** (formulates arguments and solve problems in the field of propaedeutics of pediatric diseases):

- formulates arguments on the collected material on the use of basic methods of clinical examination for diseases of internal organs and systems;
- formulates the arguments in identifying the main symptoms and syndromes of diseases of internal organs;
- formulates his own conclusions about the principles of medical care in emergency conditions of internal organs.

**4) Skills of study or ability to study** (collects and interprets information to form judgments taking into account social, ethical and scientific considerations):

- uses creative thinking in gathering information on drawing up a plan for laboratory and instrumental methods of examining patients with diseases of internal organs and systems;
- uses creative thinking when interpreting laboratory and instrumental survey methods;
- uses creative thinking when drawing up a plan for treating internal diseases, as well as diagnosing and providing medical care in emergency conditions.

**5) Communication skills** (communicates information, ideas and problems and solutions to both professionals and non-professionals):

- provides own knowledge, judgment and skills on the principles of communication with patients in clinical practice.

**Prerequisites:** morphology and physiology

**Postrequisites:** basics of childhood diseases

**Literature:**

**Basic:**

1. Mazurin, A. V. Propaedeutics of childhood diseases. 1 volume [: textbook / - Almaty : "Evero" , 2017. - 144 p
2. Mazurin, A. V. Propaedeutics of childhood diseases. 2 volume] : textbook / - Almaty : "Evero" , 2017. - 172 p.
3. Mazurin, A. V. Propaedeutics of childhood diseases. 3 volume [: textbook / - Almaty : "Evero" , 2017. - 140 p.
4. Mazurin, A. V. Propaedeutics of childhood diseases. 4 volume: textbook / - Almaty : "Evero" , 2017. - 120 p.
5. Issayeva, L. A. Childhood diseases. I part [: textbook / - Almaty : "Evero" , 2017. - 144 p
6. Issayeva, L. A. Childhood diseases. II part] : textbook / - Almaty : "Evero" , 2017. - 170 p.
7. Issayeva, L. A. Childhood diseases. III part [: textbook / - Almaty : "Evero" , 2017. - 140 p.
8. Issayeva, L. A. Childhood diseases. IV part [: textbook / - Almaty : "Evero" , 2017. - 185 p.

**Additional:**

1. Karen J. marcdante. Robert M. Kligeman. Nelson “Essential of Pediatrics” 7th edition 2015.
2. Joseph J.Zorc Schwartz`s “ Clinical Handbook of Pediatrics” fifth edition 2013.

**1. Department - Pediatrics 1**

**2. Level of training - Bachelor**

**3. Name of EP - 6B10101 «General medicine»**

**4. Course – 4, amount of of credits-10, amount of of hours-300.**

**5. Name of elective discipline - Pediatric surgery**

**Purpose of the discipline:** training of a specialist capable of diagnosing and providing qualified assistance to children with surgical pathology in accordance with the principles of evidence-based medicine.

**Content of the discipline:**

Pediatric surgery is a discipline in the General medicine undergraduate educational program. The discipline will familiarize you with the work of the children's surgery service in medical institutions of the Republic, as well as with the works and contributions to the formation of an independent discipline of domestic children's surgeons (Ormantaev, Erekeshev A. E., Karabekov A. K. and others.) In the course of teaching the discipline "Children's surgery" is important for students who work independently, must be able to provide the necessary first aid to children of various ages with surgical pathology, and especially newborns and young children, as well as the principles of treatment of the most common surgical diseases in childhood.

Therefore, students studying at the University should get sufficient theoretical knowledge in the field of physiology and pathology of the child's body, know the basic principles of diagnosis, methods of prevention and treatment of children's diseases, as well as acquire practical skills for independent work in medical and preventive institutions.

**Learning objective:**

ability to communicate with healthy and sick children, their parents, observing the principles of ethics and deontology;

- collect, evaluate and analyze anamnestic data on the child's health and development;
- improve knowledge, communication and practical skills in the examination and treatment of patients with surgical pathology of the thoracic and abdominal cavities, soft tissues, bone-joint and vascular systems;

- expand knowledge and skills in the interpretation of modern laboratory, invasive and non-invasive methods of examination of surgical patients;
- conduct a study of modern innovative methods of treatment of surgical diseases;
- train students to maintain current medical records;
- participate in the conducting of sanitary-educational work and formation of healthy lifestyle among patients supervised
- formation of students ' ability to analyze scientific literature, use of normative documents in the field of Pediatrics, preparation of abstracts on modern scientific problems.

**Justification:**

A special feature of the pediatric specialty is the need to have extensive knowledge not only on the variety of children's and infectious diseases, but also on children's surgical diseases, malformations, oncology, traumatology and their features in different age periods. Parents with a sick child, first of all, turn to a pediatrician and the life of the child often depends on how quickly and correctly the primary diagnosis is made and the medical tactics are determined. The doctor should not only know the main symptoms and clinical manifestations of the most common surgical diseases, but also be able to conduct a full examination, make a correct diagnosis, and determine surgical tactics

**Learning outcomes (competencies)**

**1) Knowledge and understanding:**

- main features and patterns of the child's body;
- main sources of medical literature and electronic information resources in pediatric surgical practice;
- ethical and deontological principles in pediatric surgery, consequences of unethical behavior of a doctor;
- list of medical documentation in pediatric surgery;
- a set of measures aimed at preserving and strengthening children's health, preventing the occurrence and spread of diseases, causes and conditions of harmful effects on children's health of environmental factors;
- principles of preventive medical examinations, medical examination and clinical supervision of healthy children and children with chronic diseases;
- risk factors affecting the formation of a growing child, healthy lifestyle skills lives.

**2) Applying knowledge and judgment:**

- competently analyze and independently evaluate the most common pathology in pediatric surgery, interpret the information received;
- find the necessary medical information for solving standard tasks using modern technical methodologies-bibliographic and informational, independently work with educational, scientific and reference literature;
- apply ethical and deontological principles in pediatric surgery;
- issue medical documentation in the practice of children's surgery, in the hospital and outpatient work;
- implement a set of measures aimed at preserving and strengthening children's health, prevent the occurrence and carry out early diagnosis of surgical diseases, identify the causes and conditions of their occurrence and development, implement measures aimed at eliminating the harmful effects on children's health of environmental factors;
- plan inspections for preventive medical examination of healthy children and medical examination of children with chronic diseases;
- to identify factors of adverse impact on the child, to carry out educational work among children and their parents.

**3) Learning Skills or learning ability:**

- skills of presenting an independent point of view, analysis and logical thinking, public speech in communication with the child and his parents;

- skills in using modern information resources, medical and biological terminology;
- - communication skills, ethical standards when dealing with a child, parents and their relatives;
- skills in maintaining medical records in pediatric practice;
- - a set of measures aimed at preserving and strengthening the health of children and including the formation of a healthy lifestyle;
- - analysis and interpretation of the results of medical research, medical examination and follow-up of healthy children and children with surgical diseases;
- skills of a healthy lifestyle and educational work among children and parents.

**Prerequisites: Childhood illnesses**

**Post-requisites: Surgical diseases, pediatric surgery.**

**Literature:**

**Main**

**in Russian:**

- 1) Сборник клинических протоколов по профилю педиатрия, разработанных в 2014 году. 1 том- Астана, 2015ж- 616 бет.
- 2) Сборник клинических протоколов по профилю педиатрия, разработанных в 2014 году. 2 том- Астана, 2015ж-667 бет.
- 3) Исаков Ю.Ф. Хирургические болезни детского возраста. В 2-х т. Т.1. -632 с.; Т.2. -584 с. М.: Гэотар -медиа, 2010.

**in Kazakh language:**

- 1) Дюсембаев А.А., Ормантаев К.С. Балалар хирургиясы. Алматы 2008
- 2) Тұрсынов Қ. Балалардың хирургиялық ірінді қабыну аурулары: оқулық. – Алматы 2011
- 3) Тұрсынов Қ. Нәрестелер хирургиясы: оқулық. – Алматы 2011

**Additional literature:**

- 1) Карабеков А.Қ. Клиника, диагностика и лечение врожденного вывиха бедра у детей. Учебное пособие.- Шымкент. 2000
- 2) Детская оперативная хирургия: практ. рук./ под ред. Тихомировой В.Д.. Спб.: Информ. Изд. Агентство «Лик», 2001
- 3) Немилова Т.К. Пороки развития пищеварительного тракта у новорожденных СПб 2002
- 4) Детская анестезиология и реаниматология: учеб. Под редакцией В.А. Михельсона, В.А. Гребенникова.-2-е издание, переработанное и доп.- М.: Медицина, 2001.

**1. Department:**Infectious diseases and Dermatovenerology

**2. Level of training:** bachelor

**3. Specialty:** «General medicine»

**4. Course:** 4

**5. Name of elective discipline:** Tropical diseases

**6. Number of credits:** 3 credits

**7. Purpose:** to acquire students in-depth systematic theoretical knowledge and professional skills in the field of early and differential diagnosis, clinic, treatment and prevention of the spread of tropical infectious diseases.

**8. Tasks:**

**Formation of students ' knowledge:** the study of the features of epidemiology, etiology, pathogenesis, clinical manifestations of tropical infectious diseases at the present stage

**Formation of students ' skills:** acquisition of skills of algorithms for early and differential diagnosis of tropical infectious diseases, emergency medical care and treatment. Organization of sanitary anti - epidemic, preventive measures against tropical infectious diseases.

**Formation of analytical skills:** the use of modern scientific data based on the principles of evidence-based medicine in the conduct of research on tropical infectious diseases.

**9. Rationale for the choice of discipline**

Due to the expansion and intensification of political, economic and cultural ties with the countries of Asia, Africa and Latin America, the citizens of Kazakhstan became frequent guests

of the States located on their territory. Meanwhile, infectious and parasitic diseases are widespread in these States, posing an extreme danger to public health. Every year, the number of imported tropical diseases among Kazakh citizens - tourists, merchants, employees of institutions located abroad, crews of ships and aircraft, specialists working under the contract increases. Every year in the world recorded deaths from imported cases of yellow fever, tropical malaria, hemorrhagic fevers. Thus, the urgency of studying the problem of tropical infections is due to the high level of morbidity in the world, high migration, severe course with possible complications and death.

#### 10. Learning outcomes (competencies)

<b>Knowledge (cognitive sphere)</b>	<b>Skills &amp; perks (psychomotor sphere)</b>	<b>Personal and professional competences (relations)</b>
<p><b>Know:</b></p> <ul style="list-style-type: none"> <li>- normative, legal and legislative documents in the field of epidemiology and prevention of tropical infectious diseases.</li> <li>- Principles of organization of infectious care in tropical infectious diseases</li> <li>- Etiology, epidemiology, pathogenesis, clinical presentation and classification of infectious diseases</li> <li>- Clinic of characteristic complications and urgent conditions in tropical infectious diseases</li> <li>- Modern methods of specific and non-specific diagnostics of infectious diseases.</li> <li>- Basic principles of treatment of tropical infectious diseases (etiotropic, pathogenetic, symptomatic therapy)</li> <li>- Principles of prevention and anti-epidemic measures in the focus of tropical infectious diseases</li> </ul>	<p><b>• Can:</b></p> <ul style="list-style-type: none"> <li>- Examine an infectious patient with tropical infectious diseases according to established rules.</li> <li>- To assess the differential diagnostic significance of symptoms and syndromes characteristic of tropical infectious diseases</li> <li>- To make a plan of the necessary laboratory and instrumental examination, to carry out the collection of pathological materials from the patient.</li> </ul> <p><b>Possess skills:</b></p> <ul style="list-style-type: none"> <li>- algorithms for early and differential diagnosis of human zoonotic infections.</li> <li>- evaluation of the results of serological, molecular biological, bacteriological, immunological studies;</li> <li>- emergency medical care and treatment of human zoonotic infections.</li> <li>- Organization of sanitary and anti-epidemic, preventive measures against human zoonotic infections</li> </ul>	<p><b>General cultural (GC):</b></p> <ul style="list-style-type: none"> <li>-ability to abstract thinking, analysis, synthesis - (OK-1);</li> </ul> <p><b>-General professional competence (GPC):</b></p> <ul style="list-style-type: none"> <li>-ability to assess morphological and functional, physiological States and pathological processes in the human body to solve professional problems (MIC-9);</li> </ul> <p><b>professional competence (PC):</b></p> <ul style="list-style-type: none"> <li>-readiness to collect and analyze the patient's complaints, his / her medical history, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease;</li> <li>- ability to determine the tactics of management of patients with different nosological forms</li> </ul>

#### 11. Literature:

1. Dr. M. Estee Torok, Dr. Ed Moran, Dr. Fiona J. Cooke. Oxford Handbook of Infectious Diseases and Microbiology. 2017
2. Harrison's Infectious Diseases / Kasper D. L., Fauci A. S.; McGraw-Hill
3. Essentials of Clinical Immunology / Chapel H. [et al.]; Wiley-Blackwell Immunology / Male D., Brostoff J., Roth D. B., Roitt I. M.; Saunders / Elsevire
4. Travel and Tropical Medicine Manual / Jong E. C. [ed. by], Sanford Ch.; Saunders / Elsevier.
5. Jong Elaine C. Netter's Infectious Disease. Elsevier Science. 2015
6. Bennett, Dolin & Blaser. Mandell, Douglas and Bennett's Infectious Disease Essentials

Elsevier Science 2016

7. Zhu, Frank. Anti-Infection Handbook. Elsevier Science. 2018
8. Kloss, Brian. Graphic Guide to Infectious Disease. Elsevier Science. 2018.
9. Gill Denis. Paediatric Clinical Examination Made Easy 6. Elsevier Science. 2017
10. Lissauer, Tom Self-Assessment in Paediatrics. Elsevier Science. 2017
11. Nocton, James J. On Call Pediatrics. Elsevier Science. 2018
12. Harris, Wayne Examination Paediatrics.5. Elsevier Science. 2017
- Kliegman, Robert M. Nelson Textbook of Pediatrics 21, i.e. Elsevier Science. 2019

**1. Department:** Infectious diseases and Dermatovenerology

**2. Level of training** bachelor

**3. Specialty:** «General medicine»

**4. Course:** 4

**5. Name of elective discipline:** Especially dangerous infections

**6. Number of credits:** 3 credits

**7. Purpose:** acquisition by students of in-depth systematized theoretical knowledge and professional skills in the field of early and differential diagnosis, clinic, treatment and prevention of the spread of particularly dangerous diseases

**8. Tasks:**

**Formation of students knowledge:** the study of the features of epidemiology, etiology, pathogenesis, clinical manifestations of particularly dangerous diseases at the present stage

**Formation of students ' skills:** acquisition of skills of algorithms for early and differential diagnosis of particularly dangerous diseases, emergency medical care and treatment. Organization of sanitary anti-epidemic, preventivemeas uresagains tparticularly dangerous diseases.

**Formation of analytical skills:** the use of modern scientific data based on the principles of evidence-based medicine in research Work on the problems of particularly dangerous diseases.

**9. Rationale for the choice of discipline**

Especially dangerous infections (EDI) — highly contagious diseases that appear suddenly and quickly spread, covering as soon as possible a large mass of the population. EDI occur with a heavy clinic and are characterized by a high percentage of mortality. The urgency of the problem of these infectious diseases is due to a number of reasons, the main ones are:

- increased risk of epidemiological emergencies due to natural disasters, man-made disasters, acts of biological terrorism;
- constant threat of importation of dangerous infectious diseases from the countries of near and far abroad;
- maintaining the epidemic potential of existing natural foci of infectious diseases, their activation and, as a consequence, the expansion of the range of pathogens;
- the emergence of new and the return of old nosological forms;
- the evolution of pathogens, leading to the emergence of multi-resistant and highly pathogenic strains.

**10. Learning outcomes (competencies)**

<b>Knowledge (cognitive sphere)</b>	<b>Skills &amp; perks (psychomotor sphere)</b>	<b>Personal and professional competences (relations)</b>
<p><b>Know:</b></p> <ul style="list-style-type: none"> <li>- normative, legal and legislative documents in the field of epidemiology and prevention of particularly dangerous diseases.</li> <li>- Principles of organization of infectious care in EDI</li> <li>- Etiology, epidemiology, pathogenesis, clinical presentation and classification of EDI</li> <li>- Clinic of typical complications and urgent conditions of EDI</li> <li>- Modern methods of specific and non-specific diagnosis of EDI.</li> <li>- Basic principles of treatment of EDI (etiologic, pathogenetic, symptomatic therapy)</li> <li>- Principles of prevention and anti-epidemic measures in the EDI focus</li> </ul>	<p><b>Can:</b></p> <ul style="list-style-type: none"> <li>- To examine the infectious patient with EDI according to the established rules.</li> <li>- To evaluate the differential diagnostic significance of the symptoms and syndromes characteristic of EDI</li> <li>- Make a plan for the necessary laboratory and instrumental examination, to carry out the collection of pathological materials from the patient.</li> </ul> <p><b>Own skills:</b></p> <ul style="list-style-type: none"> <li>- algorithms for early and differential diagnosis of human zoonotic infections.</li> <li>- evaluation of the results of serological, molecular biological, bacteriological, immunological studies;</li> <li>- carrying out emergency medical care and treatment of human zoonotic infections.</li> <li>- Organization of sanitary and anti-epidemic, preventive measures against human zoonotic infections</li> </ul>	<p><b>General cultural (GC):</b></p> <ul style="list-style-type: none"> <li>- ability to abstract thinking, analysis, synthesis- (GC-1);</li> </ul> <p><b>General professional competence (GPC):</b></p> <ul style="list-style-type: none"> <li>- ability to assess morphological and functional, physiological States and pathological processes in the human body to solve professional problems (MIC-9);</li> </ul> <p><b>professional competence (PC):</b></p> <ul style="list-style-type: none"> <li>- readiness to collect and analyze the patient's complaints, his/ her medical history, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease;</li> <li>- ability to determine the tactics of management of patients with different nosological forms.</li> </ul>

## 11. Literature:

13. Dr. M. Estee Torok, Dr. Ed Moran, Dr. Fiona J. Cooke. Oxford Handbook of Infectious Diseases and Microbiology. 2017
14. Harrison's Infectious Diseases / Kasper D. L., Fauci A. S.; McGraw-Hill
15. Essentials of Clinical Immunology / Chapel H. [et al.]; Wiley-Blackwell Immunology / Male D., Brostoff J., Roth D. B., Roitt I. M.; Saunders / Elsevier
16. Travel and Tropical Medicine Manual / Jong E. C. [ed. by], Sanford Ch.; Saunders / Elsevier.



17. Jong Elaine C. Netter's Infectious Disease. Elsevier Science. 2015
18. Bennett, Dolin & Blaser. Mandell, Douglas and Bennett's Infectious Disease Essentials Elsevier Science 2016
19. Zhu, Frank. Anti-Infection Handbook. Elsevier Science. 2018
20. Kloss, Brian. Graphic Guide to Infectious Disease. Elsevier Science. 2018.
21. Gill Denis. Paediatric Clinical Examination Made Easy 6. Elsevier Science. 2017
22. Lissauer, Tom Self-Assessment in Paediatrics. Elsevier Science. 2017
23. Nocton, James J. On Call Pediatrics. Elsevier Science. 2018
24. Harris, Wayne Examination Paediatrics.5. Elsevier Science. 2017 Kliegman, Robert M. Nelson Textbook of Pediatrics 21, i.e. Elsevier Science. 2019

**1. Department:** Infectious diseases and Dermatovenerology

**2. Level of training:** bachelor

**3. Specialty:** «General medicine»

**4. Course:** 4

**5. Name of elective course:** HIV-infection

**6. Number of credits:** 3 credits

**7. Purpose:** to acquire students in-depth systematic theoretical knowledge and professional skills in the field of early and differential diagnosis, clinic, treatment and prevention of HIV infection.

**8. Tasks:**

- teaching students the basic principles of treatment and diagnosis of HIV infection;
- study of the principles of HIV prevention.

**9. Rationale for the choice of discipline:**

Infection caused by human immunodeficiency virus (HIV) – a chronic infectious disease, the pathogen is transmitted by contact. The disease is characterized by damage to the human immune system, and the development of acquired immunodeficiency syndrome (AIDS) and secondary lesions from subacute encephalitis to death. In the history of medicine there was no such infection, which would simultaneously cover five continents, had a high tendency of growth. Specialists currently number about 50 million people living with HIV. Since the end of the twentieth century and the beginning of the XXI century their number has increased 10-20 times.

Students need to know the diagnosis, treatment and prevention of HIV infection.

#### 10. Learning outcomes (competencies)

<b>Knowledge (cognitive sphere)</b>	<b>Skills &amp; perks (psychomotor sphere)</b>	<b>Personal and professional competences (relations)</b>
<p><b>know:</b></p> <ul style="list-style-type: none"> <li>- features of examination of an infectious patient</li> <li>— HIV infection: etiology, epidemiology, pathogenesis.</li> <li>— HIV infection: clinical manifestations, diagnosis and treatment principles.</li> <li>— The principles of HIV prevention</li> </ul>	<p><b>Can:</b></p> <ul style="list-style-type: none"> <li>— the basic principles of working with infected patients in bed at the infectious diseases hospital,</li> <li>— establish a maximum level of trust with the patient, the patient's nannies, the patient's relatives and other health care professionals,</li> <li>— examination of HIV-infected patients,</li> <li>— selection of laboratory and instrumental diagnostic methods and interpretation of results,</li> <li>— antiviral drugs used in the treatment of HIV infection, make a treatment plan.</li> </ul> <p>•own skills:</p>	<p><b>General cultural (GC):</b></p> <ul style="list-style-type: none"> <li>-ability to abstract thinking, analysis, synthesis- (Gc-1);</li> </ul> <p><b>General professional competence( GPC):</b></p> <ul style="list-style-type: none"> <li>- ability to assess morphological and functional, physiological States and pathological processes in the human body to solve professional problems (GPC-9);</li> </ul> <p><b>professional competence (PC):</b> readiness to collect and analyze the patient's complaints, his/her medical</p>

	- clinical diagnosis of HIV infection. – Interpretation of laboratory tests for HIV infection: General clinical, biochemical blood test, proteinogram, immunogram, coagulogram, ELISA analysis and PCR diagnosis; – the treatment of HIV infection; – the organization of preventive measures against HIV-infection	history, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease; ability to determine the tactics of management of patients with different nosological forms.
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### 11. Literature:

25. Dr. M. Estee Torok, Dr. Ed Moran, Dr. Fiona J. Cooke. Oxford Handbook of Infectious Diseases and Microbiology. 2017
26. Harrison's Infectious Diseases / Kasper D. L., Fauci A. S.; McGraw-Hill
27. Essentials of Clinical Immunology / Chapel H. [et al.]; Wiley-Blackwell Immunology / Male D., Brostoff J., Roth D. B., Roitt I. M.; Saunders / Elseviere
28. Travel and Tropical Medicine Manual / Jong E. C. [ed. by], Sanford Ch.; Saunders / Elsevier.
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37. Kliegman, Robert M. Nelson Textbook of Pediatrics 21, i.e. Elsevier Science. 2019

**1. Department:** Infectious diseases and Dermatovenerology

**2. Level of training** bachelor

**3. Specialty:** «General medicine»

**4. Course:** 4

**5. Name of elective discipline:** Especially dangerous infections

**6. Number of credits:** 3 credits

**7. Purpose:** acquisition by students of in-depth systematized theoretical knowledge and professional skills in the field of early and differential diagnosis, clinic, treatment and prevention of the spread of particularly dangerous diseases

**8. Tasks:**

**Formation of students knowledge:** the study of the features of epidemiology, etiology, pathogenesis, clinical manifestations of particularly dangerous diseases at the present stage

**Formation of students ' skills:** acquisition of skills of algorithms for early and differential diagnosis of particularly dangerous diseases, emergency medical care and treatment. Organization of sanitary anti-epidemic, preventivemeas uresagains tparticularly dangerous diseases.

**Formation of analytical skills:** the use of modern scientific data based on the principles of evidence-based medicine in research Work on the problems of particularly dangerous diseases.

**9. Rationale for the choice of discipline**

Especially dangerous infections (EDI) — highly contagious diseases that appear suddenly and quickly spread, covering as soon as possible a large mass of the population. EDI occur with a heavy clinic and are characterized by a high percentage of mortality. The urgency of the problem of these infectious diseases is due to a number of reasons, the main ones are:

- increased risk of epidemiological emergencies due to natural disasters, man-made disasters, acts of biological terrorism;

- constant threat of importation of dangerous infectious diseases from the countries of near and far abroad;
- maintaining the epidemic potential of existing natural foci of infectious diseases, their activation and, as a consequence, the expansion of the range of pathogens;
- the emergence of new and the return of old nosological forms;
- the evolution of pathogens, leading to the emergence of multi-resistant and highly pathogenic strains.

#### 10. Learning outcomes (competencies)

Knowledge (cognitive sphere)	Skills & perks (psychomotor sphere)	Personal and professional competences (relations)
<p><b>Know:</b></p> <ul style="list-style-type: none"> <li>- normative, legal and legislative documents in the field of epidemiology and prevention of particularly dangerous diseases.</li> <li>- Principles of organization of infectious care in EDI</li> <li>- Etiology, epidemiology, pathogenesis, clinical presentation and classification of EDI</li> <li>- Clinic of typical complications and urgent conditions of EDI</li> <li>- Modern methods of specific and non-specific diagnosis of EDI.</li> <li>- Basic principles of treatment of EDI (etiotropic, PA togenetic, symptomatic therapy)</li> <li>- Principles of prevention and anti-epidemic measures in the EDI focus</li> </ul>	<p><b>Can:</b></p> <ul style="list-style-type: none"> <li>- To examine the infectious patient with EDI according to the established rules.</li> <li>- To evaluate the differential diagnostic significance of the symptoms and syndromes characteristic of EDI</li> <li>- Make a plan for the necessary laboratory and instrumental examination, to carry out the collection of pathological materials from the patient.</li> </ul> <p><b>Own skills:</b></p> <ul style="list-style-type: none"> <li>- algorithms for early and differential diagnosis of human zoonotic infections.</li> <li>- evaluation of the results of serological, molecular biological, bacteriological, immunological studies;</li> <li>- carrying out emergency medical care and treatment of human zoonotic infections.</li> <li>- Organization of sanitary and anti-epidemic, preventive measures against human zoonotic infections</li> </ul>	<p><b>General cultural (GC):</b></p> <ul style="list-style-type: none"> <li>- ability to abstract thinking, analysis, synthesis- (GC-1);</li> </ul> <p><b>General professional competence (GPC):</b></p> <ul style="list-style-type: none"> <li>- ability to assess morphological and functional, physiological States and pathological processes in the human body to solve professional problems (MIC-9);</li> </ul> <p><b>professional competence (PC):</b></p> <ul style="list-style-type: none"> <li>- readiness to collect and analyze the patient's complaints, his/ her medical history, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease;</li> <li>- ability to determine the tactics of management of patients with different nosological forms.</li> </ul>

#### 11. Literature:

38. Dr. M. Estee Torok, Dr. Ed Moran, Dr. Fiona J. Cooke. Oxford Handbook of Infectious Diseases and Microbiology. 2017
39. Harrison's Infectious Diseases / Kasper D. L., Fauci A. S.; McGraw-Hill
40. Essentials of Clinical Immunology / Chapel H. [et al.]; Wiley-Blackwell Immunology /Male D., Brostoff J., Roth D. B., Roitt I. M.; Saunders / Elsevire
41. Travel and Tropical Medicine Manual / Jong E. C. [ed. by], Sanford Ch.; Saunders / Elsevier.
42. Jong Elaine C. Netter's Infectious Disease. Elsevier Science. 2015
43. Bennett, Dolin & Blaser. Mandell, Douglas and Bennett's Infectious Disease Essentials Elsevier Science 2016
44. Zhu, Frank. Anti-Infection Handbook. Elsevier Science. 2018
45. Kloss, Brian. Graphic Guide to Infectious Disease . Elsevier Science. 2018.
46. Gill Denis. Paediatric Clinical Examination Made Easy 6. Elsevier Science. 2017

47. Lissauer, Tom Self-Assessment in Paediatrics. Elsevier Science. 2017
48. Nocton, James J. On Call Pediatrics. Elsevier Science. 2018
49. Harris, Wayne Examination Paediatrics.5. Elsevier Science. 2017 Kliegman, Robert M. Nelson Textbook of Pediatrics 21, i.e. Elsevier Science. 2019

**1. Department - Pediatrics 1**

**2. Level of training - Bachelor**

**3. Name of EP - 6B10101 «General medicine»**

**4. Course – 4, amount of of credits-10, amount of of hours-300.**

**5. Name of elective discipline - Basic of childhood diseases**

**Purpose of the discipline:** the formation of knowledge and skills in the diagnosis, treatment and prevention of childhood diseases.

**Content of the discipline:**

Pediatrics diseases — a group of diseases occurring primarily or exclusively in childhood and associated with the peculiarities of the child's body. Childhood diseases studying Pediatrics. Intensive growth and development of the child determine the anatomical and physiological characteristics of his body and the peculiarity of pathology. Even diseases that occur mainly in adults have a peculiar course in children, which also depends on the age of the child.

In the study of childhood diseases student understands the need and importance of basic disciplines in the formation of clinical competency Clinician doctor, as the examination of the patient and the diagnosis of internal diseases the Clinician must rely on knowledge of the underlying disciplines.

**3.Learning objective:**

- to form clinical thinking and ability to work independently with scientific literature on discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of disease occurrence;
- teach the student the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- improve the skills of manual examination of the patient, palpation, percussion and auscultation;
- develop the skill of interpreting the results of paraclinic examination of the patient;
- to teach the algorithm of differential diagnosis of diseases;
- to develop the skill to make sound choices etiopathogenetic treatment;
- teach basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatrician;
- improve interpersonal skills with colleagues, patients and their parents;
- stimulate the student's desire for self-development and self-improvement, the choice of professional trajectory;
- develop the skills of working with medical literature, the ability to analyze literary and Internet sources.

**Justification:**

Meaningfully, it lays the foundations of knowledge and practical skills in working with sick newborns, children under 18 years of age and adolescents. This discipline is a stage of studying the main diseases according to the principle of the distribution of pathology by the periods of childhood and organ pathology. During the training, students should improve their knowledge and acquired competencies in the studied sections of pediatrics, get acquainted with rare and complex diagnostic diseases and syndromes. The discipline is directly related to the disciplines that characterize the age-related anatomical and physiological characteristics of a child and a teenager, the peculiarities of the organization of nutrition of healthy and sick children, congenital malformations and the principles of medical examination and prevention of diseases. The teaching of the discipline is based on modern concepts of etiology, principles and methods of

diagnosis, modern classifications, as well as methods of prevention and treatment that correspond to the principles of evidence-based medicine.

**Learning outcomes (competencies)**

**1) Knowledge and understanding** (demonstrates knowledge and understanding of childhood diseases):

- etiology, pathogenesis, modern classification, prevention of the most common diseases in children;
- clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in children of different age groups;
- clinical picture, peculiarities of course and possible complications of congenital and hereditary diseases;
- modern methods of clinical, laboratory, instrumental examination of patients (including endoscopic, radiological methods, ultrasound diagnostics), as well as diagnostic capabilities of methods of direct examination of the patient's pediatric profile;
- methods of treatment and indications and contraindications to their appointment;
- clinical and pharmacological characteristics of the main groups of drugs and rational choice of specific drugs in the treatment of major pathological syndromes of diseases and emergency conditions in patients;

**2) Application of knowledge and understanding** (applies knowledge and understanding on a professional level):

- improve clinical thinking;
- when drawing up a plan for laboratory and instrumental examination of the patient in diseases of internal organs, as well as during the interpretation of widely used in practice paraclinical methods of examination (clinical studies of blood, urine, sputum; biochemical blood examination; radiography of the chest, ECG, Echocardiography, ultrasound of the abdominal cavity, endoscopic methods of examination of the esophagus, stomach, intestines);
- when developing a treatment plan for diseases of internal organs based on the principles of evidence-based medicine, taking into account the clinical protocols of diagnosis and treatment of MOH RK;
- when working with normative documents regulating the activities of medical workers.

**3) Formation judgements** (formulates arguments and solve problems in the field of childhood diseases):

- formulates arguments on the collected material on the use of basic methods of clinical examination in diseases of internal organs and systems;
- formulates arguments in identifying the main symptoms and syndromes of diseases of the internal organs;
- formulates its own conclusions about the principles of medical care in emergency conditions of internal organs.

**4) Communication skills** (provides information, ideas, and problems and solutions to both professionals and non-professionals):

- according to their own knowledge, judgment and skills about the principles of communication with patients in clinical practice.

**5) Learning skills or learning abilities** (collects and interprets information to form judgments based on social, ethical, and scientific considerations):

- have a high concentration and attention to the studied materials and skills;
- responsible attitude to study and practice, correctly use the knowledge in the work;
- well and clearly to reason, not to be confused in thoughts;
- in addition, independently replenish their knowledge through the use of printed and electronic sources of information;
- to work on mistakes, continuously improve their professional skills.

**Prerequisites:** propedeutics of childhood diseases

**Postrequisites:** basics of pediatric surgery

**Literature:**

1. Issayeva, L. A. Childhood diseases. I part [: textbook / - Almaty : "Evero" , 2017. - 144 p
2. Issayeva, L. A. Childhood diseases. II part] : textbook / - Almaty : "Evero" , 2017. - 170 p.
3. Issayeva, L. A. Childhood diseases. III part [: textbook / - Almaty : "Evero" , 2017. - 140 p.
4. Issayeva, L. A. Childhood diseases. IV part [: textbook / - Almaty : "Evero" , 2017. - 185 p.

**Additional:**

1. Karen J. marcdante. Robert M. Kligeman. Nelson “Essential of Pediatrics” 7th edition 2015.
2. Joseph J.Zorc Schwartz`s “ Clinical Handbook of Pediatrics” fifth edition 2013.

1. **The Department:** Biology and Biochemistry
2. **Program:** Undergraduate
3. **Specialty:** General Medicine
4. **Year:** 5 (9 semester)
5. **Name of the elective disciplines:** Medical Biochemistry
6. **Number of academic credits:** 5
7. **Goal:** to form students a holistic understanding of the molecular mechanisms and regulation of the main metabolic processes, the characteristics of their flow in human organs and tissues, the use of biochemical indicators, their competent interpretation for diagnosing and monitoring the effectiveness of treatment.
8. **Objectives:**
  - to form students' understanding of the role of biological chemistry in the professional activities of future doctors;
  - to give of the chemical structure, properties and biological functions of proteins, carbohydrates, lipids and other biologically active compounds in living organisms;
  - to form of the biochemical patterns of energy transformation, metabolism and regulation of metabolic processes;
  - to give of the peculiarities of the molecular organization and metabolism of the most important organs and tissues of the body;
  - to form of modern biochemical approaches for diagnosing diseases and correcting metabolic disorders.
9. **Justification of the choice of discipline:** Practical medicine requires the training of highly qualified medical and pharmaceutical personnel, whose activities are aimed at improving the health of the population.

In this regard, it is advisable for future doctors to study the discipline "medical biochemistry", which allows you to get a holistic view of the metabolic processes of the body, the mechanisms of disease.

Medical biochemistry is one of the basic basic medical disciplines that studies the chemical processes underlying the vital activity of cells, tissues and the organism as a whole. The main focus of teaching biochemistry is the study of metabolic processes and features of metabolism and its regulation in the human body to understand the causes and consequences of their disorders in pathology.

**10. Learning outcomes (competencies)**

	<b>Knowledge (cognitive sphere)</b>	<b>Skills and skills (psychomotor sphere)</b>	<b>Personal and professional competencies (relationships)</b>

<p>Demonstrates knowledge of the subject and tasks of medical biochemistry for professional activity.</p> <p>Knows the methods of biochemical analyzes.</p> <p>Describes the molecular mechanisms of flow and regulation of metabolic processes.</p> <p>Outlines the basic principles of bioenergy and nutrition biochemistry.</p> <p>Calls the mechanisms of molecular disease, the principles of their diagnosis.</p> <p>He knows the basic principles of the use of biochemical research methods in practice, the reference values of the main biochemical parameters.</p>	<p>Able to work on modern equipment: biochemical analyzer, spectrophotometer, photoelectric colorimeter, electrophoretic installation, centrifuge, thermostat, urine analyzer when conducting biochemical analyzes. Able to work and search for the necessary data from a special reference material.</p> <p>Interprets the results of laboratory and instrumental studies of biological body fluids. Able to determine the reference values of the main biochemical parameters of biofluids.</p>	<p>Able to present their own judgments and critically analyze the results of educational experiments.</p> <p>Able to defend their own judgments in practical exercises, at meetings of the student circle, student scientific conferences, etc.</p> <p>When planning and conducting training experiments, he is able to explain the observed facts and phenomena, their causal relationships.</p> <p>Able to work in a team, to make a collective decision.</p> <p>Able to transfer to students, teachers, examiners the knowledge gained in the process of studying the discipline.</p>
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**11. Prerequisites:** morphology and physiology, microbiology and immunology, medical biochemistry, fundamentals of morphology and physiology<sup>2</sup>

**12. Post requisites:** pharmacology, propedeutics of internal diseases

**13. Literature:**

**Medical biochemistry:**

**In English**

1. Baynes J.W., Dominiczak M.H. Medical Biochemistry, Mosby Elsevier, 2014
2. Ferrier, Denise R. Biochemistry: Lippincott's Illustrated Reviews: textbook/Denise R. Ferrier. -7<sup>th</sup> ed.- Philadelphia: Wolters Kluwer, 2017.

Electronic resources: Medical biochemistry

1. Biochemistry [Electronic resource]: a textbook for universities / ed. E.S. Severin. - 5th ed. isp. and add. - Electron. text given. (66.3 MB) - M.: GEOTAR - Media, 2013. - 768 p. email wholesale disk (CD-ROM).
2. Biochemistry [Electronic resource]: textbook / edited by E.S. Severin. - 5th ed. - Electron. text given. (66.4 MB) - M.: Publishing group "GEOTAR-Media", 2011. - 768 p. email wholesale disk (CD-ROM)
3. Biochemistry with exercises and tasks [Electronic resource]: studies. for universities / E.S. Severin [et al]; by ed. E.S. Severin. - Electron. text given. (58.2 MB) - M.: GEOTAR - Media, 2010. - 384 p. email wholesale Disk (CD-ROM): II. - (Electronic textbook).

1. **Department:** "Social health insurance and public health»
2. **Level of training:** Bachelor
3. **Specialty:** "General medicine»
4. **Course:** 5, Term-9
5. **Name of elective discipline:** "CSHI and medical law»
6. **Number of credits –** 5/150

**7. Goal:** To form a set of students' knowledge, skills and abilities necessary for effective work in the health care system, transformed with the introduction of mandatory social health insurance. To teach future health professionals to correctly cover changes in the work of medical institutions in accordance with the requirements of the mandatory social health insurance program.

**8. Tasks:**

- Study the social factors that affect human health.
- To study the forms and methods of social medicine aimed at preserving, restoring health and preventing diseases.
- Develop skills to develop effective methods of social protection of public health from sociogenic factors.

To teach a systematic approach to the analysis of public health and health care.

- Acquire knowledge and skills to solve problems in three main aspects of public health: demography, morbidity, and physical development.
- To study ways of implementing the OSMS system in the healthcare system of the Republic of Kazakhstan.
- Analyze the advantages and disadvantages of the interaction between OSMS and gobmp.
- To develop knowledge of the principles and methods of successful management of the health system in the framework of OSMS among health managers.

**9. Rationale for the choice of discipline:** Compulsory medical insurance (MHI) is a type of compulsory social insurance that is a system of legal, economic and organizational measures created by the state aimed at ensuring, in the event of an insured event, guarantees of free provision of medical assistance to the insured person at the expense of mandatory medical insurance within the territorial program of mandatory medical insurance and in cases established by Federal law, within the basic program of mandatory medical insurance. Within the framework of the basic program of compulsory medical insurance, primary health care, including preventive care, and emergency medical care (with the exception of specialized (sanitary-aviation) emergency medical care) are provided.

**10. Learning outcomes (competencies):** Knowledge and understanding (Demonstrate knowledge and understanding in the field of study, including elements of the most advanced knowledge in the field):

- \* Knows the directions for introducing mandatory social insurance;
- \* Monitoring the activities of medical and sanitary institutions in the context of interaction with the system of mandatory medical insurance;
- \* Knows the rights and obligations of both the insurer and the policyholder;
- \* Knows how to use the compulsory health insurance system in practice;

**Application of knowledge and understanding** (apply this knowledge and understanding at a professional level):

- \* Is able to keep records in the clinic and hospital, taking into account the changes required by the introduction of mandatory social health insurance;
- \* Is able to provide a set of legal, economic and organizational measures to provide medical care to consumers of compulsory social insurance services;



- \* Able to provide information systems and electronic information about mandatory social insurance programs;
- \* The company draws up an innovative program and develops an action plan for their implementation.

**Formation of judgments** (to formulate arguments and solve problems in the study area):

- \* Able to answer questions about the organization of medical care in the interaction of the mandatory medical insurance Fund and the guaranteed amount of free medical care;
- \* Is fluent in the rules of registration of insurance policy in the mandatory social health insurance Fund;
- \* Able to take into account consumers of medical services in the framework of mandatory social insurance;
- \* Shows your ability to work as a team.

**Learning skills or learning abilities** (to collect and interpret information to form judgments based on social, ethical and scientific considerations):

- \* Applies the acquired knowledge to distribute information among students explaining current issues on the rules for obtaining an insurance policy and receiving medical care in accordance with the introduction of the mandatory medical insurance system;
- \* Able to distinguish between types of medical and social protection used in medical practice;
- \* Able to pass on their own knowledge and skills to students, teachers, and examiners when planning and conducting training events;
- \* Builds your skills in social insurance.

**Communication skills** (to communicate information, ideas, problems and solutions to both professionals and non-professionals):

- \* Analyzes the collection of information on the state of public health, socially vulnerable groups of the population;
- \* Increases public awareness of the mandatory social health insurance system;
- \* Conducts an audit that allows you to conclude and make recommendations in accordance with the rules of mandatory social insurance;
- \* Conducts public lectures on public health issues.

**11. Prerequisites:** Social medicine.

**12. Post-requirements:** master's degree Courses.

**13. Literature:**

**Basic:**

1. Improving the quality of medical care and patient safety in medical organizations: a visual guide. G. E. Ulumbekova ; under the editorship of S. S. Panesar. Moscow: GEOTAR-Media, 2016. - 160 p.
2. Lecture complex on the discipline: "Global health": lectures / KAF. public health-1. - Shymkent : SKSPHA, 2016. - 17 s
3. Lisitsyn, Yu. P. Public health and healthcare: textbook / Yu. P. Lisitsyn, G. E. Ulumbekova. - 3rd ed., Rev. ; Ministry of education and science of the Russian

Federation. Rivers'. GOU VPO "the First state med. UN-t im. I. M. Sechenov". Moscow: GEOTAR-Media, 2015. - 544 p.

4. Mamyrbayev, A. A. Fundamentals of occupational medicine: textbook. manual / A. A. Mamyrbayev. - Aktobe: Samrad, 2015. - 388 p.

5. Levchuk, I. p. Safety of life: studies. manual for med. schools and colleges / I. P. Levchuk, and E. K. Khandogin, M education and science of the Russian Federation. - ; Rivers'. The SEI HPE "First Moscow med. UN-t im. I. M. Sechenov". Moscow: GEOTAR-Media, 2014. - 144 p.

6. Medik, V. A. Public health and healthcare: textbook / V. A. Medik, V. K. Yuriev. - 2nd ed., ISPR. and EXT.; of the Rivers. GOU VPO " Mosk. honey. Acad. them. I. M. Sechenov". Moscow: GEOTAR-Media, 2014. - 608 p.

7. Public health and healthcare, health Economics. In 2 vol. T. 1: textbook / M-vo of education and science of the Russian Federation; edited By V. Z. Kucherenko. - ; Rivers'. Sbei HPE "First Moscow. state med. UN-t im. I. M. Sechenov". Moscow: GEOTAR-Media, 2013. - 688 Il.

8. Public health and healthcare, health Economics. In 2 vol. T. 2: textbook / M-vo education and science; edited by V. Z. Kucherenko. - ; Rivers'. Sbei HPE "First Moscow. state med. UN-t im. I. M. Sechenov". Moscow: GEOTAR-Media, 2013. - 160 p.: ill. -

9. Bledow, M. Schwa. Kogamdyk Densauylyk and desaulty satou : owly / M. Schwa. Blelow. - Almaty: Evero, 2015. - 244 bet s.

10. Sarsenbaeva, G. J. Kogamdyk Densauylyk satou : excellent Ali / G. J. Sarsenbaeva ; R Densauylyk satou ministrels; OMPA. - Karagandy: aknur residential complex, 2013. - 184 bet. with.

Additional:

1. Saparbekov, M. K. Lectures on General epidemiology: selected lectures: textbook.- metotic manual / M. K. Saparbekov. - ; Rivers'. by the decision of the Uchen press. Agiuv Council. - Almaty: Evero, 2013. - 78 p.

2. Medik, V. A. Public health and healthcare: ruk. to practical classes: studies. manual / V. A. Medik, V. I. Lisitsyn, M. S. Tokmachev; M-vo of education and science of the Russian Federation; Federal state University "Federal Institute of education development". - ; Rivers'. GOU VPO " Mosk. honey. Acad. them. I. M. Sechenov". Moscow: GEOTAR-Media, 2012. - 400 p.: ill.

3. Polunina, N. V. Public health and healthcare: textbook / N. V. Polunina; REC. Educational method. 'ed. by med. and pharmaceutical. image. University of Russia. - Moscow: MIA, 2010. - 544 p.: ill.

4. Bledow, M. Schwa. Kogamdyk Densauylyk and desaulty satou : owly / M. Schwa. Blelow ; R BM. - Almaty : R Geary excellent orindary audactiy, 2012. - 256 bet. with.

Electronic resources:

1. Lisitsyn, Yu. P. Public health and healthcare [Electronic resource]: textbook / Yu.P. Lisitsyn, G. E. Ulumbekova. - 3rd ed., Rev. and DOP. - Electron. text messages. ( 43.1 MB). Moscow: GEOTAR-Media, 2017. - el. wholesale. disk (CD-ROM).

2. DRS Kesan. Alandi Densaulyk satou PN boiynsha [Electronic resource] : DRS Kesan / No. 1 kogamdyk Densaulyk satou kafedrasi. - Electron. text messages. (208 KB). - Shymkent : OMPA, 2016. - 16 bet. with.
3. Primary health care as a priority in the health care system [Electronic resource] : lecture complex / SKSPHA. Department: "Public health-1". - Electron. text messages. - Shymkent : [b. I.], 2015. - el. wholesale. disk
4. Medik, V. A. Public health and healthcare [Electronic resource]: textbook / V. A. Medik, V. K. Yuriev. - Electron. text messages. ( 47.6 MB). Moscow: GEOTAR-Media, 2013. - 608 p. El. wholesale. disk (CD-ROM)
5. Lisitsyn, Yu. P. Public health and healthcare [Electronic resource]: textbook / Yu .P. Lisitsyn, G. E. Ulumbekova. - 3rd ed., Rev. and DOP. - Electron. text messages. ( 40.9 MB). - M. : Publishing House. GEOTAR-Media group, 2011. - 544 El. wholesale. disk
6. Shchepin, O. p. Public health and healthcare [Electronic resource]: textbook / O. P. Shchepin, V. A. Medik. - Electron. text messages. ( 43.6 MB). - M. : Publishing House. GEOTAR-Media group, 2011. - 592 p. El. wholesale. disk (CD-ROM).

1. **Department:** "Hygiene and epidemiology"
2. **Level of preparation** (bachelor / internship / magistracy / residency)
3. **Specialty:** "" General Medicine "
4. **Course:** 5
5. **Name of elective discipline:** " Epidemiology with the basics of disinfection "
6. **The number of credits - 5**
7. **Purpose:** the development and application of such methods of clinical observation, which enable students to draw fair conclusions, conduct retrospective and prospective studies.
8. **Tasks:**
  - to teach students to distinguish between the main types of clinical research;
  - to teach the basic skills of using the database of clinical epidemiology;
  - teach to critically evaluate medical information regarding clinical epidemiology;
  - to give knowledge of the theoretical, methodological and organizational bases of clinical diagnosis for infectious and parasitic diseases;
9. **The rationale for the choice of discipline:** Clinical epidemiology is the selection and systematization of reliable results of various methods of diagnosis and treatment, the development and application of methods of clinical observation, which make it possible to draw fair conclusions, avoiding the influence of systematic and random errors. To exclude systematic errors take into account the features of patient selection.
10. **Learning outcomes (competencies):**

<b>Knowledge (cognitive sphere)</b>	<b>Skills and abilities (psychomotor sphere)</b>	<b>Personal and professional competencies (relationships)</b>
<ul style="list-style-type: none"> <li>- Demonstrates knowledge of the subject;</li> <li>- knows the methods of clinical research, the system of epidemiological diagnosis;</li> <li>- owns the principles of organizing and conducting research in the field of clinical epidemiology;</li> <li>- knows the method of calculating the intensive and extensive indicators, assessing the clinical research indicators, predicting the manifestations of the epidemic process of infectious and non-communicable diseases;</li> <li>- knows the Code of the Republic of Kazakhstan "On the health of the people and the health care system";</li> <li>- Knows the methodology for calculating and assessing population health indicators.</li> </ul>	<ul style="list-style-type: none"> <li>- able to conduct clinical research facilities;</li> <li>- able to conduct research in the field of this discipline;</li> <li>- able to develop a set of measures for the prevention and reduction of infectious diseases, the prevention of importation and the spread of especially dangerous infections;</li> <li>- able to maintain accounting records using computer technology;</li> <li>- able to present and interpret legislation on the protection of public health, sanitary, environmental legislation of the Republic of Kazakhstan, the legal framework for the activities of specialists of the state sanitary and epidemiological service;</li> </ul>	<ul style="list-style-type: none"> <li>- able to promote healthy lifestyle among the population;</li> <li>- able to implement methods of collecting, storing and processing information used in clinical epidemiology;</li> <li>- able to transfer to students their own knowledge and skills in working with information (educational, reference, scientific);</li> <li>- Own the skills of public speaking with the presentation of their own judgments, analysis and synthesis of information in the studied area.</li> </ul>

	<ul style="list-style-type: none"> <li>- able to present personal judgments, arrange in the form of an abstract, presentation, project and present at practical classes, student meetings, student scientific conferences, etc.</li> </ul>	
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**11. Prerequisites:** Hygiene and epidemiology

**12. Post requisites:** -

**13. Literature:**

1. Amireev S.A. Standards and algorithms for activities with infectious diseases. Volume 1: A Practical Guide. –Evero, 2014.

2. Amireev S.A. Standards and algorithms for activities with infectious diseases. Volume 2: a practical guide. –Evero, 2014.

3. Infectious diseases and epidemiology: a textbook. - M.: GEOTAR - Media, 2013.-

additional:

1. S. A. Amireev Immunization in practice [Text]: a practical guide / [and others]. - Almaty: [b. and.], 2013. - 448 p.

2. Alshinbaeva, G. U. Infectious diseases with the basics of epidemiology: a textbook. - Astana: ANKr, 2014. - 364 p.

3. Duysenbaeva, P. R. Current approaches to the study of epidemiology, clinic, diagnosis, treatment, prevention of measles, rubella, chicken pox and scarlet fever in children: a textbook. - Almaty: Evero, 2014. - 140 p.

4. Epidemiology. In 2 t. T. 1: textbook / N. I. Briko [et al.]. -; Rec. GBOU VPO "First MGMU them. IM Sechenov". - M.: Medical Information Agency LLC, 2013. - 832 p. : il.

5. Epidemiology. In 2 t. T. 2: textbook / N. I. Briko. -; Rec. GBOU VPO "First MGMU them. IM Sechenov". - M.: Medical Information Agency LLC, 2013. - 656 pp., Ill.

**Electronic resources.**

1. Infectious diseases and epidemiology [Electronic resource]: studies. for honey Universities / V.I.Pokrovsky [et al.]. - Electronic text data. (39.6 MB) - M., 2009. - 816 hrs. El. opt.disk (CD-ROM). - 1 copy

2. Schloss Leopoldskron Infectious Diseases and Epidemiology '98 [Electronic resource]: cornell Seminar in Saizburg / Leopoldskron Schloss. - Electron. text

data. (623 MB). [S. l. : s.n.], 1998. - email. opt.disk (CD-ROM). - 1 copy  
Translation of the title: Infectious diseases and epidemiology.