

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION

PENZA STATE UNIVERSITY

MEDICAL INSTITUTE



APPROVED

by director of the institute

Mitroshin A.N.

2016

SUBJECT'S SYLLABUS

C 1.1.6 HISTORY OF MEDICINE

Program (specialty) – *31.05.03 – Dentistry*

Graduate's qualification (degree) – *Dentist*

Study format – *full-time*

Penza, 2016

1. Subject mastering goals

Main goals of mastering the discipline “History of Medicine” is to study the history, objective laws and logics of healing and medicine of the peoples of the world throughout the humanity history. The main goals are:

- to teach students to analyze historical events, achievements and perspectives in medicine and healthcare system;
- to show general laws of the world historical process of the healing and medicine evolution in different countries from the ancient times up to nowadays;
- to show medical achievements of greatest civilizations of each epoch in the context of progressive human development;
- to show the correspondence of national and international factors in the genesis of medicine as a science and its practice in different world regions;
- to acquaint students with the life of outstanding world scientists and doctors who determined the development of medicine as a science and practice medicine;
- to implant the ethical principles of medical practice;
- to show the peculiarities of medical ethics development in different civilizations and countries of the world, and the philosophical and historical background for their formation;
- to instill in students [high standards of integrity](#): devotion to the profession, devotion to duty, humanism and patriotism;
- to enlarge general scientific and cultural outlook.

2. Subject’s place in bachelor MPEP’s structure

The Discipline “History of Medicine” in the curriculum is a basic part (C1), and is one of the disciplines that forms the general cultural and general professional competence that are specific to a specialist in the direction of training 31.05.05 – Dentistry.

The main provisions of the discipline can be used in future to study the following disciplines:

- Philosophy (C1.1.1);
- Jurisprudence (C1.1.4);
- National History (C1.1.5).

On the base of general humanitarian knowledge the study of the subject helps to evaluate the medical achievements of different epochs by students themselves. It also helps to analyze biomedical and medical problems of the past and present.

The History of Medicine is the base for further study of theoretical and practical disciplines. For its study it’s necessary to have the following knowledge, skills, and abilities: the knowledge of basic philosophical definitions and terms, main concepts of human and society development, the foundations of gnoseology, the main stages of philosophy development; the skills to work with scientific texts, to analyze scientific information; the abilities to analyze philosophy and medical problems, to discuss problems.

3. Student competences developed as a result of subject mastering History of Medicine

Studying of the subject is intended to develop elements of the following competences according to FSESHE in the given field:

Compe tence code	Name of the competence	Structural elements of the competence (knowledge, skill, application as a final learner outcome)
GEC-2	The ability and willingness to analyze philosophical, socially and personally significant philosophical problems, the basic philosophical categories to self-perfection;	knowledge: the main philosophical, socially and personally important philosophical problems, by relying on the historical experience of humanity
		skill: to use historical facts for analysis
		abilities: extrapolation of historical representations

GEC-3	The ability and willingness to analyze significant political events and trends, to participate in political life with responsibility, to master the basic concepts and laws of the world historical process, to relate to the historical heritage and traditions respectfully and carefully, to assess the policy of the state; to know the historical and medical terminology;	knowledge: significant political events and trends
		skill: to master the basic concepts and laws of the world historical process, to relate to the historical heritage and traditions respectfully and carefully, to assess the policy of the state
		abilities: the terms of political and socio-cultural spheres
GEC-8	The ability and willingness to carry out their activities according to socially accepted moral and legal norms, to observe the rules of medical ethics, laws and statutory act for handling confidential information; to maintain patient confidentiality.	knowledge: history of socially accepted moral and legal norms, traditions and values, ethnic stereotypes of behavior.
		skill: to use morality in practice
		abilities: information on the rules of ethical conduct

4. Structure and contents of subject History of Medicine

4.1. Subject's structure

General work load of the subject totals 2 credit units, 72 hours.

№	Names of parts and topics of the discipline	Semester	Week of the semester	Types of learner activities, including students' individual work and workload (in hours)								Forms of current assessment (divided in weeks)								
				Class study				Individual work				Discussion	Tutorial	Test assessment	Test paper grading	Research paper	Other	Term paper	Practical Skills	
				Total	Lectures	Practical classes	Laboratory classes	Total	Preparation for	Abstract	Term paper									Exam preparation
1	Introduction to History of Medicine. Primitive Society Medicine.	2	1-2	4	2	2		2	2				2							
2	The art of healing in the countries of the Ancient East.	2	3-4	4	2	2		2	2						4					
3	The art of healing and medical science of the Mediterranean region in the period of Antiquity	2	5-6	4	2	2		2	2						6					
4	Medicine of the Middle Ages and Renaissance	2	7-8	4	2	2		2	2						8					
5	Biomedical line of Medicine Development during the Modern Age (the development of General Biology and Genetics, Anatomy, Microbiology)	2	9-10	4	2	2		2	2						10					
6	Biomedical line of Medicine Development during the Modern Age (the development of Histology, Embryology, Pathology, Microbiology)	2	11-12	4	2	2		4	4						12					
7	Clinical Medicine of the Modern Age.	2	13-14	4	2	2		4	4						14					
8	Dentistry and odontology of the Modern Era.		15-16	4	2	2		4	4						16					

№	Names of parts and topics of the discipline	Semester	Week of the semester	Types of learner activities, including students' individual work and workload (in hours)								Forms of current assessment (divided in weeks)							
				Class study				Individual work				Discussion	Tutorial	Test assessment	Test paper grading	Research paper	Seminar	Term paper	Practical Skills
				Total	Lectures	Practical classes	Laboratory classes	Total	Preparation for	Abstract	Term paper								
9	The Medicine of the 20 th – 21 st cc.		17-18	4	2	2		4	4					18					
10	Perspectives for the development of Medicine in the 21 st c.		19-20	4	2	2		4	4					20					
	Overall workload, in hours			40				32						Interim assessment					
														Type	Semester				
														pass-fail exam	2				

4.2. Subject's contents

1). Introduction to History of Medicine. Primitive Society Medicine.

History of Medicine as a science. Basic meanings of the term "medicine". Branches of medicine. Fields of medicine. History of Medicine as a subject.

The epochs of the primitive society (stone age, bronze age, iron age). The beginning of the primitive society and primitive art of healing. The art of healing during the period of the primitive society bloom. Totemism. Fetishism. Animism. Magic. The art of healing during the period of the primitive society decay. Folk, traditional, scientific medicine.

2). The art of healing in the countries of the Ancient East.

The art of healing in Ancient Mesopotamia. Hammurabi's Code of Laws. The art of healing in Ancient Egypt. The Edwin Smith and the Georg Ebers papyri. Mummification. The art of healing in Ancient India. Ayurveda . The earliest surviving Ayurveda texts. The art of healing in Ancient China. The Yellow Emperor's Inner Canon of Medicine, the Divine Husbandman's Materia Medica; the Canon of Problems-, the Treatise on Cold-Damage Disorders. The idea of the *yin-yang* pairing and *wu xing*.

3). The art of healing and medical science of the Mediterranean region in the period of Antiquity

The art of healing and medical science of Ancient Greece. Greek mythology. Hippocrates, his ideas, achievements and works. The Corpus. The idea of four humours (blood, yellow bile, black bile and phlegm). Alexandrian Medicine.

The art of healing and medical science of Ancient Rome. Scribonius Largus. Celsus' *Artes* [The Sciences]. Galen.

4). Medicine of the Middle Ages and Renaissance

Medicine in Western Europe (the Middle Ages).The characterization of the Middle Ages and Renaissance. The role of the Catholic Church and the Crusades. European Medieval hospitals. Girolamo Fracastoro. Andreas Vesalius. William Harvey. Paracelsus. Leonardo Da Vinci. Ambroise Paré. Edward Anthony Jenner. The Black Death.

Medicine in the Byzantine Empire (395-1453) . First Byzantine Physicians. Paul of Aegina. Vienna Dioscurides. Oribasius. Actuarius

Medicine in Kievan Russ (IX-XV cc.) and in Muscovite Russ (XV-XVII cc.). The Primary Chronicle. Monastic Medicine. The Mongol period and the development of medicine

Medicine in the medieval Islamic world (VII-XVII cc.). Muhammad ibn Zakariyā Rāzī (Al-Razi). Ibn Sina (Avicenna). The Canon of Medicine and its world influence.

Medicine of the peoples of America before and after the Conquista. Aztec Medicine. Mayan Medicine. Inca Medicine.

5). Biomedical line of Medicine Development during the Modern Age (the development of General Biology and Genetics, Anatomy, Microbiology)

Xavier Bichat . François Magendie. Gregor Mendel. Mendelian genetics. Charles Darwin. On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life. Matthias Schleiden and Theodor Swann. Marcello Malpighi. I. Pavlov. I. Sechenov.

6). Biomedical line of Medicine Development during the Modern Age (the development of Histology, Embryology, Pathology, Microbiology)

The establishment of the cell theory. Giovanni Batista Morgagni . Carl von Rokitansky. Rudolf Virchow. Robert Koch. Joseph Lister.

7). Clinical Medicine of the Modern Age.

Internal Medicine. Infectious diseases and epidemiology. Pediatrics. Psychiatry. Surgery. Obstetrics and Gynecology. Public Health during the Modern Age.

8). Dentistry and odontology of the Modern Era.

Ancient history of dentistry: a base for modern dentistry. Pierre Fauchard, the "father of modern dentistry". John Hunter. World dental organizations.

9). The Medicine of the 20th – 21st cc.

The main achievements of Medicine in the 20th c. The formation of the Soviet Medicine. International Cooperation in the sphere of Medicine. WHO. International Committee of the Red Cross. The League of Red Cross Societies. International Physicians for the Prevention of Nuclear War.

10). Perspectives for the development of Medicine in the 21st c.

Main diseases of the XXI century. Modern technologies. The questions of ethics.

5. Educational technologies

In order to implement an individual approach to the teaching of students who carry out the learning process according to their individual educational plan, the study of the discipline is based on the following capabilities: the provision of work out of the classroom for the students, including the work in the electronic learning environment using relevant software, distance learning forms, the Internet resources, individual tutorials.

Educational technologies that are used in classroom activities are:

1. Technologies of working with information (technology of search and selection of information, technology of the development of critical thinking, technology of working with text, spreadsheet, questions, technology of solving of heuristic and problem tasks).

2. Information and communication technologies. Electronic manuals and resources. Networking educational technologies.

3. The technology of effective pedagogical communication. The technology of conducting classes in the form of a dialogue.

4. The technology of the assessment of the quality of the results of educational activities of students. Testing.

5. Case technologies.

Interactive educational technologies that are used in classroom activities (at least 30% of the total number of hours).

6. Educational and methodological support of students' out-of-class work.

Assessment means for current progress monitoring, interim attestation of subject mastering results.

6.1. Outline of students' individual work

№	Topic	Type of individual work	Task	Suggested reading material	Hours
Semester II					
1	Introduction to History of Medicine. Primitive Society Medicine.	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	2
2	The art of healing in the countries of the Ancient East.	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	2
3	The art of healing and medical science of the Mediterranean region in the period of Antiquity	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	2
4	Medicine of the Middle Ages and Renaissance	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	2
5	Biomedical line of Medicine Development during the Modern Age (the development of General Biology and Genetics, Anatomy, Microbiology)	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	2
6	Biomedical line of Medicine Development during the Modern Age (the development of Histology, Embryology, Pathology, Microbiology)	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	4
7	Clinical Medicine of the Modern Age.	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	4
8	Dentistry and odontology of the Modern Era.	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	4

No	Topic	Type of individual work	Task	Suggested reading material	Hours
9	The Medicine of the 20 th – 21 st cc.	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	4
10	Perspectives for the development of Medicine in the 21 st c.	Preparation for class study	Preparing for a job interview and testing of practical skills relating to classes	c1-c7	4

6.2. Instructional guidelines on students' out-of-class work organization

Execution of tests. Before performing the tests should carefully review the theoretical material. The tests include the following types:

1. Selection of the correct answer from among the proposals. In these tests, you must choose the correct answer from among the proposals.
2. Multiple Choice (without a label). You must select all the correct answers from the number proposed.
3. Questions rankings. In this case it is necessary to arrange the answers in the correct order.
4. Issues closed. Here, the response options are not available, you must write your answer in the answer.

6.3. Materials to carry out current monitoring and interim attestation of students' knowledge

Competence mastering assessment

No	Assessment type	Monitored topics (sections)	Competences that include components under assessment
1	Discussion	Part 1	GEC 2, GEC 3, GEC 8
2	Test assessment	Part 2-7	GEC 2, GEC 3, GEC 8

Demonstrative test variant No1 (part 4)

	Choose the right variant(s) for each question. Remember that sometimes more than 1 option is possible. To answer question 11 you have to give a full answer.
1.	The Medieval Period lasted from
a.	the 5 th century
b.	the 6 th century
c.	the 7 th century
d.	the 8 th century
2.	The important role for the development of medicine in the Middle ages was played by
a.	the Crusades
b.	humorism
c.	the Catholic Church
d.	ancient Indian medicine
3.	Girolamo Fracastoro is a scholar who
a.	pioneered the use of minerals and chemicals in the body. He proposed that certain chemical and mineral balances in the body were required for health; he added that some illnesses

	could be treated and cured with chemical remedies.		
b.	wrote one of the most influential books on human anatomy "De Humani Corporis Fabrica (On the Structure of the Human Body)"		
c.	put forward the idea that epidemics may be caused by pathogens from outside the body that may be passed on from human-to-human by direct or indirect contact		
d.	known as the pioneer of vaccinations, having created the smallpox vaccine.		
4.	Andreas Vesalius is a scholar who		
a.	pioneered the use of minerals and chemicals in the body. He proposed that certain chemical and mineral balances in the body were required for health; he added that some illnesses could be treated and cured with chemical remedies.		
b.	wrote one of the most influential books on human anatomy "De Humani Corporis Fabrica (On the Structure of the Human Body)"		
c.	put forward the idea that epidemics may be caused by pathogens from outside the body that may be passed on from human-to-human by direct or indirect contact		
d.	known as the pioneer of vaccinations, having created the smallpox vaccine.		
5.	Paracelsus is a scholar who		
a.	pioneered the use of minerals and chemicals in the body. He proposed that certain chemical and mineral balances in the body were required for health; he added that some illnesses could be treated and cured with chemical remedies.		
b.	wrote one of the most influential books on human anatomy "De Humani Corporis Fabrica (On the Structure of the Human Body)"		
c.	put forward the idea that epidemics may be caused by pathogens from outside the body that may be passed on from human-to-human by direct or indirect contact		
d.	known as the pioneer of vaccinations, having created the smallpox vaccine.		
6.	Edward Anthony Jenner is a scholar who		
a.	pioneered the use of minerals and chemicals in the body. He proposed that certain chemical and mineral balances in the body were required for health; he added that some illnesses could be treated and cured with chemical remedies.		
b.	wrote one of the most influential books on human anatomy "De Humani Corporis Fabrica (On the Structure of the Human Body)"		
c.	put forward the idea that epidemics may be caused by pathogens from outside the body that may be passed on from human-to-human by direct or indirect contact		
d.	known as the pioneer of vaccinations, having created the smallpox vaccine.		
7.	Match the Byzantine doctor with his achievements:		
a.	Paul of Aegina	1)	composed a Compendium of all the Materia medica which describes nearly 600 plants and their possible medical use.
b.	Vienna Dioscurides	2)	wrote a prominent work on Urine which made the foundation of further studies in the field
c.	Actuarius	3)	wrote Epitome of Medicine, comprised of 7 books. It was a comprehensive compendium of the medical and surgical knowledge of his time and was subsequently translated into multiple languages.
8.	The ancient Russian medicine was primarily		
a.	state		
b.	folk and monastic		
c.	mongol		
d.	foreign		

9.	Al-Razi was a Persian physician who
a.	was the first to distinguish measles from smallpox.
b.	known as the "father of pediatrics"
c.	wrote <i>The Book of Healing</i> , an enormous scientific encyclopedia, as well as <i>The Canon of Medicine</i> , which became essential reading at several medical schools around the world
10	The idea of the life force was created by
.	
a.	Maya
b.	Inca
c.	Aztec
11.	What are the main achievements made during the Middle Ages and Renaissance?

Exemplary list of pass-fail examination questions:

1. History of Medicine as a science.
2. The beginning of the primitive society.
3. Folk, traditional, scientific medicine.
4. The art of healing in Ancient Mesopotamia.
5. The art of healing in Ancient Egypt.
6. The art of healing in Ancient India.
7. The art of healing in Ancient China
8. The art of healing and medical science of Ancient Greece
9. The art of healing and medical science of Ancient Rome
10. Medicine in Western Europe (the Middle Ages)
11. Medicine in the Byzantine Empire (395-1453)
12. Medicine in Kievan Russ (IX-XV cc.) and in Muscovite Russ (XV-XVII cc.).
13. Medicine in the medieval Islamic world (VII-XVII cc.).
14. Medicine of the peoples of America before and after the Conquista
15. The development of General Biology and Genetics.
16. The development of Anatomy
17. The development of Histology
18. The development of Embryology
19. The development of Pathology
20. The development of Microbiology
21. The development of Physiology
22. Internal Medicine
23. Infectious diseases and epidemiology
24. Pediatrics
25. Psychiatry
26. Surgery
27. Obstetrics and Gynecology
28. Dentistry and odontology of the Modern Era
29. Public Health during the Modern Age
30. The main achievements of Medicine in the 20th c.
31. The formation of the Soviet Medicine
32. International Cooperation in the sphere of Medicine
33. Perspectives for the development of Medicine in the 21st c.

7. Educational, methodological and informational means provided for subject “History of Medicine”

a) basic literature:

1. Sorokina T.S. The History of Medicine. – M.: Academy, 2005. – 560 p.
2. Lisitsin Yu.P. The History of Medicine. – M.: GGEOTAR-MED, 2004. – 400 p.
3. Gritsak E.N. Popular history of Medicine. – M.: VEChE, 2003. – 464 p.

b) additional literature:

1. Kalmin O.V. An outline of Anatomy history : guidance manual. – Penza: PSU, 2000. – 60 p.
2. Samoilov V.O. The history of Russian medicine. – M.: Epidavr, 1997. – 200 p.
3. The History of Medicine: methodological guidance / ed. by. O. E. Schevnina. - Penza: PSU, 2009. - 88 p.

c) Online resources:

1. History of medicine. <https://www.britannica.com/topic/history-of-medicine>
2. History of medicine. https://en.wikipedia.org/wiki/History_of_medicine
3. History of medicine. http://www.historylearningsite.co.uk/history_of_medicine.htm
4. History online. Journal of the History of Medicine and Allied Sciences <http://www.history.ac.uk/history-online/journal/journal-history-medicine-and-allied-sciences>
5. What is medicine? The History of Medicine. <http://www.medicalnewstoday.com/info/medicine/>
6. The History of Surgery. <http://surgery.about.com/od/surgeryinthedia/a/HistoryOfSurgeryTimeline.htm>
7. Medicine Studies. An International Journal for History, Philosophy, and Ethics of Medicine & Allied Sciences <https://link.springer.com/journal/12376>

8. Material and technical means provided for subject “History of Medicine”

№ п/п	The name of the special rooms and areas for independent work	Equipment of special rooms and areas for independent work
1	<ul style="list-style-type: none"> - Room № 102 (Building 1) - Room 204 (Building 7B) - Room 106B (Building 8) - Rooms 233(Building 11) 	<ol style="list-style-type: none"> 1. The audience, equipped with furniture 2. Multimedia learning tools (multimedia projector, screen, computer, TV). 3. Computer equipment capable of connecting to the Internet and access to electronic information-educational environment of the organization. 4. Microsoft Windows (Dream Spark /Microsoft Imagine Standart); reg. number 00037FFEBACF8FD7, contract № СД-130712001 of 12.07.2013. 5. Kaspersky Anti-Virus 2016-2017, reg. number KL4863RAUFQ, contract № XII-567116 of 29.08.2016. 6. Open source software: Libre Office; Google Chrome; Adobe Reader; 7zip.

The work program of subject "History of Medicine" was composed in compliance with requirements of FSES HE and the educational program 31.05.03 "Dentistry".

The program was compiled by:

1. Dyatlova A.K., PhD., associate prof.



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The program was approved at a meeting of sub-department "History of Russia, Local History and History Teaching Methodology"

Report № 4

from «15» 02 2016

Head of sub-department
"History of Russia, Local History
and History Teaching Methodology"



Kondrashin V.V.

The program was approved by the Dean of the Dentistry faculty

M.D., Prof.



Zyulkina L.A.

The program was approved by the methodological committee of the medical institute

Report № 7

from «5» 03 2016

Head of the methodological committee of
Medical institute



Kalmin O.V.

**Data on re-approval of the program for consecutive academic years
and record of alterations**

Academic year	Sub-department's decision (Report №, date, signature of sub-department's head)	Introduced alterations	Page number		
			changed	new	annulled
2016/17	Протокол № 1 от 2.09.16 	Квалификационные требования зачисленцев на "Вост-вест-математик"			
2018/18	Протокол № 1 от 5.09.18 	Программа призыва студентов			