Федеральное государственное образовательное учреждение
высшего образования
«КАЗАНСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»
Министерства здравоохранения Российской Федерации

«УТВЕРЖДАЮ»
Руководитель ОПОП
Декан факультета иностранных
студентов, доцент
_____Е.С. Кошпаева
01 июля 2025

СБОРНИК СИЛЛАБУСОВ
ДИСЦИПЛИН (МОДУЛЕЙ) И ПРОГРАММ ПРАКТИКИ
ОСНОВНОЙ ПРОФЕССИОНАЛЬНОЙ ОБРАЗОВАТЕЛЬНОЙ ПРОГРАММЫ ВЫСШЕГО ОБРАЗОВАНИЯ

по специальности

31.05.03 Стоматология (на английском языке)

Квалификация: врач-стоматолог
Уровень: специалитет
Форма обучения: очная
Срок обучения: 5 лет
Факультет: Иностранных студентов

Казань, 2025 г.

Federal State Educational Institution of Higher Education
"KAZAN STATE MEDICAL UNIVERSITY"
Ministry of Health of the Russian Federation

"APPROVED"
Head of the GPEP
Dean of the Faculty of International Students,
Associate Professor
_____ E.S. Koshpaeva

DIGEST OF SYLLABUSES
OF DISCIPLINES (MODULES) AND PRACTICAL PROGRAMS
OF THE GENERAL PROFESSIONAL EDUCATIONAL PROGRAM OF HIGHER EDUCATION

in specialty
31.05.03 Dentistry (medium of instruction: English)

Qualification: dentist
Level: specialist
Form of study: full-time
Duration of study: 5 years
Faculty: International students

Kazan, 2025

BIOLOGY 4
HISTORY OF MEDICINE 9
PHYSICS 17
CHEMISTRY 21
INFORMATICS 25
HUMAN ANATOMY 29
HISTOLOGY, EMBRYOLOGY, CYTOLOGY – ORAL HISTOLOGY 36
FOREIGN LANGUAGE 43
PHILOSOPHY 61
LATIN LANGUAGE 68
ECONOMICS 71
PHYSIOLOGY OF MAXILLOFACIAL REGION 75
BIOCHEMISTRY 79
TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY 91
PSYCHOLOGY AND PEDAGOGY 95
LEGAL AND ETHICAL FOUNDATIONS IN MEDICAL ACTIVITY 98
MICROBIOLOGY, VIROLOGY, MOC 102
PATHOPHYSIOLOGY - HEAD AND NECK PATHOPHYSIOLOGY 113
OBSTETRICS 130
PHARMACOLOGY 134
HYGIENE 141
RADIOLOGY 146
OTORHINOLARYNGOLOGY 150
OPHTHALMOLOGY 153
INTERNAL DISEASES. CLINICAL PHARMACOLOGY 157
SURGICAL DISEASES 164
PEDIATRICS 177
DERMATOVENEROLOGY 180
MEDICAL REHABILITATION 186
EPIDEMIOLOGY 191
NEUROLOGY 194
PHTHISIOLOGY 199
INFECTIOUS DISEASES 203
PSYCHIATRY 206
ORTHODONTICS 211
PEDIATRIC DENTISTRY 216
DENTISTRY: MODULE “CLINICAL DENTISTRY” 223
DENTISTRY: MODULE "PREVENTION AND COMMUNAL DENTISTRY" 230
MAXILLOFACIAL SURGERY 240
MAXILLOFACIAL SURGERY: MODULE “PEDIATRIC MAXILLOFACIAL SURGERY” 255
DENTISTRY 262
FORENSIC MEDICINE 283
ORTHOPEDIC DENTISTRY 288
CLINICAL ANATOMY AND RADIOLOGY IN DENTISTRY 314
AESTHETIC ASPECTS OF PROSTHETIC TREATMENT 321
ELECTIVE "PROPAEDEUTIC DENTISTRY" 324
ELECTIVE COURSE «INNOVATIVE TECHNOLOGIES IN PERIODONTICS». 329

IMMUNOLOGY, CLINICAL IMMUNOLOGY.....335
FIRST AID 339
RUSSIAN LANGUAGE IN PROFESSIONAL COMMUNICATION 343
MEDICAL INFORMATICS 348
CLINICAL CLERKSHIP “RESEARCH WORK” 352
CLINIKAL CLERKSHIP “EMERGENCY CARE IN THERAPEUTIC PRACTICE” 354
CLINICAL CLERKSHIP “PRACTICE ON OBTAINING PROFESSIONAL SKILLS AND EXPERIENCE OF PROFESSIONAL ACTIVITY (ASSISTANT OF A DOCTOR - DENTIST (SURGEON))”.....359
CLINICAL CLERCSHIP “DENTAL ASSISTANT HYGIENIST” 363
CLINICAL CLERKSHIP “ASSISTANT DENTIST PEDIATRICIAN 368
PRACTICAL CLERKSHIP "ASSISTANT DENTIST (THERAPIST)" 4TH YEAR, 8TH SEMESTER.....372
CLINICAL CLERKSHIP “PRACTICE IN OBTAINING PROFESSIONAL SKILLS AND PROFESSIONAL EXPERIENCE IN PROSTHETIC DENTISTRY - DENTAL ASSISTANT (PROSTHETIC)” 378
ELECTIVE: RUSSIAN AS A FOREIGN LANGUAGE. LINGUISTIC AND REGIONAL STUDIES 381

BIOLOGY

Teachers: Associate Professor, PhD Koshpaeva E.S., PhD Sychev K.V., PhD Nurullin L.F.
Building, Department, classroom # NUK, Department of Medical Biology and Genetics, Butlerova Str. 49

Contact details:

- Telephone number: +78432360543
- E-mail address: elena.koshpaeva@kazangmu.ru
- Office and working hours: Monday – Friday from 9 a.m. to 17 p.m.

Class hours:
Total hours — 144:

- Lectures 20 hours;
- Practical classes 60 hours;
- Independent work 28 hours;
- Control 36 hours

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2087).

Course objectives: The purpose of mastering the discipline
The purpose of mastering the discipline is to form a scientific view of genetic processes that ensure the vital activity of organisms, their development and reproduction; study of the mechanisms of heredity and variability of organisms with using classical approaches and the latest advances in the field of molecular genetics, biotechnology and genetic engineering.

Tasks of the discipline:
To form knowledge in the field of:
- formation of systemic knowledge about the basic patterns of life development and mechanisms ensuring its maintenance at different levels of the organization;
- formation of knowledge about the functioning of ecological systems and dependencies human health from environmental quality;
- to form ideas about the cytological bases of heredity and basic patterns of inheritance of traits;
- study the molecular mechanisms of the implementation of the genetic program;

Objectives of discipline mastering:
studying multiple levels of organization of biological systems, the patterns of organic evolution, functioning of biological systems; formation of students' conception of man as a central object of study in medical biology; study of the biosocial nature of human, his subordination to the general

biological laws of development, unity of human and the environment; formation of view about modern ecosystem and anthropogenic factors acting within it, human adaptation to the environment; an important objective is to acquire practical skills necessary for subsequent research and practical activities.

Course topics:

Lectures

1. General introduction to the cell biology. Molecular level of organization. Structure of
2. DNA. DNA Replication.
3. Structure of RNA. Transcription and processing. Translation.
4. Types of genes. Regulation of gene expression in prokaryotes and eukaryotes.
5. Gene mutation. Mechanisms of DNA repair.
6. Anatomy of the human genome. The Human Genome Project.
7. Genetic variations. Structural and numerical abnormality. Chromosomal diseases
8. Fundamental methods in human genetics
9. Concept of heredity. Mendelian inheritance. Extensions of mendelism
10. Techniques of molecular genetics and biotechnology. Manipulating genes. Transgenic organisms

Practical classes

Module 1. Molecular and Cell Biology

1. Structure of DNA. DNA replication Transcription of RNA. Processing of RNA. Translation of proteins
2. Genetic variations. Gene mutation. Repair of DNA
3. Optical apparatus. Light microscope. Structure of eukaryotic cell. Structure and functions of plasma membrane. Transport across plasma membrane
4. Nucleus. Life cycle. Mitosis. Gametogenesis. Meiosis. Reproduction. Embryonic development
5. Unit test1.

Module 2. Genetics

6. Principles of Mendelian Inheritance. Gene Interaction. Multiple Alleles. Human Blood Groups.
7. Sex Linked Inheritance. Sex Determination. Linked Inheritance. Crossing Over. Group Linkage
8. Genealodycal method.
9. Cytogenetic approaches for studying human diseases.
10. Population genetics. Molecular methods for detecting of polymorphisms
11. Unit test 2.

Module 3. Parasitology.

12. Protozoa
13. Platyhelminthes and Nemathelminthes
14. Arthropods
15. Unit test 3.

Exam

Text books and required supplies:

1. Alberts B. et all. // Molecular Biology of the cell (6^{th} ed.) – 2015.-1342 p.
2. Peter D. Turnpenny, Sian Ellard, Ruth Cleaver // Elements of Medical genetics and genomics. - 2017.-435p.
3. Paniker's textbook of medical parasitology (8^{th} ed.) – 2018.-235p.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

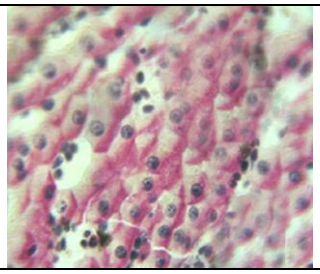
Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1. Cell biology.
Part 1. MCQ

Example:	Which organoid includes two cylindrical bodies which oriented at a 90-degree angle to one another. This organoid is found near the Golgi apparatus in non-dividing cells. A. Smooth ER B. Centrosome C. Ribosome D. Mitochondria E. Rough ER
Example:	Which of the following statements about base pairing in DNA is incorrect? A. Purines always base pairs with pyrimidines. B. Adenine binds to guanine. C. Base pairs are stabilized by hydrogen bonds. D. Base pairing occurs at the interior of the double helix.

Part 2. Practical skills. Identification of specimens with light microscope.

Example:	
Example:	Fragment of double stranded DNA (700 bp) consists of 40% of Adenine; 10% of Guanine; 40% of Thymine; 10% of Cytosine. What is the number of A. T. G and C in that fragment?

EVALUATION OF THE MODULE-1 UNIT TEST ANSWER

Part 1. MCQ – ticket contains 50 questions, time duration: 50 minutes; weight of 2 question is 1 points

Total: 50 x 2 = 100 points

Part 2. Practical skills. Ticket contains 10 slides and 5 tasks. Weight of 1 task is 10 points. weight of 1 slide is 5 points

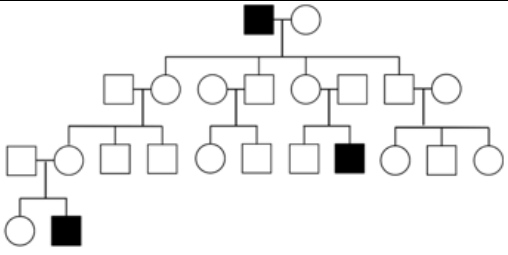
Total: 10 x 5+ 5 x 10 = 100 points

Example of module No. 2. Genetics.

Part 1. MCQ

Example:	**Colour blindness is found more in males than in females because:** A. The males containing the single affected X chromosome are colour blind B. Heterozygous females are colour blind C. Males having affected Y chromosome are colour blind D. Affected X chromosome has much high affinity to Y chromosome as compared to unaffected X chromosome
Example:	**Which part of chromosome is named as chromosome band?** A. Part of chromosome which stain either light-colored or dark-colored, depending on the particular staining technique B. Heterochromatic regions C. Euchromatic regions D. Positions of the structural genes E. DNA regions with tandem repeated nucleotides

Part 2. Practical skills. Solving problems on inheritance of traits.

Example:	Hemophilia is inherited as recessive, X-linked trait. A hemophilic son with blood I (O) is born to parents having II (A) blood group. None of the parents suffers from hemophilia. Calculate the probability of having a healthy child with II (A) blood group.
Example:	 A. On the basis of this pedigree, what is the most likely mode of inheritance for the disease? Explain your reasoning.

	B. From your answer to part "a", give the most likely genotypes for all persons in the pedigree.

EVALUATION OF THE MODULE-2 UNIT TEST ANSWER

Part 1. MCQ – ticket contains 50 questions, time duration: 50 minutes; weight of 1 question is 2 points

Total: 50 x 2 = 100 points

Part 2. Practical skills. Ticket contains 10 tasks. weight of 1 task is 10 points

Total: 10 x 10 = 100 points

Example of module No. 3. Parasitology.

Part 1. MCQ

Example:	**The egg of which parasite is ovoid, about 150x50 μm, roundish with lateral knob and small granules of tissue debris adherent to shell? These eggs may be found only in urine.** A. Fasciola hepatica B. Dicrocoelium lanceatum C. Paragonimus westermani D. Schistosoma haematobium E. Taenia solium

Part 2. Practical skills. Identification of specimens with light microscope and atlas

Example:

1) Latin name of parasite
   or
2) General morphological features of parasite
   or
3) Life cycle of parasite

EVALUATION OF THE MODULE-3 UNIT TEST ANSWER

Part 1. MCQ – ticket contains 50 questions, time duration: 50 minutes; weight of 1 question is 2 points

Total: 50 x 2 = 100 points

Part 2. Practical skills. Ticket contains 10 specimens; weight of 1 specimen is 10 points

Total: 5 x 10 = 100 points

Example of Biology Exam.

Part 1.1. MCQ

Example:	Which of the following is not a typical characteristic of human traits that follow an autosomal recessive inheritance pattern? A. All of the above are characteristic of autosomal recessive inheritance. B. They often "skip" generations. C. They appear equally in males and females. D. Parents of affected children are often phenotypically normal themselves. E. When affected individuals marry phenotypically normal individuals, their

	children are often phenotypically normal.

Part 1.2. Oral part of the exam. Open-end questions.

Example:	1. The structure and functions of the rough endoplasmic reticulum. 2. Enumerate and describe the general attributes of living organisms 3. Fundamental methods in human genetics (briefly describe the methods and name their significance in human's genetics). 4. Replication of DNA. Steps and enzymes. Programmed Senescence Theory. Hayflick Limit. 5. Class Sporozoa. Toxoplasma gondii. Habitat. Morphology. Localization. Life cycle. Methods of diagnosis. 6. Southern Blotting and Probes.

Part 2. Practical skills. Identification of specimens/solve the situation task

Example: Identify the parasite:

The parasite is endemic in the Far East—Japan, Korea, Taiwan, China, and South East Asia—Sri Lanka and India. Cases have been reported from Assam, Bengal, Tamil Nadu and Kerala. The adult worm is egg-shaped about 10 mm long, 5 mm broad and 4 mm thick. Adult worms live in the lungs.

EVALUATION OF THE MODULE-5 UNIT TEST ANSWER

Part 1.1. MCQ – ticket contains 40 questions, time duration: 40 minutes; weight of 1 question is 1 point

Total: 40 x 1 = 40 points

Part 1.2. Oral part of the exam. Open-end questions. Ticket contains 6 open-end questions; weight of 1 question is 10 points

Total: 6 x 10 = 60 points

Total for the theoretical part: 40 +60 = 100 points

Part 2. Practical skills. Ticket contains 5 tasks (one task from each module); weight of 1 task is 20 points

Total: 5 x 20 = 100 points

HISTORY OF MEDICINE

Teachers: PhD Regina Ivanova

Building, Department, classroom # NUK, Department of Biomedical ethics, medical law and history of medicine, 322, 319, 317, 324

Contact details:

- Telephone number: 89047628064 (PhD Regina Ivanova)
- E-mail address: R.Ivanova@kazangmu.ru MuseumKGMU@yandex.ru
- Office and working hours: 332 (9–17)

Class hours:

Total 36 h:

Lectures 8 hours;

Practical classes – 10 hours;

Independent work – 18 hours.

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Practical training is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The work involves active participation of students in problem discussion. It requires preliminary preparation by the student and it is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).

Course objectives: The purpose of mastering the discipline are formation of systematic knowledge and skills of formulating

- the main stages and patterns of development of the world historical process in medical area;
- the main stages and patterns of development of the Russian history;
- names of outstanding figures in medicine and health care, outstanding medical discoveries, the impact of humanistic ideas on medicine;
- the most important milestones in the history of world medicine, the place and role of each crucial achievement in the history of mankind and in the modern world;
- general patterns of the world-historical process of formation and development of healing and medicine in various countries of the world from ancient times to our time;
- socio-cultural traditions of various social groups, ethnic groups, confessions, including world religions, philosophical and ethical teachings necessary for the study of other academic disciplines and the acquisition of professional medical qualities.

Tasks of the discipline:

To form knowledge in the field of:

- analyzing the features of social interaction, taking into account historical, national, cultural and religious characteristics;
- to express professional information competently and in an accessible way in the process of intercultural interaction;
- analyze historical events and processes, logically correctly and clearly build oral and written speech;
- take into account in social and professional communication the socio-cultural traditions of various social groups, ethnic groups, confessions, including world religions, philosophical and ethical teachings;
- analyze and evaluate historical information, formulate reasoned judgments regarding the history of medicine, justify one's own civic position, conduct a dialogue

Course topics:

Calendar plan of lectures

Lecture №1. Introduction to the History, history of medicine course. History of medicine as a science. Classification of historical sources;
Lecture №2. Russian history in IX–XVII centuries;
Lecture №3. Russian history in XVIII–XX centuries;
Lecture №4. Russian cultural history in IX–XX centuries;
Lecture №5. Medicine in Ancient World; Medicine in the Middle Ages and Renaissance (V – XVII centuries);
Lecture №6. European medicine in New Age (XVIII – XIX centuries)
Lecture №7. World medicine in XX century.
Lecture №8. Kazan medical history.

Calendar plan of practical trainings

Class 1. Seminar № 1. History as a science;
Class 2. Seminar № 2. History of medicine as a science. Historical sources. Medicine in primitive society;
Class 3. Seminar № 3. Ancient Russian medicine;
Class 4. Seminar № 4. Medicine in Ancient East (Mesopotamia, Egypt);
Class 5 Seminar № 5. Medicine in Ancient East (India, China);
Class 6. Module №1 on topics 1–5;
Class 7. Seminar № 6. Medieval Russian medicine;
Class 8. Seminar № 7. Medicine in the Byzantine Empire;
Class 9. Seminar № 8. History of Ancient Kievan Rus' and Medieval Russia;
Class 10. Seminar № 9. History of Russia in XVIII century;
Class 11. Seminar № 10. History of Russia in XIX century;
Class 12. Seminar № 11. History of Tatarstan and Kazan;
Class 13. Module №2 on topics 6–11;
Class 14. Seminar № 12. Medieval Islamic medicine;
Class 15. Seminar № 13. Formation of Hygiene and Public health in XVI–XIX centuries;
Class 16. Seminar № 14. Military medicine in XX century;
Class 17. Module №3 on topics 12–14;
Class 18. Excursion to the Museum of KSMU' history;
Class 19. Final test.

Text books and required supplies:

1. Kaiser D. H. Maureen Perrie, ed. The Cambridge History of Russia. Volume I: From Early Rus' to 1689. Cambridge: Cambridge University Press, 2006, 777 pp.;
2. Morrissey S. The Cambridge History of Russia. Vol. 2, Imperial Russia, 1689–1917. Ed. Dominic Lieven. Cambridge, Eng.: University of Cambridge Press, 2006. 765 pp.;
3. Nathans B. The Cambridge History of Russia. Volume 3, The Twentieth Century. Edited by Ronald Grigor Suny. Cambridge: Cambridge University Press, 2007. 842 pp.;
4. The History of the Tatars, Volumes 1–7, Kazan, 2017;
5. Lisicyn YU. P. Istoriya mediciny: uchebnik Moskva: Izdatel'skaya gruppa "GEOTARMedia", 2015
6. Kashnikova K. V. Istoriya mediciny i farmacii: Uchebnoe posobie Moskva: Eksmo, 2010, Electronic resource
7. Lisicyn Yu. P. Istoriya mediciny: uchebnik Moskva: Izdatel'skaya gruppa \"GEOTAR-Media\", 2015
8. Bachilo E. V. Istoriya mediciny i farmacii: Uchebnoe posobie Moskva: Eksmo, 2010, Electronic resource
9. Jackson M. The Oxford Handbook of the History of Medicine New York: Oxford University Press, 2013
10. Magner L. N., Kim O. J. A History of Medicine Boca Raton [et al.]: CRC Press Yaylor & Francis Group, 2018
11. Tyurina I. A., Kovalenko E. I. Istoriya mediciny v Rossii: uchebno-metodicheskoe posobie Surgut: Izdatel'skij centr SurGU, 2022, Electronic resource
12. Sc.D., Kalinin A. G., Postoev V. A., Cand.Sc., History of Medicine and Public Health: training manual Arhangel'sk: СГМУ, 2021, Electronic resource

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/ abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during breaks
- Using phone is allowed only during breaks

Example of module No. 1.

1. Answer the question "History of Medicine as a science"

Answer: The History of Medicine is the important part of Medical humanities consists of the humanities (literature, philosophy, ethics, history and religion), social science (anthropology, cultural studies, psychology, sociology), and the arts (literature, theater, film, and visual arts) and their application to medical education and practice. The History of Medicine shows how societies have changed in their approach to illness and disease from ancient times to the present; studies the patterns of development and the history of treatment, medical knowledge and medical activity of peoples around the world throughout the history, in close connection with the philosophy, science, culture, psychology. The World History of Medicine introduces students to the world of their future profession, increases the level of general and professional culture, and brings a sense of professional medical ethics. The History of Medicine helps to understand global problems and challenges in the field of medicine and public health; helps to recognize our own responsibility for the future of our planet and helps to find ways and methods of solving these problems and challenges.

2. Answer the question "Prehistoric forms of medicine".

Answer: Prehistoric forms of medicine are now known as traditional medicine and folk medicine, though they do not fall within the modern definition of "medicine" which is based in medical science.Traditional medicine (also known as indigenous or folk medicine) comprises medical aspects of traditional knowledge that developed over generations within various

societies before the era of modern medicine.The World Health Organization (WHO) defines traditional medicine as "the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness". Traditional medicine is contrasted with scientific medicine. Prehistoric medicine incorporated plants (herbalism), animal parts, and minerals. In many cases these materials were used ritually as magical substances by priests, shamans, or medicine men. Well-known spiritual systems include animism (the notion of inanimate objects having spirits), spiritualism (an appeal to gods or communion with ancestor spirits); shamanism (the vesting of an individual with mystic powers); and divination (magically obtaining the truth).

3. Answer the question “Main medical texts in Ancient Egypt”.

Answer: Egyptian medical papyri are ancient Egyptian texts written on papyrus which permit a glimpse at medical procedures and practices in ancient Egypt. The papyri give details on disease, diagnosis, and remedies of disease, which include herbal remedies, surgery, and magical spells. Early Egyptian medicine was based mostly on a mixture of magic and religious spells. Most commonly "cured" by use of amulets or magical spells, the illnesses were thought to be caused by spiteful behavior or actions. Afterwards, doctors performed various medical treatments if necessary. The instructions for these medical rituals were later inscribed on papyrus scrolls by the priests performing the actions. The Kahun Gynaecological Papyrus is the oldest known medical text in Egypt. The papyrus contains 35 separate paragraphs relating to women's health, such as gynecological diseases, fertility, pregnancy, and contraception. It does not describe surgery.

The Edwin Smith Papyrus is the oldest known surgical treatise on trauma. This document, which may have been a manual of military surgery, describes 48 cases of injuries, fractures, wounds, dislocations and tumors. While other papyri, such as the Ebers Papyrus and London Medical Papyrus, are medical texts based in magic, the Edwin Smith Papyrus presents a rational and scientific approach to medicine in ancient Egypt in which medicine and magic do not conflict.

EXAMPLE OF MODULE № 3 QUESTIONS:

1. Al-Razi.
2. Ali ibn-Sina. “The Canon of Medicine
3. Ophthalmology in Medieval Islamic medicine.
4. Medieval Islamic hospitals. Features of hospitals
5. William Petty. John Graunt
6. Paracelsus. Georgius Agricola
7. Bernardino Ramazzini. Edward Jenner
8. Max Joseph Pettenkofer. Robert Koch
9. Terms «military medicine», “Mental disorder”, “Shell shock”
10. Public health and volunteer organizations
11. World War I Public Health effects
12. Marie Curie and Helen MacMurchy medical contributions.
13. Development of Psychiatry in XIX – early XX centuries.
14. Terms “Combat stress reaction”, “posttraumatic stress disorder”
15. Alexander Fleming

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 3 questions.

Less than 70 points = No any question is answered correctly. Module isn’t passed, student has to re-pass it again;

70–75 points = 1 question is answered correctly and completely; or 2-3 questions are answered correctly but not completely;

80-85 points = 2 questions are answered correctly and completely; or 3 questions are answered correctly but not completely;
90-95 points =3 questions are answered correctly and completely;
100 points = perfect answer for all 3 questions, given with all the details
* The teacher has the right to remove from 5 to 15 points for incorrect or incomplete writing of names, terms, and dates.
Total for three questions: 100 points

HISTORY OF RUSSIA

Teachers: assistant Timur Khasanov, assistant Aysylu Shakirova
Building, Department, classroom # NUK, Department of history, philosophy and sociology, 331, 329

Contact details:

- Telephone number: 89961243861 (assistant Aysylu Shakirova)
- E-mail address: nasibullina-aysylu@mail.ru
- Office and working hours: 348 (9-17)

Class hours:
Total hours — 144:
- Lectures 48 hours;
- Practical classes 68 hours;
- Independent work 28 hours:
Control 36 hours

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).

Course objectives: The purpose of mastering the discipline
The goals of mastering the **history of Russia** discipline are formation a comprehensive understanding of the cultural and historical uniqueness of Russia and its place in world and European civilization; to form systematized knowledge about the basic patterns and features of the world historical process with an emphasis on studying the history of Russia; introduction to the range of historical problems, development of skills for obtaining analysis and generalization of historical information.

Tasks of the discipline:
To form knowledge in the field of:
- understanding of citizenship and patriotism as devotion to one's Fatherland, the desire to serve its interests through one's actions, incl. protecting the interests of Russia;

- knowledge of the driving forces and patterns of the historical process; the place of man in the historical process, the political organization of society;
- education of morality, ethics, tolerance;
- understanding the diversity of cultures and civilizations in their interaction, the multivariate nature of the historical process;
- understanding the place and role of the graduate's field of activity in social development, the relationship with other social institutions;
- the ability to work with diverse sources, the ability to effectively search for information and criticize sources;
- skills of historical analytics: the ability, based on historical analysis and a problem-based approach, to transform information into knowledge, to comprehend processes, events and phenomena in Russia and the world community in their dynamics and interrelationships, guided by the principles of scientific objectivity and historicism;
- ability to think logically and conduct scientific discussions;
- creative thinking, independent judgment, interest in domestic and world cultural and scientific heritage, its preservation and enhancement.

Course topics:

Calendar plan of lectures

1. History as a science. From the formation of the ancient Russian state to feudal fragmentation.
2. The rise of Moscow and the formation of the Russian state in the 13th – 16th centuries.
3. From the Grand Duchy to the Muscovite Kingdom. Russia in the late 16th – 17th centuries.
4. Russia in the 18th and 19th centuries.
5. Revolutionary upheavals and the USSR in the 20th century. Russia and the world at the turn of the century.

Calendar plan of practical classes

1. Eastern Slavs in ancient times. Old Russian state 9th – 13th centuries. Socio-political changes in Russian lands in the 12th – 13th centuries.
2. Formation of the Russian centralized state in the 14th – 15th centuries.
3. Russia and the world in the 16th – 17th centuries.
4. Features of the modernization of Russia in the 18th century.
5. Russia in the 18th century: from the era of palace coups to the Enlightened absolutism of Catherine II.
6. Russian Empire in the first half of the 19th century. Attempts to resolve the peasant question.
7. Russia during the period of reforms and the beginning of industrialization in the second half of the 19th century.
8. Russia in the conditions of a national crisis and the First World War.
9. Formation of the Soviet state in the 1920s – 1930s of the 20th centuries.
10. The Soviet Union during the Second World War and the Great Patriotic War. Post-war development of the USSR.
11. The Thaw or the Search for Alternative Paths of Development in the History of the Soviet State.
12. Soviet Union in 1965 – 1991.
13. Russia at the turn of the century. Russia and the world in the 21st century.

Text books and required supplies:

1. History of Russia IX- beginning of the 20th century / Maksimenko E.P. M.: MISiS, 2016.https://www.studentlibrary.ru/book/ISBN9785906846198.html
2. Radugin A.A. History of Russia (2. History of Russia: from ancient times to the present day: textbook / Derevyanko A.P., Shabelnikova N.A., Usov A.V. M.: Prospekt, 2016. https://www.studentlibrary.ru/book/ISBN9785392192144.html

3. Historiography of Russian history: textbook / ed. A. A. Chernobaeva. 2nd ed., revised. and additional M.: Yurayt, 2014.
4. Bushuev S.V. History of the Russian state: historical and bibliographical essays / S.V. Bushuev, G.E. Mironov. M.: Book Chamber, 1991.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test /abstracts/reports).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No.1

Annotation

- Write an annotation based on the historical material "Formation of the Russian state at the 9th century".
- Total: 10 points

Example of module No.2

Analysis of a problem situation

Having studied the lecture materials and the recommended educational literature, you should prepare answers to the following questions:

1. What were the causes of historical events?
2. What role and what influence did the participants in these events have?

3. Was it possible to prevent negative events?

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 3 tasks.
Questions 1 - 3 on history of Russia are evaluated by 33 points.
* The teacher has the right to remove from 1 to 3 points for incorrect writing.
Total: 3 x 33 = 100/10 points

PHYSICS

Teachers: PhD Elena Zhivotova
Building, Department, classroom # NUK, Department of Medical and Biological Physics, 509, 501

Contact details:
- Telephone number: 89381530078 (PhD Elena Zhivotova)
- E-mail address: elzhivotova@gmail.com
- Office and working hours: 522 (9-17)

Total hours — 108:
- Lectures 16 hours;
- Practical classes 45 hours;
- Independent work 47 hours.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=3337).

Course objectives: The purpose of mastering the discipline
The aim of achievement by medical students of mastery of course **physics, mathematics** is the formation of systematic knowledge on physical properties of matter and physical processes taking place in biological objects including human body as well as the learning of fundamental principles of mathematics and applied mathematics necessary for the study of some others educational courses and the acquisition of professional medical skills.

Tasks of the discipline:
To form knowledge in the field of:
- usage of physics concepts and procedures in the prevention, diagnosis, and treatment of disease;

- diagnostic imaging; medical imaging technologies, such as X rays MRI scans and CT scans;
- radiation therapy by facilitating targeting and destruction of cancer cells (accurate calculations regarding radiation doses and an understanding of how radiation interacts with tissue are crucial for ensuring treatment while minimizing harm to healthy cells);
- cardiovascular medicine (this field of medicine heavily relies on the principles of physics to comprehend how blood flows within the heart and blood vessels. Medical professionals utilize this understanding to diagnose and provide treatment, for heart related ailments;
- physical basics of laboratory analysis;
- statistical analysis of medical data.

Course topics:

Calendar plan of lectures

1. Properties of liquids. Physics of Blood and Circulatory System. Flow Rate and Its Relation to Velocity. Equation of continuity. Branching of the flow. Bernoulli's Equation. Viscosity. Laminar and turbulent flow. Auscultation method of blood pressure measurement. Poiseuille's Law. Resistance to flow in vascular system. Frank's model (two-element windkessel). Pulse wave. Surface tension
2. Sound. Physics of Hearing. Physics of Ultrasound Imaging.
3. Biological membranes. Fluid Mosaic Model. Transport of substances through biological membranes. Biopotentials. Physics of electrocardiography.
4. Geometric optics. Biological and medical applications. Total internal reflection in medicine. Fiber Optics: Endoscopes. Lenses. Ray diagrams. Vision Correction. Microscopes. Wave optics. Interference, diffraction, polarization. Biological and medical applications.
5. Radioactivity. Biological Effects of Exposure to Radiation. Radiation dosimetry. Ionizing radiation in diagnostics and therapy.
6. Atomic and molecular spectroscopy. Light absorption. Colorimetry. Spectroscopy of Biological Macromolecules. Photoelectric effect. Photomultiplier tubes. X-ray tubes. Medical uses of X-rays. Computed tomography.
7. Elements of probability theory and mathematical statistics. Random events and their classification. Full group of events. Classical and statistical definitions of probability. The theorem of addition of probabilities for incompatible events. The theorem of multiplication of probabilities for independent and dependent events. The formula of total probability. Repeated independent tests. Bernoulli's formula. Discrete and continuous random variables. The law of distribution of a discrete quantity, the distribution polygon. Numerical characteristics of a discrete random variable, their properties. Bernoulli distribution. Normal distribution law. The rule of "three sigma".
8. Problems of mathematical statistics. General and selective population. A typical sample. Statistical distribution of the sample, discrete and interval variational series. Polygon, histogram. Empirical probability distribution function. Point estimates of the distribution parameters. The general average and average value of the sample. The general variance. Unbiased and biased estimates of the total variance: selective and "corrected" sample variance. Confidence interval for the estimation of the mathematical expectation of normally distributed random variable based on small sample data. Student's distribution. Processing and analysis of experimental data. Measurement errors and their estimates. Statistical and functional dependencies. Linear correlation dependence. Linear regression equation, regression coefficients. Linear correlation coefficient, its properties. Calculation of sample linear correlation coefficient. Null and competing hypotheses. Statistical criteria. Significance level. Testing the significance of a linear correlation between values. Comparison of mean values of two normally distributed populations whose variances are unknown and equal based on the results of small independent samples.

Testing the hypothesis of equality of variances of two normally distributed populations based on their estimates. Fisher-Snedecor criterion. Nonparametric criteria (sign test).

Calendar plan of laboratory classes

1. Safety rules in physical laboratory. Determination of surface tension by capillary rise method. Determination of the surface tension by the drop counting method.
2. Determination of the viscosity by the Ostwald viscometer. Determination of the viscosity by the falling ball method.
3. Physical basics of the pure tone audiometry. Recording pure tone audiograms. Physical basics of ultrasound diagnostics.
4. Registration and interpretation of electrocardiograms. Physical basics of the auscultation method of blood pressure measurement.
5. Module on topics 1-4.
6. Microscope and measurement of microobjects. Refractometry. Optical Fiber Loss and Attenuation.
7. Interferometry measurement of concentration. Verification of Malus law. Polarimetry measurement of concentration. measuring the wavelength of monochromatic light by a diffraction grating. Studying the diffraction of white light.
8. Radioactivity. Interaction of nuclear radiation with matter. Detectors of ionizing radiation
9. Atomic and molecular spectroscopy. Light absorption. Colorimetry. Photoelectric effect.
10. Module on topics 5-8.
11. Random events. Classical and statistical definitions of probability. The theorem of addition of probabilities for incompatible events. The theorem of multiplication of probabilities for independent and dependent events. The formula of total probability. Repeated independent tests. Bernoulli's formula. Random values. The law of distribution of a discrete quantity, the distribution polygon. Numerical characteristics of a discrete random variable, their properties.
12. Problems of mathematical statistics. Polygon, histogram. Empirical probability distribution function. Estimates of distribution characteristics from sample data. Point estimates of the distribution parameters. Confidence interval and confidence. Estimation of the interval of confidence
13. Elements of correlation analysis. Linear correlation dependence
14. Testing of statistical hypotheses. Comparison of means of two normally distributed populations
15. Module on topics 9-12. Outcoming testing. Final test.

Text books and required supplies:

1. Davidovits, Paul. Physics in Biology and Medicine. Fifth Edition. Elsevier Science. 2018. – 358 p.
2. Hobbie, Russell K. R. Intermediate Physics for Medicine and Biology. 4th Edition. Springer. 2015. – 616 p.
3. College Physics. OpenStax. Open Education Resource (OER) LibreTexts Project.
4. Everitt B.S. Medical Statistics from A to Z. Cambridge University Press. 2006. – 249 p.
5. Janet L. Peacock. Oxford Handbook of Medical Statistics. Oxford University Press. 2011. – 517 p.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of test questions

The auscultation method of blood pressure measurement is based on the detection of Korotkoff sounds caused by

(a) turbulent blood flow in an artery.
(b) laminar blood flow in an artery.
(c) turbulent blood flow in capillaries.
(d) laminar blood flow in capillaries.

Correct answer: (a)
Correct answer - 5 points.

An optician prescribes a lens of power -1.5 D for correction of vision of a person. What kind of defect in vision is the patient suffering from? What is the focal length of the corrective lens? What is the nature of the corrective lens?

(a) Hypermetropia; 67 cm; convex lens.
(b) Myopia; -67 cm; convex lens.
(c) Hypermetropia; 67 cm; concave lens.
(d) Myopia; -67 cm; concave lens.

Correct answer: (d)
Correct answer - 5 points.

A hospital claims, it ambulance response time is less than 10 minutes, it can be written as:

(a) $H_0 > 10$ min, $H_A \leq 10$ min
(b) $H_0 \leq 10$ min, $H_A > 10$ min

(c) $H_0 \neq 10$ min, $H_A = 10$ min
(d) $H_0 < 10$ min, $H_A \neq 10$ min

n normal distribution curve, mean of the data lie on the
a. Right end
b. Centr
n normal distribution curve, mean of the data lie on the
a. Right end
b. Centr
Correct answer: (a)
Correct answer - 5 points.

Example of problems

During ultrasonographic examination, a transducer sends a pulse of ultrasound and receives an echo 20 microseconds later. Calculate the depth of object from which the signal was reflected. Assume that the speed of sound through human tissues is 1540 m/s. Write the answer in millimetres.

Correct answer: 15.

Correct answer - 5 points.

The effect of cobalt on the weight of rabbits was studied in 2 groups of animals. During the study, the animals gave the following weight gain:

Control group, x	550	600	550	450	700	-
Test group, y	500	400	390	550	600	650

Check at the significance level p=0.05 whether the effect of cobalt on mass gain is significant.
Correct answer: *t*-statistic = 0.92; at the 0.05 level, the difference between sample mean values is not significant.

Correct answer - 5 points.

The toxicity of different doses of the drug X (mg/kg) was studied in white mice. The animals were observed during 10 days. Estimate the correlation between the lethality Y (%) and the dose of the drug:

X	1	4	5	8	9
Y	8	7	10	10	11

Correct answer: $r = 0.789$, strong positive correlation

Correct answer - 5 points.

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 20 tasks (12 theoretical MCQ, 4 practical MCQ and 4 numerical answer problems).

Each question is evaluated by 5 points.

CHEMISTRY

Teachers: Prof. Liliya Nikitina, PhD Inna Fedyunina
Building, Department, classroom # NUK, Department of General and Organic Chemistry, 629, 632
Contact details:

- Telephone number: 89033075070 (Prof. Liliya Nikitina)
- E-mail address: nikitl@mail.ru
- Office and working hours: 633 (9-17)

Total hours — 108:
- Lectures 16 hours;

- Practical classes 45 hours;
- Independent work 47 hours;

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University https://e.kazangmu.ru/course/view.php?id=2564

Course objectives: The purpose of mastering the discipline

The goals of mastering the **chemistry** discipline are formation of systematic knowledge and skills of calculating physicochemical parameters of processes for medical students, occurring in the human body, evaluating these processes on cellular and molecular levels, correctly interpreting the effect of chemicals and other environmental factors on the body, necessary for the study of other academic disciplines and the acquisition of professional medical qualities (hereinafter - discipline).

Tasks of the discipline:

To form knowledge in the field of:

- understanding the meaning of chemical phenomena occurring in living organism by student, using chemical laws in the diagnosis and treatment of diseases, the ability to understand physicochemical principles of work and organization of devices and apparatus, used in modern medicine;
- studying physicochemical aspects of the most important biochemical processes and homeostasis in the body;
- forming systematic knowledge of students on chemical transformations of low- and high-molecular organic compounds that take part in the processes of vital activity of the human body;
- development of the student's professional self-awareness, his ability to use the acquired knowledge in the analysis of organic medicines and in the research activity of the future specialist;

Course topics:

Calendar plan of lectures

1. Surface phenomena. Adsorption on the solid surface.
2. Chromatography.
3. Classification of disperse and colloidal systems. Preparation and purification methods of colloidal solutions.
4. Molecular-kinetic and optical properties of colloidal systems.
5. Structure of lyophobic colloidal particles. Electrokinetic phenomena in colloidal systems.
6. Coagulation of colloidal solutions.
7. Semicolloids. Microheterogeneous (coarse) systems, their nature and variety. Emulsions.
8. High-molecular compounds.

Calendar plan of laboratory classes

1. Safety rules in chemical laboratory. An introduction to chemistry.
2. Adsorption on the solid surface. Types of adsorption: physical adsorption and chemisorption. Langmuir's and BET equations. Surface-active substances. Gibbs equation. Solution of situational problems. Practical work "Adsorption on solid surface".
3. Chromatography. Practical work "Thin-layer chromatography".
4. Colloidal systems, their nature, varieties, preparation and purification, molecular-kinetic and optical properties. Methods of preparation of colloidal systems: dispersion and condensation methods. Purification of colloidal systems: dialysis, electrodialysis, ultrafiltration.
5. Molecular-kinetic properties: Brownian motion, osmotic pressure, diffusion, sedimentation. Tyndall effect as a result of light scattering on colloidal particles. Solution of situational problems.
6. Structure of lyophilic and lyophobic colloidal particles. Nucleus, granule, micelle, potential-determinative and counter-ions. Electrokinetic phenomena in colloidal systems: electrophoresis, electroosmosis, potential of sedimentation and flowing.
7. Solution of situational problems. Practical work "Determination of the charge sign of colloidal particles".
8. Module on topics 2-7.
16. Aggregate-kinetic stability of colloidal systems. Coagulation of colloidal solutions. Coagulation threshold. Schulze-Hardy valence rule.
17. Solution of situational problems. Practical work "Determination of the coagulation threshold".
18. Semicolloids, their properties and importance.
19. Microheterogeneous systems, their varieties, properties and practical significance. Emulsions, foams, powders. Types of emulsions, reversal of emulsions. Solution of situational problems. Practical work "Properties of emulsions and foams".
20. High-molecular compounds, their nature, properties and biomedical importance. Classes of HMC and their preparation. Solution of situational problems. Practical work "Salting out casein. Determination of the isoelectric point of casein".
21. Module on topics 9-13.
22. Outcoming testing. Final test.

Text books and required supplies:

1. N.Lezhava, O.Gabrichidze. An introduction to medical chemistry / Tbilisi, - 2006. – 292 p.
2. Bruce M.Mahan, Rollie J.Myers. University Chemistry. Fourth edition : Addison Wesley Longman. – 1998. – 1076 p.
3. E.Mikrukova, L.Nikitina. An introduction to general chemistry / Kazan: KSMU, 2009. — 59 p
4. I.V. Fedyunina. An introduction to physical and colloidal chemistry. For English-speaking students of the faculty of general medicine/ Kazan: KSMU, 2011. — 78 c.
5. I.V. Fedyunina. Manual on laboratory classes on physical and colloidal chemistry course *for English-speaking students of the faculty of general medicine* / Kazan: KSMU, 2011. — 46 c.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or

absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Examples of module No. 1 questions

1. Adsorption equilibrium is:
a. state of the system in which the concentration of the adsorbent does not change on the surface of the adsorbent
b. penetration of adsorbent molecules into the adsorbent
c.formation of a monomolecular layer of adsorbent molecules on the surface of the adsorbent
d.maximum filling of the adsorbent surface with adsorbent molecules
2. Dynamic adsorption equilibrium can be shifted by:
a. all of the above ways
b. changing the phase adjacent to the adsorbent
c. changing the temperature
d. destroying the adsorbent
3. With increasing temperature physical adsorption:
a. increases
b. does not change
c. increases or decreases depending on the nature of the adsorbent
d. decreases
4. According to selective adsorption (Panet-Faience rule):
a. adsorbed primarily those substances that are part of the adsorbent
b. during adsorption, the binding of certain ions is accompanied by the attraction of the corresponding number of oppositely charged ions
c. with the extension of the hydrocarbon chain by one CH_2 unit, the surface activity of surfactants increases by 3 times
d. adsorption occurs before the formation of one layer of adsorbent molecules

5. During ion exchange adsorption occurs:
a. exchange of oppositely charged ions
b. the binding of certain ions is accompanied by the attraction of the corresponding number of oppositely charged ions
c. exchange of like charged ions
d. binding of only those ions that are part of the adsorbent

Examples of module No. 2 questions

1. Coagulation in colloidal solution can be caused:
a. all the named effects
b. by increasing the concentration of colloidal solution
c. by adding an electrolyte
d. by mechanical impact

2. Hidden coagulation occurs due to the fact that:
a. with a small concentration of the added electrolyte, the charge of the particles is still large and therefore only some particles can overcome the forces of electrostatic repulsion
b. as the concentration of the electrolyte increases, the charge of the particles is gradually neutralized and reduced, but not every collision of particles leads to their clumping and settling
c. as the concentration of the electrolyte increases, the charge of the particles does not change and the rate of coagulation is determined selectively with respect to sols
d. as the concentration of the electrolyte increases, the charge of the particles becomes zero, each collision leads to the aggregation and sedimentation of the particles

3. The coagulation threshold is the minimum amount of electrolyte (in mmoles) that must be added to 1 liter of sol in order to:
a. precipitate completely the dispersed phase
b. stop coagulation initiation.
c. initiate obvious coagulation
d. initiate dormant coagulation

4. What coagulation is observed in the colloidal system if the electrolyte concentration becomes higher than the threshold concentration?
a. obvious quick
b. obvious
c. dormant
d. obvious slow

5. The micelle structure is expressed by the formula $\{mAu,nAuO_2^-.(n-x)K^+\}^{x-}.xK^+$. Which of the following electrolytes has the greatest coagulating ability?
a. $K_4[Fe(CN)_6]$
b. KC1
c. $NaNO_3$
d. $MgSO_4$

EVALUATION OF ANSWER
of Modules

The ticket of the module consists of 10 tasks. Questions are evaluated by 10 points.
Total: 10 x 10 = 100 points

INFORMATICS

Teachers: Ildar Iskandarov, Azalya Amirova, Dinara Nigmatullina

Building, Department, classroom # NUK, Department of Public Health and health organization, 311, 313

Contact details:

- Telephone number: 236-08-81
- E-mail address: oz-kgmu@mail.ru
- Office and working hours: 306 (9-17)

Course: 1
Semester: 1

Total: 72 hours.
Lectures: 10 h
Class hours: 30 h
Self-study: 32 h

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

Course objectives: The purpose of mastering the discipline
The goals of mastering the discipline: to provide the knowledge and skills necessary for a future doctor to work in the field of public health. To form students' knowledge about the essence of information, informatics and information processes; to provide information about modern information technologies in medicine and healthcare; to study the principles of storage, search, processing and analysis of biomedical information, including using computer technology; to master the methods of mathematical statistics necessary for the study of other academic disciplines and acquisition of professional medical qualities

Tasks of the discipline:
To teach students:
• study of methods, software and hardware of medical statistics used at various stages of obtaining and analyzing biomedical information
• provide students with information about modern computer technologies used in medicine and healthcare
• provide knowledge about informatization methods used in the therapeutic and diagnostic process
• be able to use Internet for the search of medical and biological information

Course topics:

Calendar plan of lectures

1. Medical statistics, its importance in assessing the health of the population and the activities of health authorities and institutions.
2. Graphic representations in medicine and healthcare.
3. Calculation, analysis and evaluation of indicators of the variation series, dynamic series, standardization

4. Organization and stages of statistical research.
5. WHO. Demography

Calendar plan of practical classes

1. Medical statistics, its importance in assessing the health of the population and the activities of health authorities and institutions. Relative values in the practice of a doctor.
2. Graphic images in medicine and healthcare. Visual representation of the results of a statistical study.
3. Calculation, analysis and evaluation of the indicators of the variation series. Average values: arithmetic mean, mode, median. The standard deviation. Coefficient of variation. The normal Gaussian distribution.
4. Application of standardization methods in medicine. The methodology of the direct standardization method
5. Analysis of dynamic series indicators.
6. Parametric methods for assessing the significance of statistical research results
7. Correlation analysis. Organization and stages of statistical research. Determination of the sample size for the implementation of medical and statistical research.
8. Organization and stages of statistical research. Determination of the sample size for the implementation of a medical statistical study
9. Introduction to medical informatics. Definitions, terminology. The concept of information
10. Informatization of healthcare.
11. A unified information space for healthcare and the social sphere. The movement of information in healthcare and medicine (general characteristics of the processes of collecting, transmitting, processing and accumulating information in the healthcare system).
12. Regulatory and legal supportfor healthcare informatization. Basic concepts and definitions in the field of information security and information protection.
13. Medical information systems. Medical and technological systems for monitoring and controlling body functions.
14. Information systems of medical institutions. Information systems in health management at the territorial and federal levels.
15. Telecommunication technologies and Internet resources in medicine. Telemedicine.

Text books and required supplies:

1. Intelligent Systems for Healthcare Management and Delivery / Nardjes Bouchemal. – IGI Global, 2019. – 377. – ISBN // 9781522570714
2. Mobile Health Applications for Quality Healthcare Delivery / Moumtzoglou, Anastasius. - IGI Global,2018. – 327. – ISBN // 9781522580218
3. Improving Usability, Safety and Patient Outcomes with Health Information Technology :From Research to Practice / Bliss, Gerry-Bartle-Clar, John A.-Lau, Francis. – IOS Press, 2019. – 548. – ISBN // 978-1-61499-950-8
4. Health Informatics Meets EHealth : Biomedical Meets EHealth – From Sensors to Decisions Proceedings of the 12th EHealth Conference / Schreier, Günter-Hayn, Dieter. - IOS Press, 2018. – 248. – ISBN // 978-1-61499-857-0
5. Data, Informatics and Technology: An Inspiration for Improved Healthcare / A. Hasman-P. Gallos-J. Liaskos-M.S.Househ-J.Mantas. - IOS Press,2018. – 251. – ISBN // 978-1-61499-879-2
6. Informatics Empowers Healthcare Transformation / J. Mantas-A. Hasman-G. Gallos. - IOS Press, 2017 – 238. – ISBN // 978-1-61499-780-1
7. Informatics for Health: Connected Citizen-Led Wellness and Population Health / R. Randell-R. Cornet-C. McCowan. - IOS Press, 2017. – 235. – ISBN // 978-1-61499-752-8
8. Medical Statistics at a Glance / A.Petrie-C.Sabin. – Blackwell Publishing, 2005. – 157. – ISBN // 978-1-4051-2780-6 URL: https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.cmu

a.nl/cmua/Wetenschap_files/Medical%2520Statistics%2520at%2520a%2520Glance%25202nd%2520Ed.pdf&ved=2ahUKEwiQ5viJ0KeJAxXgVKQEHaN5BysQFnoECBcQAQ&usg=AOvVaw3m-6V0jZsQdzhl3jRU0ujs

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Test (final) are held in forms of problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Level 1 – assessment of knowledge

The following types of control are used to evaluate learning outcomes in the form of knowledge:
— test;
Examples of tasks:
Medical informatics is:
-the science that studies the quantitative side of mass phenomena;
- mathematics;
-prevention;
- hygiene.
Evaluation criteria:
"Excellent" (90-100 points) "Good" (80-89 points) "Satisfactory" (70-79 points) "Unsatisfactory" (0-69 points).

Level 2 – assessment of skills

The following types of control are used to evaluate learning outcomes in the form of skills:
— case tasks;
Examples of tasks:
- Calculate the required number of round-the-clock inpatient beds for children. The total population is 61,800, children - 12,200. The standard of provision of pediatric beds is 113.74 per 1000 residents.
A simple bed, due to the turnover of the bed, is planned for 1 day. The average length of a patient's stay in a bed is 9 days. 2500 deliveries were delivered at the maternity hospital, including 401 with surgical interventions. Among the surgical interventions there were 66 cesarean sections. 2 cases of maternal mortality have been registered.
Calculate:
1. The proportion of surgical interventions.
2. The proportion of cesarean sections.
3. Maternal mortality rate.
4. Give a conclusion.

Evaluation criteria:
"Excellent" (90-100 points) – the task is clearly completed, your own position is formulated, the scientific terminology is used correctly. "Good" (80-89 points) – the task is clearly completed, but one's own position is not formulated, scientific terminology is correctly used. "Satisfactory" (70-79 points) – the task is not fully completed, one's own position is not formulated, scientific terminology is not correctly used. "Unsatisfactory" (0-69 points) – the task has not been completed, one's own position has not been formulated, scientific terminology has not been used correctly.

Level 3 – assessment of skills

The following types of control are used to evaluate learning outcomes in the form of skills:
— tasks for decision-making in a non-standard situation (situations of choice, multiple alternatives to solutions;
Examples of tasks:
Clinical trials of a new drug that can be used in the applied treatment regimen instead of an old drug available on the market, but less effective, were conducted in a medical organization. Suggest a method of economic justification for the need to use a new drug.
Evaluation criteria:
"Excellent" (90-100 points) – the answer is correct, scientifically reasoned, with links to the topics covered. "Good" (80-89 points) – the answer is correct, scientifically reasoned, but without references to the topics covered. "Satisfactory" (70-79 points) – the answer is correct, but not scientifically reasoned, or the answer is incorrect, but an attempt is presented to substantiate it from alternative scientific positions covered in the course. "Unsatisfactory" (0-69 points) – the answer is incorrect and not scientifically reasoned.

HUMAN ANATOMY

Teachers: PhD Ilnaz Gazizov, PhD Zufar Safiullin, Alina Fayzrahmanova, Aleksandr Petrov, Radik Habibullin, Mariya Petrova
Building, Department, classroom # Anatomy theatre, Department of Normal Anatomy
Contact details:

- Telephone number: 89046612001 (PhD Ilnaz Gazizov)

- E-mail address: ilnazaziz@mail.ru
- Office and working hours: 6 (8-17)

Discipline hours: total - 360 h
Lectures – 60
Practical lessons – 144
Self-study – 120
Exam – 36

Course description:
Lecture is a type of studying directed primarily for theoretical education of listeners. The aim of the lecture is to form basis for future study of the subject, systematization of knowledge, depicting interdisciplinary role and importance of topic, accentuation on most difficult and key problems. Lecture is directed for stimulation of students for active conscious self-study, search for knowledge, formation of creative thinking and preparation for work with advanced textbooks.
Self-study is needed for increasing, deepening, detailing and solidification of theoretical knowledge.
Practical lessons develop scientific thinking and speech, teach usage of anatomical terminology, and form basic practical skills.

Course objectives:
The purpose of mastering the Human Anatomy is to develop students' knowledge of human anatomy and topographic anatomy, both of the body as a whole and of individual organs and systems of adults and children at different age periods based on modern achievements of macro- and microscopy; to use the acquired knowledge in the subsequent study of other fundamental and clinical disciplines, as well as the future practical activities of a dentist; acquisition by students of in-depth, detailed knowledge of the structure and function of the organs of the head, neck and general information, devoid of secondary data, on the anatomy of the organs of the trunk and limbs.

Tasks of the discipline:
- understanding topography, structure of organs and their anatomical and functional relations, taking into account age, gender and individual characteristics;
- development of the student's professional self-awareness, his\her ability to use the acquired knowledge in the analysis of medical problems and in the research activity as future specialist;
- to know anatomical terminology;
- to be able to useanatomical medical instrument - tweezers, scalpel; information about the rules of working with natural anatomical preparations.

Course topics:

Calendar plan of lectures

1st term:

23. Introduction into Human Anatomy.
24. Introduction into Osteology.
25. The structure of bone as an organ, development.
26. Synarthroses.
27. Diarthroses 1.
28. Diarthroses 2.
29. Introduction to myology.
30. Development of skeletal muscles. Accessory apparatus of muscles.
31. Clinical anatomy of neck, abdomen, thorax, back.

32. Clinical anatomy of upper and lower limbs.

2nd term:

1. General morphofunctional characteristics of the digestive system.
2. Development of the digestive system organs.
3. Anatomy of the respiratory system.
4. Anatomy of the organs of the urinary system.

5, 6 Anatomy of the reproductive organs.

7. Morphofunctional characteristics of the cardiovascular system.
8. Arterial system.
9. Venous system. Lymphatic system.
10. Blood circulation in the fetus.

3rd term:

1. Anatomy of the central nervous system.
2. Development of the nervous system in phylo- and embryogenesis.
3. Afferent pathways.
4. Efferent pathways.
5. Introduction to the peripheral nervous system.
6. General plan of the structure of the autonomic nervous system
7. I, II, III, IV, VI pairs of cranial nerves. Organ of vision.
8. X pair of cranial nerves. Parasympathetic part of the autonomic nervous system
9. The sympathetic part of the autonomic nervous system.
10. Pathways of the organ of vision, hearing and equilibrium.

Calendar plan of practical classes

1st term:

1. Introduction to anatomy. Characteristics of the human skeleton.
2. Bones of the body. Bones of the upper limb.
3. Bones of the lower limb. Skeleton of the head. Bones of viscerocranium.
4. Bones of neurocranium.
5. Skull as a whole. Newborn skull.
6. Module 1 – Osteology.
7. General arthrosyndesmology.
8. Connection of the bones of the axial sceleton.
9. Connection of the bones of the upper limb.
10. Connection of the bones of the lower limb.
11. Muscles, fascia, topography of the head.
12. Muscles, fascia, topography of the neck.
13. Muscles, fascia, topography of the thorax, abdomen, back.
14. Muscles, fascia, topography of the upper limb.
15. Muscles, fascia, topography of the lower limb.
16. Module 2 – Locomotion apparatus.

2nd term:

1. Oral cavity, organs of oral cavity. Salivary glands.
2. Pharynx. Esophagus. Stomach.
3. Small and large intestine. Liver. Pancreas.
4. Peritoneum. Endocrine glands.
5. Upper and lower respiratory tract.
6. Lungs. Pleura.

7. Urinary organs.
8. Male reproductive organs.
9. Female reproductive organs.
10. Module 3 - Splanchnology.
11. Anatomy of the heart. Aortic arch, branches of the aortic arch.
12. Arteries of the upper limb.
13. Thoracic and abdominal parts of the aorta.
14. Arteries of the lower limb.
15. System of the superior and inferior vena cava.
16. Module 4 - Cardiovascular system.

3rd term:

1. Anatomy of the central nervous system. Development of the nervous system in phylo- and embryogenesis.
2. Spinal cord. Meninges of the spinal cord.
3. Rhombencephalon.
4. Midbrain. Diencephalon.
5. Telencephalon. Meninges of the brain.
6. Module 5 - Central nervous system.
7. Formation of the spinal nerves. Cervical plexus. Intercostal nerves.
8. Nerves of the upper limb.
9. Nerves of the lower limb.
10. I, II, III, IV, VI pairs of cranial nerves. Organ of vision.
11. Trigeminal nerve.
12. VII, IX, XI and XII pairs of cranial nerves.
13. Organ of hearing and equilibrium. Vestibulocochlear nerve.
14. X pair of cranial nerves. Parasympathetic part of the autonomic nervous system.
15. The sympathetic part of the autonomic nervous system.
16. Module 6 - Peripheral nervous system. Sensory organs.

Text books and required supplies:

Main literature

1. Анатомия человека [Текст] : [учебник] / М. Г. Привес, Н. К. Лысен-ков, В. И. Бушкович. - Изд. 12-е, перераб. и доп. - Санкт-Петербург : СПбМАПО, 2011. - 720 с. 380 экз.
2. Human Anatomy [Text] : [Textbook] / M. G. Prives, N. K. Lysenkov, V. I. Bushkovich. – 12th edition - Saint-Peterburg : SpbMAPO, 2010. - 720 p. 179 copies.

Additional literature

1. Атлас анатомии человека [Текст] : учеб. пособие для студентов мед. вузов : в 4 т. / Р. Д. Синельников, Я. Р. Синельников, А. Я. Синельников. - Изд. 7-е, перераб. - Москва : Новая Волна : Издатель Умеренков, 2016 - Т. 1 : Учение о костях, соединении костей и мышцах. - 2016. - 348 с.
2. Атлас анатомии человека [Текст] : учеб. пособие для студентов мед. вузов : в 4 т. / Р. Д. Синельников, Я. Р. Синельников, А. Я. Синельников. - Изд. 7-е, перераб. - Москва : Новая Волна : Издатель Умеренков, 2016 - Т. 2 : Учение о внутренностях и эндокринных железах. - 2016. - 247, [1] с.
3. Атлас анатомии человека [Текст] : учеб. пособие для студентов мед. ин-тов : В 4 т / Р. Д. Синельников, Я. Р. Синельников. - М. : Медицина, 1989 - Т. 3 : Учение о сосудах. - 1992. - 231 с.

4. Атлас анатомии человека [Текст] : учеб. пособие : В 4 т. / Р. Д. Си-нельников, Я. Р. Синельников. - М. : Медицина, 1994 - Т. 4 : Учение о нервной системе и органах чувств. - 1994. - 319 с. 969 экз.

Evaluation and grading:

Monitoring progress is carried by the end of each module (written check-list with possible assessment of practical skills).

Routine performance assessment (oral discussion, tests, written answers for questions during classes) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Exams are held in forms of test and practical assessment of acquired skills. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, assessment of his\her auditory class achievements, modules and results of exam.

Classroom rules:

- Be respectful.
- Be careful with equipment and preparations.
- Be disciplined.
- Be prepared for the classes.
- Be involved, do not hesitate to ask questions.
- Look professional: you have to wear clean white coat and change shoes.
- Eating is not allowed in Anatomy theatre.
- Using phone is allowed only during brakes.

Example of check list for one of the modules (CNS №1)

Maximum score is 70. Each term gives up to 4 points.
Note: all anatomical terms have to be in latin, absence or incorrect term cancels 2 points for each term.

Midbrain in latin -	2
Identify anatomical structures of hypothalamus, which are visible on inferior surface of brain: 1 2 3 4 5	 4 4 4 4 4
Identify cortical analyzers present in lobus frontalis facies superolateralis: 1. 2. 3 4	 4 4 4 4

Walls of III ventricle: 1. 2. 3. 4. 5.	 4 4 4 4 4
Recesses of III ventricle: 1. 2. 3	 4 4 4

Practical part №1

Write all terms in latin if it is asked. Correct answer will give 3 points (latin term – 1,5 points; identification and showing – 1,5 or 3 points). Maximum score for practical part is 30 points.

№	Identify and show	show	latin
1.	Lower border of medulla oblongata -		
2.	Commissural fibers of diencephalon -		
3.	Border between parietal and frontal lobe -		
4.	Trigonum lemniscus lateralis		XXX
5.	End of columna fornicis ventrally -		
6.	Inferior projection of lateral ventricles -		
7.	Exit of V cranial nerve -		
8.	Cavity of midbrain -		
9.	Primary visual cortical center -		
10.	Sinus along posterior edge of ala minor os sphenoidale –		
Number of correct answers:			
Result:			

Standard of answers to check list for CNS №1

Midbrain in latin - mesencephalon	2
Identify anatomical structures of hypothalamus, which are visible on inferior surface of brain: 1 tuber cinerum 2 corpora mamillaria 3 chiasma opticum 4 tractus opticus 5 hypophysis	 4 4 4 4 4
Identify cortical analyzers present in lobus frontalis facies superolateralis: 1 general center for movements 2 writing	 4

3 speaking 4 coordination of movements of eyes, eyes and neck	4 4 4
Walls of III ventricle: 1. lamina terminalis 2. tela choroidea on fornix 3. hypothalamus 4. thalamus 5. commissura habenularum et commissura posterior	 4 4 4 4 4
Recesses of III ventricle: 1. recessus pinealis 2. recessus infundibuli 3 recessus supraopticus	 4 4 4

Practical part №1

№	Identify and show	show	latin
1.	Lower border of medulla oblongata – decussatio pyramidum, exit of radices n. spinalis I, foramen magnum		
2.	Commissural fibers of diencephalon – adhesio interthalamica		
3.	Border between parietal and frontal lobe – sulcus centralis		
4.	Trigonum lemniscus lateralis		XXX
5.	End of columna fornicis ventrally – corpora mamillaria		
6.	Inferior projection of lateral ventricles – cornu inferius		
7.	Exit of V cranial nerve – between pons et pedunculi cerebellaris media; linea trigeminofacialis		
8.	Cavity of midbrain – aqueductus mesencephalici		
9.	Primary visual cortical center – sulcus calcarinus		
10.	Sinus along posterior edge of ala minor os sphenoidale – sinus sphenoparietalis		
Number of correct answers:			
Result:			

EVALUATION OF THE MODULE ANSWER

The check-list for module has theoretical and practical parts. Theoretical part has open questions, where student has to write correct answer for anatomical structures in Latin. Theoretical part has a maximum 70 points to gather. In practical part student has to be able to identify and show to the teacher anatomical structures, which are asked. It has 30 points to gather. Total – 100 points for the check-list.

If student gathers 70 points and above, the module is considered to be passed. If student gathers less than 70 points, he\she has second and third attempt on next classes with decreasing coefficient of minus 10 points. Modules, which are not passed can be written again during exam sessions with no decreasing coefficient.

TESTS OF EXAM

Examples of tests can be found on educational portal: https://e.kazangmu.ru/course/view.php?id=1523.

Questions for practical part of exam are available on: https://kazangmu.ru/files/anatom/stom_for__2021.pdf

EVALUATION OF EXAM RESULTS

Tests (theoretical part of exam) is considered to be passed if student scores 70 and above. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Practical part of exam is considered to be passed if student scores 70 and above. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Final result for the discipline is calculated on special program for each student and takes into account all achievements: practical class and lecture attendance, average mark for class work, modules, exam. Discipline is considered to be passed if student scores 70 and above. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

HISTOLOGY, EMBRYOLOGY, CYTOLOGY – ORAL HISTOLOGY

Teachers: PhD Izmailov A.A., PhD Archipova S.S., Garifulin R.R., Vavilov D.N., Davlieva M.A.

Building, Department, classroom # Universitetskaya str, 13, Histology, Cytology, and Embryology Department, 306, 307, 308, 319

Contact details:

- Telephone number: 2927654 (Prof. Islamov R.R.)
- E-mail address: rustem.islamov@gmail.com
- Office and working hours: 304 (9-17)

Total hours — 216:

Lectures 36 hours
Practical classes 84 hours
Independent work 60 hours
Control 36 hours
Credits - 6

Course description

Course consists of studying of the cell, basic human developmental stages and of the four basic histology tissues, followed by studying of organs and organ system with emphasis on those tissues that compose the oral cavity. Course establishes the foundation of normal dental anatomy and the surrounding extraoral and intraoral structures to include the embryologic development and related histology of the orofacial structures. This foundation is necessary for use in assessing oral health and disease, determining appropriate dental hygiene treatment plans, and applying these findings to instrumentation principles. Lectures and laboratories will be conducted by the course.

Lectures contain basic theoretic material of main discipline topics. It is usually held for the course of students at the same time. Additionally, lectures are provided on the Distance course on KSMU Education portal.

The laboratory classes involve studying of the structure of tissues, systems and organs using images derived from a microscope and histological slides. For laboratory classes student will be provided with a collection of glass slides of specimens prepared by a variety of routine and special histologic methods. Also virtual slide specimens studying in the lab classes are

represented on KSMU Educational portal in a Distance course "Histology, Embryology, Cytology – Oral Histology".
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs) on KSMU Educational portal in a Distance course "Histology, Embryology, Cytology – Oral Histology" (https://e.kazangmu.ru/course/view.php?id=2176).

Discipline aim and objectives

The aim of mastering the discipline

The aim of mastering the discipline is to provide with an understanding of the development, structure, biochemistry, chemistry and function of cells, tissues and organs, especially of oral cavity organs

Discipline objectives

- To develop or sharpen the important skills of observation, description and interpretation of data, which in this course primarily involves microscopic images
- To provide students with a solid understanding of the structure and function of normal cells, tissues and organs in which subsequent courses may build
- To correlate the structural organization and functional capabilities of cells, tissues and organs, utilizing information derived from current techniques (scanning electron microscopy, immunocytochemistry, etc)
- To assist the students in the development of approaches to morphologic analysis and identification which is directed toward growth in independent self-education

Skills

1. Skill in using the microscope
2. Be able to identify the cells and structures of all tissues and organs using light microscope
3. Be able to make sketches of histological structures seen under the microscope
4. Be able to make notes on your observations in order to develop ability and confidence in observing, describing and interpreting microscopic images

Lectures and laboratory classes assignment

The discipline consists of a series of lectures and a number of associated laboratory classes in terms 2nd and 3rd with general exam in the end of 3rd term. The course is divided into 4 modules. Each module consists of number of lectures and lab classes. Each module ends with a quiz.
For each module topic student must:
1) review the learning objectives
2) listen to the lecture in class and read corresponding lecture notes at the Distance course
3) complete lab class tasks
4) study corresponding texts in recommended textbooks
4) complete the online test at the Distance course
5) take the scheduled auditory or online module examinations (quizzes).
Attendance of lectures and laboratory classes is obligatory.

Lectures curriculum

1. Introduction to the subject. Research Methods. Cell. Plasmolemma: structure and functions. Nucleus structure. DNA and gene. Chromatin and chromosome. Cytoplasm. Organelles. Cytoskeleton. Cell cycle
2. Human embryology. Basic concepts of development. Fertilization, cleavage and gastrulation. Neurulation. Germ layers and derivatives. Organogenesis. Body shaping

3. Epithelial tissue. The concept of tissue. Intercellular interactions in histogenesis. Intercellular junctions. General characteristics of epithelium. Functional and structural classification. Basement membrane
4. Connective tissue. Structural organization of extracellular matrix. Cell types. Connective tissues proper and tissues with special properties
5. Skeletal tissue. Cartilage tissue: cells and cartilage matrix. Regeneration. Hormonal regulation. Bone tissue: cells and bone matrix. Bone reorganization. Hormonal regulation. Chondrogenesis and osteogenesis. Fracture healing
6. Blood and hemopoiesis. Blood functions. Morpho-functional and quantitative characteristics of blood cells. Bone marrow. Embryonic and postnatal hemopoiesis. Hemopoietic growth factors. Hemopoietic stem cell nishes
7. Muscle tissues. Morphological and functional characteristics of skeletal, cardiac, smooth muscle tissues. Molecular basis of contraction. Regeneration of muscle tissues
8. Neural tissue. Neuron. Neuroglia: macro- and microglia. Ependymal glia. Schwann cells. Myelin. Structure and regeneration of peripheral nerve. Nerve endings
9. Cardiovascular system. Vascular wall cell types. Endothelium: morphological and functional characteristics. Angiogenesis and vasculogenesis. Smooth myocytes: contractile and secretory phenotypes, humoral regulation of activity. Pericytes of the microvasculature. Types of cardiomyocytes; atriopeptin and its effects
10. Endocrine system. The concept of hormone and interactions with target cell. Hypothalamic-hypophiseal system. Trophic hormones. Hormones of the brachiogenic group of glands. Steroidogenesis and hormones of the adrenal glands, gonads
11. Development of orofacial system. Foregut. Stomodeum. Buccopharyngeal membrane. Branchial apparatus. Embryonic processes shaping face. Cleft formation
12. Tooth: development, growth, and eruption. Embryonic sourses for tooth development. Stages of development. Enamel organ. Odontogenesis and amelogenesis. Root development. Dental sac derivatives. Tooth eruption
13. Dentin. Dentinogenesis. Dentin: organic components, mineralization; dentin types, layers, lines, regeneration. Dentinal tubules
14. Enamel and pulp. Amelogenesis. Enamel structure: prisms/rods, inter-rod substance, lines, tufts, lamellae, spindls; perikymata. Pulp: functions, layers, cells, blood supply, innervation, age changes
15. Supporting and retaining apparatus of the tooth. Composition and function of cementum, cellular and acellular. Composition, principal bundles, innervation, blood supply of periodontal ligament. Structure and functions of gingiva. Formation, structure and maintenance of alveolar bone
16. Morphology of oral cavity organs. Histological structure, types, and functions of oral mucosa. Epithelium. Development and structure of lip, cheek, palate, tonque. Oral floor
17. General scheme of digestive tract organization. Enteric nervous system. Enteroendocrine cells. Esophagus
18. Intestine and glands. Small and large intestine, mucosa and epithelial cell types. Immune defense. Liver. Pancreas

Laboratory classes curriculum

1. Histological elements. Histological technique. Histological elements. Cell. Cell shape. Nucleus. Cytoskeleton. Organelles. Inclusions.
2. Cell. Plasmalemma. Endocytosis and exocytosis. Microvilli, stereocilia, kinocilia, cilia. Cell cycle. Cell death
3. Human embryology. Sperm cell. Oocyte. The mechanism of fertilization. Zygote, cleavage, morula, blastocyst Primitive streak. Gastrulation: early gastrula, late gastrula (neurula). Somitogenesis. Derivatives of ecto-, meso-, endoderm

4. Epithelial tissue. Simple and stratified epithelia. Types of stratified epithelium. Classification of exocrine glands. Types of secretion
5. Connective tissues. General characteristics of connective tissue proper. Loose and dense connective tissue. Connective tissue with special properties
6. Bone and cartilage. Hyaline, elastic, fibrous cartilages. Organization of lamellar bone tissue. Blood supply. Intramembranous and endochondral osteogenesis
7. Blood Hemopoiesis. Morphological, functional, and quantitative characteristics of blood cells Blood cell development: embryonic and postnatal. Growth factors. Bone marrow
8. Muscle tissues. Skeletal muscle fiber as a symplast. Cardiac muscle tissue as functional syncytium. Sarcomere and its proteins. Smooth muscle cells and tissue
9. Neural tissue. Nerve tissue of peripheral nervous system. Structure of neuron. Morphological classification of neurons. Neurons of central nervous system and ganglia. Glial cells Peripheral nerve: connective tissue sheaths, myelinated and nonmyelinated nerve fibers. Motor and sensory nerve endings
10. **Module 1 Quiz**
11. Central nervous system Special sense organs. The structure of spinal cord, cerebral and cerebellar cortex. The structure of eyeball layers. The structure of cochlea and spiral organ of Corti. Macula and cristae. Taste bud
12. Skin and its appendages. The structure of epidermis and dermis. Morphology of sebaceous and sweat glands. The structure of hair and hair follicle
13. Cardiovascular system. Layers of blood vessel wall. Arteries and veins. Microcirculatory bed. Heart wall structure
14. Endocrine system. Pituitary gland and hypothalamo-hypophyseal system. Thyroid and parathyroid glands Adrenal glands: structure and hormones. Pancreatic islets. Corpus luteum of ovary
15. Immune system. Structural and functional characteristics of thymus, spleen, lymph nodes. Cells of the immune system
16. **Module 2 Quiz**
17. Development of face. Tooth development. Embryonic processes shaping face. Branchial arches. Stomodeum. Tooth development stages
18. Tooth structure: enamel and dentin. Dentin: organic components, mineralization; dentin types, layers, lines, regeneration. Dentinal canaliculi. Enamel structure: prisms, lines, tufts, lamellae
19. Tooth pulp. supporting and retaining apparatus. Pulp: layers, cells, blood supply, innervation. Formation and structure of cementum, periodontum, gingiva, alveolar bone
20. Development and structure of oral cavity organs. Development of oral cavity. Oral mucosa and submucosa. Epithelium. Development and structure of lip, cheek, palate
21. Tonque and oral floor. Tonque development. Tunics of tonque. Tonque papillae. Morphology of oral floor
22. Salivary glands. Morphology of excretory ducts, secretory portions, serocytes, and mucocytes. Parotid, submandibular, sublingual glands. Small salivary glands
23. **Module 3 Quiz**
24. Digestive system: esophagus stomach. Functional morphology of esophagus and stomach (cardiac, fundic, pyloric parts)
25. Digestive system: small and large intestine. Structural features of small and large intestine. Cell types in epithelium of villi and crypts
26. Digestive system: liver and pancreas. Liver: structural organization, blood supply, cell types and their function. Exocrine and endocrine parts of pancreas
27. Digestive system: lymphoid apparatus. Lymphoid tissue: single and multiple follicles (tonsils, appendix, ileum) and immunocompetent cells
28. Respiratory system. The structure of airways wall, epithelium, pulmonary acinus and alveoli wall

29. Urinary system. Structural organization of the cortex and medulla of kidney. Blood supply. Renal corpuscle and nephron tubules. Collecting ducts, ureter, urinary bladder wall structure
30. Male reproductive system. Testis structure. Spermatogenic epithelium and spermatogenesis. The structure and function of epididymis, prostate gland
31. Female reproductive system. The morphology of ovary. Follicles at different stages of development. The formation and structure of corpus luteum. The structure of oviduct, uterus
32. **Module 4 Quiz**

General test
Exam slides training
Final exam

Text books and required supplies

1. Danilov, R. K. Histology, Embryology, Cytology : Textbook / R. K. Danilov, T. G. Borovaya - Москва : ГЭОТАР-Медиа, . - 480 с. - ISBN 978-5-9704-6385-7. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970463857.html (дата обращения: 15.10.2024). - Режим доступа : по подписке.
2. Histology, Embryology, Cytology. - Москва : ГЭОТАР-Медиа, 2022. - 768 с. - ISBN 978-5-9704-7055-8. - Электронная версия доступна на сайте ЭБС "Консультант студента" : [сайт]. URL: https://www.studentlibrary.ru/book/ISBN9785970470558.html (дата обращения: 15.10.2024). - Режим доступа: по подписке. - Текст: электронный
3. Зиматкин, С. М. Гистология, цитология и эмбриология. Атлас учебных препаратов = Histology, Cytology, Embryology. Atlas of practice preparations : учебное пособие / С. М. Зиматкин. - 2-е изд. , испр. - Минск : Вышэйшая школа, 2020. - 87 с. - ISBN 978-985-06-3202-9. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9789850632029.html (дата обращения: 15.10.2024). - Режим доступа : по подписке.
4. Boychuk N.V. et al. Histology of oral cavity. Laboratory manual: for English-speaking students of the Dentistry faculty. 2020 https://lib-kazangmu.ru/index.php?option=com_attachments&task=download&id=2166

Evaluation and grading

Student marks will be based on results of current controls (post-lecture tests, post-lab tests, and correct schetches) and 4 post-module controls (quizzes), passing during the year course. Each quiz consists of slide test and written test (or interview, or classroom control work). Marks on these controls will contribute to final general exam mark.

Tests

Tests used for current control are evaluated in a 10-point system. The test score is set in proportion to the proportion of correct answers:

- 90-100% - excellent rating (9.0-10.0 points)
- 80-89% - "good" rating (8.0-8.9 points)
- 70-79% - "satisfactory" rating (7.0-7.9 points)
- Less than 70% of the correct answers are “unsatisfactory” (0-6.9 points).

Tests may be applicable for post-module control and cover the content of all material passed (the final output test and general exam test). In such cases, the assessment is made on a 100-point scale.

Classroom control work

Classroom control work is used as form of quiz control and is evaluated in a 100-point system.

- "Excellent" (90-100 points) - the work answers the questions posed in full, the correct interpretation of the terms is given, key issues are considered. A clear and clear presentation of the material, clear and evidence-based argumentation, a built-up logic of answers. Clearly and graphically constructed graphs and charts.
- "Good" (80-89 points) - the work answers the question in full, the correct interpretation of the terms is given, the key questions of the topic are partially considered. Graphs and charts correctly reflect the answer to the question. The presentation is clear. The logic is not completely built and the argument is not always conclusive.
- "Satisfactory" (70-79 points) - the work answers the question posed, but not fully, the correct interpretation of not all terms is given, the key issues of the topic are partially considered, the construction of diagrams and graphs does not fully correspond to the task. The presentation is not entirely clear, the logic of the answers is confused.
- "Unsatisfactory" (0-69 points) - the work does not answer the question posed, the terms are misinterpreted, the key questions of the topic are not touched, the constructed graphs and schemes do not correspond to the question posed, the presentation is unclear, the logic is confused.

Oral survey (interview)

Interview is used as form of quiz control and as exam control and is evaluated in a 100-point system.

- "Excellent" (90-100 points) - student clearly sets out. He knows the answers to all the questions. Knows all the concepts. Clear and evidence-based reasoning. Built logic of answers. Correct speech. Read the required literature, competently applies.
- "Good" (80-89 points) – student knows the answers to all questions. He knows all the concepts, but not everything can be said correctly. Clearly, clearly stated. Not always clear and evidence-based reasoning. Built logic of answers. Correct speech. Correctly applies the basic concepts. He read the required literature, but can not always remember, apply.
- "Satisfactory" (70-79 points) - student does not know the answers to all questions. Knows not all concepts. Clearly stated. Not always clear and evidence-based reasoning. The logic of the answers is confused. Mistakes in speech. Not always correctly applies the basic concepts. Student did not fully read the basic literature.
- "Unsatisfactory" (0-69 points) - student does not know the answers to all questions. Own position is not defined. The arguments are contradictory. The logic of the answers is confused. Mistakes in speech. Weak vocabulary, can not express their thoughts. Does not know the basic concepts or did not read the basic literature, or read very little.

An oral survey (interview) can be used to monitor the mastery of individual topics. In this case, student knowledge is evaluated on a 10-point system.

<u>Skill assessment</u>

The following types of control are used to evaluate learning outcomes in the form of skills:

- tasks for compiling a description of the microscopic image of slides;
- tasks for the identification of various histological elements using a microscope and the diagnosis of slides.

• 90-100 points - the student confidently works with a microscope and various magnifications, correctly names and describes in detail the structural elements of all slides;

• 80-89 points - the student confidently works with a microscope and various magnifications, correctly names, but finds it difficult to characterize all the structural elements of slides;

• 70-79 points - the student knows how to work with a microscope, identifies the slides, but it is difficult to describe the visible microscopic image;

• Less than 70 points - the student does not handle the microscope correctly, cannot identify and characterize the slide.

Examples of Module 1 controls

Tests

Correct sequence of the oocyte membranes is:
A) corona radiata — trophoblast — plasmalemma
B) plasmalemma — corona radiata — amniotic membrane
C) corona radiata — zona pellucida — plasmalemma
D) zona pellucida — corona radiata — chorionic membrane
Answer is B

Questions for control work or interview

1. Composition and functions of cytoskeleton
2. Acrosomal reaction
3. Morphological classification of the exocrine glands

Examples of Module 2 controls

Tests

Collagen precursors are secreted by:
A) plasma cells
B) mast cells
C) fibroblasts
D) adipose cells
Answer is C

Questions for control work or interview

1. Structure of the tendon
2. Structure of the compact bone
3. Neutrophil: number, life span, ultrastructure, contents of granules, functions

Examples of Module 3 controls

Tests

The myelin-forming cells within the central nervous system:
A) oligodendrocytes
B) astrocytes
C) microglia
D) Schwann cells
E) ependymal cells
Answer is A

Questions for control work or interview

1. Structure of soft palate
2. Tooth root development
3. Types and structure of tongue papillae

Examples of Module 4 controls

Tests

4. Oral mucosa contains all following structures or layers EXCEPT:
A) stratified squamous epithelium
B) lamina propria
C) nerve terminals
D) lamina muscularis
E) blood vessels
Answer is D

Questions for control work or interview

1. Ovary: stages of follicular development
2. Pulmonary surfactant

3. Loop of Henle: structure, role in reabsorbtion

Final exam

Final exam consists of two parts: 1) assessment of knowledge in the discipline (test, interview) and 2) assessment of skills (diagnostics of histological slides). Assessment is based on a 100-point scale (the evaluation criteria are described above).

Example of exam ticket

№2

1. Neuron: structure and morphological classification
2. Appendix structure and function
3. Lip structure
4. Pulp layers

Evaluation of exam answer

- "Excellent" (90-100 points) - student clearly sets out. He knows the answers to all the questions. Knows all the concepts. Clear and evidence-based reasoning. Built logic of answers. Correct speech. Read the required literature, competently applies.
- "Good" (80-89 points) – student knows the answers to all questions. He knows all the concepts, but not everything can be said correctly. Clearly, clearly stated. Not always clear and evidence-based reasoning. Built logic of answers. Correct speech. Correctly applies the basic concepts. He read the required literature, but cannot always remember, apply.
- "Satisfactory" (70-79 points) - student does not know the answers to all questions. Knows not all concepts. Clearly stated. Not always clear and evidence-based reasoning. The logic of the answers is confused. Mistakes in speech. Not always correctly applies the basic concepts. Student did not fully read the basic literature.
- "Unsatisfactory" (0-69 points) - student does not know the answers to all questions. Own position is not defined. The arguments are contradictory. The logic of the answers is confused. Mistakes in speech. Weak vocabulary, cannot express their thoughts. Does not know the basic concepts or did not read the basic literature, or read very little.

Summary rating by discipline

Results of final exam and results of current and module controls are taken into account and a point-rating system of KSMU is applied to calculate summary rating of discipline. Rating is recorded in the student's credit-book.

FOREIGN LANGUAGE

Teachers teaching the course:

Associate Professor Fidaeva L.I., Associate Professor Chevela O.V., Associate Professor Fedotova S.I., Associate Professor Evdokimova A.G., Associate Professor Amirova R.M., Associate Professor Svetlova R.M., Associate Professor Ibragimova L.G., Associate Professor Alikova E.A., Associate Professor Kuznetsova E.G., Associate Professor Gilemshina A.G., Senior Lecturer Fomina S.E., Senior Lecturer Yakubova L.S., Senior Lecturer Nikityuk V.P., Senior Lecturer Baltaeva V.T., Senior Lecturer Yusupova L.G.

Building, department, auditorium #. NUC, Department of Russian and Tatar languages,

Courses: 1-2
Semesters: 1,2,3,4

Practical classes (seminars) 250 hours.
Independent work 146 hours.
Credit 1,2
Credit with grade – 3,4 semesters

Total 396 hours.
Credit units of labor intensity (ZET) 11

Developer(s):
Associate Professor of the Department
of Russian and Tatar Languages O.V. Chevela
Associate Professor of the Department
of Russian and Tatar Languages S.I. Fedotova
Phone number: 88432364530

Course Description:

Russian language is a general purpose of the discipline "Foreign language" in a medical university has an applied, practical orientation and is designed to solve the problems of teaching Russian to foreign students of a medical specialty in order to prepare for clinical practice in Russian, to live and study in a Russian language environment, to perceive the basic values of Russian culture. To study the discipline, knowledge, skills and abilities are required in the amount of the basic level (A2) of proficiency in Russian as a foreign language, namely:

Know:

- methods of independent work with educational material;
- didactic units for study and (or) repetition (reinforcement);
- educational and methodological materials (textbooks, teaching aids, electronic training programs, etc.) necessary for effective independent and scientific work;
- the main communicatively significant grammatical categories of the Russian language (independent parts of speech, prepositions, conjunctions), syntax of simple and complex sentences in accordance with the profile being studied;
- the main methods of combining lexical units and the main word-formation models;
- elementary norms of Russian speech etiquette;
- 2,300 units of common vocabulary;
- terminological vocabulary in the medical specialty;
- lexical and grammatical models of scientific style of speech.

Be able to:

- deepen and expand theoretical knowledge and practical skills in the discipline;
- perform current work on educational material; tests and assignments in practical classes;
- work with banks of tasks, multimedia educational, information and reference and control programs, prepared special audio and video materials.
- activate cognitive activity;

a) in reading:

- be able to read texts taken from different sources, understand the basic and additional information of adapted texts of regional studies, informational and journalistic, social and professional nature;
- read and understand texts from the social and cultural and social and everyday communication spheres, using different types of reading.
- read texts from recommended educational literature, extract the necessary information and convey it orally and in writing with varying degrees of condensation;
- make various types of plans for the texts read;

- read and understand educational texts that correspond in difficulty to the material being studied; - read and understand (with the help of a dictionary) texts on the specialty.

b) in listening

- listen to and understand the information contained in a monologue,

- audit the information of an oral message from the social and cultural and social and everyday sphere of communication with subsequent transmission of its content with varying degrees of condensation;

c) in speaking

- understand the basic information presented in individual monologues and dialogues of a social and everyday and socio-cultural nature;

- be able to initiate a dialogue in simple situations of a standard type, maintain a conversation about oneself, a friend, family, studies, work, learning a foreign language, working day, free time, hometown, health, weather, etc., and also construct one's own statement based on the text read;

- use the acquired skills of formulating statements about one's intentions in a limited set of situations

- apply grammatical norms and a minimum vocabulary in speech.

- independently generate a text according to a specified model, construct a coherent detailed statement on a given topic, be able to conduct dialogues of various types;

- express one's own attitude to the facts, events set out in the text, the characters and their actions.

- understand the content of the interlocutor's statements;

- adequately respond to the interlocutor's remarks;

- establish and maintain social contacts with other people (acquaintance, greeting, addressing acquaintances and strangers, expressing gratitude and apologies

- express assessments, opinions and subjective-emotional attitudes towards persons, objects, events and actions;

- receive and transmit specific information about people, facts, events.

- apply grammatical norms and a minimum vocabulary in speech;

- conduct a dialogue on educational, everyday and professional topics. - reproduce information presented orally and in writing (retelling).

d) in writing

- be able to write a short letter, note, congratulations, etc., outline the main content of the source text, based on questions

- construct a written monologue of a reproductive nature based on a read or listened to text in accordance with the communicative setting;

– understand a statement on the topic of the specialty;

- construct a written monologue of a reproductive nature based on a read or listened to text in accordance with the communicative setting.

Have:

- linguistic, speech and actually communicative material necessary for solving the following communicative tasks:

- master the elementary norms of the Russian literary language;

- speech genres of question and communication of information;

- oral and written speech skills.

- linguistic, speech and communicative material, necessary for mastering the elementary and basic level for solving the following communicative tasks:

- master the norms of Russian speech etiquette when meeting people, when addressing senior members of the teaching staff;

- speech genres of asking and communicating information, greetings, farewells, gratitude, requests, refusals, apologies and congratulations.

- linguistic, speech and communicative material necessary for understanding the studied specialized texts, including medical terminology.

Course objectives: The purpose of mastering the discipline

Within the framework of a given program, three learning purposes are implemented: practical, general education, and educational.

In a language environment, learning is complex, as it includes: 1) a practical (communicative) goal, i.e. the purpose of learning to communicate in Russian;

2) an educational purpose, i.e. the purpose of expanding the cognitive base of students through the formation of metalanguage, regional studies, professional and universal knowledge;

3) the educational purpose, which consists in forming a positive attitude among foreign students towards Russia, its history, culture, and people.

The general education purpose is to form for l students

knowledge of regional studies (about the geography and history of Russia, about the current state of society, about material and spiritual culture);

about the Russian language in comparison with the native language — knowledge that allows you to assimilate a new system of concepts through which reality can be perceived.

The educational purpose also involves the development of:

- attention, memory and thinking;
- communication and cognitive abilities;
- general academic skills and abilities — to work with a book and a dictionary, express your thoughts in written and oral forms, etc.

Educational purpose are solved in the course of academic and extracurricular work and are aimed at forming students' commitment, tolerance, the ability to behave with fellow students, seniors and patients, to comply with the internal regulations of KSMU, the rules of stay in the territory of the Russian Federation.

Educational purpose and objectives of the course

1. Fostering tolerance towards representatives of a foreign cultural environment.
2. Teaching the basic techniques of effective intercultural interaction.
3. Fostering interest in further study of the Russian language system.
4. Education of a harmoniously developed linguistic personality.

List of language competencies acquired by students upon completion of their studies:

1. Pronunciation and intonation minimum:
2. Word formation and morphology:

2.1. Word composition.

2.2. Grammatical minimum.

A) Noun. Animate and inanimate nouns. Gender and number of nouns. Case system of nouns. Formation, meaning and use of cases.

B) Pronoun

C) Adjective

D) Verb

E). Numeral.

E) Adverb.

G) Service parts of speech

3. Syntax.

The place of the discipline (module) in the structure of the educational program

The discipline "Foreign Language" refers to the humanitarian cycle of disciplines.

The discipline "Foreign Language" in the 1st year is a new discipline and does not imply a connection with other previous courses and disciplines.

The discipline "Foreign Language" is auxiliary in the study of the following disciplines: history of medicine, chemistry, physics, mathematics, biochemistry, etc.. The peculiarity of the discipline is its applied and practical focus - preparing students for clinical practice, transferring theoretical knowledge to the sphere of professional communication in the country of their immediate residence and training.

The area of professional activity of foreign graduates who have mastered the pharmacist program includes pharmaceutical activity in the sphere of circulation of medicines in Russian, in accordance with the current legislation of the Russian Federation and professional standards.

Learning objectives of the discipline:

As a result of studying the discipline, students must master the following competencies:

General cultural competencies:

OK-5 (readiness for self-development, self-realization, self-education, use of creative potential).

OK-8 (readiness to work in a team, tolerant perception of social, ethnic, religious and cultural differences).

Professional competencies:

OPK-2 (readiness for oral and written communication in Russian and foreign languages to solve professional tasks)

Calendar of practical classes
1,2 semesters

	Sections / Topics Discipline	**Total labor intensity (hours)**	**Types of educational activities, including independent work of students and workload (in hours)**			**Forms of current monitoring of academic performance**
			Topics of educational activity, including independent work of students and workload (in hurs)		**Independent work of students**	
			lectures	**Practical classes**		
	Section 1. Introductory phonetic course (Lessons: 1-5).	60		40	20	
.	Topic 1.1. Phonetics. Vowels. Voiceless and voiced consonants. Sonants. Intonation constructions IK-1 and IK-4. Complex sentences with connecting and adversative	12		8	4	dictation, role play, reading subtest, listening (distance course).

	conjunctions.					
.	Topic 1.2. Phonetics. Correlation of phonemes and their letter designations. Affricates. Category of gender. Classes of pronouns	12		8	4	dictation, role play, reading subtest, writing subtest, speaking subtest, listening subtest.
.	Topic 1.3. Phonetics. Soft consonants. Grammar. Category of number. Category of animate/inanimate. Concept of conjugation. Verbs of the first conjugation. Concept of subject and predicate.	16		10	6	Vocabulary dictation, dictation with grammar task, role play, test, listening and a test (distance course).
.	Topic 1.4. Meaning of the direct object. Verbs of the second conjugation. Category of adverb. Adverbs of manner.	16		10	6	Reading subtest, speaking subtest, writing subtest, listening subtest.
.	Контрольное занятие по разделу 1.	4		4		Control lesson on section 1.
	Section 2. *Elementary level. Initial stage of learning Russian. Prepositional-case course (Lessons: 6-10)*	96		64	32	
.	Topic 2.1. Gender and number of adjectives. Adjectives and adverbs of manner. Infinitive constructions. Future complex tense of the verb	16		12	4	test, reading subtest, speaking subtest, writing subtest
.	Topic 2.2. Prepositional case in the meaning of place. Adverbs of place and time. Past tense of the verb. Cardinal	18		12	6	dictation, dictation with grammar task, reading subtest, speaking subtest, writing subtest, role play, test, Listening

	numbers.					and test (distance course).
	Topic 2.3. Prepositional case of nouns and personal pronouns in the meaning of place and object of speech and thought. Prepositions в, на, о (об).	22		16	6	dictation, dictation with grammar task, reading subtest, speaking subtest, writing subtest, role play, test, Listening and test (distance course).
.	Topic 2.4. The concept of verb types. Use of verb types in the past tense. Infinitive constructions. Demonstrative pronouns.	36		20	16	dictation, dictation with a grammar task, reading subtest, speaking subtest, writing subtest, role-playing game, test.
.	Test lesson for section 2. (Lesson 10)	4		4	-	Grammar control-testing. Subtest Listening and test (distance course).
	Section 3. Basic level. Intermediate stage of learning Russian (Lessons 11-15).	60		34	26	oral survey, vocabulary dictation, teacher-student dialogue
	Topic 3.1. Use of verb types in the future tense. Accusative in temporal and directive meanings. Concept of verbs of motion. Complex sentence with a subordinate clause of time and condition.	14		8	6	dictation, role play, reading subtest, listening.
.	Topic 3.2. Basic meanings of the genitive case: meanings of possessor, absence; starting point of movement.	16		10	6	dictation, role play, reading subtest, writing subtest, speaking subtest, listening subtest.
.	Topic 3.3. Basic meanings of the genitive case (continued): genitive partitive, quantities, measures and degrees. Imperative.	14		6	8	Vocabulary dictation, dictation with grammar task, role play, test, listening and test.

.	Topic 3.4. Accusative case of animate nouns. Infinitive constructions with the word "must". The concept of a direct and indirect object.	12		6	6	Reading subtest, speaking subtest, writing subtest, listening subtest.
.	Test lesson for section 3. (Lesson 15.) Credit	4		4		Grammar control-testing. Subtest. Listening and test.
	Section 4. Basic level. General proficiency (Lessons 16-20).	72		40	32	
	Topic 4.1. Dative case of the addressee of nouns and personal pronouns.	16		8	8	dictation, role play, test, reading subtest, speaking subtest, writing subtest
	Topic 4.2. Basic meanings of the dative case (continued). Complex sentences with a subordinate clause of purpose.	16		8	8	dictation, dictation with grammar task, reading subtest, speaking subtest, writing subtest, role play, test, listening and test.
	Topic 4.3. Instrumental case, sociative. Preposition c (co).	16		8	8	dictation, role play, test, reading subtest, speaking subtest, writing subtest
	Topic 4.4. Generalization of the studied grammatical material.	16		8	8	dictation, dictation with grammar task, reading subtest, speaking subtest, writing subtest, role play, test.
	Test lesson for section 4. (Lesson 20.)	4		4		Grammar control-testing. Subtest Listening and test.
	Credit	4		4		Final Grammar Test. Monologue on the topic. Dialogue
3, 4 *semesters*						

3 *semester*	
	Section 5. Anatomy of the head and neck

	Topic 5.1. Anatomical structure of the skull. Upper and lower jaws. Terminological vocabulary. Declension of nouns (systematization). Word-formation suffixes of nouns. Lexical and grammatical models of scientific style of speech.	6		3	3	reading, dictation, answering questions, retelling
	Topic 5.2. Anatomical structure of the cervical spine. Muscles of the head and neck. Terminological vocabulary. Verb control. Accusative case of adjectives (singular, plural). Lexical and grammatical models of scientific style of speech.	9		6	3	reading, listening, answering questions, retelling
	Section 6. Formation and development of dentistry as a science					
	Topic 6.1 From the history of dentistry. Terminological vocabulary. Adjective. Number of adjectives. Declension of adjectives. Genitive case of adjectives (singular, plural)	6		3	2	reading, answering questions, retelling
	Topic 6.2. Famous dentists. Terminological vocabulary. Prepositional case of adjectives (singular, plural)	6		3	2	reading, answering questions, retelling
	Section 7. Structure of teeth, organs and tissues of the oral cavity.					
	Topic 7.1. Masticatory apparatus. Terminological vocabulary. Dative case of adjectives (singular and plural). Lexical and grammatical models of scientific style of speech.	9		6	3	reading, retelling, answering questions, completing pre-, pre- and post-text tasks
	Topic 7.2. Tooth structure. Dental tissues. Terminological vocabulary. Prepositional case of adjectives (singular, plural)	9		6	3	reading, retelling, answering questions, completing pre-, pre- and post-text tasks
	Generalization of the studied lexical and grammatical material	6		3	3	Completing tasks
	Control of the studied material (summary)	5		3	2	Test, control work.
	credit with grade	3		3		oral response
Всего за семестр		54		36	18	
4th semester						
	Section 8. Organ Systems					

	Topic 8.1. Nervous system. Nerves of the head. Terminological vocabulary. Active participles of the present tense. Teaching how to draw up a nominative plan. Restoring information using a diagram.	8		5	3	reading, retelling, answering questions, completing pre-, pre- and post-text tasks, composing questions, diagrams
	Topic 8.2. Digestive system. Oral mucosa. Salivary glands. Medical terminology. Past active participles. Lexical and grammatical models of scientific style of speech..	8		5	3	reading, retelling, answering questions, completing pre-, pre- and post-text tasks
	Topic 8.3. The relationship between the state of the oral cavity and the functioning of the digestive system. Medical terminology. Passive participles of the present tense.	8		5	3	reading, retelling, answering questions, completing pre-, pre- and post-text tasks
	Раздел 9.					
	Topic 9.1. Types of occlusion in dentistry. Medical terminology. Lexical and grammatical models of scientific style of speech. Passive participles of the past tense.Short forms of participles.	16		10	6	reading, retelling, answering questions, completing pre-, pre- and post-text tasks
	Topic 9.2. Peculiarities of dental and oral hygiene. Medical terminology. Lexical and grammatical models of scientific style of speech. Generalization of the studied lexical and grammatical material	8		5	3	reading, answering questions, completing pre-, pre- and post-text tasks
	Final test	3		3		test
	credit with grade	3		3		oral response
Total for the semester		54		36	18	
Total:		108	-	72	36	

Methodological materials defining the procedures for assessing knowledge, skills, abilities and (or) experience of activities characterizing the stages of competency formation

The procedure for assessing learning outcomes is carried out on the basis of the Regulation of Kazan State Medical University on the forms, frequency and procedure for current monitoring of academic performance and midterm assessment of students. The following types of students' educational activities in the discipline "Foreign Language" are subject to current monitoring of academic performance (hereinafter referred to as CMAP): attendance of practical classes, results of independent work. CMAP is conducted by a teacher assigned to implement the educational program in a specific academic group or a teacher responsible for the types of educational activities of students.

When conducting practical classes, it is envisaged to use active forms of classes, built in a traditional form (including a survey) and using interactive teaching methods, in combination with extracurricular (independent) work with the support of a teacher.

The current control is conducted at each lesson to check the degree of development of specific skills and the level of proficiency in the studied dose of language material, to stimulate students' academic work, and to improve the methods of teaching the discipline. It can be conducted during all types of classes in the form selected by the teacher or provided for by the subject plan. The results of the current control are reflected in the log of academic classes and are used by the department for the operational management of the educational process.

The current control of academic performance should be organized and conducted in such a way as to identify:

the degree of development of students' skills and abilities in each section and topic;

the degree of responsibility of students for academic work, the level of development of their abilities, the reasons that prevent them from working productively;

the level of mastering the skills of independent work;

deficiencies in the organization and conduct of classes (independent work).

Based on the analysis of the results of the current control, each teacher must promptly outline measures to eliminate the identified deficiencies in the organization of the educational process in the discipline of the department. Well-organized and methodically competently conducted current control should stimulate students' interest in studying the Russian language, increase their activity in learning, and also develop the habit of systematically working independently on the educational material.

Students' work is assessed during practical classes, which involves doing exercises (orally and in writing), oral answers.

The student's answer is estimated at 10 points.

Current control of the results of independent work in workbooks, written tests, oral surveys, and test control is carried out in the form of assessing the results of independent work in workbooks, completing written tests, oral surveys, and testing. Current control of the results of independent work is carried out at each lesson for all students. At the end of each section of the thematic plan (module), the current control is carried out for all students in the group. During practical classes, the teacher evaluates any, especially successful action (for example, participation in a discussion), only the solution of a full-fledged problem is marked. Teachers will strive to determine the assessment in the dialogue (external assessment of the teacher + external assessment of students + self-assessment). The student has the right to challenge the grade given. A separate mark is given for each academic task or group of tasks demonstrating mastery of a separate skill.

The assessment of students' academic performance on a separate topic is expressed on a 10-point scale, where 0-6 – "bad", 7 - "satisfactory", 8 – "good", 9 – "very good" and 10 - "excellent".

Module on a 100-point scale. The assessment must be reflected in the academic journal.

69 (unsatisfactory):

- Non-attendance of practical classes or a large number of absences.
- Incorrect response or refusal to respond
- Lackofactivityin class
- Low level of material proficiency.
- Independent work:Tasks for independentwork are not completed, either they contain a lot of errors, or there is a high percentage of plagiarism.
- Lexical and grammatical errors in tasks.

70-79 (satisfactory):

- Attend most of the practical classes
- The answer is correct, but not sufficient

- Low activity in the classroom
- Low level of material proficiency.
- Independent work:
- Tasks for independent work are completed, but with errors or with an average level of borrowing
- Lexical and grammatical errors in tasks.

80-89 (good):

- Attending all practical classes, skipping only for a valid reason
- Correct, sufficient answer.
- Average activity per class
- Average level of material proficiency.
- Independent work:
- Tasks for independent work are mostly performed without errors and with a small amount of borrowing.
- There are no lexical or grammatical errors.

90-100 (excellent):

- Attending all practical classes, skipping only for a valid reason
- Regular correct answers, includingusing additional literature
- High activity in the classroom
- Fluent knowledge of the material.
- Independent work:
- Tasks for independent work are completed without mistakes or borrowing
- There are no lexical or grammatical errors.

90-100 points – the student demonstrates knowledge of the minimum vocabulary of a conversational nature, the ability to understand elementary questions by ear (conversation), correctly use grammatical forms, good command of all types of speech activity, possession of both productive and reproductive speech skills.

80-89 points - the student has sufficient command of all types of speech activity, mainly correctly uses the lexical minimum and the studied grammatical and syntactic material in oral and written forms of expression, demonstrates sufficient competence in the socio-cultural and socio-everyday spheres of communication with native speakers. The mistakes made are not of a communicative nature, reproductive speech skills prevail.

70-79 points – the student has a poor command of all types of speech activity, has a limited vocabulary and does not always use it correctly, has significant difficulties in using the studied grammatical and syntactic material in oral and written forms of expression, makes a significant number of communicative errors, demonstrates only reproductive speech skills, has low competence in the socio-cultural and social-everyday spheres of communication with native speakers.

less than 70 points - the student has practically no command of the main types of speech activity, the lexical minimum and lexical and syntactic material, finds it difficult to use the studied material in both forms of expression. The mistakes are of a communicative nature, competence in the socio-cultural and socio-everyday spheres of communication with native speakers has not been formed.

The final (rating) grade is made up of grades for modules (maximum 100 points per module), the current grade (maximum 10 points). Assessment and evaluation criteria:

List of primary and secondary educational literature required for mastering the discipline (module)

Primary educational literature

List of primary literature Number of copies

1. Moskovkin L.V., Silvina L.V. Russian language. Elementary course for foreign students. Publishing house SMIOPress, 2014. – 528 p.

2. Shustikova T.V., Kulakova V.A. Russian language is my friend. Basic level.- 6th ed., corrected. And add.- Moscow: RUDN, 2014. – 849 p.

3.T.G. Grigoryan, S.R. Nalbandyan, I.A. Karakhanyan, T.K. Asatryan.

A textbook on the Russian language for students of the Faculty of Dentistry. – Yerevan: Publishing House of Yerevan State Medical University named after M.H. Heratsi, 2017. – 130 p.

4. V. V. Bely, V. A. Stadnik. Russian language for future dentists: teaching aid. – 2nd ed. – Minsk: BGMU, 2015. – 143 p.

Additional educational literature

1. Evdokimova A.G., Baltaeva V.T. Phonetics: from A to Z: a teaching aid for foreign students. – Kazan, KSMU, 2011. – Part 1.

2. Evdokimova A.G., Baltaeva V.T. Phonetics: from A to Z: a teaching aid for foreign students. – Kazan, KSMU, 2011. – Part 2.

3. Evdokimova A.G., Baltaeva V.T. Russian language in stories and dialogues: a teaching aid for foreign students. – Kazan, KSMU, 2012. – Part 1.

4. Evdokimova A.G., Baltaeva V.T. Russian language in stories and dialogues: a teaching aid for foreign students. – Kazan, KSMU, 2012. – Part 2.

5. Evdokimova A.G., Baltaeva V.T. Cases: a teaching aid for foreign students. – Kazan, KSMU, 2011. – Part 1.

6 Kuznetsova E.G. Verb: a teaching aid for foreign students. – Kazan, KSMU, 2011.

7 Yakubova L.S., Kuznetsova L.G. Preparing for the final exam in Russian: a teaching aid for foreign students. – Kazan, KSMU, 2012. – Part 1.

8 Yakubova L.S., Baltaeva V.T., Nikityuk V.P. Russian-Hindi educational dictionary: for foreign first-year medical students studying in an intermediary language: more than 3190 units. – Kazan, KSMU, 2014. – 116 p.

9. Anikina M.N. Stairs: a textbook on the Russian language for beginners. For English-speaking students. – M.: Russian language. Courses, 2015. – 463 p.

10. Akishina T.E. Learn Russian in 10 days in a new way (for English speakers). – M.: Russian language. Courses, 2015. – 223 p.

11. Koprov V.Yu. Syntax of the Russian language for doctors and biologists. Object and adverbial relations. M.: Russian language. Courses, 2017. – 327 p.

12. Babalova L.L. Workshop on Russian grammar: 2 hours – Part 2. – M.: Russian language. Courses, 2017. – 351 p.

13. . Khavronina S.A. Russian in exercises: a tutorial. – M.: Russian language. Courses, 2018. – 328 p.

List of resources of the information and telecommunications network "Internet" (hereinafter referred to as the "Internet") required for mastering the discipline (module)

1. Fedotova S.I., Chevela O.V. Russian as a Foreign Language. Part 1. Elementary Level. – Distance Course. – http://www.kgmu.kcn.ru:40404/moodle/course/view.php?id=467

2. Portal on Russian as a Foreign Language “RussNet” (in English).

http://www.russnet.org

3. Resources for Students of Russian Language and Culture of Russia (Russian Studies Department, Bucknell University) (in English).

http://www.departments.bucknell.edu/russian

4. Evdokimova A.G., Baltaeva V.T. Russian Language in Stories and Dialogues: A Teaching Aid for Foreign Students. – Kazan, KSMU, 2012. – Part 2.

5. Russian for everybody (Russian language for everyone) – Russian as a foreign language course RUDN 2000 (Russian and English versions).

http://www.LinguaRus.com

6 Russian Web Tutor (Interactive materials on Russian as a foreign language)
http://www.auburn.edu/~mitrege/RVT
7. Materials on Russian as a foreign language by Professor T. Bayer (Middlebury College).
http://www.middlebury.edu/~beyer/mapryal/
http://www. gramota.ru
8. Electronic catalog of the scientific library of KSMU [Electronic resource].
URL: http://library.kazangmu.ru
9. Electronic library system of KSMU Copyright holder: scientific library of KSMU (FS on intellectual property No. 2012620798, registration date 17.08.2012) [Electronic resource]. URL: http://old.kazangmu.ru/lib/
10. Electronic library system elibrary.ru — electronic versions of Russian scientific and technical journals. Current agreement No. D-3917 dated 14.02.2017. Access period: 14.02.2017 — 14.02.2018. Unlimited access from university computers [Electronic resource]. URL: http://elibrary.ru
11. Culture of written speech [Electronic resource]. URL: www.gramma.ru, free.
12. Encyclopedic Dictionary of Medical Terms [Electronic resource].
URL: http://studentmedic.ru
13 Russian dictionaries [Electronic resource]. URL: www.slovari.ru
14. National Corpus of the Russian Language [Electronic resource]. URL: www.ruscorpora.ru
15 Practical skills for a graduate of a medical university [Electronic resource] / Bulatov S.A., Anisimov O.G., Abdulganieva D.I., Akhmadeev N.R., Bikkineev F.G., Gorbunov V.A., Orlov Yu.V., Petukhov D.M., Sadykova A.R., Sayapova D.R. - Kazan: Kazan State Medical University. – Access mode: http://www.studmedlib.ru, free.

Information reference system:

National Corpus of the Russian Language

http://www.ruscorpora.ru/index.html - The Corpus of the Russian Language is an information and reference system based on a collection of Russian texts in electronic form. The corpus is intended for anyone interested in a variety of issues related to the Russian language: professional linguists, language teachers, schoolchildren and students, foreigners studying Russian.

Online translators and dictionaries with the Russian language:

http://online.multilex.ru/ - English-Russian online translator "Multilex"
http://www.rambler.ru/dict/enru/ - New English-Russian dictionary
http://slovari.yandex.ru/ - translation from/into Russian, German, French, Italian, Spanish, Latin, Ukrainian
http://www.multitran.ru/ - database of multilingual dictionaries.

Databases of Russian language dictionaries on the Internet

http://www.martindalecenter.com/Language_3_Russian.html – database in English
http://www.gramota.ru/slovari/online/ – database in Russian

Methodological guidelines for students on mastering the discipline (module)

Requirements for completing the test.

The test is aimed at identifying the level of students' mastery of lexical and grammatical knowledge, skills and abilities on the topics covered. The work indicates the topic and the student's full name, without a title page. The work is done on a computer or by hand in neat, clear handwriting. When completing the work, it is not allowed to use a textbook, dictionaries, or

other reference materials. If necessary, you can use a draft. Entries in the draft will not be checked or assessed.

Requirements for conducting an individual interview

The interview is conducted according to a list of questions known to students in advance, individually with each student. The latter must, having received the questions, explain the concepts that are given in these questions. The student does not receive additional time for preparation. No more than 5 minutes are allocated for working with one student.

Requirements for written answers to questions

The work is submitted in writing, no more than 15 to 20 minutes are allocated for them. The work must be individual in nature, if several works coincide, the teacher has the right to cancel them.

Requirements for tasks for assessing skills and abilities

The tasks are completed in the classroom, during practical classes. The tasks are individual in nature, the teacher has the right to decide whether to give them orally or in writing.

Requirements for test tasks

Tests for elementary and basic levels are used by the teacher to check the residual knowledge of students. Test tasks are designed for independent work without the use of auxiliary materials. To complete a test task, the student must carefully read the question. After reading the question, you should start reading the proposed answer options. You must read all the options and choose only one index (digital designation) as an answer, corresponding to the correct answer. In each test, only one of the options is correct. The choice must be made in favor of the most correct answer. A limited time is allocated for completing the test. It may vary depending on the level of the test takers, the complexity and volume of the test. As a rule, the time for completing a test task is determined based on the calculation

Requirements for situational tasks (role-playing games) - case method:

Case method is a form based on the study, analysis, and comprehensive consideration of a problem that is relevant for a given group of students. They must analyze the situation, understand the essence of the problem, propose possible solutions, and choose the best one. The essence of this method is that students are asked to find a solution to a situation that relates to real-life problems and the description of which reflects a practical task. A distinctive feature of this method is the creation of a problem situation based on facts from real life. Tasks are given in the form of special problems (cases), students gain knowledge as a result of analytical and creative activities. This method has a number of features that distinguish it from other interactive forms, for example: the central point is the problem, not the subject, the case must deal with a specific object, and not just with general theory, students are required to actively participate in the learning process, and not just be passive listeners.

The purpose of the elementary and basic levels of proficiency in the Russian language is the formation and further development of speech skills and abilities in all types of speech activity (reading, listening, speaking and writing), the formation and development of regional studies and socio-cultural competence.

To achieve this purpose, the main study time is allocated to practical work on the skills and abilities of speech communication, including: 1) teaching the language system; 2) developing speech skills of speaking, listening, reading, writing; 3) familiarization with the culture of the country of the language being studied (Russian as a foreign language, Russian as a foreign language, Russian as a native language); 4) educational tasks.

When studying the academic discipline, it is necessary to use active forms of learning and master practical skills to generate oral and written texts that are correct from the point of view of various norms of the Russian language, and adequately understand oral and written texts created by native speakers for native speakers in the conditions of natural speech communication (authentic texts).

Language and speech material is selected and distributed taking into account its communicative significance - first, students are taught the grammar and vocabulary most necessary for communication. New linguistic phenomena are presented as part of speech samples that are related to one or several communication situations. The learning process itself is to a certain extent similar to the process of real communication, since the basis of learning is communicative practice, the constant implementation of conditional communicative and genuine communicative exercises. All actions of the teacher and students are directed/

Rules of student conduct in classes on the subject "Foreign language":

- attend classes regularly;
- do homework;
- be prepared for class;
- not be late;
- listen carefully to the teacher's explanations;
- actively participate in discussions on a given topic;
- do not talk about abstract topics;
- be polite to others, observe the rules of etiquette of speech communication;
- use a mobile phone only with the teacher's permission and only for educational purposes;
- do not eat or drink;
- do not use obscene expressions, gestures;
- do not make noise;
- have a neat appearance, wear a white coat.

Standard control tasks or other materials necessary for assessing knowledge, skills and (or) experience of activities that characterize the stages of competence formation in the process of mastering an educational program

Letter dictation.

А, Д, Ж, З, Я, Х, С, Т, П, Р, Н, Ф, Ц, Й, Ю, У, К, Т, Ш, Щ, О, Ь, И, И, Ы.

Syllabic dictation.

ма-па-на
та-да-ба-па
шо-жо-со-зо
ду-му-ну
лэ-гэ-кэ

Task 1. Write the plural form.

Страна, аудитория, словарь, подруга, окно, картина, студент, студентка, карандаш, ручка.

Task 2. Fill in the table:

он	она	оно

Слова для справок: группа, журнал, тетрадь, стол, яблоко, сыр, масло, шарф, шкаф, семья, подруга.

Task 3. Complete the exercise according to the example:

***Образец*: Это я, а это мой друг.**

1. Это ты, а это … дом. 2. Это вы, а это…класс. 3. Это Анвар, а это…комната. 4. Это мы, а это…группа. 5. Это студенты, а это… институт. 6. Это Нина, а это… сумка. 7. Это я, а это… папа и мама.

Task 4. Insert possessive pronouns instead of periods:
– мой, моя, мое:
Это…друг. Это… тетрадь. Это…яблоко. Это…мама.
– твой, твоя, твое:
Это … ручка. Это … дом. Это … молоко. Это … папа.
– наш, наша, наше:
Это … класс. Это … столовая. Это … окно. Это … институт.
– Это … город. Это … столица. Это…журнал. Это … страна. Это … окно.

Task 5. Answer the questions according to the example:
Образец:
– Чей это карандаш? *– Чей это карандаш?*
– (я) *– Это **мой** карандаш.*
1. – Чья это тетрадь? 2. – Чей это класс? 3. Чье это яблоко?
– (я) – (мы) – (она)

1. – Чья это сумка? 2. – Чье это молоко? 3. Чей город?
– (ты) – (он) – (вы)

Intermediate module assessment criteria:

The control work has 5 tasks.
Completion time: 60 minutes.
70-79 points – satisfactory
80-89 points – good
90-100 – excellent
1 correct answer – 2 points. 15 incorrect answers – 70 points. 16 or more errors – fail.

Test
Instructions for completing the test
Time to complete the test - 50 minutes. You can use a dictionary when completing the test.
You have received a test. It consists of 3 parts and 30 test tasks. Choose the correct answer and mark the corresponding letter on the matrix.
PART I Tasks 1-5. Read the announcements. Say what a person should do if he understood them correctly.
1. В пятницу и субботу библиотека не работает. Вы можете взять книги в библиотеке ... .
(А) в понедельник (Б) в среду и субботу (В) в пятницу
2. Единый билет на все виды транспорта можно получить 25-27 марта. Вы можете получить билет в ... месяца. (А) начале (Б) середине (В) конце
3. Всем студентам необходимо получить в деканате студенческие билеты. Все студенты должны ... . (А) купить билеты на самолёт (Б) взять студенческий билет (В) получить студенческую визу
4. Расписание занятий по русскому языку висит на втором этаже. Вы хотите посмотреть расписание, поэтому Вам нужно ... . (А) спуститься на первый этаж (Б) пойти на второй этаж (В) подняться на третий этаж

5. Пожалуйста, не курите в коридоре. (А) В коридоре нельзя курить. (Б) Курить можно только в коридоре. (В) Все курят в коридоре.

Задания 6-10.

Прочитайте фразу и найдите ту, которая является продолжением прочитанной.

6. Мой друг отдыхает. (А) Он говорит только по-китайски. (Б) Будьте добры, говорите медленнее. (В) Прошу вас, не разговаривайте так громко.

7. Здесь так холодно. (А) Закройте, пожалуйста, окно. (Б) Включите, пожалуйста, свет. (В) Не курите, пожалуйста, здесь.

8. Извините, я сегодня опоздал. (А) В автобусе было много народа. (Б) Долго ждал автобуса. (В) На улице шёл дождь.

9. Я очень плохо себя чувствую. (А) Кабинет врача находится на втором этаже. (Б) Лекарство можно купить в любой аптеке. (В) Мне надо пойти к врачу.

10. Прекрасный костюм! Но он мне мал. (А) У вас есть другой размер, больше, чем этот? (Б) К сожалению, он слишком дорогой для меня. (В) Сколько стоит этот костюм?

The purpose of the test is to check the level of development of speech skills. The following skills are the objects of control: - predict a response based on what has been read (tasks 1-5); - predict the content that may be a continuation of the message read (tasks 6-10); - understand the basic information contained in the text, as well as some details that carry an important semantic load.

Credit (certification) materials – 1,2nd semesters

Approximate topics for a monologue:

1. Россия (Russia)
2. Моя страна (My home country).
3. Праздники в России (Holidays in Russia).
4.Праздники в моей стране (Holidays in my country).
5.Город, в котором я учусь (The city where I study).
6. КГМУ (KSMU)
7. Великие люди России (Great people of Russia).
8.Древняя Русь (Ancient Rus'_
9. Великие люди моей страны (Great people of my country).
10. Мой родной город (My hometown).

Approximate topics for a dialogue:

1. Знакомство в общежитии (Acquaintance in a hostel).
2.В поликлинике (In a clinic).
3. У врача (At the doctor's).
4. В деканате (In the dean's office).
5.В столовой (In the canteen).
6. Разговор по телефону (Conversation on the phone).
7. Наше расписание (Our schedule)
8. В аэропорту (At the airport).
9. Друг болен. Вызов врача (A friend is sick. Calling a doctor).
10. В библиотеке (In the library).

Credit with grade (certification) materials – 3, 4 semesters

Анатомическое строение черепа

Анатомическое строение шейного отдела позвоночника. Мышцы головы и шеи.

Известные стоматологи.
Жевательный аппарат
Строение зуба. Ткани зуба.
Нервная система
Пищеварительная система. Слизистая оболочка полости рта
Виды прикуса в стоматологии.
Особенности гигиены зубов и ротовой полости.

Anatomical structure of the skull
Anatomical structure of the cervical spine. Muscles of the head and neck.
Famous dentists.
Masticatory apparatus
Tooth structure. Tooth tissues.
Nervous system
Digestive system. Oral mucosa
Types of bite in dentistry.
Features of dental and oral hygiene.

PHILOSOPHY

Teachers: Dr.Sc. Alexei Gurianov, Dr.Sc Svetlana Nagumanova, PhD Sarbinaz Gayazova
Building, Department, classroom # NUK, Department of History, Philosophy, Sociology, 350, 348
Contact details:

- Telephone number: 89046724398 (Dr.Sc. Alexei Gurianov)
- E-mail address: alexeigurianov@rambler.ru
- Office and working hours: 348 (9-17)

Total hours — 108:
- Lectures 16 hours;
- Practical classes 38 hours;
- Independent work 18 hours;
- Control 36 hours

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1175).
Course objectives:
The purpose of mastering the discipline
The purpose of mastering the Philosophy discipline is formation of humanistic and scientific worldview, systematic and critical thinking, active and responsible behavior by means of a range of philosophical ideas and approaches developed throughout the history of philosophy.

Tasks of the discipline:

– Contribute to formation of comprehensive systematic view at the world and the man as its integral part;
– Familiarize with the diversity of outlooks, philosophical schools and doctrines;
– Develop the ability of critical analysis of approaches to worldview problems;
– Develop the ability to formulate precisely, argue and present one's own views in a logical and consistent manner.

Course topics:

Calendar plan of lectures

1. Philosophy - concept, genesis, subject matter, structure
2. Philosophy - features, functions, stages of development, benefits
3. Early Greek Philosophers (pre-socratics)
4. Hellenistic and Christian philosophy
5. Modern Metaphysics
6. 18-19th Century Philosophy
7. Ancient and Modern Ethics

Calendar plan of practical classes

1. Historical interpretations of philosophy, main subject-areas are given together with a consideration of the dialogue that raises main points about philosophy, reasons of philosophizing and modern problems discussed with the help of philosophy.
2. Basic branches of philosophy, subdivision of philosophy, the place philosophy occupies among other types of historical worldviews. Origin of philosophy and the relationship between philosophy and science. Basic philosophical questions.
3. Metaphysics as the study of the nature of being; historical interpretations and main points about metaphysics, the derivation of the word. Comparison and contrast of the metaphysics of the three Milesians.
4. Comparison and contrast of the metaphysics of Heraclitus and Parmenides. Parmenides's way of thinking. Comparison and contrast of the metaphysics of the atomists, Anaxagoras, Empedocles.
5. Plato's metaphysics incorporates ideas from some of the other, earlier philosophers mentioned before. Identification of as many of those philosophers and ideas as possible. Explanation of two statements "The behavior of atoms is governed entirely by physical law." "Humans have free will." Examples of a Platonic Form other than mentioned in the lecture. Discussion on whether or not the forms really exists, and why. Some reasons for believing that a world of Forms exists separately from the world of concrete, individual things. Are appearances real for Plato? Are they real in fact?
6. Aristotle's first philosophy. What are the four Aristotelian causes of a baseball? Aristotle believed that if individual horses didn't exist, then there would be no such things as the Form horse. Is this correct? Discussion with the help of an excerpt from Aristotle's Metaphysics.
7. Explanation of Augustine's solution to the problem of evil, and determination of whether or not it is sound. Explanation and evaluation of Aquinas's reasons for believing that ultimate human happiness does not consist in wealth, worldly power, or anything in this life. Compare and contrast the views of the Academics and the Pyrrhonists. Module 1 test.
8. "Nothing can be known." What is a powerful objection to this claim? "I do not know whether or not knowledge is possible." Critical evaluation of this claim. Suggestion of an argument to defend some version of total skepticism. Creation ex nihilo. Some reasons for thinking that creation ex nihilo is impossible. Compare and contrast Plato's The Good, Plotinus's One, and Augustine's God. Explanation of the difference between realism and conceptualism.
9. "Modern science undermines metaphysical dualism." Explanation of this remark. Explain how all mental activity reduces to matter in motion, according to Hobbes. "The things that really

are in the world outside us are those motions by which these seemings are caused," Explain and critically evaluate this assertion by Hobbes.
10. The relationship of the mind to the body, according to Spinoza. Berkeley's reasons for saying that sensible objects exist only in the mind. Are the qualities of sensible objects (e.g., size, color, taste) all equally "relative" to the observer?
11. Definition and explanation of dualism, materialism, idealism, and neutralism. Explain and critically evaluate either Descartess "dream conjecture" or his "evil demon conjecture." Difference between primary and secondary qualities.
12. Do you ever observe anything other than your own perceptions? Explain. Explain what this means and what Hume's reasons were for holding it. Will the future resemble the past? Can you know that it will, or must you merely assume that it will?
13. Kant about the possibility of knowledge. The ordering principles of the mind. Things-in-themselves. If knowledge begins with experience, must it also rise from experience? Explain. Is it possible that we may someday experience an event that is in neither space nor time? If not, why not? Is it possible for extraterrestrial aliens to experience things that are not in space or time? Do infants have experience? Do cats? Fish? Explain. Can we have knowledge of things in themselves? Clarification of what you mean by "things-in-themselves."
14. Absolute Idealism: Hegel and Dialectical methodology. The notion of spirit and dialectic. The history of mankind as self-cognition of the Absolute. Triads and the human being as the vehicle of the absolute spirit.
15. The challenge of ethical relativism. Sophists and Socrates. Virtue ethics. Plato's ethical and political theories. Aristotle's ethical and political theories. Naturalism. Hedonism. Epicureanism. Stoicism. Morally good actions have in common? Defense of the view. "What is right is what you yourself believe is right." Critical evaluation of this statement.
16. The connection between virtue and happiness, in the philosophy of Plato. Explanation of how Plato's theory may be regarded as "complete." Happiness according to Aristotle. When can we be said to be virtuous, according to him? The connection between habit and moral character, for Aristotle. Compare and contrast of the ethical philosophies of Epicureanism and Stoicism. Evaluation of Aristippus's philosophy. (Excerpts from "Gorgias" by Plato)
17. Hobbes. Contractarianism. Egoism and altruism. Hume on moral judgements. Deontological ethics. Kant on reason and morals. Categorical imperative. Utilitarianism. Bentham and Mill. Nietzsche on two moralities. Beyond "good" and "evil". Do the consequences of an act determine whether it is good, or the intent with which the act has been taken? Or something else altogether? Kant held that there is no moral worth in helping others out of sympathy for them. What reasons are there for holding this view?
18. What does it mean to say that rational beings should be treated as ends and not as means? Was Bentham correct in saying that ought, right, good, and the like have meaning only when defined in terms of pleasure? Explain the difference between psychological hedonism and ethical hedonism. Was Mill correct in saying that some pleasures are inherently better than others? Explain the paradox of hedonism. What does Nietzsche mean when he says life is the will to power? Are moral value judgments merely expressions of taste? Explain. "There cannot be moral values if there is no God." Critical evaluation of this assertion.
19. Evolution of analytic philosophy: logical atomism, phenomenalism, and post-phenomenalist epistemology and metaphysics. Bertrand Russel, Ludwig Wittgenstein, John Dewey, Richard Rorty. Some reasons for believing that a human being is not a purely physical thing. If humans are purely physical things, could they have free will? Explanation. Assuming that it is possible to doubt the existence of physical things but not your own mental states, does that show that your mental states are not physical things? Module 2 test.

Text books and required supplies:

1. Philosophy: The Power Of Ideas, 11th Edition / Brooke Noel Moore and Kenneth Bruder.McGrawHill, 2023.

2. Humanly Possible: Seven Hundred Years of Humanist Freethinking, Inquiry, and Hope / Sarah Bakewell. Penguin Press. 2023
3. Stanford encyclopedia of philosophy http://plato.stanford.edu/

Evaluation and grading:

Monitoring progress is carried by the end of each of 2 modules (MCQ test on the portal).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during breaks
- Using phone is allowed only during breaks

Example of module No. 1. Ancient, Hellenistic and Medieval Ohilosophy

1. Which of the following is the "fundamental metaphysical question"?
   How should I live?
   What can I know?
   What is the nature of being?
   What is the perfect form of government?

2. The question: "What is prior Mind or Matter?" refers to:
   Epistemology
   Ontology
   Philosophy of science
   Physics

3. … was the first to come up with the idea of perfect, eternal reality

Plato
Heraclitus
Pythagoras
Empedocles

4. Who worked out a four element doctrine of origin of the world?
Leucippus
Empedocles
Anaxagoras
Thales

5. Which does *not* apply to Plato's metaphysics?
Two realms
Theory of Ideas
Indivisible Forms
No independent existence apart from particular objects

6. Which doctrine of St. Augustine was at odds with Neoplatonism?
The unchanging God
The Incarnation of Jesus Christ
The nature of evil
The timelessness of God

7. What wasn't among reasons Sextus said he had for thinking that one must suspend judgment on every issue?
We are never aware of any object as it exists independently of our perception
The thoughts and perceptions of one person differ from those of another
To every argument an equal argument is opposed
Nothing can be known for certain

Example of module No. 2 on the section of Modern Metaphysics and Contemporary Philosophy

1. According to Hobbes, the source of knowledge is
Motion in internal objects
Motion in external objects
Motion in mental processes
All of the above

2. Hobbes said that voluntary actions are caused by
Mental activity
Desire
Perception of outer objects
Decisions

3. Locke said that secondary qualities of things are
Size and shape
Color and weight
Extention, number and sound
Color, smell and taste

4. The doctrine that "there's nothing in the intellect that wasn't first in the senses" was accepted by
The rationalists
Spinoza
The empiricists
Descartes

5. David Hume said that
All our knowledge is limited to what we experience and what we discover by reason
All our knowledge is limited to what we discover by reason
All our knowledge is limited to what we experience
Infinite knowledge is possible (in principle)

6. Which of the following claims would be *rejected by* Kant?
All knowledge arises from experience
Relative to the experienceable world, Kant was not a skeptic
Relative to *das Ding-an-sich,* Kant was a skeptic
Perceptions, to qualify as experience, must be connected or unified in one consciousness

7. The distinction between phenomena and noumena is most closely associated with
G. W. F. Hegel
Immanuel Kant
John Stuart Mill
David Hume

EVALUATION OF THE MODULE ANSWER

The MCQ test comprises 30 questions and is designed be completed for 30 minutes as the time limit. The number of correct answers determines the final grade for the module:

27-30 correct answers are evaluated by excellent grade (91-100 with the step of 2,5 points per each correct answer);

23-26 correct answers are evaluated by excellent grade (81-90 with the step of 2,5 points per each correct answer);

19-22 correct answers are evaluated by excellent grade (70-80 with the step of 2,5 points per each correct answer).

The students that fails to be graded for the module may have a second chance at the end of the course before final examination

SAMPLES OF EXAM TICKETS

Question card #1

Topic: **Definition of philosophy.**

1) What is the ancient Greek and Roman definition of philosophy?
2) What is the definition of philosophy in Middle ages?
3) What is the definition of philosophy by I.Kant?
4) Why philosophical problems cannot be solved? (Give examples)
5) Why philosophical questions have consequences for everyone? (Give examples)

Question card #2

Topic: **Main subject-areas of philosophy.**

1) List all the philosophical disciplines with definitions.
2) Illustrate each discipline with 2-3 questions appropriate to that discipline.
3) How did early Greek philosophers understand being?
4) What was the main theme of Kantian epistemology?

5) What is the essence of ethics of Epicurus.

EVALUATION OF THE EXAM ANSWER

1. The evaluation criteria are as follows:

The correct and complete answer is "excellent";
The correct but incomplete answer is "good";
Incomplete answer with errors is "satisfactory";
The incorrect answer is "unsatisfactory";
Even if one module has not been passed, the student gets an "unsatisfactory" grade for the exam.
If all modules are successfully passed, the student starts the exam and takes an examination card.

2. The ticket consists of the theoretical task represented by three questions in accordance with the academic program of the discipline. The content of the discipline is structured in themes (sections). On the exam, the student is given the opportunity to view the academic program. Students are given 40 minutes to prepare a response to the questions in the card.

3. The interview with the teacher is conducted according to the following scheme: the teacher reads the student's written answer to the questions and then asks three additional questions (two of them are to test an understanding of the themes considered, the third one – beyond the card but within the program, to test knowledge of the discipline on the whole).

4. The Criteria for evaluating the response to questions:

90-100 (excellent)	clearly formulated personal position, combination of philosophical argumentation with textual information, correct use of scientific terminology, clear logical structure of the answer.
80-89 (good)	clearly formulated personal position, predominance of personal reflection over philosophical argumentation and textual information, the correct use of scientific terminology, clear logical structure of the work with insignificant faults
70-79 (satisfactory)	implicitly formulated personal position, predominance of personal reflection over philosophical argumentation and textual information, correct use of scientific terminology, implicit logic of work
69 and less (unsatisfactory)	implicitly formulated personal position, or lack of it, or a high share of borrowings, a lack of philosophical reasoning and terminology, implicit logic of work

Note: if the written answer is correct and complete, but the student's oral answers to the teacher's test questions are incorrect or incomplete, the final rating score is reduced.

5. If a student uses a cheat sheet, a mobile phone, headphones, a watch-cheat on the exam, then an act of violation of the procedure is drawn up. The student receives an "unsatisfactory" grade.

6. The final rating score of the student is calculated on the computer. It is transferred to the record books on the next day after the exam.

7. Retaking the exam in order to raise the grade is allowed with the permission of the Pro-rector for educational activities.

8. Pre-schedule passing of the exam in the discipline of Philosophy is allowed in special cases with the permission of the Dean's office and the head of the Department if appropriate documents are provided.

9. In the process of answering exam questions the teacher has the right to record the student's answers on a voice recorder. This procedure is carried out to avoid disagreement about the objectivity of assessing students' responses by the teacher.

LATIN LANGUAGE

Teachers: PhD Sitdikova Anastasiya Vladimirovna
Building, Department, classroom # NUK, Department of the Latin Language and Medical Terminology, 523, 525, 527, 530, 531
Contact details:

- Telephone number: 89274562251 (PhD Sitdikova Anastasiya Vladimirovna)
- E-mail address: nastyyap@mail.ru
- Office and working hours: 536 (8-16)

Total hours – 108:

- Practical classes – 60 hours;
- Independent work – 48 hours.

Course description:
Practical class is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Independent work is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1733).
Course objectives: The purpose of mastering the discipline
The purpose of mastering the **Latin language** discipline is to lay the foundations of terminological training for future specialists who are able to conscious and competitive use medical terms in Latin, understand the ways of forming terms, and know the specifics of various subsystems of medical terminology. In addition to professional tasks, general educational and general cultural tasks are decided. They give an idea of the common language patterns characteristic of European languages, of the organic connection of modern culture with ancient culture and history.
Tasks of the discipline:
- to know rules for writing medical and pharmaceutical terms (in Latin) for deciding problems of professional activity;
- to use Latin terminological units and terminological word-building elements in professional activities;
- to apply Latin medical and pharmaceutical terminology in professional activities.

Course topics:

Calendar plan of practical classes

Unit 1. Latin grammar. Anatomical terminology (Part 1)

1.1 The Latin alphabet. Reading rules.

1.2 The rules of reading (continuation). Stress setting.
1.3 Noun: the main categories. Uncoordinated definition.
1.4 Uncoordinated definition (continuation). Plural forms of 1, 2, 4 and 5 declensions.
1.5 Adjective: main categories. Singular and plural forms of first group adjectives. Coordinated definition.
1.6 Coordinated definition (continuation). Preparation for the module No. 1.
1.7 Module No. 1.

Unit 2. Latin grammar. Anatomical terminology (Part 2)

2.1 Singular and plural forms of 3 declensions. Types of 3 declension.
2.2 Second group adjectives.
2.3 Degrees of comparison of adjectives.
2.4 The structure of the anatomical term.
2.5 The structure of the anatomical term (continuation). Preparation for the module No. 2.
2.6 Module No. 2.
2.7 The history of the Latin language (review). Anatomical nomenclature in Latin.
2.8 Verb: general information.

Unit 3. Clinical terminology

3.1 The structure of the clinical term. Word formation. The most commonly used morphemes.
3.2 Greek-Latin term elements on the topics: head, nervous system and psyche, cardiovascular system, science and methods of diagnostic examination.
3.3 Greek-Latin term elements on the topics: body and musculoskeletal system, treatment and disease, gender and age.
3.4. Greek-Latin term elements on the topics: respiratory system, integumentary system, digestive system, urinary system.
3.5 Greek-Latin term elements on the topics: volumetric and spatial characteristics, temperature characteristics, color, other physical characteristics.
3.6 Greek-Latin term elements on the topics: surgical treatment, glands, secrets, fluids, tissues.
3.7 Greek-Latin term elements on the topics: functional states and processes, pathological states and processes.
3.8 Greek-Latin term elements on the following topics: sensory system, life and death, characteristics of relationship and quantity.
3.9 Clinical terminology of the specialty. Preparation for the module No. 3.
3.10 Module No. 3.
3.11 Final testing.

Textbooks and required supplies:

1. Nosacheva, M.I. The Latin Language: a textbook for foreign students of the 1st year of the bilingual department (English Media) of medical universities studying in the specialty 31.05.03 "Dentistry" / edited by Professor N.I. Danilina. – Saratov, 2022. – 131 p.
2. Znamenskaya S. V. LATIN AND MEDICAL TERMINOLOGY. Textbook for Foreign Medical Students of the English Medium / Znamenskaya S. V., Pigaleva I. R., Znamenskaya I. A. – Stavropol. Publishing house: StSMU. – 2017. – 316 p.
3. FIPAT. Terminologia Anatomica. 2nd ed. FIPAT.library.dal.ca. Federative International Programme for Anatomical Terminology, 2019.
4. Latin Language for Foreign Students (Specialty: Dentistry). URL: https://e.kazangmu.ru/course/view.php?id=1733

Evaluation and grading:

Routine performance assessment (written assignments, practical assignments, terminological dictation, testing, oral interview, etc.) is evaluated on a 10-point scale:

- the student receives 10 points for the detailed answer without mistakes, which takes into account all the nuances of the studied material (the score is "excellent");
- the student receives 9 points for an answer that does not contain mistakes or contains 1 mistake, for example, in stress (the score is "very good");
- the student receives 8 points for an answer containing 1–2 mistakes (the score is "good");
- the student receives 7 points for an answer containing 3–4 mistakes (the score is "satisfactory");
- the student receives 6 points for an answer containing 5–6 mistakes (the score is "mediocre").

If a student makes more than 6 mistakes, his answer is not counted, and he must retake this topic.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test paper). Test paper (module) is evaluated on a 100-point scale:

- 90–100% – excellent grade (90–100 points)
- 80–89% – good grade (80–89 points)
- 60–79% – satisfactory grade 60–79 points)

Less than 60% of correct answers are rated "unsatisfactory" (less than 60 points).

Exam is held in form of test. Grading: 0–60 – “poor”, 60–79 – “satisfactory”, 80–89 – “good”, 90–100 – “excellent”.
Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Attendance of classes in any format is mandatory. If you were not in class for any reason, you must answer to the teacher the material that was assigned for that day.
- Please do not tell us your diagnoses and medical problems. You can contact the dean's office with this. In any case, we will note your absence.
- The task of the teachers of the department is to teach you and control your knowledge. All issues that are not directly related to our discipline must be resolved with your tutor and the dean's office.
- Write all messages to the messenger group. Otherwise, they just get lost in our phones. Each of us has more than 300 students studying at the same time, we are not able to communicate with each individually.
- The teacher responds to messages only during business hours. Have respect for the teacher's free time and days off.
- Don't be late for classes, you have to be on time.

Example of module No. 1

1. Demonstrate knowledge of the following anatomical terms by writing them down in the full dictionary form:
calcaneus, hepatic, gland, colon, patella, valve, masticatory, layer, optic, humerus

2. Demonstrate ability to translate anatomical terms according to the rules of Latin grammar. Decline the following terms:
gastric artery, pharyngeal tubercle, mastoid process

3. Demonstrate skills of translating anatomical terms:

1) Translate into Latin:
deep petrosal nerve, lymph nodes, wide ligament of uterus

2) Translate into English:

corpus adiposum buccae, bursae musculorum gluteorum, plexus venosus pterygoideus

Example of module No. 2

1. Demonstrate knowledge of the following anatomical terms by writing them down in full dictionary form:

apex (tip), body, shoulder blade, system, holder, intercostal, superior, cochlear, suborbital, superficial

2. Demonstrate ability to translate anatomical terms according to the rules of Latin grammar. Decline the following terms:

upper articular process, large sciatic notch, internal auditory passage

3. Demonstrate skills of translating anatomical terms:

1) Translate into Latin:

additional nasal cartilages; posterior border of petrosal part; long elevating muscle of ribs

2) Translate into English:

musculus sphincter vesicae urinariae; facies linguae superior; dentes molares superiores

Example of module No. 3

1. Demonstrate knowledge of the following clinical term elements by explaining their meaning:
phren(o)-, peri-, omphal(o)-, galact(o)-, anis(o)-, -eurynter, blast(o)-, -acusia, -stenosis, -plasia
2. Demonstrate ability to understand clinical terms and explain their meaning:
а) odontoclasia, brachycephalia, hypertrichosis, spondylodynia, monophthalmia
б) blepharitis, phytotherapia, dyspepsia, colostomia, asphygmia
3. Demonstrate skills of composing a clinical term in Latin based on its meaning:
nose bleeding; lack of red blood cells; presence of sugar in urine; bone tumor; instrumental examination of uterus; non-inflammatory disease of cartilage; softening of brain; inflammation of stomach.

EVALUATION OF THE MODULE ANSWER

The module is considered not passed if, as a result of mistakes, the student scores less than 60 points out of 100 possible.

Evaluation criteria:

- Grammatical mistake:
  incorrect case ending; incorrect agreement; incorrect definition of gender or declension; mistake in the structure of the term -5 points
- Lexical mistake:
  incorrect translation (including incorrect preposition), as well as the lack of translation of the word -5 points
- Graphic mistake:
  incorrect use of uppercase and lowercase letters -2 points

Orthographic mistake:
incorrect spelling of a word unrelated to grammatical categories -1 point

ECONOMICS

Teachers: Assistant G.A. Khusnutdinova
Building, Department, classroom # NUK, Department of Economic theory and Social work, 126, 132
Contact details:

- Telephone number: 89872323008 (assistant G.A. Khusnutdinova)
- E-mail address: Gulnaz.gilyazova@kazangmu.ru

- Office and working hours: 132 (9-17)

Class hours: 72 h:
Lectures 10 h
Practical classes 14 h
Self-study 48 h

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__
Course objectives: The purpose of mastering the discipline
The goals of mastering the discipline Economics are as follows:

- To form systemic theoretical knowledge, skills and competences in economics.
- To teach to carry out critical analyses of problematic financial, economic, socio-economic situations on the basis of a systematic approach.
- To develop the ability to formalise knowledge in a competent presentation at seminars, examinations, test papers, in solving practical problems, tests, cases.
- To provide theoretical economic, financial literacy to students, which will allow them to solve certain financial and economic problems within the speciality and in personal life.
- To develop students' ability to make sound economic decisions.

Tasks of the discipline:
- To provide students with basic theoretical knowledge, skills, abilities, competences in economics, allowing them to adequately assess and effectively implement economic relations in the implementation of professional medical activity;
- To provide students with knowledge of the fundamentals of economic theory and basic principles of economic functioning and economic development;
- To teach students to use in their practical knowledge, skills and competences in economic and financial life;
- To teach students to use the principles of economics, quality management systems and marketing in their professional activities;
- To prepare students for further study of interdisciplinary foundations based on knowledge of economics;
- To form in students a respectful attitude to patients - consumers of services of medical organisations, basic understanding of responsibility for economic costs and results of work;
- To provide skills in studying and analyzing regulatory and legal documents, journals and publications, educational and scientific literature on economics; to foster in students a respectful attitude towards laws and other legal acts in economics as a fundamental guarantor of observance of economic rights, freedoms and interests of citizens and society.

Course topics:

Calendar plan of lectures

9. General Problems and Basic Concepts of economic theory (2 hours).
10. Market organisation: content and structure. Economic theory of commodities and money.
11. Mechanism of market functioning.
12. Property. Entrepreneurship. Costs of production. Profit.
13. Macroeconomic indicators. Economic growth. The role of the state in a market economy.
14. Finances. Budget. Taxes.
15. Banks. Credit. Financial market. Securities.
16. Labour market. Employment. Unemployment.
17. Social policy of the state. Policy revenues.

Calendar plan of practical classes

33. General Problems and Basic Concepts of economic theory.
34. Module on topic 1.
35. Market organisation: content and structure. Economic theory of commodities and money.
36. Mechanism of market functioning.
37. Property. Entrepreneurship. Costs of production. Profit.
38. Module on topics 3-5.
39. Macroeconomic indicators. Economic growth. The role of the state in a market economy.
40. Finances. Budget. Taxes.
41. Banks. Credit. Financial market. Securities
42. Module on topics 7-9.
43. Labour market. Employment. Unemployment.
44. Social policy of the state. Policy revenues.
45. Module on topics 11-12.
46. Fundamentals of regional economy.
47. World economy. International economic relations.

Textbooks and required supplies:

6. Economic Theory [Electronic resource]/ Gary S. Becker. – Routledge; 2nd edition, 2017. – 242 p.
7. Introductory Microeconomics [Electronic resource] / Dr. Deepashree. – New Saraswati House, India, 2018. – 372 p.
8. Principles of Macroeconomics an Open Text by Douglas Curtis and Ian Irvine [Electronic resource]/ D. Curtis, I. Irvine. – Lyryx, 2017. – 430 p.
9. An Introduction to International Economic Relations [Electronic resource]/ Y.Kozak, T. Shengelia – Tbilisi : Publishing House "Universal", 2014. -224 p.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in

other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

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Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

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- Using phone is allowed only during brakes

Examples of module No. 1. questions "General Problems and Basic Concepts of economic theory"

№	1 option	2 option
1	Economic theory (to give definition)	Economic system (to give definition)
2	Main elements of the economic system (list7)	Characteristics of economic theory as a science (name 5 and explain)
3	4 basic questions of economics(name and explain)	Functions of economic theory(name 4 and explain)
4	Methods of studying economic phenomena and processes (name 5, explain)	Classification types of benefits (name 5 criteria, in them types, characteristic features)
5	Positive approach	Normative approach
6	Economic categories (definition, 10 examples)	Economic laws (definition, 5 examples)
7	Microeconomics (give definition; give 5 examples of what it studies; name the indicators)	Macroeconomics (give definition; give 5examples of what it studies; name the indicators)
8	Main economic goals of the economic system (list 9 and explain.)	The main economic objectives of theorganisation (list 10)
9	Administrative-command (centralised) system (main characteristics, pros and cons, model examples)	Market economic system (main characteristics, pros and cons, examples ofmodels)
10	Social market economy	The social state
11	Needs	Production
12	Factors shaping needs	The law of exaltation of needs (to

	(list at least 5)	givefull definition)
13	Classification of needs A. Marshall's (name 5 species)	A. Maslow's hierarchy of needs (draw, name levels and types)
14	Economic benefit	Infrastructure
15	Customised production	Public production
16	Production infrastructure	Social infrastructure
17	Intangible industries	Material industries
18	3 properties of factors of production (name it, explain it)	Reproduction (define, name2 types, explain)
19	Extensive reproduction	Intensive reproduction
20	Factors of intensive of reproduction (list 5 factors)	Factors of extensive of reproduction (list 5 factors)
21	Resources (definition, types)	Factors of production (definition,structure)
22	Labour	Labour force
23	Labour resources	Human capital
24	Personal (human) factor Production (definition, structure)	Material factor of production (definition, structure)
25	Entrepreneurial skills	Investment resources
26	Earth	Natural, natural resources
27	Means of production (definition, structure)	Productive forces (definition,structure)
28	Means of labour (definition, examples)	Tools of labour (definition, examples)
29	Knowledge	Science
30	Technology	Information
31	Resource endowment	Resource conservation
32	Three basic properties of factors (name and explain)	Resource constraints. The problem of choice
33	Types of information	Data protection
34	Economic efficiency	Social efficiency
35	Performance indicators	Factors affecting efficiency
36	Labour productivity (2 definitions)	The main factors determining level of labour productivity

EVALUATION OF THE MODULE ANSWER

The question card of the module 1 consists of 2 options, 36 questions each.
Questions 1-28 worth 3 points each, questions 29-36 worth 2 points each.
* The teacher has the right to remove from 0.5 to 3 points for incorrect writing of answers
Total: (28 x 3) + (8 x 2) = **100 points**

PHYSIOLOGY OF MAXILLOFACIAL REGION

Teachers: PhD Martinov Alexandr Vladimirovich, PhD Nabatov Alexey Anatolievich, Khabibrakhmanov Aidar Nazimovich, Nagiev Kerim Kazbekovich, Talan Matvei Sergeevich, Ponomareva Daria Nicolaevna, Bilalova Diana Faritovna, Vavilov Dmitrii Nicolaevich

Building, Department, classroom # Universitetskaya, 13, Department of Normal Physiology, 310 - 315

Contact details:

- Teacher - telephone number: +79173955818 (PhD Martinov Alexandr Vladimirovich)
  E-mail address: martynoff85@hotmail.com
- Lecturer - telephone number: +79173955818 (PhD Martinov Alexandr Vladimirovich)
  E-mail address: martynoff85@hotmail.com
- Office and working hours: Universitetskaya, 13, 310 - 315 (9-17)

Total hours – 72 h:
Lectures: 10 h;
Practical classes: 30 h;
Independent work – 32 h;
Control – credit

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University https://e.kazangmu.ru/enrol/index.php?id=1920

Course objectives: The purpose of mastering the discipline
The goals of mastering the **Physiology of the Maxillofacial Region** to form students' systematic knowledge about the vital activity of the body as a whole, the dynamics of vital processes and the interaction of the body with the external environment, as well as an idea of the patterns of functioning of the organs of the maxillofacial region involved in the processes of physiological functions and compensatory reactions in disorders of these functions.
Tasks of the discipline:
The tasks of mastering the discipline (module) are the formation of students' skills in analyzing the functions of an integral organism from the standpoint of analytical methodology;- formation of a systematic approach among students in understanding the physiological mechanisms underlying the implementation of body functions from the perspective of the concept of functional systems;- students' mastering of research methods body functions used both in laboratory experiments and for diagnosis in clinical practice;- students' study of the patterns of formation of maxillofacial functions- the facial area;- students' study of the patterns of interaction of the organs of the maxillofacial region with other body systems; - formation of clinical thinking among students for the future practice of a dentist.
Course topics:

Section 1. Physiology of the digestive system and the maxillofacial region

Calendar plan of lectures

II semester

1. The organization and physiology of the maxillofacial region. The oral cavity. Sensory functions of the oral cavity. Taste, pain, temperature, tactile reception.
2. Physiology of digestion. The main functions of the digestive tract. Digestion in the oral cavity. Digestion in the stomach. Gastric secretion. Pancreatic secretion.
3. The physiology of the liver. Bile. Biliary excretion.
4. Digestion in the intestine. The mechanisms of absorption of digestive products in various parts of the gastrointestinal tract.
5. Motor activity of the gastrointestinal tract. Defecation and formation of feces. Humoral and nervous regulation of digestive tract functions.

Calendar plan of practical classes

1. Sensory function of the oral cavity.
2. Digestion in the oral cavity. Secretion of saliva. Mastication. Deglutition.
3. Digestion in the stomach. Gastric juice. Pepsin and hydrochloric acid secretion.
4. Digestion in the intestine. Pancreas. Pancreatic secretion. Regulation of pancreatic secretion.
5. Liver. Secretion of bile by the liver. The role of bile in digestion
6. Intestinal contractions and motility. Peristalsis, segmentation. Slow waves. Function of small intestine.
7. Humoral and nervous regulation of digestive tract.
8. Regulation of the gastrointestinal tract. Autonomic nervous system, enteric nervous system, paracrine regulation, hormonal regulation.
9. Regulation of food intake. Energy balance. Basal metabolic rate.
10. Module on topics 1-9

Text books and required supplies:

1. Ganong's Review of Medical Physiology. 26th Edition. MC Graw Hill. 2019. 1792p. ISBN-10: 978-1-26-012241-1.
2. Hall J. Guyton and Hall Textbook of Medical Physiology. 13rd Edition. Elsevier. 2016. 1046p. ISBN 13:9781455770052.
3. W., Boulpaep E. Medical Physiology. 3rd Edition. Elsevier. 2016. 1312p. eBook ISBN: 9780323391597
4. Educational portal course: Normal Physiology for faculty of Dentistry https://e.kazangmu.ru/enrol/index.php?id=1920

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, practical work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Control class is held in forms of MCQ test (one correct answer). Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of the question card of the module

Example of the question card of the module No.1. Physiology of the digestive system and the maxillofacial region.

1. Functions of digestive system: motility, secretion, digestion, absorption, storage, elimination.
2. Secretion of bile by the liver. Enterohepatic circulation.

Evaluation of the module answer

The question card of the module consists of 2 questions: problem cases, practical exercises, oral and written questions or their combination.
1 correct answer - 50 points
Total for module: **100 points**

Evaluation of knowledge, abilities and skills

- MCQ Test

Example:

1. A researcher conducts a study of the regulation of salivary secretion in a group of volunteer medical students under various conditions. Which of the following conditions would be expected to be associated with the lowest rates of secretion? A. Chewing gum; B. Undergoing a mock dental exam; C. Sleep; D. Exposure to a nauseating odor; E. Resting control conditions

Correct answer: C.

Evaluation criteria: The score on the test is set in proportion of correct answers: 90-100% - score "excellent" 80-89% - score "good" 70-79% - score "satisfactory" Less than 70% of correct answers – score "unsatisfactory".

- Oral examination

Example:

"Mechanisms of secretion in digestive system"

Evaluation criteria: "Excellent" (90-100 points) – The student is fully proficient in the basic material, possesses additional information, is able to analyze physiological processes and mechanisms, reveal their significance and interrelation with other organs and systems. "Good" (80-89 points) – The student knows the basic material, but does not fully possess additional information. The answer contains minor errors in the logical sequences. "Satisfactory" (70-79 points) – The student partially owns the material, makes mistakes in terminology, logical sequences, physiological mechanisms, the significance of physiological processes and their relationship with other organs and systems. "Unsatisfactory" (0-69 points) – The student has scattered knowledge with significant errors in physiological processes and mechanisms, makes mistakes in terminology, cannot analyze the significance of physiological processes.

- Reports

Example:

"Regulation of saliva secretion"

Evaluation criteria: "Excellent" (90-100 points) – the report fully reveals the topic, the student tells, practically without looking at the text and answers all additional questions. "Good" (80-89 points) – the report reveals the topic, but requires additions, the student tells based on the text, but without reading it out and answers all additional questions: "Satisfactory" (70-79 points) – the report reveals the topic, but requires additions, the student cannot answer most of the additional questions, partially reads the text during the story. "Unsatisfactory" (0-69 points) – the report does not disclose the topic, the student cannot answer most of the additional questions, reads out the text.

- Case-study

Example:

A patient suffering from anemia comes to his physician complaining of frequent bouts of gastroenteritis. A blood test reveals antibodies directed against gastric parietal cells. The anemia in this patient is attributable to hyposecretion of which gastric product? Explain the mechanism.

Correct answer: Intrinsic factor.

Evaluation criteria: "Excellent" (90-100 points) – the correct answer is given, the essence and mechanisms of physiological processes are explained, their significance for the normal functioning of organs and systems is revealed, if necessary, an analysis of physiological constants and laboratory results is given, the student uses additional information. "Good" (80-89 points) – a short correct answer is given, the essence and mechanisms of physiological processes are explained, their significance for the normal functioning of organs and systems is revealed, if necessary, an analysis of physiological constants and laboratory results is given, the student does not use additional information. "Satisfactory" (70-79 points) – a short answer to the question is given, mistakes are made, the essence of physiological processes is not explained, an incomplete analysis of physiological constants and laboratory results is given. "Unsatisfactory" (0-69 points) – an incorrect answer is given, the problem is not solved.

BIOCHEMISTRY

Teachers: associate professor Alexey Nabatov

Building, Department, classroom Tolstogo st. 6/30; Biochemistry department: 319, 330, 331

Contact details:

- Telephone number: 89872675387 (associate professor A. Nabatov)
- E-mail address: rastoska@mail.ru
- Office and working hours: 327 (9-17)

Total hours — 216:
- Lectures 32 hours;
- Practical classes 90 hours;
- Independent work 58 hours;
- Control 36 hours).

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1897).

Course objectives: The purpose of mastering the discipline

The main purpose is to teach students to use in their further study of alternative disciplines and professional activity their knowledge concerning chemical composition and metabolic processes which occur in the human's body cells and tissues as the indices that allow to differ the normal patient's state and a disease ; to teach the students to realize the actual basis molecular mechanisms that determine normal physiological functions, and a number of pathological conditions in the cases of their disturbances as well.

Tasks of the discipline:

The whole Biochemical course is divided onto the theoretical and practical parts. The principal tasks of theoretical part are to get the knowledge concerning structure, physical and chemical properties, metabolism and functions of the abundant organic compounds, forming the tissues and organs of human body.

The principal task of practical classes is to teach students to use obtained theoretical biochemical knowledge in their practical work as physicians ; to make them to be acquainted with the most frequently used clinical and biochemical techniques and to make them to be able to resolve certain medical problems by means of biochemical reveal of a number of protein, carbohydrate and lipids compounds in blood and urine; to form a true notion of generally accepted biological phenomena and world-wide shared philosophy of life.

Course topics:

Calendar plan of lectures

1. The structure of proteins. The structural organization of a protein molecule. Physico-chemical properties of proteins. Molecular weight, size and shape, solubility, ionization, hydration. The lability of the spatial structure of proteins and their denaturation.
2. The history of the discovery and study of enzymes. Features of enzymatic catalysis. Catalytic and regulatory centers. Enzyme cofactors. The specificity of the action of enzymes. The dependence of the rate of enzymatic reactions on temperature, pH, concentration of the enzyme and substrate. Enzyme inhibitors. Allosteric inhibitors and activators. Classification and nomenclature of enzymes. Isoenzymes. Cofactors and coenzymes.
3. Enzyme diagnostics for diseases in the oral cavity. The use of enzymes in the treatment of oral diseases.

4. Biological oxidation. Endergonic and exergonic reactions in a living cell. Mitochondrial electron transfer chain. Dehydrogenation of substrates and oxidation of hydrogen (formation of water) as an energy source for synthesis for ATP synthesis. NAD-dependent and flavin dehydrogenases. Oxidative phosphorylation, coefficient P/O. Respiratory control as the main mechanism of regulation of the conjugation of oxidation and phosphorylation.
5. Water-soluble vitamins. Fat-soluble vitamins. Vitamin deficiency. Dental manifestations. Mineral metabolism.
6. Biochemical bases of regulation at the level of cells and molecules. The mechanism of action of hormones. Endocrinopathy. Manifestation in the oral cavity. Hormones of protein-peptide nature and amino acid derivatives, hypo- and hyperthyroidism, manifestations in the oral cavity. Steroid hormones. Hypo- and hyper-corticism. Manifestations in the oral cavity. Steroid hormones. Sex steroids. The benefits and harms of using anabolics.
7. Inflammatory periodontal diseases, their sharp aggravation in smokers. Enamel as the most mineralized, solid and durable biological structure. Demineralization and remineralization of enamel. Acid demineralization as a trigger for caries. The protective effect of fluorides. Features of root caries: bacterial collagen proteolysis.
8. The mineral composition of saliva: the concentration of calcium, inorganic phosphate and other electrolytes in the secretion of salivary glands. Buffer systems of mixed saliva. The role of fluoride ions in maintaining enamel health. The content of fluorides in food and water. The optimal level of daily intake and the narrowness of the interval between deficiency and toxicity of fluoride, the selectivity of fluoride to hard tissues. Dental fluorosis as a result of prolonged fluoride excess during enamel formation. The relationship between the frequency of caries and fluoride deficiency. Centralized fluoridation of drinking water as an optimal way to prevent caries.
9. Metabolism. The concept of metabolism, metabolic pathways. The main carbohydrates of food. Metabolism and functions of carbohydrates. Digestion and absorption of carbohydrates. Glucose transporters into GLUT1-GLUT5 cells. The functions of insulin. (counterhormones).
10. Aerobic breakdown of glucose. Specific transformations of glucose to pyruvate. Substrate phosphorylation. Oxidative decarboxylation of pyruvic acid: the structure of the pyruvate dehydrogenase complex (enzymes and coenzymes). Anaerobic glycolysis. Lactic acid fermentation. Glycogenolysis. Alcoholic fermentation.
11. Citric Acid cycle (Krebs cycle): the sequence of reactions and characteristics of enzymes. The reaction of substrate phosphorylation in the citric acid cycle, macroergic compounds. Energy and plastic functions of the Krebs cycle. Regulation of the activity of the pyruvate dehydrogenase complex and the citric acid cycle. The pentose phosphate pathway of glucose conversion.
12. Gluconeogenesis. Key reactions of gluconeogenesis. The Measles cycle. Features of glucose metabolism in different organs and cells: red blood cells, brain, muscles, adipose tissue, liver. Synthesis and breakdown of glycogen. The mechanism of glycogen branching. Covalent modification and allosteric regulation of glycogen phosphorylase and glycogen synthase. The mechanism of synchronization of muscle contraction and glycogenolysis. Glycogenoses.
13. Hormonal regulation of carbohydrate metabolism. Catalytic membrane receptors. Target cells and cellular hormone receptors. Classification of hormones by chemical structure and biological functions. Mechanisms of transmission of hormonal signals to cells. The role of insulin, glucagon, adrenaline, adenylate cyclase system, protein kinases. Allosteric regulation of glycolysis and gluconeogenesis enzymes. The role of fructose-2,6-bisphosphate. Glycation of proteins. Renal threshold for glucose, glucosuria. Glucose tolerance.
14. Features of carbohydrate metabolism in the oral cavity. Complications of diabetes mellitus in the oral cavity.

15. Lipid metabolism and functions. Classification. Phospholipids as components of biomembranes. The digestion of fats. The role of bile acids in the digestion of fats. Lipoproteins, classification, biological significance, lipoprotein metabolism, disorders. Chylomicrons. Lipoprotein lipase.
16. The metabolism of fatty acids. Activation and transport of fatty acids in the mitochondria. The role of carnitine. Oxidation of saturated and unsaturated fatty acids with an even number of carbon atoms. Prostaglandins. Phospholipids. The metabolism of polyunsaturated fatty acids. The formation of eicosanoids, their biological role. Synthesis and decomposition of triacylglycerols and glycerophospholipids: a sequence of reactions. Differences in the synthesis of TAG in the liver and adipose tissue. Mutual conversion of glycerophospholipids. Fatty degeneration of the liver. Lipotropic factors.
17. Biosynthesis of fatty acids. The formation of malonyl-CoA. Palmitate synthase complex: structure, sequence of reactions. Sources of reducing equivalents. Steroids. The spread of cholesterol in human organs. Synthesis and use of ketone bodies. Hyperketonemia, ketonuria, acidosis in diabetes mellitus and fasting.
18. Protein digestion. Nutritional value of proteins. Interchangeable and non-
19. replaceable amino acids. Common pathways of amino acid catabolism. The cycle of urea formation. Deamination and decarboxylation of amino acids.
20. DNA biosynthesis (replication): substrates, energy sources, matrix, enzymes and proteins of the DNA replication complex. Biosynthesis of RNA (transcription). Protein biosynthesis (translation). The biological code.
21. The main properties of blood protein fractions. The blood coagulation system. The role of vitamin K and calcium in blood clotting. The main mechanisms of fibrinolysis. The main blood anticoagulants. Hemophilia.
22. The decay of heme. Formation of "direct" and "indirect" bilirubin. Violation of bilirubin metabolism. Jaundice: hemolytic, hepatic-cellular, obstructive.

Calendar plan of laboratory classes

1. Features of working in a biochemical laboratory. Safety precautions. Introduction to biochemistry. Qualitative reactions to specific groups of proteins and amino acids.
2. Physico-chemical properties of proteins. Factors of protein stability in solution. Denaturation of proteins.
3. The discovery of the components of complex proteins–chromoproteins, nucleoproteins, phosphoproteins. Complex proteins are glycoproteins. The discovery of the constituents of saliva mucin.
4. Module: "Structure and functions of proteins and nucleic acids".
5. General properties of enzymes. Hydrolysis of starch by saliva amylase. The main properties of saliva amylase are: thermolability, specificity.
6. Determination of the activity of alpha-amylase of saliva by Volhemut. Alpha, beta and gamma amylases of saliva. The mechanism of their action. The effect of saliva pH on their activity. Saliva alpha-amylase activators and inhibitors. Determination of the activity of blood catalase.
7. Module: "Enzymes and biological oxidation.
8. Qualitative reactions to vitamins A, D, B2, B12, PP, C. Quantitative determination of vitamin C in urine.
9. Module: "Vitamins"
10. Seminar: "Hormones"
11. Module: "Hormones"
12. Seminar: The structure of the hard tissues of the tooth. Pulp. Dentin. Cement. Enamel. Permeability, solubility of enamel. Inflammatory periodontal diseases, their sharp aggravation in smokers. Enamel as the most mineralized, solid and durable biological

structure. Demineralization and remineralization of enamel. The protective effect of fluorides.

13. Seminar: General information about salivary glands and saliva: development of salivary glands; features of the structure of salivary glands; formation and secretion of saliva; functions of salivary glands. Saliva indices in dental diseases, cardiovascular diseases, diabetes mellitus, kidney pathology, malignant diseases; infectious diseases.Metabolism of calcium, fluorine and phosphorus. The effect of hormones and vitamin D on the metabolism of calcium, fluorine and phosphorus. Digestion of carbohydrates in the oral cavity. Saliva enzymes. The mechanism of their action.
14. Seminar: Mucins of saliva. Proteins synthesized by serocytes: staterin, cystatins, lactoferrin, histatins and "proline-rich proteins". The role of the enzymes α-amylase, lysozyme, and lactoperoxidase in antimicrobial protection. The mineral composition of saliva: the concentration of calcium, inorganic phosphate and other electrolytes in the secretion of salivary glands. Buffer systems of mixed saliva.
15. Seminar: Oral mucosa. Oral fluid. Gingival fluid. Biochemistry of saliva. Daily volume and physico-chemical parameters of saliva (viscosity, ionic strength, pH, buffer capacity). Reflex effects on the secretion rate and saliva composition. Low molecular weight organic substances of saliva as a reflection of their level in blood plasma. The functional purpose of saliva is to create a wet sliding coating of the surfaces of the oral cavity, antimicrobial protection, and maintenance of enamel durability.
16. Quantitative determination of glucose concentration in blood serum by glucose oxidase method". Glucose tolerance test.
17. Qualitative determination of glucose and ketone bodies in the urine of a diabetic patient. A semi-quantitative method for determining glucose in urine using a "glucotest". A method for the polarimetric determination of glucose in the urine of a diabetic patient.
18. Oxidative decarboxylation of pyruvic acid. Quantitative determination of pyruvic acid in urine.
19. Seminar on the topic: "Carbohydrate metabolism".
20. Module on the topic "Carbohydrate metabolism"
21. Physico-chemical properties of lipids. The discovery of unsaturated fatty acids. The effect of bile acids on the activity of pancreatic lipase. The role of albumin in the transport of higher fatty acids. The discovery of cholesterol in brain tissues.
22. Seminar on the topic: “Lipid metabolism”. Computer modeling of lipids and biological membranes.
23. Module on the topic: “Lipid metabolism”.
24. Quantitative determination of gastric juice acidity. Ufelman's reaction to lactic acid in gastric juice Digestion of protein with pepsin. Qualitative reactions to hydrochloric acid in gastric contents.
25. Qualitative and quantitative determination of creatinine and ammonia in urine. Amino acid metabolism disorder. Reactions to homogentisic and phenylpyruvic acid. Qualitative and quantitative determination of protein in urine.
26. Seminar on the topic: “Metabolism of simple and complex proteins. Biosynthesis of nucleic acids and proteins (matrix biosynthesis).
27. Module on the topic “Metabolism of simple and complex proteins”
28. Spectroscopic study of blood pigments. Buffer systems and total blood protein. Preparation of hemin crystals.
29. Quantitative determination of total, direct, indirect bilirubin in blood serum using the Jendraszek method. Qualitative reactions to blood and bile pigments in urine.
30. Quantitative determination of calcium and phosphorus in tooth tissue.
31. Vitamins that affect the metabolism of calcium and phosphorus.
32. Hormonal regulation of calcium and phosphorus in the body.
33. Module on the topic “Blood and mineral metabolism.”

34. Physicochemical properties of urine. Computer control for knowledge of biochemical formulas. Certification.

Text books and required supplies:

Main:

1. Berezov T.T., Korovkin B.F. Biological chemistry. – M.: "Medicine", 1998.
2. Nikolaev A.Ya. Biological chemistry. – M.: "Medical informational agency", 2001.
3. Zubairov D.M., Timerbaev V.N., Davydov V.S. Medical Biochemistry. – Kazan, 2001.

Supplementary:

1. Wight A., Handler F. et al. The essentials of biochemistry: V. I, II, III. – M.: "Mir", 1982.
1. Cruit G. Biochemistry. – M.: "Medicine", 1979.
2. Marry R., Grinner D. et al. Human biochemistry: V. I, II. – M.: "Mir", 1993.
3. Elliot V., Elliot D. Biochemistry and molecular biology. – 2000.
2. Biochemistry: A brief interpretation with exercises / Edit. by E.S. Severin & A.Ya. Nikolaev. – M.: "GEOTAR", 2001.
3. Molecular principles of biological processes: from "Contemporary Natural Sciences" V.8 of Russian Encyclopedia / Edit. by Yu. A. Vladimirov. – M.: "Magistr-press", 2000.
4. 10.David E. Metzler Biochemistry.The Chemical Reactions of Living Cells.-V. I,II.-Academic Press,2003.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes

- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1. Proteins and nucleic acids

1. An essential amino acid is one that
   A. is essentially easy to synthesize
   B. is essential to flagella motion
   C. the body cannot synthesize
   D. the body can synthesize under essential conditions
   E. none of the above
2. The isoelectric point of an amino acid is defined as the pH
   A. where the molecule carries no electric charge
   B. where the carboxyl group is uncharged
   C. where the amino group is uncharged
   D. of maximum electrolytic mobility
   E. none of the above
3. Which of the following is an essential amino acid?
   A. Tryptophan
   B. Methionine
   C. Lysine
   D. All of these
   E. None of the above

Example of module No. 2. Enzymes

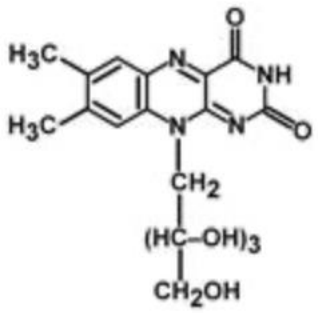
1. Which of the following statements about enzymes or their function is true?
   A. Enzymes do not alter the overall change in free energy for a reaction
   B. Enzymes are proteins whose three-dimensional form is key to their function
   C. Enzymes speed up reactions by lowering activation energy
   D. A and C
   E. All of the above
2. What is the function of enzymes within living systems?
   A. structural elements
   B. neurotransmitters
   C. catalysts
   D. extracellular modulators
   E. A and C
3. Which of the following statements is NOT correct about enzymes?
   A. Most enzymes are protein molecules.
   B. Every reaction in a cell requires a specific enzyme.
   C. Enzymes speed up a chemical reaction.
   D. Enzymes are named for the products formed.
   E. Enzymes are absolutely necessary to the continued existence of a cell.

Example of module No. 3. Vitamins

1. In what form does nicotinic acid participate in the synthesis of fatty acids?
   A. as a coenzyme for ENR
   B. as a coenzyme for 3-Hydroxyacyl ACP dehydratase
   C. as a coenzyme for S-acetyltransferase
   D. as a substrate for ENR
2. What role does vitamin C play in collagen synthesis??
   A. Hydroxylation of serine

B. Hydroxylation of lysine
C. Hydroxylation of proline
D. Hydroxylation of proline and lysine
E. Hydroxylation of proline and serine

3. The formula of which vitamin is shown in the figure:



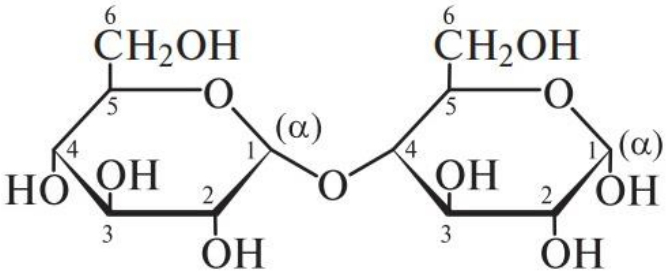
A. vitamin B1
B. vitamin B2
C. vitamin B3
D. vitamin B5
E. vitamin B12

Example of module No. 4. Hormones

1. The hormone secreted by the anterior pituitary gland that stimulates the mammary glands to produce milk is the:
   A. luteinizing hormone
   B. growth hormone
   C. thyroid-stimulating hormone
   D. prolactin
   E. none of the above
2. The two hormones produced by the cell bodies of the secretory neurons for the posterior pituitary gland are:
   A. oxytocin and epinephrine
   B. oxytocin and antidiuretic hormone
   C. epinephrine and antidiphoretic hormone
   D. epinephrine and estrogen
   E. oxytocin and estrogen
3. Which of these is not a function/effect of epinephrine (adrenaline)?
   A. increased cardiac activity
   B. control of glycogen breakdown
   C. release of lipids by adipose tissue
   D. controls the nerve impulse
   E. C and E

Example of module No. 5. Carbohydrates metabolism

1. Which glucose transporter is insulin-dependent?
   A. GLUT4
   B. GLUT2
   C. GLUT3
   D. GLUT1
   E. All answers are correct
2. Formula is:



A. maltose
B. glucose
C. lactose
D. fructose
E. galactose

3. The sucrose-isomaltase complex hydrolyzes:
A. alpha-1,4-glycosidic bonds
B. alpha-1,6-glycosidic bonds
C. alpha-1,2-glycosidic bonds
D. all answers are correct
E. no correct answer

Example of module No. 6. Lipids metabolism

1. Systematic nomenclature assigns for fatty acids number of carbon atoms, number and position of double bonds. Choose common name for fatty acid 16:1:△9
   A. arachidonic
   B. palmitoleic
   C. timnodonic
   D. linolenic
   E. butyric
2. b-oxidation of fatty acids in cell occurs in the
   A. cytosol
   B. mitochondrion
   C. ribosome
   D. nucleus
   E. lysosome
3. The most highly spread saturated fatty acid in human tissue fats is
   A. Lauric 12:0
   B. palmitic 16:0
   C. stearic 18:0
   D. myristic 14:0
   E. margarinic 17:0

Example of module No. 7. Proteins metabolism

1. In the degradation of heme, which of the following substances is produced at the same time that carbon monoxide is produced?
   A. Bilirubin
   B. Biliverdin
   C. Urobilin
   D. Stercobilin
   E. None of the above
2. Which out of the following conditions is associated with hypouricemia?
   A. Lesch-Nyhan syndrome

B. Adenosine deaminase deficiency
C. Over activity of PRPP synthetase
D. Over activity of amido transferase
E. Von Gierke's disiase

3. Which statement best describes xanthine?
A. It is a direct precursor of guanine
B. Is covalently binds to allopurinol
C. It is oxidized to form uric acid
D. It is oxidized to form hypoxanthine
E. It is substrate rather than product of enzyme xanthine oxidase

Example of module No. 8. Blood

1. "Direct" bilirubin in contrast to "indirect" one is:
A. Lipidated
B. Glycosylated
C. Methylated
D. Ubiquitinated
E. Palmtoylated
2. Which immunoglobulin type appears first in response to the previously unmet infection in blood?
A. IgA
B. IgB
C. IgE
D. IgG
E. IgM
3. Which of the following coagulation factors is not a protease?
A. VII
B. VIII
C. IX
D. X
E. XI

EVALUATION OF THE MODULE ANSWER

The module consists of 30 MSQ tasks. First 20 questions refer to the general knowledge of the topic – 3 points each; 60 points total. Next 10 questions refer to solving complicated problems, requires understanding both fundamental biochemical processes and the process of their application in clinical practice – 4 points each; 40 points in total.

Example of exam ticket:

1. pH of urine usually is:
A. 4.5-8.0
B. >7.0
C. 5.0
D. 7.5-8.5
E. no correct answer

2. In reactions of neutralization xenobiotics combined with:
A. glycine and glucuronic acids, glutamine
B. galacturonic acid
C. heparin and histamine

D. glycine and glutathione
E. methionine and hippuric acid

3. Renin accelerates:
   A. formation of angiotensin I
   B. formation of angiotensin II
   C. conversion of angiotensin I to angiotensin II
   D. cleavage of kinins
   E. synthesis of kinins
4. The natriuretic factor is formed in:
   A. atrium
   B. kidneys
   C. liver
   D. pituitary gland
   E. urethra
5. The natriuretic factor acts through:
   A. cGMP
   B. cAMP
   C. calcium
   D. phosphoinositol Tyrosine
   E. kinase

6. The amount of indican increases in urine when:
   A. intensification of the processes of putrefaction in the intestine
   B. reducing the processes of putrefaction in the intestine
   C. eating large amounts of plant foods
   D. drinking large amounts of milk
   E. increased fermentation in the stomach

7. Which components can be found during microscopy of healthy urine:
   A. RBC
   B. WBC
   C. epithelial cells
   D. cylinders
   E. all answers are correct

8. Concentration of urobilinogen in urine is equal to :
   A. 10 mg/L
   B. 20 mg/L
   C. 100 mg/L
   D. 10 mg/ml
   E. 20 mg/ml

9. Which pathological condition accompanied by creatinuria?
   A. muscle diseases
   B. encephalitis
   C. meningitis
   D. myocardial infarction
   E. gout
10. Inorganic components of urine include:
   A. hydrocarbonates
   B. sodium
   C. potassium

D. phosphates
E. all answers are correct

11. The amount of hippuric acid in the urine increases in the case of:
A. plant-based diet
B. vitamin C deficiency
C. reduction of antitoxic liver function
D. kidney diseases
E. muscle diseases

12. The patient has ochronosis, the urine darkens on the air and the Benedict reaction is positive. Choose the correct diagnosis
A. alkaptonuria
B. cystinuria
C. creatininuria
D. phenylketonuria
E. orataciduria

13. Pronounced proteinuria (more than 2000 mg/day) manifests itself
A. hereditary nephritis
B. tubulopathy
C. interstitial nephritis
D. obstructive uropathy
E. amyloidosis

14. The physiological "renal threshold" for glucose in adults is:
A. 1,5–2,0 mmol/l
B. 5,5–6,0 mmol/l
C. 8,8–9,9 mmol/l
D. 3,5–4,0 mmol/l
E. 7,5–8,5 mmol/l

15. Normal density of urine is:
A. 1.008-1.025
B. 1.004-1.020
C. 1.002-1.008
D. 1.025-1.030
E. 1.010-1.015

16. The daily excretion of urine for patients with oliguria is:
A. <600 ml of urine
B. <50 ml of urine
C. 50-500 ml of urine
D. >2000 ml of urine
E. 0.8-1.2 l of urine

17. The rate of sodium reabsorption is regulated by:
A. thyroid hormones
B. vasopressin
C. oxytocin
D. adrenaline
E. insulin

18. Bicarbonates are actively reabsorbed in:
A. Henle loops
B. distal sections of the nephron
C. proximal sections of the nephron
D. in all departments of the nephron
E. only in the neurons of the cortical layer of the kidneys

19. Physical properties of urine:

A. volume
B. color
C. transparency
D. density
E. all answers are correct

20. Unorganized urine sediment includes:
A. erythrocytes
B. granular cylinders
C. calcium oxalate
D. leucocytes
E. erythrocytes cylinders

EVALUATION OF THE EXAM ANSWER

Exam consist of 100 questions for 2 variants. It's the multiple select type of questions for every topic that was studied during two semesters.

TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY

Teachers: Associate Professor Farid Bashirov, Associate Professor Sergey Obydennov, PhD Vahe Markosyan, assistant Bulat Sakhabetdinov, assistant Sultan Targachev

Building, Department, classroom # Gorky Street, 35 a, Department of Operative Surgery and Topographic Anatomy

Contact details:

- Telephone number: 89033069224 (PhD Vage Markosyan)
- E-mail address: vage.markosyan@gmail.com
- Office and working hours:

Total hours — 72:

- Lectures 10 hours;
- Practical classes 30 hours;
- Independent work 32 hours

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher. Classes are conducted on a cadaver.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

Course objectives: The purpose of mastering the discipline

Aims of mastering the discipline: "topographic anatomy, operative surgery" is anatomical and surgical training of students necessary for subsequent classes in clinical departments and independent medical activities.

Tasks of the discipline:

To form knowledge in the field of:

– to provide students with information to acquire knowledge of topographic anatomy and operative surgery to the extent necessary for further education and professional activity in practical healthcare.
– creation of students' knowledge of the topographic anatomy of regions, organs and systems.
– mastery of elementary surgical actions and some typical surgical techniques by students.

Course topics:

Calendar plan of lectures

1. Methods used in topographic anatomy, operative surgery – doctrine of principles and operation technique, surgical terminology.
2. Topography of cerebral part of the skull.
3. Cranial nerves
4. Topography of facial part of the skull.
5. Trepanation of the skull.
6. Facial surgery
7. Topography of neck.
8. Operations on neck organs

Calendar plan of Practical training

1. Methods used in topographic anatomy.
2. Operative surgery – doctrine of principles and operation technique, surgical terminology.
3. Module on topics 1-2.
4. Topography of cerebral part of the skull.
5. Topography of cerebral part of the skull.
6. Cranial nerves
7. Topography of facial part of the skull.
8. Topography of facial part of the skull.
9. Trepanation of the skull.
10. Facial surgery.
11. Module on topics 3-10.
12. Topography of neck.
13. Topography of neck.
14. Operations on neck organs
15. Module on topics 12-14.

Text books and required supplies:

1. Topographic Anatomy and Operative Surgery. In 2 volumes. Volume 1 [Electronic resource]: textbook / Sergienko V.I., Petrosyan E.A., Frauchi I.V.; under the general editorship of Y.M. Lopukhin. - 3rd ed., corrected. - M.: GEOTAR-Media, 2010. - http://www.studentlibrary.ru/book/ISBN9785970417560.htmlBruce M.Mahan, Rollie J.Myers. University Chemistry. Fourth edition: Addison Wesley Longman. – 1998. – 1076 p.
2. Topographic Anatomy and Operative Surgery. In 2 volumes. Volume 2 [Electronic resource]: textbook / Sergienko V.I., Petrosyan E.A., Frauchi I.V.; under the general editorship of Y.M. Lopukhin. - 3rd ed., corrected. - M.: GEOTAR-Media, 2010. - http://www.studentlibrary.ru/book/ISBN9785970417584.htmlI.V. Fedjunina. An introduction to physical and colloidal chemistry. For English-speaking students of the faculty of general medicine/ Kazan: KSMU, 2011. — 78 c.

Evaluation and grading:

Progress is monitored at the end of each module using a test.

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10-point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt, the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment with assessment is a form of testing knowledge, skills and abilities in a discipline or its section in the form of a test. Assessments: 0–69 — "unsatisfactory", 70–79 — "satisfactory", 80–89 — "good", 90–100 — "excellent".
A student's overall rating is based on class attendance, module results and midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1. Topographic Anatomy and Operative Surgery of the Head

1.MRI revealed haematoma of fronto-parieto-occipital region broadened all over the fornix of head. In which layer it is situated?
а) Subcutaneous fat
б) Subaponeurotic fat
в) Subpericraneal loose tissue
г) Diploic layer of skull bone
2. The wounds of face and soft tissues of head are known for rapid regeneration due to what reasons?
а) Higher regeneration potential of epithelium
б) Better blood supply
в) Presence of wide net of venous anastomoses
г) Presence of massive lymphoid conglomerations
3. The damage of soft tissues of head are the cause of profuse and prolonged haemorrage due to what two features?
а) Multiple sources of blood supply
б) The wide net of blood vessels in subcutaneous fat
в) Fuse of vessel wall with connective tissue intersections of subcutaneous fat
г) Anastomoses among superficial veins and venous sinuses of dura mater
4. Profuse bleeding due to fronto-parieto-occipital region soft tissue is explained by
а) Major vessels damage
б) High intravascular pressure
в) Adventitia fuse with connective intersections
г) Presence of subpericraneal loose tissue
5. The main sourse of fronto-parieto-occipital region blood supply are the following 3 arteries
а) Deep temporal artery

б) Occipital artery
в) Superficial temporal artery
г) Supraorbital artery
6. Most of blood vessels of fronto-parieto-occipital region are situated in
а) The skin
б) The subcutaneous fat
в) The musculo-aponeurotic layer
г) The subaponeurotic fat
7. With an abscess in the subcutaneous tissue of the scalp, the infection spreads to the dura mater through
а) emissary veins
б) temporal and parietal arteries
в) temporal and parietal veins
г) lymphatic vessels
8. Patient a. Is admitted to the hospital suffering from exophthalmos, a "glasses" symptom, liquorrhea from the nose. the preliminary diagnosis
а) fracture of the cranial vault
б) a basilar skull fracture in the anterior cranial fossa
в) a basilar skull fracture in the middle cranial fossa
г) a basilar skull fracture in the posterior cranial fossa
9. The middle meningeal artery is a branch
а) maxillary artery
б) external carotid artery
в) superficial temporal artery
г) internal carotid artery
10. In the cranial cavity, the middle meningeal artery enters through
а) foramen rotundum
б) foramen ovale
в) foramen spinosum
г) foramen stylomastoideum

Example of module No. 2. Topographic Anatomy and Operative Surgery of the Neck

1. Which two of the following triangles are located in the posterior region of the neck?
а) subclavian triangle (omoclavicular triangle)
б) muscular (omotracheal) triangle
в) occipital triangle
г) carotid
2. By which anatomical structure is the submandibular triangle bounded superiorly by?
а) posterior belly of the digastric muscle
б) anterior belly of the digastric muscle
в) mandible
г) anterior margin of the sternocleidomastoid muscle
3. The pirogov triangle in the submandibalar triangle is bounded by (choose three)
а) tendon of posterior belly of the digastric muscle
б) n.hypoglossus
в) m. mylohyoideus
г) a.lingvalis
4. What anatomical structure is the pirogov triangle in the submandibalar triangle inferiorly bounded by?
а) m.platysma
б) m.milohyoideus
в) m.hyoglossus

г) m.digastricus
5. What can be found in the pirogov triangle in the submandibalar triangle?
а) a.facialis
б) a.lingualis
в) v.lingualis
г) n.hypoglossus
6. What can be found in the pirogov triangle in the submandibalar triangle?
а) a.facialis
б) a.lingualis
в) v.lingualis
г) n.hypoglossus
7. The carotid triangle is bounded by
а) sternocleidomastoid muscle
б) posterior belly of the digastric muscle
в) anterior belly of the digastric muscle
г) superior belly of omohyoid muscle
8. The muscular (omotracheal) triangle is bounded by
а) sternocleidomastoid muscle
б) superior belly of omohyoid muscle
в) the median line of the neck
г) trachea
9. How many fascias are there in the neck basing on classification by V.N. Shevkunenko?
а) two
б) three
в) four
г) five
10. The submandibal glands are surrounded by
а) fascia colli superficialis
б) superficial layer of the deep cervical fascia
в) deep layer of the deep cervical fascia
г) fascia endocervicalis

EVALUATION OF THE MODULE ANSWER

All modules and midterm assessment are a test consisting of 50 questions.
Where 1 question = 2 points.

PSYCHOLOGY AND PEDAGOGY

Teachers: Sofja Urjevna Osokina, Anna Alexandrovna Akberova,
Building, Department, classroom NUK, 3rd floor, medical and general psychology and pedagogy department - room 334
Contact details:

- Telephone number: +78432369669
- E-mail address: med.psychologyKSMU@yandex.ru
- Office and working hours: Monday – Friday from 9 a.m. to 18 p.m.

Total: 72 h
Lectures – 10 h;
Practical classes – 26 h;
Self-study – 36 h;

Course description:

The course is dedicated to several branches of psychology for better understanding of a basic principles and laws of a mind work through the prospective of the main approaches (psychodynamic, behavioral, humanistic) including cognitive psychology, psychology of personal development, health psychology, psychology of individual differences and general psychology.

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher, involving experimental scientific research activities. It requires the use of special psychological methods (tests, questionnaires etc.).

Self-study is work with the special literature or teaching materials (literary sources, video and audio material)

Course objectives:

The objectives of the discipline "Psychology and Pedagogy" are the forming of psycho-pedagogical, ethical, deontological philosophy as the foundation for the study of professional disciplines, and for future professional activities.

Tasks of the discipline:

To form knowledge in the field of:

1. the introduction to the scientific field of psycho-pedagogical disciplines for successful socialization and professionalization;
2. forming knowledge about mind functioning, behavior and personality;
3. skill development to use the knowledge in professional practice for the patient benefits;
4. communicative skills development for effective interaction with patients and colleagues;
5. teaching students how to use methods to improve their own personal and cognitive abilities and a motivation for the personal and professional growth.

Course topics:

Calendar plan of lectures:

1. Introduction to psychology: Basic terms. Methods of research. Branches of psychology.
2. Cognitive processes: sensation, perception, attention, memory, cognition, language and speech.
3. Emotions. Motivation. Theories of motivation and emotions. Stress. Theories of stress.
4. Temperament. Types of temperament, the role of a temperamental type in the process of development.
5. Character: reflexes, habits as a part of behavior. Personality: psychological approaches in studying personality (psychodynamic, behavioral, humanistic)

Calendar plan of laboratory classes:

1. Introduction to psychology. The structure of psychology. Experiments, Tests, Observation, Interview as basic scientific methods in psychological research.
2. The control work. Cognitive processes: measuring and analyzing of cognitive sphere: properties of attention, types of memory, styles of thinking.
3. Cognitive processes. Discussion of tests' results and making psychological conclusion.
4. IQ: identifying a personal level of intelligence quotient. Discussion of test results and making psychological conclusion

5. Emotions and feelings: introduction to emotional sphere of psyche. Emotional intelligence.
6. The control work. Empathy. Alexithymia. Studying of particular qualities of emotional sphere in communicative process.
7. Coping strategies: Stress resistance. Individual styles in stress experience. Subconscious defense mechanisms
8. The control work. Temperament: revealing primary and secondary temperamental blends, basic types of temperament, impulsiveness, impressionability.
9. Character: behavioral stereotypes in everyday life, compilation of personality profile.
10. Personality approaches: Discussion of opportunity to use different psychological approaches in a system of medical treatment. To elevate the level of communicative skills for effective interaction with patients and colleagues
11. Writing a psychological portrait according to the tests results to use psychological methods to improve students' personal and cognitive abilities and a motivation for the personal and professional growth
12. Final test
13. Credit scoring

Text books and required supplies:

1. Introduction to Psychology, 8th edition. James W. Kalat. North Carolina State University. 2008
2. Biological Psychology 10th edition. James W. Kalat. North Carolina State University. 2009
3. The Psychology of Verbal Communication. Robert M. Krauss Columbia University *International Encyclopedia of the Social and Behavioral Sciences* 2002.
4. Psychology, 11th Edition 11th Edition by David G. Myers, C. Nathan DeWall Publisher: Worth Publishers; 11th edition (January 12, 2015)
5. Psychology Miles Hewstone, Frank D. Fincham and Jonathan Foster Blackwell Publishing (2005)

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful

- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Requirements:

- A personal copybook is required for every practical class and lecture
- Make notes during the lecture (you should use your notes for the monitoring progress preparation)
- Be prepared for the control work after each lecture
- All the psychological test results should be kept in a personal copybook during the whole semester

Example of module No. 1. Cognitive sphere

1. Give the definition of intelligence
2. List the cognitive processes
3. List and describe the types of memory
4. Explain the difference between sensation and perception processes
5. Give the definition of attention

Example of module No. 2 Emotional (affective) sphere

1. Give the definition of emotional intelligence
2. List and describe the functions of emotions
3. List and describe the stress phases according to Hans Selye theory
4. Explain the difference between conscious and subconscious coping strategies
5. List and describe emotion-based coping strategies

Example of module No. 3 Personality

1. Give the definition of Temperament
2. List and describe the types of Temperament
3. Explain the difference between Temperament and Character notions
4. Give the definition of Personality
5. Describe one Personality theory

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 5 questions
Total: 5 x 20 = 100 points
Total for one question: **20 points**

LEGAL AND ETHICAL FOUNDATIONS IN MEDICAL ACTIVITY

Teachers: **assistant professor I.L. Maximov, senior teacher V.A. Shcherbakov**
Building, Department, classroom # NUK, Department of Biomedical ethics, Medical Law and History of Medicine, 317, 319, 322
Contact details:

- Telephone number: (843) 236-39-91 (department of biomedical ethics, medical law and history of medicine)

- E-mail address: biopravo@kazangmu.ru
- Office and working hours: 326 (8-17)

Class hours: 72 h

Lecture hours 12 h
Practical classes hours 20 h
Self-study hours 40 h

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Practical classes are aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1772).__

Course objectives:

The goals of mastering the discipline **legal and ethical foundations in medical activity** are:

- identifying ethical problems in medicine and biology;
- giving a rational justification for ethical decisions;
- applying ethical principles in the assessment and solution of the specific problem situations of modern medical practice.

Tasks of the discipline:

To form knowledge in the field of:
- understanding the main ethical problems in medicine and biology;
- studying methods of solving of the main ethical problems in medicine and biology;
- forming rational justification for ethical decisions;
- applying ethical principles in the assessment and solution of the specific problem situations of modern medical practice

Course topics:

Calendar plan of lectures

1. History and philosophy of ethics, bioethics
2. What is bioethics
3. The Relationship Between the Doctor and the Patient in the 21st century
4. Social, legal and ethical aspects of the beginning of life. Social, legal and ethical aspects of the end of human life
5. Ethical-legal problems of transplantation and transfusion medicine.
6. The principles of the UNESCO Universal Declaration on bioethics

Calendar plan of practical classes

1. Ethics and moral. What is ethics? What is bioethics?
2. Human dignity and human rights. Benefit and harm
3. The autonomy of the individual and individual responsibility
4. Informed consent. The persons who do not have legal capacity to give consent
5. Privacy and confidentiality
6. Equality, justice and equity. Non-discrimination and stigmatization. Social responsibility
7. Module control work №1. Social, legal and ethical aspects of the beginning of life. Social, legal and ethical aspects of the end of human life
8. Ethical-legal problems of transplantation and transfusion medicine. Ethical-legal problems of HIV-infection.

9. Ethical-legal problems of modern methods of intervention in human nature. Experimental medicine. Ethical and legal issues. The principles of the "universal Declaration on bioethics and human rights" UNESCO in the conduct of biomedical experiments
10. Module control work №2. Final test

Text books and required supplies:

1. Legal and ethical foundations in medical activity. Nezhmetdinova F.T., Guryleva M.E., Maximov I.L. Kazan, 2019. – 156 p.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1. Propaedeutic bioethics

1. The concept of bioethics of the following definition corresponds most:
    a. the science of survival; "the bridge between biology and ethics" (Potter);
    b. ethics of the doctor;
    c. deontology;
    d. medical ethics;
    e. cultural studies

2. Contract model between doctors and patients have the type of relationship
   a. colleagues to each other;
   b. husband and wife;
   c. the seller and the buyer;
   d. the father and the son;
   e. engineer and the mechanism.
3. Morality is ...
   a. the totality of scientific tests;
   b. the criterion of "good-evil" attitude and norms of people in culture;
   c. the form of the "objective unconscious", which indicates the due;
   d. philosophical doctrine;
   e. strict observance of the laws and the Constitution.
4. Biomedical ethics and medical law must be able:
   a. medical law is a priority;
   b. independence;
   c. biomedical ethics is a criterion for medical law;
   d. medical law determines the correctness of biomedical ethics;
   e. should be kept a priority biomedical ethics.

Example of module No. 2 on the section of clinical bioethics

1. Medical mistakes are:
   a. unfavorable outcomes associated with the refusal of a competent patient from appropriate treatment;
   b. the unfavorable outcomes associated with random circumstances that a conscientious physician could not foresee and prevent;
   c. the negligent perform of a doctor's duties;
   d. honest mistakes of the doctor in diagnosis, technique, treatment, surgery;
   e. the unfavorable outcomes associated with the refusal of a competent patient from an adequate examination.
2. Transplantation can be performed without the consent of the donor, if the donor:
   a. retarded;
   b. the deceased man, who left the document for the use of its organs;
   c. incurable disease;
   d. a particularly dangerous criminal, sentenced to life imprisonment;
   e. citizen of another state.
3. The main ethical principles of human research does not apply:
   a. risk/benefit ratio;
   b. low social status of the patient;
   c. informing the patient;
   d. scientific substantiation of the project;
   e. obtaining consent.
4. Euthanasia in Russia:
   a. allowed in exceptional cases;
   b. the law on euthanasia is under discussion;
   c. there is no the law on euthanasia in the Russian legislation;
   d. prohibited by law;
   e. permitted by law.

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 10 multiple choice questions.
Each question is evaluated by 10 points.
Total: 10 x 10 = 100 points.

Scale of marks:
10 correct answers – 100 p.
9 correct answers – 90 p.
8 correct answers – 80 p.
7 correct answers – 70 p.
6 and less correct answers – 60 p. (not passed).

MICROBIOLOGY, VIROLOGY, MOC

Teachers: Nikita Chumarev
Building, Department, classroom # Study building #2, Department of Microbiology named after academician V.M. Aristovsky, 229
Contact details:

- Telephone number: 89991690487 (Assistant Nikita Chumarev)
- E-mail address: nikita.chumarev@kazangmu.ru
- Office and working hours: 229 (8-17)

Class hours: 180 h

- Lectures 28 h;
- Practical classes 72 h;
- Independent work 44 h;
- Exam 36 h.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2115)

Course objectives: The purpose of mastering the discipline
The purpose of mastering the discipline: students mastering the theoretical foundations and patterns of interaction between micro- and macroorganisms, practical skills in prevention methods, microbiological, molecular biological diagnostics, the main directions of treatment of infectious and opportunistic human diseases, including diseases of the oral cavity.
Tasks of the discipline:
To form knowledge in the field of:

- prevention of dental diseases among the population;
- prevention of infectious, parasitic and non-infectious diseases;
- diagnosis of somatic and infectious diseases with referral of the patient to the appropriate specialist;
- differential diagnosis of dental diseases in somatic and infectious diseases;

- formation of motivation in the adult population, adolescents and their family members to introduce elements of a healthy lifestyle, including the elimination of bad habits;

Course topics:

Calendar plan of lectures

1. The subject and tasks of microbiology.
2. Taxonomy and morphology of bacteria
3. The structure and classification of viruses. Viroids. Prions. Bacteriophages.
4. Chemotherapeutic drugs. Antibiotics
5. The study of infection
6. Pathogenic cocci (staphylococci, streptococci)
7. The causative agent of diphtheria. Pathogens of tuberculosis.
8. The causative agent of tetanus. Pathogens of wound anaerobic infection
9. SARS viruses. Orthomyxoviruses. Coronaviruses
10. Human immunodeficiency virus (HIV). Herpesviruses.
11. Microbiocenosis of the oral cavity. Characteristics of the main representatives of the microbiocenosis of the oral cavity. Factors of non-specific and specific protection of the oral cavity
12. Biofilm of the oral cavity and teeth. The role of microbes in the development of dental caries. Methods of microbiological research in clinical dental practice.
13. The microflora of the oral cavity in inflammatory periodontal diseases.
14. The microflora of the oral cavity in odontogenic inflammatory processes. The microflora of the oral cavity in non-specific stomatitis. The influence of filling materials, prostheses and other factors on the microflora of the oral cavity.

Calendar plan of laboratory classes

1. Equipment and rules of operation in the bacteriological laboratory. Microscopic examination method. Light microscopy. The immersion system of the microscope. Systematics of microbes. Principles of taxonomy. The concepts of species, strain, culture, clone, population. Morphology of bacteria.
2. The structure of a bacterial cell. Simple and complex coloring methods. Methods of Gram, Zil-Nielsen. Methods for detecting spores and capsules in bacteria. The importance of the microscopic method in the diagnosis of infectious diseases.
3. Classification and structure of viruses. Viroids. Prions. Moderate and virulent bacteriophages. The practical importance of bacteriophages in biology and medicine
4. Morphology of fungi and protozoa. Test 1 (topics 1-4)
5. Principles of decontamination. Modern methods of sterilization and disinfection. Nutrient media, classification. Methods of cultivation and isolation of pure culture of aerobic bacteria.
6. Methods of cultivation and isolation of pure culture of anaerobic bacteria. The study of the biochemical properties of microbes. Enzymes. Pigments.
7. The structure of the bacterial genome. Features of the relationship between genotype and phenotype in prokaryotes. Characteristics and mechanisms of the main forms of variability in bacteria. Transformation, conjugation, transduction.
8. The microflora of the human body and its functions. Dysbiosis. The microflora of the oral cavity. Test 2 (topics 5-8)
9. Chemotherapeutic drugs. Antibiotics. Determination of the sensitivity of the isolated culture to antibiotics.
10. The study of infection. Pathogenicity factors of microbes. Toxins. The concept of the pathogenesis of an infectious disease.
11. The immune system of the human body, the main functions. Antigens of microbes. Antibodies, structure and functions. Immunoprophylaxis and immunotherapy. Vaccines. Serums. Immunoglobulins.

12. Serological method of diagnosis of infectious diseases. Serological reactions. The allergological method.
13. Molecular genetic diagnostic method. PCR. Test 3 (topics 9-13)
14. Principles of microbiological diagnosis of bacterial infectious diseases. Pathogenic cocci (staphylococci, streptococci, pneumococci, meningococci).
15. The causative agent of diphtheria. Pathogens of tuberculosis. The causative agent of leprosy.
16. The causative agent of gonococcal infection. Pathogens of urogenital chlamydia. The causative agent of syphilis.
17. The causative agent of tetanus. Pathogens of wound gas anaerobic infection. The causative agent of botulism. The causative agent of anthrax.
18. Pathogens of mycoplasmosis. Test 4 (topics 14-18).
19. Pathogens of escherichiosis. Pathogens of typhoid and paratyphoid fever. Pathogens of shigellosis. Pathogens of salmonellosis. Pathogens of klebsiella infection. The causative agent of pseudomonas aeruginosa infection. The causative agent of cholera.
20. The causative agents of Lyme borreliosis. The causative agent of epidemic typhus and Brill-Zinsser disease. Pathogens of fungal diseases. (candidiasis, dermatomycosis).
21. Pathogens of protozoal diseases. (amoebiasis, trichomoniasis) Test 5 (Topics 1-3)
22. Principles of microbiological diagnosis of viral infectious diseases. Influenza viruses. The measles virus. Herpes simplex virus. The chickenpox virus. Coronaviruses. Vesicular stomatitis virus.
23. Hepatitis B viruses, C. HIV. The polio virus. Coxsackie and ECHO viruses.
24. Hemorrhagic fever viruses with renal syndrome. Test 6 (Topics 4-6)
25. Principles of decontamination in dentistry. Methods of pre-sterilization treatment, disinfection and sterilization. Antiseptics, disinfectants in dentistry. Methods of microbiological research in clinical dental practice
26. Microecology of the oral cavity. The main biotopes of the oral cavity. Factors contributing to and preventing microbial colonization of the oral cavity. Formation of the microbial flora of the oral cavity during life. Factors of non-specific and specific protection of the oral cavity.
27. Resident microflora of the oral cavity. Principles of classification of oral microbes. Characteristics of the leading residents of the oral cavity. Facultative and obligate anaerobic streptococci. Vaillonella, diphteroids, actinomycetes, propionibacteria, eubacteria. Taxonomy, basic properties, role in the pathology of the maxillofacial region.
28. Gram-negative anaerobic bacteria: bacteroids, prevotella, porphyromonads, fusobacteria, leptotrichia. Convoluted forms of gram-negative anaerobic bacteria: campylobacteria, treponema. Taxonomy, basic properties, role in the pathology of the maxillofacial region.
29. Characteristics of eukaryotic microbes of the oral cavity. Fungi of the genus Candida. Amoebas. Trichomonas. Taxonomy, basic properties, role in the pathology of the maxillofacial region. Test 7 (Topics 7-11)
30. Formation of dental plaque. Characteristics of the cariesogenic microflora (streptococci, lactobacilli, actinomycetes). The role of tooth biofilm in the pathogenesis of caries.
31. Microbial flora, pathogenesis and immune processes in odontogenic infection (pulpitis, periodontitis). Microbial flora and immune processes in periodontal diseases. Characteristics of periodontopathogenic flora. Pathogens and pathogenesis of gingivitis and periodontitis.
32. Bacterial infections and their manifestations in the oral cavity. Scarlet fever, diphtheria, listeriosis, pustular (strepto-staphylococcal) infections, gonococcal, tuberculous, syphilitic, ulcerative necrotic lesions. Characteristics of pathogens. Clinical manifestations in the oral cavity. Microbiological diagnostics. Treatment and prevention.
33. Viral infections and their manifestations in the oral cavity. Characteristics of pathogens and clinical manifestations in the oral cavity in herpetic stomatitis, shingles, measles, vesicular and coxacivirus stomatitis, hemorrhagic fevers, papillomavirus infections and SARS (influenza). Microbiological diagnostics. Treatment and prevention.

34. Typical lesions of the oral cavity in patients with HIV infection. Microbiological diagnostics. Treatment and prevention. Fungal infections and their manifestations in the oral cavity. Characteristics of the pathogens of candidiasis. Microbiological diagnostics. Treatment and prevention.
35. The microbial flora of the oral cavity as an etiological factor in systemic diseases of the body. The importance of chronic foci of infection in the oral cavity in the development of general somatic pathology.
36. The role of the microbial flora of the oral cavity in the development of infectious endocarditis. Test 8 (Topics 12-18)

Text books and required supplies:

1. Zverev, V. V. Medical Microbiology, Virology, Immunology : textbook. Vol. 1 / Zverev V. V. , Boichenko M. N. - in 2 volumes. - Москва : ГЭОТАР-Медиа, 2020. - 384 с. - ISBN 978-5-9704-5607-1..
2. Zverev, V. V. Medical Microbiology, Virology, Immunology : textbook : Vol. 2. / eds. V. V. Zverev, M. N. Boichenko. - Москва : ГЭОТАР-Медиа, 2020. - 392 с. - ISBN 978-5-9704-5719-1..
3. Artamonova, M. N. Medical Microbiology, Virology and Immunology. Lecture Notes : textbook / Artamonova M. N. , Potaturkina-Nesterova N. I. , Ilyina N. A. , Nemova I. S. - Москва : ГЭОТАР-Медиа, 2021. - 352 с. - ISBN 978-5-9704-6043-6.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes

- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1.

1. Light microscope (bright field), immersion system
2. Cell wall. Functions.
3. Temperate cycle

Example of module No. 2

1. Culture media, their classification
2. Biochemical properties of bacteria. Enzymes. Pigments
3. Genetic recombinations in bacteria: transduction

Example of module No. 3

1. Classification of antibiotics by the mechanism of action
2. Carrier. Definition, conditions of occurrence. Examples.
3. Characterization of bacterial antigens

Example of module No. 4

1. Methods of microbiological diagnostics of bacterial infectious diseases
2. The causative agent of syphilis. Taxonomy. Properties. The pathogenesis of the disease. Microbiological diagnostics. Prevention and treatment
3. Mycoplasmas. Taxonomy. Properties. The pathogenesis of diseases. Microbiological diagnostics. Prevention and treatment

Example of module No. 5

1. Pathogens of salmonellosis. Taxonomy. Properties. The pathogenesis of diseases. Microbiological diagnostics. Prevention and treatment
2. Methods of microbiological diagnosis of fungal infectious diseases
3. Trichomonas. Taxonomy. Properties. The pathogenesis of diseases. Lesions in the oral cavity. Microbiological diagnostics. Prevention and treatment

Example of module No. 6

1. Influenza virus. Taxonomy. Properties. The pathogenesis of the disease. Damage to the oral mucosa. Microbiological diagnostics. Prevention and treatment
2. HIV virus. Taxonomy. Properties. The pathogenesis of the disease. Microbiological diagnostics. Prevention and treatment
3. Hemorrhagic fever virus with renal syndrome. Taxonomy. Properties. The pathogenesis of the disease. Microbiological diagnostics. Prevention and treatment

Example of module No. 7

1. Methods of microbiological research used in dentistry
2. Formation of the microbial flora of the oral cavity during life
3. Veillonella, diphtheroids, actinomycetes, propionibacteria, eubacteria - Taxonomy, main properties, role in the pathology of the maxillofacial region

Example of module No. 8

1. Characteristics of cariogenic microflora
2. Pathogens, pathogenesis in odontogenic infection. Microbiological methods of study
3. Syphilitic lesions of the oral cavity. Characteristics of the pathogen. Microbiological diagnostics. Prevention and etiotropic treatment

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 3 tasks
Questions 1 - 3 are evaluated by 33,3 points

* The teacher has the right to remove from 1 to 3 points for incorrect writing of taxonomy, reactions

Total: 3 x 33,3 = 100 points

For example, for the 2nd question from the question card on second module:

- correct answer - 33 points

Total for one question: **33,3 points**

Example of exam card

Card 1.

Microbiology, virology, microbiology of the oral cavity

Variant 1

Choose one correct answer

1. Bean shape bacteria:
1) Fusobacterium
2) Neisseria
3) Corynebacterium
4) Chlamydia

2. Gram staining depends on:
1) the presence of sterols in the cell membrane
2) the method of obtaining energy
3) the structure of the cytoplasmic membrane
4) composition and structure of the cell wall

3. Twisted bacteria are:
1) micrococcus
2) sarcines
3) streptococcus
4) spirochaetes

4. Protozoa are
1) eukaryotes
2) prokaryotes
3) archaea
4) deuteromycetes

5. Bacteria that have partially or completely lost their cell wall, but retain the ability to reproduce
1) rickettsia
2) L-form bacteria
3) spheroplasts
4) mycoplasma

6. To study the structure of viruses apply:
1) dark field microscope
2) phase contrast microscope
3) electron microscope
4) light microscope

7. It is typical for viruses
1) synthesis of exotoxins

2) the presence of several types of nucleic acid
acids
3) facultative parasitism
4) disjunctive method of reproduction

8. Bacteriophages are
1) mushrooms
2) bacteria
3) viruses
4) protozoa

9. To identify motility, the following method is usually used:
1) Ziehl-Neelsen staining
2) Burri-Gins staining
3) Neisser staining
4) Hanging drop preparation

10. Differential diagnostic environment is
1) yolk salt agar
2) bile broth
3) Endo's medium
4) peptone water

11. Main pathogenicity factor of C.diphtheriae:
1) Cord factor
2) Histotoxin
3) Neuraminidase
4) Hyaluronidase

12. Lyme disease causes:
1) Borrelia reccurrentis
2) Borrelia persica
3) Borrelia caucasica
4) Borrelia burgdorferi

13. These drugs used for HIV treatment, EXCEPT:
1) Raltegravir
2) Enfuvirtid
3) Indinavir
4) Acyclovir

14. Rickettsia are characterized by:
1) the presence of intracellular motor fibrils
2) the presence of sterols in the composition
membranes
3) obligate parasitism in
eukaryotic cell
4) absence of a cell wall

15. Pneumococcus belongs to the genus:
1) Streptococcus
2) Staphylococcus

3) Diplococcus
4) Neisseria

16. Symplast is called:
1) giant multinucleated cell
2) a collection of red blood cells adsorbed on
the surface of a virus-infected cell
3) viral inclusions in the cell
4) sponge-like accumulations of nervous tissue
that arose under the influence of prions

17. SSPE (subacute sclerosing panencephalitis) is associated with:
1) flu
2) measles
3) tick-borne encephalitis
4) rubella

18. Viral lesions in HIV-infected people are more often caused by a virus:
1) herpes
2) measles
3) coxsackie
4) hemorrhagic fevers

19. For specific prevention of diphtheria the following is used:
1) killed vaccine
2) live vaccine
3) toxoid
4) recombinant vaccine

20. There are causative agents of epidermophytosis, EXCEPT:
1) Microsporum
2) Blastomyces
3) Epidermophyton
4) Trichophyton

21. For the treatment of botulism the following is used:
1) toxoid
2) bacteriophage
3) antitoxic serum
4) antibacterial serum

22. Pseudomonas aeruginosa infection is caused by:
1) P. gingivalis
2) P. intermedia
3) P. oralis
4) P. aeruginosa

23. The causative agent of chickenpox belongs to the genus:
1) Varicellovirus
2) Rhadinovirus
3) Simplexvirus
4) Cytomegalovirus

24. The leading pathogenicity factor of the causative agent of tetanus is:
1) capsule
3) flagella
2) endotoxin
4) exotoxin

25. Nutrient medium for the accumulation of the cholera pathogen:
1) kligler
2) Alkaline peptone water
3) endo
4) bile broth

26. In the surface layers of dental plaques, the microflora is represented mainly by the following microorganisms:
1) S. mutans, actinomycetes
2) spirochetes, bacteroids
3) veillonella, corynebacteria
4) spirochetes, fusobacteria

27. The microflora of the oral cavity normally contains:
1) Rickketsia
2) Toxoplasma
3) Neisseria
4) Bordetella

28. Virulence of Porphyromonas gingivalis is associated with the presence of:
1) exotoxin
2) proteases
3) flagella
4) oxidases

29. Periodontopathogenic bacteria of the first order include:
1) Staphylococcus epidermidis, Streptococcus
milleri
2) Aggregatibacter actinomycetemcomitans,
Porphyromonas gingivalis
3) Fusobacterium nucleatum, Treponema
Denticola
4) Eikenella corrodens, Prevotella intermedia

30. To reduce the risk of infective endocarditis in dental patients, before performing procedures that can induce bacteremia, the following is prescribed:
1) a course of antibiotic prophylaxis
2) course of vaccination
3) prevention with bacteriophages
4) immunoglobulin prophylaxis

31. Name the reaction using antibodies labeled with enzymes:
1) neutralization
2) complement fixation
3) enzyme immunoassay

4) agglutination

32. The essential structure of a bacterial cell is
1) fimbriae
2) dispute
3) nucleoid
4) volutin grains

33. Gram-positive bacteria are painted in:
1) blue-violet color
2) raspberry red color
3) yellow color
4) blue

34. Acid-fast bacteria are stained using the following method:
1) Ziehl-Nielsen
2) Romanovsky-Giemsa
3) Burri-Ginsa
4) Gram

35. For the treatment of botulism, you can use:
1) polyvalent antitoxic serum
2) autovaccine
3) bacteriophage
4) antifungal drugs

36. Alpha-hemolytic streptococci form on blood agar:
1) colonies surrounded by a transparent
colorless zone of hemolysis
2) non-hemolytic colonies
3) colonies surrounded by a green hemolysis
zone
4) colonies with hemolysis indistinguishable to
the naked eye

37. The selective medium for isolating Staphylococcus aureus is:
1) Ploskirev's medium
2) Yolk-Salt agar
3) MPA
4) Endo medium

38. Antibiotics according to their mechanism of action are divided into the following groups, EXCEPT:
1) those that suppress cell wall synthesis
2) those that disrupt the functions of the CPM
3) those that inhibit the synthesis of nucleic acids
4) disrupting the functions of flagella

39. Exotoxins are characterized by:
1) Thermal stability
2) Specificity of action
3) Weak toxicity

4) Weak antigenic properties

40. The spherical shape is characteristic of the following bacteria:
1) Borrelia
2) Bacilli
3) Vibrio
4) Staphylococcus

41. Mandatory vaccination, which prevents the development of the disease, is carried out in:
1) coxsackie viral stomatitis
2) measles
3) herpetic stomatitis
4) vesicular stomatitis

42. Bacteria that form spores:
1) Corynebacterium
2) Mycobacterium
3) Bacillus
4) Klebsiella

43. How many serotypes does the polio virus have:
1) 1
2) 3
3) 4
4) 2

44. Anthrax is caused by:
1) Bacillus subtilis
2) Bacillus cereus
3) Bacillus megaterium
4) Bacillus anthracis

45. The main role in the pathogenesis of cholera is played by:
1) Enterotoxin
2) Histotoxin
3) Neurotoxin
4) Dermonecrotoxin

46. Name the residents of the oral cavity related to gram-positive bacteria:
1) Veillonella
2) Leptotrichia
3) Klebsiella
4) Lactobacterium

47. Measles virus belongs to the genus:
1) Flavivirus
2) Paramyxovirus
3) Morbillivirus
4) Pneumovirus

48. The causative agent of amoebiasis is:

1) Shigella flexneri
2) Balantidium coli
3) Entamoeba histolytica
4) Shigella dysenteria

49. Brill-Zinsser disease is:
1) Relapse of typhus
2) Reinfection of typhus
3) Relapse of Q fever
4) Superinfection of typhus

50. The carriers of the causative agent of Lyme disease are:
1) Ticks
2) Mosquitoes
3) Flies
4) Fleas

Preparation card

Preparation name: Vaccine measles cultural live dry	**Compounds**	**Practical application**

EVALUATION OF THE EXAM ANSWER

Evaluation of complete, comprehensive answers to the examination tasks offered to students of the specialty "Dentistry" in the exam in the discipline " Microbiology, virology, microbiology of the oral cavity" in %:
1. The MCQ - 80%
2. The preparation – 20%

Note: incorrect answers are evaluated depending on the completeness of presentation (below the announced percentage).

The final assessment of intermediate certification in the subject "Microbiology, virology, microbiology of the oral cavity" is calculated by a computer program in accordance with the score-rating system for assessing students' knowledge in force at the Kazan State Medical University, taking into account the attendance of lectures and laboratory classes, grades obtained from the current academic performance monitoring, grades for modules and examination grades.

The standard of answer to a preparation card:

Preparation name	Composition	Practical use
Vaccine measles cultural live dry	Vaccine strain of measles virus with weakened virulence, grown on cell culture, dried by freeze drying	The vaccine is intended for routine vaccination against measles according to the National Calendar of Preventive Vaccinations for Children

PATHOPHYSIOLOGY - HEAD AND NECK PATHOPHYSIOLOGY

Teachers: PhD Aigul Galembikova, PhD Firuza Bikinieva

Building, Department, classroom, Department of General Pathology, Tolstoy street, 6/30, 1st floor, 119, 126, 131, 132 rooms.

Contact details:

- Telephone number: 8 (843)236-75-31
- E-mail address: general-pathology@kazangmu.ru
- Office and working hours: 633 (9-17)

Class hours:

Total hours — 180:
- Lectures 28 hours;
- Practical classes 72 hours;
- Independent work 44 hours;
- Control 36 hours

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University https://e.kazangmu.ru/course/view.php?id=1891

Course objectives: The purpose of mastering the discipline

Pathology belongs to propedeutical disciplines supplying a bridge between the basic sciences and the clinic. The goals of mastering the pathophysiology are to provide the basic knowledge of etiology and the mechanisms of the typical pathological processes and common types of the diseases, thus establishing the effective fundamental principles for preventive and therapeutic health care measures and practices.

Tasks of the discipline:

To form knowledge in the following field:

- Demonstrate a basic understanding of the concepts and elements of disease.
- Apply principles of molecular biology, anatomy, physiology, biochemistry, and histology of human body systems to the pathologic processes and most common syndromes and diseases.
- Demonstrate an understanding of the fundamental principles of mechanisms of diseases, the diagnosis of diseases, and the treatment of diseases.
- Discuss common laboratory and diagnostic tests.
- Understand the pharmacological pathogenesis-based treatment strategies of diseases and pathologic conditions.

Course topics:

Calendar plan of lectures

1. General concepts of pathophysiology
2. Inflammation
3. Allergy
4. Immunodeficiency
5. Mechanisms of tumorigenesis
6. Disorders of haemostasis
7. Atherosclerosis. Coronary artery disease
8. Arterial hypertension

9. Pathophysiology of shock
10. Obstructive lung diseases
11. Pathophysiology of Acid-peptic disease
12. Pathophysiology of Pancreatitis
13. Acute and chronic Hepatitis
14. Acute and chronic renal failure

Calendar plan of workshops and practical classes

1. Cell injury and death
2. General mechanisms of hypoxia
3. Acid-base disorders
4. Water and electrolyte disorders.
5. Module 1
6. Acute Inflammation
7. Chronic inflammation
8. Pathophysiology of Fever
9. Pathophysiology of Allergy
10. Module 2
11. Immunodeficiencies
12. Pathophysiology of Tumors
13. Pathophysiology of Tumors 2
14. Module 3
15. Red blood cell disorders
16. White blood cell disorders
17. Module 4
18. Conduction disorders
19. Dysrhythmias
20. Heart failure
21. Module 5
22. Lung volumes, capacities, and the spirogram
23. Ventilation to perfusion mismatch
24. Module 6
25. Pathophysiology of Jaundice
26. Overview of liver diseases. Liver Function tests
27. Glomerular filtration rate(GFR)
28. Glomerulonephritis and nephrotic syndrome
29. Module 7
30. Reworks

Text books and required supplies:

1. General pathophysiology. Selected themes. Общая патофизиология. Избранные темы: методическое пособие для студентов / ГБОУ ВПО «Казан. гос. мед. ун-т» Министерства здравоохранения, каф. патофизиологии; [составители Л.Д.Зубаирова, С.В.Бойчук].– Казань: КГМУ, 2012. –98 с.
2. Pathophysiology of organs and systems. Selected themes. Патофизиология органов и систем. Избранные темы: методическое пособие для студентов / ГБОУ ВПО «Казан. гос мед ун-т» Министерства здравоохранения, каф. патофизиологии; [составители Л.Д.Зубаирова, С.В.Бойчук].– Казань: КГМУ, 2011. – 101 с.
3. Tests on pathophysiology/ Тесты по патофизиологии: методическое пособие для студентов / ГБОУ ВПО «Казан. гос. мед. ун-т» Министерства здравоохранения, каф. патофизиологии; [составители Л.Д.Зубаирова, С.В.Бойчук].– Казань: КГМУ, 2012. – 72 с.

4. Hammer, G. D. Pathophysiology of disease: an introduction to clinical medicine. 8th ed. New York: McGraw-Hill Education, 2018. 800 p.
5. Pathophysiology. The Official Journal of the International Society for Pathophysiology https://www.journals.elsevier.com/pathophysiology

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test works assessment, reports or other).

Routine performance assessment (homework, oral answer during classes, etc.) is carried out using 10-point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test. Grading: 0–69 – "noncredit", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance (10%), module and test results (50%), final exam results (40%).

Classroom rules:

- Be respectful
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Using phone is allowed only during brakes

Example of module No. 1 on the section of General concepts of pathophysiology, Cell injury and death, Hypoxia, Acid-base and Water electrolyte disorders

1. What is etiology?
2. What does Pathophysiology deal with?
3. Which hormones are increased in stress?
4. Central to the endocrine component of the neuroendocrine response to stress is…
5. The net result of lipid peroxidation is…
6. Which enzymes are activated with the increased intracellular calcium level?
7. The major lipid-soluble antioxidant present in all cellular membranes is...

8 Apoptotic cell death is characterized by…

9. Immediate adaptive changes seen in hypoxia are…
10. Blood centralization reaction is characterized by…

11 Determine the type of hypoxia if: $PaO_2\rightarrow$, $SaO_2\rightarrow$, $CaO_2\downarrow$?

12. Metabolic alkalosis is a...
13. In what circumstances an overproduction of ketoacids occurs?
14. Respiratory acidosis develops as a result of…
15. Manifestations of metabolic acidosis include...
16. Plasma pH above 7.45, plasma $HCO3^-$ above 25 mmol/L and base excess above 3 mmol/L are characteristics of…
17. The physiologic mechanisms that contribute to edema formation include factors that…

18. The rate at which the kidney excretes or conserves sodium is dependant of…
19. Aldosterone acts at the level of the cortical collecting tubules of the kidneys for…
20. An increase in arterial resistance or decrease in venous resistance is supposed to…

Example of module No. 2 on the section of Inflammation, Fever, Allergy

1. What type of acid-base imbalance can result from prolonged vomiting?
2. Which tubule does aldosterone act on?
3. The tissue-derived inflammatory mediators, which are synthesized de novo
4. How do cytokines cause fever?
5. What are the steps of Type 4 hypersensitivity reaction?

Example of module No. 3 on the section of Immunodeficiency and Tumors

Immunodeficiency

1. Adaptive immune response exhibits:
a. specific recognition of the microbe
b. Immunological "memory"
c. generation of Ag-specific T- and B-cellsd.
d. all are correct
2. Absolute lymphopenia can be a signature of:
a. Wiskott-Aldrich syndrome
b. hereditary angioneurotic edema
c. Ataxia-Telangiectasia
d. Chediak-Higashi syndrome
3. T-cell receptor (TCR) recognizes a processed antigen peptide…
a. in association with a self-recognition protein, called a major histocompatibility complex (MHC) molecule
b. by membrane-bound immunoglobulin molecules that can bind a specific epitope
c. both mechanisms indicated above
d. none of indicated mechanisms
4.Secretory immunoglobulin found in saliva, tears, colostrums and bronchial, gastrointestinal, prostatic and vaginal secre-tions and consid-ered a primary defense against local infections in mucosal tissues is
a.Ig E, b.Ig G, c.Ig A, d.Ig D
X-linked hyper IgM syndrome is classified as
a. secondary cellular immunodeficiency disorder
b. primary cellular immunodeficiency disorder
c. secondary humoral immunodeficiency disorder
d. primary humoral immunodeficiency disorder

Tumors

1. Hayflick1.'s limit characterizes:
a. the limited number of contacts between cells
b. the unlimited abilities of cancer cells to proliferate
c. activation of the cellular check-points in response to DNA damage
d. cell abilities to the limited number of mitosis
2. Epstein-Barr virus mignt be the etiological factor of the following malignancies, except:
a. nasopharyngeal carcinoma
b. squamous cell carcinoma of the cervix
c. Burkitt's lymphoma
3. p53 is known as a:
a. proto-oncogene and decreased activity of this gene decreases the risk of cancer
b. onco-supressor gene and its decreased activity decreases risk of cancer

c. onco-supressor gene and its decreased activity increases risk of cancer
d. proto-oncogene and increased activity of this gene increases the risk of cancer

4. Tamoxifen is commonly used for therapy of:

a.all types of breast cancers shown here
b.ER-positive breast cancer
c.chronic myeloid leukemia (CML)
d.HER2-positive breast cancer
e.triple-negative breast cancer

5. The molecular mechanism of action of aromatase inhibitors is due to:

a. inhibition of the microtubules polymerization resulting to the mitotic spindle disassembly and cellular arrest in metaphase
b. the induction of DNA cross-links or strand-breaks in tumor cells
c. blockage of the extra-adrenal synthesis of estrogen
d. prevention of the microtubule disassembly into tubulin monomers and cell cycle arrest in anaphase

Example of module No. 4 on the section of Pathophysiology of blood

1. By assessing the indicators of "red blood cells", determine if there is anemia and then determine its affiliation with post hemorrhagic, "deficient", hemolytic or aplastic anemia. Explain your answer. (Cases 1 and 2)
2. Determine affiliation of the following hemograms with diseases. Explain your answer. Cases (3 and 4)

1. RBC 3,5 x 1012/l, Hb 82 g/l
Rt 1%, MCV ↓
SI ↓ TIBC↑ Fer ↓
Pt 190 x 10^9/l
WBC 8 x 10^9/l
- Neutrophil
- band 4%
- segmented 60%
- Lymphocyte 22%
- Monocyte 9%
- Eosinophil 4%
- Basophil. 1%

2. RBC 3,4 x 10^{12}/l, Hb 80 g/l
Rt 5%, MCV→
Pt 310 x 10^9/л
WBC 13 x 10^9/l
- Neutrophil
- metamyelocytes 1%
- band 10%
- segmented 59%
- Lymphocyte 21%
- Monocyte 5%
- Eosinophil 3%
- Basophil. 1%

3. RBC 2,05 x 10^{12}/l, Hb 64 g/l
Rt 0.3%, MCV→
Pt 100 x 10^9/l
WBC 8 x 10^9/l
- Neutrophil
- band 1%

- segmented 38%
- Lymphocyte 22%
- Monocyte 4%
- Eosinophil 0
- Basophil. 0

Blasts 33%

4. RBC 3,7 x 10^{12}/l, Hb 122 g/l

Rt 0.8%, MCV→

Pt 200 x 10^9/l

WBC 3 x 10^9/l

- Neutrophil
- band 20%
- segmented 22%
- Lymphocyte 50%
- Monocyte 7%
- Eosinophil 1%
- Basophil. 0

Example of module No. 5 on the section of Pathophysiology of Cardiovascular system

1. Normal sinus rhythm is defined by…

a. QRS largely regular, P must be positive in limb leads

b. P must be positive in II but negative in Avl

c. each and every QRS is preceded by a P, positive in II

2. The early lesion, or fatty streak is characterized by:

a. macrophages and vascular smooth muscle cells full of oxidised LDL cholesterol

b. skeletal muscle cells full of oxidised LDL

c. platelets full of oxidised LDL

3. Key to the onset of acute coronary syndrome ACS is:

a. fatty steak formation

b. plaque disruption and subsequent thrombus formation

c. hypercholesterolemia

4. AV nodal conduction abnormalities can occur because of:

a. reflex activation of the vagus nerve

b. activation of sympathetic fibers

c. both correct

5. Preload is largely determined by:

a. the angiotensinogen

b. the blood pressure

c. the venous return to the heart

6. Diastolic dysfunction can be present in following cases except:

a. decreased relaxation

b. decreased elastic recoil

c. decreased stiffness of the ventricle

7. Symptoms of right ventricular failure include the following except:

a. accumulation of fluid in the lung venous circulation

b. generalized edema (anasarca)

c. ascites

8. Adrenal disease can cause hypertension by:

a. increased production of cortisol

b. increased production of thrombin

c. increased production of erythropoietin

9. The primary mechanism of the shock due to the blood loss is:
a. cardiac dysfunction
b. volume loss
c. volume maldistribution
10. The primary mechanism of the anaphylactic shock is
a.cardiac dysfunction
b.volume loss
c.volume maldistribution

11. Name the type of Dysrhythmia in the following strips.

Example of module No. 6 on the section of Pathophysiology of Respiratory system

1. The areas that do not participate in gas exchange in the normal lung are referred to:

a. anatomic dead space
b. alveolar dead space
c. both
d. all are wrong

2. Inspiratory reserve volume (IRV) is defined as:

a. the amount of air that can be forcibly inspired at the end of normal inspiration
b. the amount of air that can be forcibly expired at the end of normal expiration
c. the total amount of gas that can be exhaled following a maximal inhalation
d. the amount of gas remaining in the lungs at the end of a maximal exhalation
e. the amount of gas inhaled and exhaled with each resting breath.

3. The macrophage-derived factor that is involved in the injury of lung parenchyma injury (for example, in emphysema) is the following:

a. serotonine
b. histamine
c. metalloprotease type 12
d. elastase

4. The decrease of the V/Q ratio represents the pathologic processes referred to:

a. all are wrong
b. alveolar dead space
c. both cases inducated above
d. shunt

5. FEV1 is disproportionately reduced as compared to the FVC, resulting in a low FEV1/FVC ratio, in:

a. obstructive lung diseases

b. restrictive lung diseases
c. both are correct

6. Factor involved in cardiogenic pulmonary edema pathogenesis is:

a. in-creased pulmonary venous pressure (causing in-creased capillary hydrostatic pressure)
b. loss of integrity of the alveolar epithelium and vascular endothelium
c. increased alveolar surface tension (thereby lowering interstitial hydrostatic pressure)
d. decreased capillary colloid osmotic pressure

7. Technetium 99 is used for:

a. perfusion scan procedure
b. spirometry test
c. all are wrong
d. diffusion lung capacity measure

8. The presence of the transudate in the lungs is typical for:

a. cardiogenic pulmonary edema
b. both types of pulmonary edemas indicated above
c. all are wrong
d. non-cardiogenic pulmonary edema

9. Index Tiffno is typically increased in:

a. bronchial asthma
b. emphysema
c. pulmonary embolism
d. chronic bronchitis
e. interstitial pulmonary fibrosis

10. The accumulation of eosinophils in bronchial airways is responsible for the following, except:

a. non-specific hyperactivity of airways
b. inability to tolerate well the exercises
c. specific hyperactivity of airways
d. reduced lung compliance

Example of module No. 7 on the section of Pathophysiology of Liver and Kidneys

1. Hepatitis A virus is spread by:

a. the fecal-oral route b. the intimate contacts c. the infected blood

2. What factors are important in pathogenesis of the extrahepatic manifestations of acute viral hepatitis?

a. immunologic b.humoral c. neurologic

3. Coagulopathy in which the prothrombin time can be corrected by vitamin K injections but not by oral vitamin K suggests:

a. loss of clearance of activated clotting factors
b. cholestatic disease
c. decreased coagulation factor synthesis

4. In patients with severe liver disease, infections can rapidly decompensate into sepsis due to:

a. decreased clearance of bacteria by liver endothelial cells
b. decreased clearance of bacteria by hepatocytes
c. decreased clearance of bacteria by Kupffer cells

5. Bilirubin ↑, ALT normal; reticulocytes normal; prothrombin time↑; + parenteral vitamin K falls, urinary changes: urobilinogen absent, faecal changes: stercobilinogen absent. Laboratory findings are due to…

a. pre-hepatic jaundice b. hepatic jaundice c. post-hepatic jaundice

6. According to the vascular theory of ARF pathogenesis…

a. occlusion of the tubular lumen increases intratubular pressure sufficiently to decrease net filtration pressure
b. afferent arteriolar vasoconstriction and efferent arteriolar vasodilation reduces glomerular filtration
c. decreased glomerular filtration results from the afferent arteriolar vasodilation and efferent arteriolar vasoconstriction

7. Continued excessive sodium ingestion in CRF will contribute to:
a. weight gain b. hyponatremia c. hypertension

8. The net effective filtration pressure is a result of:
a. the sum of the pressure in Bowman's capsule and the plasma colloidal pressure
b. the intracapillary pressure minus the sum of the pressure in
Bowman's capsule and the plasma colloidal osmotic pressure
c. the intracapillary pressure and the plasma colloidal osmotic pressure

9. Which statement is not correct?
a. the glomegular filter can be cloggede by endothelial swelling during acute inflammation which results in decreased filtration
b. the podocytes can be injured, allowing the loss of size and charge selectivity which results in decreased filtration
c. the glomegular filter can be clogged by connective tissue deposition in chronic inflammation which results in decreased filtration

10. The clinical expression of glomerular endothelium injury is known as:
a. nephrotic syndrome b. nephritic syndrome

Answer the following questions related to the case.
BP 100/60 mm Hg, HR 80 b/min, RBC $4.8x10^{12}$/l, Hb 145g/l, Leu $5.52 \cdot 10^{9}$/l

Serum: creatinine – 11.1 mg\ml, (N 12-14 mg\ml), urea – 6,8 mmol\l, (N 3-8 mmol/l), proteins – 58 g/l, (N 65-85g/l), albumins – 28g/l, (N 40-50g/l).
Diuresis: 2200 ml/day
Urine: creatinine 760 mg/ml, proteins –2.8 g/l, glucose – absent, casts – present.

11. Are there signs of azotemia?
a. yes b. no

12. Make calculation of GFR. Is it…
a. reduced b. increased c. normal

13. What is the mechanism of lowered blood pressure?
a. intravascular volume depletion b. reflex vasodilatation c. reflex vasoconstriction

14. What is the mechanism of hypoalbuminemia?
a. hemodilution b. loss of protein synthetic function of the liver c. loss of proteins with urine

15. What syndrome is the patient having?
a. Chronic renal failure b. Nephrotic syndrome c. Acute renal failure d. Nephritic syndrome

EXAMPLE OF THE FINAL EXAM

1. Definition of health by WHO
a. State of complete physical, and social well-being
b. State of complete physical, mental, and social well-being and not merely the absence of disease
c. Mental and social well-being and not merely the absence of disease
2. The example of multifactorial disease is
a. tuberculosis
b. cancer
c. AIDS
3. Dissolved oxygen molecules are registered as…
a. CaO2
b. PaO2

c. SaO2
4. The main source of free radicals is...
a. Oxygen
b. Hydrogen
c. Carbogen
5. Coagulation of blood vessels and tissue proteins occurs
a. With intense heat
b. With biologic injury
c. With lead toxicity
6. The tissue colloidal osmotic pressure…
a. pulls water out of the interstitial spaces into the capillary
b. pulls water out of the capillary into the interstitial spaces
c. pushes water out of the cell
7. Edema due to a decrease in capillary colloidal pressure
a. tends to affect tissues in dependent parts of the body
b. tends to affect the face as well as the legs and feet
c. tends to affect lungs
8. The mechanism protecting the ECF volume:
a. alterations in potassium balance
b. alterations in sodium balance
c. alterations in glucose balance
9. Metabolic alkalosis is a...
a. Decrease in HCO3- levels
b. Reduction in pH
c. Increased HCO3- levels
10. Plasma pH below 7.35 and an arterial PCO2 above 50 mm Hg refers to:
a. Metabolic acidosis
b. Respiratory acidosis
c. Respiratory alkalosis
11. The organization (tissue repair) of the acute inflammation reflects the processes, in which
a. lost tissues are replaced by proliferation of cells of the same type, which reconstruct the normal architecture
b. dead material are removed by phagocytosis and the tissues are left with their original architecture
c. lost tissues are replaced by a fibrous scar, which is produced from granulation tissues
12. The acute-phase inflammatory proteins are synthesized in
a. liver
b. spleen
c. bone marrow
13. Beneficial effects of inflammation include the following except
a. dilution of toxins
b. stimulation of immune response
c. swelling
d. fibrin formation
14. The increased oncotic pressure in inflammatory site is a consequence of
a. activation of lyzosomal enzymes with proteolytic activities
b. increased vascular permeability
c. all are correct
15. The term “allergy” was originally defined as “an altered capacity of the body to react to a foreign substances” by :

a. Clemens Von Pirquet
b. Edward Jenner
c. Louis Paster
d. Robert Kox
16. Patient with sneezing and itchy, watery eyes is diagnosed with allergic rhinitis. This hypersensitivity reaction is caused by:
a. binding of an allergen to a specific IgE on the surface of a mast cells
b. binding of an allergen to a specific IgA on the surface of a basophil
c. binding of a histamine to an allergen
d. binding of a mast cells to histamine
17. The sensitization phase is present in the following processes:
a. passive sensitization
b. active sensitization
c. hypertension
18. Substances required the additional transformation to be the complete allergen are termed as:
a. exogenous allergens; b. primary endogenous allergens; c. secondary endogenous allergens
d. gaptens; e. all are correct
19. Antipyretics are also known as a:
a. NSAID's (non-steroid anti-inflammatory drugs)
b. SAID's (steroid anti-inflammatory drugs)
c. hypotensive drugs
d. all are correct
20. The ability of antipyretics to reduce increased body temperature is due to
a. inhibit shivering and rigors
b. inhibit peripheral vasoconstriction
c. inhibit cyclooxygenase
d. increase sweating and vasodilation
21. Persons with Wiskott-Aldrich syndrome are susceptible to:
a. recurrent bacterial infections.
b. bleeding episodes or symptoms (low platelet counts)
c. Varicella infection
d. devel¬opment of malignancies of the mononuclear phagocytic system, including Hodgkin's lymphoma and leukemia.
e. all are correct
22. The first cir¬culating immunoglobulin to appear in response to an anti¬gen and the first antibody type made by a newborn is:
a. IgG; b. IgD; c. IgM; d. IgA; e. IgE
23. Acute viral infections (measles, cytomegalovirus) are able to induce:
a. primary humoral immunodeficiency
b. primary cellular immunodeficiency
c. secondary humoral immunodeficiency
d. secondary cellular immunodeficiency
e. combined severe immunodeficiency
24.High susceptibility to the diseases caused by extracellular pathogens can be a consequence of:
a. humoral immunodeficiency disorders
b. cellular immunodeficiency disorders
c. all are correct
25. The central defect of X-Linked Agammaglobulinemia is:
a. an inability of T cells to signal B cells to undergo isotype switching to IgG and IgA; thus, they produce only IgM

b. embryonic defect resulting in the partial or complete failure of thymus and parathyroid glands development
c. block of differentiation of pre-B cells, creating an absence of mature circulating B cells and plasma cells
d. all are correct
26. If the DNA damage is non-repairable, p53 protein:
a. increases the proliferation to repair damaged DNA in the S-phase
b. induces a quiescence
c. induces a apoptosis
27. The initiation step of carcinogenesis is:
a. a reversible mutation of DNA
b. precedes the promotion step of carcinogenesis
c. do not alter DNA but make it susceptible to the following mutagenesis
d. second stage of carcinogenesis
28. Arrange in correct sequence the phases of the anti-tumor defenses:
a. anticarcinogenic, antimutational, anticellular
b. antimutational, anticarcinogenic, anticellular
c. anticellular, antimutational, anticarcinogenic
d. anticarcinogenic, anticellular, antimutational
29.The anti-mutational step of anti-tumor resistance include:
a. recognition of cancer cells by cytotoxic lymphocytes and NK- killers
b. inhibition and inactivation of carcinogens (free oxygen radicals, hydroperoxides etc.)
c. reparation of damaged DNA and activation of anti-oncogenes (onco-supressors)
30. Burkitt's lymphoma can be developed after the exposure to:
a. Epstein-Barr virus; b. hepatitis B virus
c. human T-cell leukaemia virus; d. human papilloma virus
e. all are correct
31. Thrombocytopenia commonly is characterized by…
a. petechiae, purpura
b. deep tissue bleeding
c. both are correct
32. Major growth factor that act on committed progenitor cells:
a. vasopressin
b. thrombopoietin
c. bradykinin
33. Acute nonlymphoid leukemia is:
a. A bone marrow derived neoplasm composed of myeloblasts
b. A bone marrow derived neoplasm composed of myelocytes
c. A bone marrow derived neoplasm composed of lymphoblasts
34. What cells can be found in the blood count in chronic myeloid leukemia?
a. lymphoblasts
b. pronormocytes
c. myelocytes
35. Anisocytosis means:
a. irregular shape
b. irregular size
c. increased size
36. Sickle cell anemia results from:
a. inherited disorder of the red cell membrane
b. a point mutation in the p chain of the hemoglobin molecule
c. drug induced disorder of red blood cells
37. Secondary polycythemia results from:

a. a physiologic increase in the level of erythropoietin
b. neoplastic proliferation
c. blood loss
38. Which type of antibodies causes red cell destruction?
a. Ig E
b. Ig M
c. Ig A
39. What is thalassemia?
a. inherited disorder of the red cell membrane
b. are a group of disorders of hemoglobin α or the β chains synthesis
c. a point mutation in the p chain of the hemoglobin molecule
40.Which statement is wrong?
a. vitamin K deficiency can result from malnutrition
b. vitamin K deficiency can result from obstructive jaundice
c. vitamin K deficiency can result from anemia
41. In descending order of frequency, the vessels commonly affected by atherosclerosis are
a abdominal aorta, coronary arteries, popliteal arteries
b. descending thoracic aorta, internal carotid arteries
c. circle of Willis, coronary arteries, popliteal arteries
42. The early lesion, or fatty streak, is characterized by:
a. proliferating plasma cells
b. foam cells within the vascular wall
c. basophile full of oxidized LDL cholesterol
43. What cells are postulated as an important source of the TF in atheroma?
a. erythrocytes
b. mast cells
c. monocytes/macrophages
44. AV nodal conduction abnormalities can occur because of:
a. activation of sympathetic fibers
b. both
c. reflex activation of the vagus nerve
45. The afterload is:
a. . the volume work of the heart
b. the pressure work of the heart
c. the heart rate
46. The increased work of breathing is the mechanism of:
a. vomiting
b. shortness of breath
c. chest pain
47. A customary division of hypertension into two categories:
a. primary and secondary b. active and passive c. hereditary and acquired
48. Adrenal disease can cause hypertension by:
a. complement production
b. cystein production
c. cateholamine production
49. Common mechanism for all shocks is:
a. volume excess
b. multiple organ underperfusion
c. increased pump function of the heart
50. Vital organs fails in shock as a result of
a. hypoxia
b. inflammation

c. immunodeficiency
51. Tidal volume (VT) is:
a. the amount of air that can be forcibly expired at the end of normal expiration
b. the amount of gas remaining in the lungs at the end of a maximal exhalation
c. the amount of gas inhaled and exhaled with each resting breath.
d. the amount of gas in the lungs at the end of a resting tidal breath
52. Inspiratory reserve volume (IRV) is:
a. the amount of air that can be forcibly expired at the end of normal expiration
b. the amount of gas inhaled and exhaled with each resting breath.
c. the amount of gas remaining in the lungs at the end of a maximal exhalation
d. the total amount of gas that can be exhaled following a maximal inhalation
e. the amount of air that can be forcibly inspired at the end of normal inhalation
53. The increase of the V/Q ratio represents the pathologic processes referred as a:
a. alveolar dead space
b. shunt
c. both
d. all are wrong
54. Technetium 99m, which is coupled with macroaggregated albumin (MAA) is used to assess:
a. lung ventilation in a ventilation perfusion scanning
b. lung perfusion in a ventilation perfusion scanning
c. diffusion lung capacity
d. all are correct
55. Cardiogenic pulmonary edema is typically a consequence of the following factors except:
a. in¬creased pulmonary venous pressure (causing in¬creased capillary hydrostatic pressure)
b. increased alveolar surface tension (thereby lowering interstitial hydrostatic pressure),
c. loss of integrity of the alveolar epithelium and vascular endothelium
d. decreased capillary colloid osmotic pressure
56. Residual volume (RV) is:
a. the amount of air that can be forcibly expired at the end of normal expiration
b. the amount of air remaining in the lungs at the end of a maximal exhalation
c. the amount of gas in the lungs at the end of a resting tidal breath
d. all are correct
57. Resting pulmonary artery blood flow is approximately:
a. 2 L/min; b. 3 L/min; c. 4 L/min; d. 5 L/min; e. all are wrong
58. The hyperventilation of resting respiratory units is able to compensate
a. rise in Pco2 (hypercapnia)
b. fall in Po2 (hypoxemia)
c. both
d. all are wrong
59. Factors able to protect lung parenchyma against oxidant injury are the following except:
a. superoxide dismutase
b. catalase
c. elastase
d. glutathione
60. Centriacinar emphysema is most frequently associated with:
a. α1-protease inhibitor deficiency
b. prolonged smoking
c. chronic bronchitis
d. interstitial pulmonary fibrosis
e. all are correct
61. Hepatitis B virus is transmitted:
a. by fecal-oral route

b. by sexual contact
c. by contact with infected food
62. …. has both direct and indirect toxic effects on the liver:
a. sodium
b. glucose
c. ethanol
63. …. is believed to be related to γ-aminobutyric acid (GABA) not be metabolized, failure of detoxification of ammonia, cerebral edema:
a. jaundice
b. encephalopathy
c. arthralgias
64. Which statement is not correct?
a. an elevation in the level of serum alkaline phosphatase specifically indicates bile ducts disease
b. an elevation in the level of serum alkaline phosphatase can be seen in bile duct obstruction
c. an elevation in the level of serum alkaline phosphatase can be seen in primary biliary cirrhosis
65. Bilirubin ↑; AST normal; ALT normal; reticulocytes ↑; urinary changes: bilirubin: absent, urobilinogen: increased, faecal changes: stercobilinogen: normal.
Laboratory findings are due to…
a. pre-hepatic jaundice
b. hepatic jaundice
c. post-hepatic jaundice
66. Which statement is not correct?
a. the fractional excretion of sodium is an indicator of progressed from prerenal azotemia to acute tubular necrosis.
b. in simple prerenal azotemia, over 99% of filtered sodium will be reabsorbed
c. the fractional excretion of sodium is less than 1% when the Na reabsorbtion is impared
67. Chronic renal failure is:
a. is a reversible clinical syndrome, due to the long-standing renal impairment
b. an irreversible clinical syndrome, due to progressive renal impairment and its effects on many types of tissues
c. is a clinical syndrome characterized by azotemia
68. The interplay of afferent and efferent arteriolar constriction and dilatation is known as:
a. autoregulation
b. decompensation
c. disregulation
69. Excess consumption of salt and water in GN are expressed by:
a. edema and hypertension
b. hematuria
c. urea casts
70. Loss of plasma proteins in nephrotic syndrome may present as:
a. hypocoagulability due to hyperfibrinogenemia, and hyperlipidemia
b decreased susceptibility to infections due to defect in opsonization by IgG
c. vitamin D deficiency state and secondary hyporparathyroidism
d. hypercoagulability, due to antithrombin III, protein C and protein S deficiency
71. Prostaglandins E1 and E2 production are able to prevent ulcer development due to their ability to:
a. attenuate acid production
b. support the capillary blood flow to surface
c. all are correct
72. pH required for H. Pylori propagation is between:
a. 4.0-8.0; b. 1.0-6.0

c. 3.0-4.0; d. 6.0-8.0
e. all are correct
73. The most effective ulcer therapy is known as:
a. 2 weeks of triple therapy
b. 5 weeks of triple therapy fall in Po2 (hypoxemia)
c. 2 weeks of dual therapy
d. 4 weeks of quadruple therapy
e. all are wrong
74. The invasive toxin-producing bacteria are generally known as a:
a. colon pathogens
b. small bowel pathogens
c. all are correct
75. Exopeptidases are known as a:
a. amilase and lipase
b. chemotrypsin, trypsine and elastase
c. carboxypeptidase
d. phospholipase A2
e. all are correct
76. The mechanism underlying in NSAID's-induced gastric ulcer formation is due to:
a. decreased bicarbonate production and secretion
b. decreased mucus production and secretion
c. inhibition of the capillary blood flow to surface.
d. all are wrong
77. COPD are known to be accompanying diseases to ulcer development due to the:
a. common source of gastrointestinal and respiratory tracts in the early ontogenesis
b. inherited deficiency of α-antitripsin treatment
c. all are correct
78. The therapeutic activity of proton pump inhibitors is related to ability to:
a. decrease acid production
b. kill the bacteria
c. decrease gastrin secretion
d. protect the stomach lining
79. Osmotic diarrhea is due to:
a. inability to digest or absorb a particular nutrient
b. increased fluid transport out of ep¬ithelial cells
c. malabsorbed nutrients or poorly absorbed electrolytes that retain water in the lumen
d. all are wrong
80. The alcohol is involved is acute pancreatitis development due to:
a. direct toxic effect on pancreatic acinar cells
b. decreased tone at the sphincter of Oddi (predisposing to reflux of bile or duodenal contents into the pancreatic duct)
c. inflammation of the sphincter of Oddi (retention of hydrolytic enzymes in the pancreatic duct and acini)
d. all correct

EVALUATION OF THE MODULE ANSWER

The question card of the module 1 consists of 20 tasks. Questions are evaluated by 5 points. Total: 5 x 20 = 100 points

The question card of the module 2 consists of 5 tasks Questions are evaluated by 20 points. Total: 5 x 20 = 100 points. For example, correct answer - 10 points, correct explanation - 10 points. Total for one question: 20 points

The question card of the module 3 consists of 10 tasks. Questions are evaluated by 10 points. Total: 10 x 10 = 100 points

The question card of the module 4 consists of 4 tasks. Questions are evaluated by 25 points. Total: 4 x 25 = 100 points. For example, correct answer - 10 points, correct explanation - 15 points. Total for one question: 25 points

The question card of the module 5 consists of 10 MCQ evaluated by 7 points each and 3 ECG strips evaluated by 10 points each.

The question card of the module 6 consists of 10 tasks. Questions are evaluated by 10 points. Total: 10 x 10 = 100 points

The question card of the module 7 consists of 10 theoretical questions evaluated by 6 points each and 5 questions concerning clinical cases evaluated by 8 points each. Total: 6 x 10 = 60 points and 8x5=40.

EVALUATION OF THE FINAL EXAM ANSWER

The question card of the final exam consists of 80 questions. Grading: 0–69% – "noncredit", 70-79% – "satisfactory", 80-89% – "good", 90-100% – "excellent".

OBSTETRICS

Teacher: PhD, Associate Professor of the Department of Obstetrics and Gynecology named after Professor V.S. Gruzdev Yuriy V Orlov.

Building, Department, classroom # GUK, Butlerova, 49, room 111, Accreditation and Simulation Center

Contact details:

- Telephone number: 89063264040 (Associate Professor Yuriy V Orlov)
- E-mail address: scenter@kazangmu.ru
- Office and working hours: 111 (8-17)

Total hours — 108:

- Lectures 16 hours;
- Practical classes 44 hours;
- Independent work 48 hours;

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical classes is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Independent work is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

Course objectives:

The purpose of mastering the discipline

Obstetrics is one of the main sections of the medical specialty, the purpose of which is to train a highly qualified doctor. The study of the main symptoms of the physiological course of pregnancy, the ability to diagnose pregnancy, the acquisition of practical skills in providing assistance during physiological childbirth, is aimed at the formation of relevant competencies.

Tasks of the discipline:

A specialist in the training area (specialty) 31.05.03 Dentistry must solve the following professional tasks in accordance with the types of professional activity:

- conduct diagnostics of physiological pregnancy, be able to provide assistance during labor.

An important section is the students' mastery of a professional algorithm for solving practical diagnostic problems, as well as mastering practical skills in providing first medical aid during uncomplicated labor.

Course topics:

Calendar plan of lectures

1. **Regulation of the menstrual cycle.** The menstrual cycle is regulated by 5 links: the GM cortex, hypothalamus, pituitary gland, ovaries, uterus
2. **Perinatal health care of the fetus and newborn.** This is a comprehensive system of diagnostics and prevention.
3. **Physiological and pathological course of the postpartum period.** The clinical picture, diagnostic methods, treatment and prevention of complications are discussed
4. **Preeclampsia. Eclampsia**. A severe complication of pregnancy, which, if unfavorable, leads to the death of the fetus and mother.
5. **Obstetric hemorrhage.** A complication that occurs during pregnancy, labor, and after labor.

Calendar plan of laboratory classes

1. Organization of the work of the obstetric hospital. Asepsis. Antiseptics. Deontology. Pelvis from an anatomical and obstetric point of view. The fetus as an object of childbirth. Obstetric terminology. Methods of examination of pregnant women. Outpatient obstetric and gynecological clinic. Goals, objectives, and organization of its work. Diagnosis of early and late pregnancy. Perinatal risk factors.
2. Biomechanism of childbirth with anterior occipital presentation. The course and management of childbirth by periods. Preeclampsia. Pathogenesis. Clinic. The effect of preeclampsia on the outcome of childbirth in mother and fetus. Principles of emergency care for preeclampsia. Placenta previa and premature detachment of a normally located placenta. Principles of emergency care. Bleeding in the 3rd stage of labour and early postpartum periods. The algorithm of emergency care.
3. Caesarean section in modern obstetrics. Indications. The technique.
4. Inflammatory infections of the female genital organs of non-specific etiology. Sexually transmitted diseases
5. Infertility. Family planning. Contraception.
6. Acute abdomen in gynecology. Interrupted tubal pregnancy. Ovarian apoplexy.

Text books and required supplies:

1. Obstetrics : textbook / ed.: V. E. Radzinskiy, A. M. Fuks. - 2nd ed. - Moscow: GEOTAR-Media, 2019. - 876 p. : il
2. Gynecology : textbook / ed.: V. E. Radzinskiy, A. M. Fuks. - 2nd ed. - Moscow: GEOTAR-Media, 2020. - 896 p. : il

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in

other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

The final test (module) is held in form of MCQ, answering the clinical case, demonstrating practical scills, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module

Level 1 – knowledge assessment. The following types of control are used to assess learning outcomes in the form of knowledge assessment: – situational tasks;

Examples of tasks: A 17-year-old primiparous woman was admitted 4 hours after the onset of labor. The pregnancy is full-term. The waters have not broken. On admission, blood pressure is 180/100 mm Hg. Edema in the lower extremities, 3 gr protein in the urine. The woman in labor suddenly turned pale, complains of "bursting" pain in the abdomen. The presenting part of the fetus is not determined. The fetal heartbeat is dull, 90 beats per 1 minute, arrhythmic. The uterus is tense, asymmetrical in shape due to an increase in the left angle of the uterus. The pulse is 100 beats per 1 minute, soft, weakly filled. There is no bleeding. During vaginal examination: the dilatation of the os is 5 cm, the amniotic sac is sharply tense. The presenting part is not determined.

Evaluation criteria:

- Labor I, full term. I stage. Preeclampsia, severe stage. Placental abruption of a normally located placenta. Progressive intrauterine fetal hypoxia.
- Correct diagnosis.
- Incomplete diagnosis: diagnosis of "placental abruption of a normally located placenta" is not made, the stage of preeclampsia is determined incorrectly.
- Incorrect diagnosis.

Level 2 – assessment of skills.

The following types of control are used to assess the learning outcomes in the form of skills:

— manual skills;

Examples of tasks:

- show the mechanism of labor in the anterior occipital presentation.

Assessment criteria:

The grade “excellent” is given to the student if mastery of the obstetric phantom technique is fully demonstrated
The grade “good” if mastery of the obstetric phantom technique is demonstrated
The grade “satisfactory” if mastery of the obstetric phantom technique is partially demonstrated
The grade “unsatisfactory” if mastery of the obstetric phantom technique is not demonstrated

Grading: 0–69 – “unsatisfactory”, 70-79 – “satisfactory”, 80-89 – “good”, 90-100 – “excellent”.

Level 3 – skills assessment

The following types of control are used to assess learning outcomes in the form of skills:
— manual skills;

Examples of tasks:

1. demonstrate the technique of placental removal by Abuladze.
2. demonstrate the method of placental removal by Crede-Lazarevich.

Assessment criteria:

The grade “excellent” is given to the student if mastery of the obstetric phantom technique is fully demonstrated
The grade “good” if mastery of the obstetric phantom technique is demonstrated
The grade “satisfactory” if mastery of the obstetric phantom technique is partially demonstrated
The grade “unsatisfactory” if mastery of the obstetric phantom technique is not demonstrated

Grading: 0–69 – “unsatisfactory”, 70-79 – “satisfactory”, 80-89 – “good”, 90-100 – “excellent”.

EVALUATION OF THE MODULE ANSWER

The procedure for assessing learning outcomes is carried out on the basis of the Regulation of Kazan State Medical University on the current monitoring of academic performance and midterm assessment of students.

All types of students' educational activities in the discipline are subject to current monitoring of academic performance: lectures, practical classes, independent work, work on the educational portal.

Current monitoring of academic performance is carried out by a teacher assigned to implement the educational program in a specific academic group or a teacher responsible for the types of educational activities of students.

Current monitoring of academic performance in the discipline is subject to:
completing practical assignments, tasks for making decisions in a problem situation, tasks for making a decision in a choice situation, case task, analysis of the history of labor analysis of the results of functional diagnostics, preparation of a presentation, testing, simulator.

Assessment of the Current Monitoring of Students' Academic Performance on a separate topic is expressed on a 10-point scale.

Assessment of students' academic performance on a modular test (module) is expressed on a 100-point scale. The assessment is necessarily reflected in the academic journal.

During the midterm assessment, the results of the current monitoring of academic performance for the entire period of study in the discipline are taken into account and the point-rating system approved by the Regulation of Kazan State Medical University on the current monitoring of academic performance and midterm assessment of students is applied. The final (rating) assessment includes: assessments for modules (on a 100-point scale), current

assessments (on a 10-point scale), assessment of the midterm assessment (on a 100-point scale). Midterm assessment for the discipline: credit.

PHARMACOLOGY

Teachers:
Prof. A.U. Ziganshin,
Prof. B.A. Bajchurina,
PhD. A.O. Lobkaryov,
PhD. D.V. Ivanova,
PhD. D.O. Nikitin,
PhD L.R. Kashapov

Building, Department, classroom:
Kazan State Medical University,
Building No. 2, 3rd floor,
Kazan, 6/30 Tolstoy Street,
Department of Pharmacology,
Classrooms 301,302, 315, 316

Contact details:
- Telephone number: 8-843-236-0512
- E-mail address: ayrat.ziganshin@kazangmu.ru
- Office and working hours: 8 am – 6 pm

Total hours — 180:
- Lectures 28 hours;
- Practical classes 75 hours;
- Self-study 41 hours;
- Control 36 hours

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2276).

Course objectives:
The goals of mastering the **pharmacology** discipline are development of professional competence based on the formation of a systematic approach in students in the field of general and specific pharmacology, prescription, taking into account the focus of specialist training on the object, type and area of professional activity.

Knowledge formation:
classification and basic characteristics of drugs;
pharmacodynamics and pharmacokinetics;
indications and contraindications to the use of medicines;
side effects;
general principles of prescriptions of medicines.
Development of skills:
analyze the effect of medicines according to the totality of their pharmacological effects and the possibility of their use for therapeutic treatment;
write prescriptions for medicines in certain diseases and pathological processes, based on the features of their pharmacodynamics and pharmacokinetics.
Formation of skills:
prescribing medicines in the treatment of various diseases and pathological processes in the adult population.

Course topics:

Thematic plan of lectures

the 5th semester

1. Pharmacology – a foundation to clinical practice. General pharmacology.
2. Autonomic pharmacology. Cholinergic drugs (cholinomimetics. anticholinesterases)
3. Anticholinergic drugs, ganglion blocking agents, neuromuscular blocking agents
4. Adrenergic agonists. Sympathomimetics. Antiadrenergic drugs: α-adrenergic blocking agents, β-adrenergic blocking agents, α-and β-adrenergic blocking agents. Sympatholytics
5. Local anesthetics. Drugs acting on CNS. General anesthetics. Sedative-hypnotics
6. Opioid analgesics and antagonists. Antipyretic-analgesics, nonsteroidal anti-inflammatory drugs
7. Psychopharmacology. Antipsychotic, antianxiety and antimanic drugs.

the 6th semester

1. Cardiotonics
2. Antianginal drugs
3. Antihypertensive drugs
4. Antibiotics
5. Synthetic antimicrobial drugs. Antitubercular drugs
6. Steroidal anti-inflammatory drugs. Nosteroidal anti-inflammatory drugs
7. Basic principles of treatment of acute drug poisoning

Thematic plan of laboratory classes

the 5th semester

1. Introduction to practical pharmacology. Drug. Drug dosage. Therapeutic dose, toxic dose, single dose, daily dose. Drug forms. Prescription (receipt). Prescription writing. Liquid drug forms (solution, ampules, tincture etc.)
2. Semisolid drug forms (cream, oil, supp etc). Prescription writing. Solid drug forms (powder, tablets, capsules etc). Prescription writing
3. General pharmacology. Pharmacokinetics Pharmacodynamics
4. Autonomic pharmacology. Cholinergic drugs Anticholinesterases.
5. Anticholinergic drugs, ganglion blocking agents, neuromuscular blocking agents.
6. Adrenergic agonists
7. Antiadrenergic drugs.

8. Screening test № 1. Theme: “Autonomic pharmacology”
9. Local anesthetics
10. Drugs acting on CNS. General anesthetics. Sedative-hypnotics.
11. Opioid analgesics and antagonists. Antipyretic-analgesics, nonsteroidal antiinflammatory drugs
12. Antipsychotic and antianxiety drugs.
13. Antidepressants, CNS stimulants and cognition enhancers (cerebral vasodilators/nootropics).
14. Screening test №2. Theme: “Drugs acting on central nervous system”
15. Respiratory system drugs
16. Gastrointestinal drugs

the 6th semester

17. Drugs affecting the cardiovascular system. Cardiotonic drugs. Cardiac glycosides. Non-glycoside cardiotonic drugs. Antiarrhythmic drugs.
18. Drugs used in ischemic heart disease. Antiatherosclerotic drugs.
19. Hypotensive agents (antihypertensive agents). Hypertensive agents. Diuretics.
20. Agents affecting erythropoiesis. Agents affecting leukopoiesis. Agents inhibiting platelet aggregation. Agents affecting blood coagulation.
21. Screening test №3. Theme: «Drugs acting on respiratory system, GIT, cardiovascular system, blood».
22. Antiseptics and disinfectants. Antibiotics.
23. Penicillin group antibiotics. Cephalosporins. Carbapenems. Monobactams. Glycopeptides. Macrolides and azalides. Lincosamides. Tetracyclines. Levomycetin. Aminoglycosides. Polymyxins
24. Synthetic antimicrobial agents. Sulfanilamide drugs. Quinolone derivatives. Synthetic antimicrobial agents of different chemical structures. Anti-tuberculosis agents. Anti-syphilitic agents. Antiviral agents. Antifungal agents.
25. Screening test №4. Theme. "Antimicrobial agents".
26. Hormones, their synthetic substitutes and antagonists.
27. Vitamins. Steroid anti-inflammatory drugs. Antihistamines.
28. Screening test 5. Final lesson on the section “Prescription” The concept of antitumor agents.
29. Final testing.

Text books and required supplies:

1. Kharkevitch D.A. Pharmacology: Textbook for medical students / Translation of Russian textbook «Pharmacology» (2017), 12th edition, revised and improved. — 2nd edition. – Moscow, GEOTAR-Media, 2018. - 680 p.
2. Alyautdin, R. N. Pharmacology. Illustrated textbook / ed. R. N. Alyautdin. - Москва : ГЭОТАР-Медиа, 2020. - 312 с. - ISBN 978-5-9704-5665-1. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970456651.html
3. Essentials of medical pharmacology [Text] : учебник / K. D. Tripathi. - - New Delhi : Jaypee Brothers Medical Publishers (P) Ltd., 2016.

Evaluation and grading:

Rating system for assessing student performance in the discipline "Pharmacology"
The progress of students in the discipline "Pharmacology" is assessed according to the rating system for assessing knowledge according to order of the Rector of the Kazan State Medical University.

The final rating of the discipline is calculated in points (70-100) using a special computer program and is the sum of four components, each of which is assigned a specific weight:

Rating components	Types of educational activity	Weight, %
1. Academic hours	Presence in the lectures and practical classes	10
2. Results of all modules and final test control	Average of all modules	35
3. Assessment of class marks	Average of all class marks	10
4. Exam	Result of exam	45
	Total	100

1. Academic hours. The volume of hours completed is calculated in % of the maximum number of classroom hours of the curriculum for the discipline. In the computer program for calculating the final rating, the number of classroom hours of lectures and practical classes missed by the student, as well as the number of hours of missed lectures and practical classes worked are entered.

If a student misses more than 50% of the classroom hours according to the curriculum (71 hours), the discipline is not certified, and the student must study the discipline again in full.

2. Results of all modules and final test control. The final results of all modules (control works) are entered into the computer program. The entire discipline "Pharmacology" is divided into 5 modules, which are distributed by semester as follows:

5 semester:

1. Autonomic pharmacology
2. Drugs acting on central nervous system

6 semester:

3. Drugs acting on respiratory system, GIT, cardiovascular system, blood
4. Antimicrobial agents
5. Final lesson on the section “Prescription” The concept of antitumor agents.
6. Final computer test

At the end of each module, a control test is carried out with a score in points. The control test on the module is passed until a positive mark is obtained (70-100 points).

Upon completion of the study of the entire discipline, computer testing is carried out in all sections of pharmacology. The result of this test is also entered into the computer program for calculating the final rating.

3. Assessment of class marks. The arithmetic mean value of all current assessments in practical classes is calculated, which were set in accordance with the scale: "unsatisfactory" - 6 points; "satisfactory" - 7 points; "good" - 8 points; "very good" - 9 points; "excellent" -10 points.

In the computer program for calculating the final rating, the arithmetic mean value of the current grades in practical classes for the 5th and 6th semester is entered separately.

4. Result of the examination.

A positive mark on the exam is given in the range of 70-100 points. If a student does not attend the exam the score is not set and the rating is not calculated.

The exam is conducted in a computer testing using MCQ tests.

Example of module №. 1. « Autonomic pharmacology»

Select one correct answer.

1) A drug created at the Kazan State Medical University that does not have anticholinesterase action:

A. Armin
B. Mebikar

C. Dimephosphone
D. Phosphacol
E. Ximedon

2) For Parkinson's disease, the following are used:
A. Atropine
B. Tubocurarine
C. Trihexyphenidyl
D. Scopolamine
E. Benzohexonium

3) Stimulation of beta-1-adrenergic receptors causes the following effect:
A. Increased heart contractions
B. Relaxation of bronchial smooth muscles
C. Slowing of heart contractions
D. Mydriasis
E. Decrease in blood pressure

4) M2-cholinergic receptors are located in:
A. Heart
B. Skeletal muscles
C. Carotid glomeruli of the aortic sinuses
D. On the parietal cells of the stomach
E. Chromaffin cells of the adrenal medulla

5) M-cholinergic receptor agonists do not increase:
A. Tone of the circular muscle of the iris
B. Secretion of the salivary glands
C. Intraocular pressure
D. Tone of the smooth muscles of the bronchi
E. Tone of the urinary bladder

Example of module №. 2 «Drugs acting on central nervous system»

Select one correct answer.

1) Drug for inhalation anesthesia:
A. Halothane
B. Morphine
C. Naloxone
D. Propanidide

2) Drug for non-inhalation anesthesia:
A. Ketamine
B. Melatonin
C. Ibuprofen
D. Aspirin

3) Which of the following drugs is indicated for all types of anesthesia:
A. Procaine
B. Trimecaine
C. Xicaine
D. Tetracaine

4) Blockers of voltage-dependent Na-channels include:

A. Phenobarbital
B. Phenytoin
C. Lamotrigine
D. Ethosuximide

5) All of the following characterize halothane except:

A. Highly effective
B. Short excitation stage
C. No side effects
D. Non-irritating to the respiratory tract

Example of module №. 3. « Drugs acting on respiratory system, GIT, cardiovascular system, blood ».

Select one correct answer.

1) Antiarrhythmic include

A. Captopril
B. Atorvastatin
C. Furosemide
D. Lidocaine

2) Angiotensin-converting enzyme inhibitors include

A. Heparin
B. Digoxin
C. Clopidogrel
D. Captopril

3) Type 2 angiotensin receptor blockers

A. Clonidine
B. Captopril
C. Ticlopidine
D. Verapamil

4) Calcium channel blockers include

A. Verapamil
B. Strofantin
C. Aspirine
D. Clopidogrel

5) Beta-blockers include

A. Lidocaine
B. Pravastatin
C. Nicotinic acid
D. Aspirin

Example of module №. 4. «Antimicrobial drugs»

Select one correct answer.

1) Beta-lactam antibiotics include:

A. Penicillins
B. Fluoroquinolones
C. Aminoglycosides
D. Tetracyclines

2) All of the following are bactericidal antibiotics except:

A. Vancomycin
B. Streptomycin
C. Ampicillin
D. Erythromycin

3) Broad-spectrum antibiotics are all except:

A. Tetracycline
B. Amoxicillin
C. Gentamicin
D. Polymyxin M

4) The Carbapenems group includes:

A. Benzylpenicillin
B. Aztreonam
C. Imipenem
D. Cefotaxime

5) Antibiotics - monobactams include

A. Ampicillin
B. Imipenem
C. Meropenem
D. Aztreonam

Example of module №. 5. Final lesson on the section "Prescription" The concept of antitumor agents.

Select one correct answer.

1) The anterior pituitary gland preparations include:

A. Oxytocin
B. Desmopressin
C. Human chorionic gonadotropin
D. Pituitrin
E. Adiurecrin

2) Sulfonylurea derivatives include:

A. Metformin
B. Rosiglitazone
C. Pioglitazone
D. Acarbose
E. Butamide

3) Indications for the use of glucocorticosteroids are all except:

A. Allergic reactions
B. Bronchial asthma
C. Skin diseases
D. Osteoporosis
E. Leukemia

4) All have a teratogenic effect except:

A. Carbamazepine
B. Tetracyclines

C. Antineoplastic agents
D. Warfarin
E. Lidocaine

5) The antidote for paracetamol overdose is:
A. Thiamine
B. Sodium bicarbonate
C. EDTA
D. Acetylcysteine
E. Penicillamine

Example of exam ticket

Select one correct answer.

1) Antibiotics that inhibit the synthesis of cell wall
A. Tetracycline's
B. Cephalosporin's
C. c)Macrolides
D. d)Aminoglycosides

2) Antianginal drugs:
A. Are used in disturbance between the heart's need for oxygen and delivery
B. Stimulate myocardial contractility
C. Increase heart rate
D. Increase blood pressure

3)Not a mechanism of drug absorption:
A. Filtration
B. Passive diffusion
C. Biotransformation
D. Pinocytosis

4)Mechanism of anesthetic action of local anesthetics:
A. CNS depression
B. Interaction with opioid receptors
C. Blockade of sodium channels of sensory nerves
D. Denaturation of mucosal proteins

5) Indication for the use of epinephrine:
A. Attack of angina pectoris
B. Anaphylactic shock
C. Hypertensive crisis
D. Seizures

EVALUATION OF THE EXAM ANSWER

Marks for the MCQ computer testing __100_____(out of 100)

HYGIENE

Teachers: **Assistant Ksenia Lushanina, Assistant Nikita Chumarev.**
Building, Department, classroom: ULK-2, Department of General Hygiene, 208, 210.
Contact details:

- Telephone number: 89600353064 (Ass. Ksenia Lushanina)
- E-mail address: kseniya.19@mail.ru
- Office and working hours: 206 (09:00 – 17:00)

Class hours:
Total 108 h:
Lectures - 16 hours;
Practical classes – 45 hours;
Independent work – 47 hours.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/).

Course objectives: The purpose of mastering the discipline

The goals of mastering the **hygiene** discipline are development of personal qualities in students, formation of general professional and professional competencies for protecting the health of citizens by ensuring the provision of high-quality dental care in accordance with established requirements and standards in the field of healthcare and medical sciences.

Tasks of the discipline:
Medical activities:
– study of the regulatory framework for the placement, arrangement, equipment, maintenance, anti-epidemic regime, preventive and anti-epidemic measures, working conditions of the personnel in medical organizations providing dental care to the population;
– introduction of modern methods of prevention, diagnosis and treatment of dental diseases;
– conducting health education work among the population, as well as using the media;
– forming motivation among the population, patients and their families aimed at a healthy lifestyle;
– teaching patients basic hygienic health measures that help prevent the occurrence of the most common diseases and improve health.
Organizational and managerial activities:
– creation of working conditions in medical organizations with a dental profile required by law, as well as favorable conditions for the population to receive medical services;
– maintenance of accounting and reporting medical documentation and submission of activity reports.
Research activities:
– analysis of scientific literature and official statistical reviews, participation in statistical analysis and public presentation of the results;
– participation in solving individual research and applied scientific problems in the field of healthcare in diagnostics, treatment, medical rehabilitation and prevention.

Course topics:

Calendar plan of lectures

1. Introduction to Hygiene as a Science. Historical Foundations and Modern Tasks of Hygiene. Scientific principles, legal and business foundations of preventive medicine.

2. Chemical composition of atmospheric air and its hygienic significance. Pollution and protection of atmospheric air as a hygienic problem.
3. Ecological and hygienic characteristics of water. The importance of the chemical composition of water in the development of dental diseases Prevention of non-infectious diseases of the dental profile.
4. Hygienic aspects of natural and geographical conditions of the environment and human health. Hygienic problems of urbanization.
5. Hygiene of nutrition. Modern theories of rational nutrition. Biological and ecological problems of nutrition.
6. Occupational hygiene of dentists and dental technicians. Occupational diseases of dentists.
7. Sources of ionizing radiation. Ionizing radiation as an environmental factor. Occupational hygiene when working with sources of ionizing radiation.
8. Hygiene and sanitary-hygienic requirements for the arrangement, organization, and operating mode of medical organizations with a dental profile.

Calendar plan of laboratory classes

1. Hygiene of the air environment. Research methods and hygienic assessment of the microclimate of residential and public buildings. Research methods and hygienic assessment of insolation, natural and artificial lighting, natural and artificial ventilation of premises for various purposes.
2. Hygiene of medical institutions. Sanitary and epidemiological requirements for organizations providing dental services to the population.
3. Occupational hygiene and health protection of workers. Industrial hazards and occupational diseases. Hygienic measures of a health-improving nature in human labor activity.
4. Hygiene of water and soil. Hygienic requirements for drinking water quality. Organization of water supply in emergency and extreme situations. Soil hygiene. The role of water and soil in the occurrence, treatment and prevention of dental diseases. Module on topics 1-4.
5. Hygienic requirements for rational nutrition. Chronometric-tabular method for calculating the body's energy expenditure. Calculating the body's needs for essential nutrients and energy. Calculating the nutritional value of rations using chemical composition tables. Nutrition standards for individual population groups.
6. Food poisoning, its investigation and prevention. Classification of food poisoning. Sources and conditions of occurrence of food poisoning. Prevention of food poisoning of various etiologies. Investigation of food poisoning and tactics of a doctor in case of suspected food poisoning.
7. Module on topics 5-6. Hygiene of children and teenagers. Methods of assessing the physical development and health of children and teenagers. Hygienic requirements for the educational process.
8. Module on topics 7. Sources of ionizing radiation in the environment and medical practice. Principles of protection when working with radioactive substances and sources of ionizing radiation.
9. Outcoming testing. Final test.

Text books and required supplies:

1. Hygiene: a textbook for dentists / edited by O. V. Mitrokhin. - Moscow: GEOTAR-Media, 2022. - 368 p. - ISBN 978-5-9704-7226-2. - Text: electronic // Electronic Library System "Student Consultant": [website]. - URL: https://www.studentlibrary.ru/book/ISBN9785970472262.html (accessed: 07/07/2023). - Access mode: by subscription.
2. Hygiene and human ecology: textbook / edited by. ed. V. M. Glinenko; E. E. Andreeva, V. A. Kataeva, N. G. Kozhevnikova, O. M. Mikailova. - 3rd ed., rev. and additional - Moscow:

GEOTAR-Media, 2023. Access mode: https://www.studentlibrary.ru/book/ISBN9785970475225.html
3. General hygiene. Guide to practical classes: study guide / O. V. Mitrokhin, V. I. Arkhangelsky, N. A. Ermakova [et al.]; First Moscow State Medical University named after I. M. Sechenov, Ministry of Health of the Russian Federation (Sechenov University). - Moscow: GEOTAR-Media, 2021. - 164, [4] p.
4. Hygiene: textbook / [G. I. Rumyantsev et al.]; under the general editorship of G. I. Rumyantsev. - 2nd ed., revised and enlarged. - M.: GEOTAR-Media, 2009. - 607 p.
5. Hygiene of medical organizations providing dental care to the population: textbook. manual for dental students. fak. / Kazan. state honey. University of Healthcare of the Russian Federation Federation; [compiled by: A. V. Shulaev, A. K. Galeev, N. I. Sharafutdinov]. - Electron. text data (983 KB). - Kazan: Medicine, 2019. - 52, [1] p. : ill. - Adj.: p. 40-49. - Bibliography: p. 49-51. - ISBN 978-5-7645-0665-4
6. Requirements for insolation and artificial lighting of premises for various purposes: a teaching aid for students of the Faculty of Dentistry / L. R. Tukhvatullina, L. N. Rastaturina, A. B. Tazetdinova; Kazan State Medical University of the Ministry of Health of the Russian Federation, Department of General Hygiene. - Kazan: Kazan State Medical University, 2021. - 53 p.
7. Hygiene: a teaching aid for students of the dental faculty / Kazan State Medical University of the Ministry of Health of the Russian Federation; [compiled by A. V. Shulaev et al.]. - Electronic text data (298 KB). - Kazan: Medicine, 2019. - 55, [1] p. - ISBN 978-5-7645-0664-7

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment

- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Examples of tasks:

– test:

At low atmospheric pressure, a person develops:
1. decompression sickness;
2. mountain sickness;
3. Graves' disease;
4. Esno and Coxsackie disease;
5. hypervitaminosis D.

Select the hygienic principles of standardizing the microclimate of premises:
1. number of people, age;
2. number of heating radiators;
3. purpose of the premises (severity of work performed);
4. characteristics of visual work;
5. climatic region, season.

Name the reasons leading to food poisoning:
1. reduction in the shelf life of perishable products;
2. admission to work of patients with chronic gastritis;
3. admission to work of patients with tonsillitis;
4. violation of the canteen schedule;
5. increase in the shelf life of prepared meals.

– oral questioning:
1. The main tasks of hygiene, the history of the development of hygiene as a science.
2. The concepts of alcoholism, drug addiction, toxicomania, the main principles of their prevention.
3. Give a hygienic characteristic of the lithosphere and soil.
4. What is one of the features of water as part of the hydrosphere?
5. Name the principles of hygienic regulation of lighting in rooms.

– case tasks:

Occupational hygiene. An assessment of working conditions was carried out in a workshop of a household chemicals plant. The microclimate in the production area meets sanitary and hygienic requirements. The noise intensity at the press operators' workplaces is 105 dBA. Carbon monoxide (below MAC), ethylene oxide up to 1.5 MAC were detected in the air of the working area. Assess the working conditions and give recommendations for their improvement.

1. Determine which production factors affect the worker and what are the numerical parameters of these factors.

2. Using regulatory documents (SanPiN) and tables of other scientific and technical documentation (NTD), determine the permissible levels of exposure to production factors (MPC, MPL, etc.).

3. Compare the actual and permissible levels and determine the degree of deviation of the parameters of the production environment and work process from the current hygienic standards. - For chemicals, biological factors and fibrogenic dust - how many times the level of the active factor exceeds the MAC; - For physical factors - the difference between the current level and the permissible (PUL).

RADIOLOGY

Teachers: PhD Yusupova Alsu Faridovna, Fatkhutdinova Aida Tagirovna, Nemirovskaya Tat'yana Anatol'evna
Building, Department, classroom: RKH, Department of Oncology and Radiology, the office of the associate professor

Contact details:
- Telephone number: 89872906427 (PhD Yusupova Alsu Faridovna)
- E-mail address: a.f.yusupova@mail.ru

Office and working hours: RKH, the professor's office (9 -15)

Total hours — 108 hours:
- Lectures 16 hours;
- Practical classes 44 hours
- Selfstuding course – 48 hour

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2243).

Course objectives:
The goals of mastering the **radiology** discipline are getting a notion about the most important radiological examinations of the maxillofacial region, and other organs and body systems, how to use them in reaching diagnosis of the most frequently performed diseases.

Tasks of the discipline:
- physical and technical foundations of radiation diagnostics and radiation therapy methods;
- methodological foundations of using radiation diagnostics methods (digital radiography, angiography, X-ray computed tomography, radionuclide diagnostics, ultrasound examinations, magnetic resonance imaging),
- features of using radiation diagnostics methods in recognizing various diseases of the dentoalveolar system;
- to give students an idea of the analysis of X-ray images (radiograms, tomograms, etc.), computer and magnetic resonance tomograms, scintigrams, echograms, with the subsequent formulation of an X-ray conclusion for the most common diseases;
- familiarizing students with the normal radiation anatomy of the maxillofacial region and X-ray semiotic signs of diseases of the dentoalveolar system;
- familiarizing students with the principles of organization and work in radiation diagnostics departments, as well as with the rules of radiation safety during radiation studies;
- developing students' skills in studying scientific literature and official statistical reviews, preparing abstracts, reviews on modern scientific problems in the field of radiation diagnostics;

- developing students' skills in communication and interaction with the team, partners, patients and their relatives;
- familiarizing students with the algorithm of radiation examination of patients with various diseases of the maxillofacial region, as well as in "emergency conditions" associated with diseases and injuries of internal organs and systems;
- developing students' skills in preparing patients for examination and issuing a referral for its implementation.

Course topics:

The list of disciplines, and their topics those are necessary to study Radiology:

- Human anatomy - anatomy of the head and neck;
- Pathological anatomy - pathological anatomy of the head and neck;
- Topographic anatomy, operative surgery;
- Dentistry
- Internal diseases

Calendar plan of lectures

1. Principles and methods of radiation diagnostics (2 hours);
2. Methods of radiation diagnostics in dentistry. Radiation anatomy and anomalies of dental development (2 hours);
3. Radiation diagnostics of diseases of internal organs (6 hours);
4. Radiation diagnostics of traumatic injuries and inflammatory diseases of the maxillofacial region (2 hours);
5. Radiation diagnostics of cysts and neoplasms of the maxillofacial region (2 hours)
6. Radiation diagnostics of diseases of the salivary glands and temporomandibular joint (2 hours).

Calendar plan of practical training (course):

1. Radiophycs. Types of most important radiological examination.
2. Methods of radiation diagnostics in dentistry
3. Radiation semiotics of bone and joint diseases.
4. The lungs and mediastinum radiology.
5. The gastrointestinal tract radiology, the liver, biliary tract radiology.
6. Module on topics 1-5.
7. Radiation diagnostics of traumatic injuries of the maxillofacial region
8. Radiation diagnostics of inflammatory and degenerative processes in the maxillofacial region.
9. Radiological diagnostics of cysts and neoplasms of the maxillofacial region
10. Module on topics 7-9.
11. Outcoming testing. Final test.

Text books and required supplies:

Main:

1. FUNDAMENTALS OF RADIOLOGY. Manual, Part 1 /Юсупова А.Ф. – Казань: КГМУ, 2005. 71 с.
2. FUNDAMENTALS OF RADIOLOGY. Manual, Part 2 /Юсупова А.Ф. – Казань: КГМУ, 2006. 101 с.
3. FUNDAMENTALS OF RADIOTHERAPY. Manual/Юсупова А.Ф. – Казань: КГМУ, 2010. 47 с.

Supplementary:

1. A Global TextBook of Radiology / Edited by Holger Petterson, MD, Series on Diagnostic Imaging from NICER Institute, 1995, 1 and 2 book.

2. Radiografic anatomy / Frank Slaby, Eugene R. Jacobs / The National Medical Series for Independent Study / A. Williams and Wilkins medical publication / 1999, 1 and 2 book.
3. Radiology and Imaging for medical students, David Sutton // Published by Elsivier, a division of Reed Elsiver, India PVT, LTD, Seventh edition in India, 2004 (SBN: 81-8147-081-8), ISBN 0-443-05917-9
4. Essentials of Dental Radiography and Radiology/ Eric Whaites, R. A. Cawson, Churchill livingstone, 2002
5. Fundamentals of Radiology, Harvard University Press 5/e due 91/96 cloth 0-674-32927-9
6. Fundamentals of Diagnostic Radiology, University of California, Davis Williams & Wilkins, 1/e 1994 cloth, 0-683-01011-5, 158.95
7. Textbook of radiotherapy/ Walter and Millers, sixth edition/ Churchill Livingstone/ An imprint of Elsevier Limited, - 2008, - ISBN 13^ 978 0 443 06201 8.

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

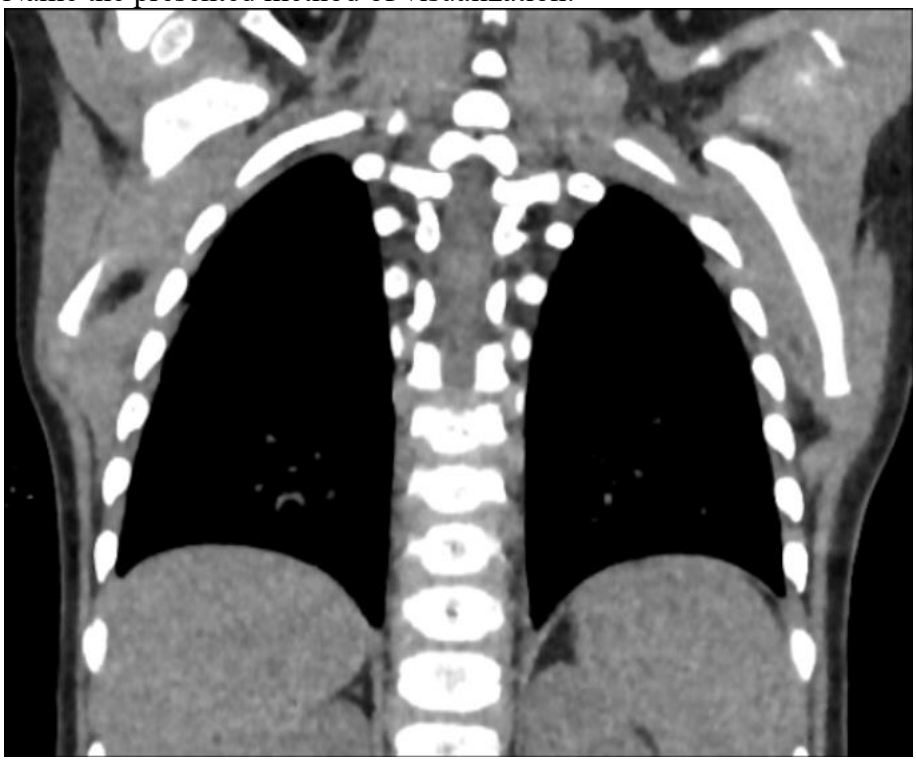
Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1.

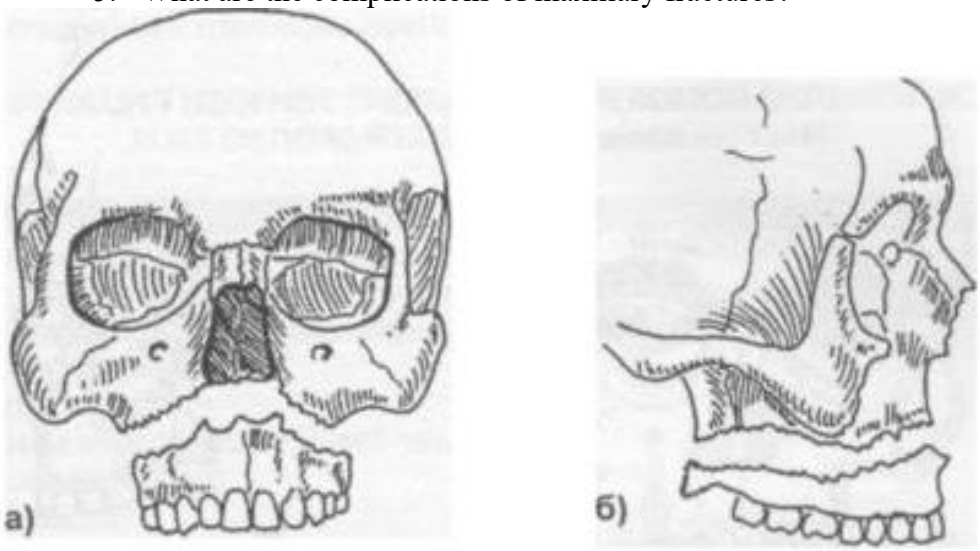
1. What types of radiological studies exist?

2. What are the most important radiological examinations of the lungs? Tell about them.
3. What are the most important radiological examinations of the heart? Tell about them.
4. The physical foundations of x-ray.
5. Name the presented method of visualization:



Example of module No. 2

1. What bone is damaged in a Le Fort fracture?
2. How long does it take for a maxillary fracture to heal?
3. What is the difference between Le Fort 1, 2, and 3 fractures?
4. Can Le Fort fractures be unilateral?
5. What are the complications of maxillary fractures?



EVALUATION OF THE MODULE ANSWER

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment.

OTORHINOLARYNGOLOGY

Teachers: PhD Dilyara Shakurova, Diana Zvorygina
Building, Department, classroom: Municipal clinical Hospital number 18, Department of Otorhinolaryngology, Professor's room and assistant room
Contact details:

- Telephone number: 89872842546 (PhD Dilyara Shakurova)
- E-mail address: ent.doc87@mail.ru
- Office and working hours: assistant room (8-17)

Total class hours: 72 h

Course description:
Lectures 10 hours - is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Practical classes (workshop) 32 hours - are usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student, and is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Independent work 30 hours - is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University

Course objectives: The purpose of mastering the discipline

The mastering special methods of diagnosis and treatment of diseases of the ear, nose and paranasal sinuses, pharynx and larynx; formation of medical thinking that ensures the solution of professional tasks and the application of knowledge on otorhinolaryngology in medical activities to provide medical care in emergency conditions; mastering the basics of prevention, diagnosis, treatment and rehabilitation of patients with ear and upper respiratory tract pathology

Tasks of the discipline:
- to acquaint students with the prevalence and significance of diseases of the ear, nose and throat in general pathology, with the principles and methods of dispensary work, noting the importance of timely detection and rehabilitation of these organs in the prevention of general morbidity and in the improvement of the population;
- to show students the features and possibilities of the examination of ENT organs – endoscopy, acumetry, vestibulometry, olfactometry, gustometry and their significance in the general system of clinical examination of the patient;
- to familiarize students with the etiology, pathogenesis, clinical signs, prevention and treatment of diseases of the ear, nose, pharynx and larynx, which are common and cause complications and related diseases;
- to teach students practical skills and methods of emergency treatment for injuries, foreign bodies, bleeding and acute diseases of the ENT organs.

Course topics:

Calendar plan of lectures

1. Anatomy and physiology of the nose and paranasal sinuses. Acute diseases of the nose and paranasal sinuses (acute rhinitis, acute sinusitis, nosebleeds). Chronic diseases of the nose and paranasal sinuses
2. Anatomy and physiology of the pharynx; acute diseases of the pharynx. Chronic diseases of the pharynx
3. Anatomy and physiology of the larynx; acute diseases of the larynx. Chronic diseases of the larynx

4. Anatomy and physiology of the ear; acute and chronic diseases of the ear
5. Tumors of the ENT organs

Calendar plan of Practical classes

1. The technique of examination of ENT organs. Acute diseases of the nose and paranasal sinuses;
2. Chronic diseases of the nose and paranasal sinuses. Rhinogenic and orbital complications;
3. Acute diseases of the pharynx. Chronic diseases of the pharynx;
4. Anatomy, physiology and methods of laryngeal examination. Acute diseases of the larynx. Chronic diseases of the larynx. Laryngeal dyskinesia;
5. Tumors of the upper respiratory tract and ear;
6. The examination methods of auditory and vestibular analyzers. Acute diseases of the external and middle ear;
7. Chronic diseases of the ear. Otogenic intracranial complications. Non-purulent ear diseases.

Text books and required supplies:

1. Otorhinolaryngology: textbook / V.T.Palchun, A.I. Kryukov, M.M. Magomedov. - 2nd ed., revised. and additional - M.: GEOTAR-Media, 2020. - 560 p.
2. Beerbohm H. Diseases of the ear, nose and throat / Hans Baerbohm, Oliver Kaschke, Tadeus Navka, Andrew Swift; lane from English – 2nd ed. – M.: MEDpress-inform, 2016. 776 pp.
3. Pediatric otorhinolaryngology: textbook / M. R. Bogomilsky, V. R. Chistyakova. — 2nd ed., revised. and additional - M.: GEOTAR-Media, 2012. - 576 p.
4. Otorhinolaryngology: textbook / ed. S. A. Karpishchenko. - Moscow: GEOTAR-Media, 2018. - 464 p.
5. Otorhinolaryngology: national guidelines. Brief edition / ed. Yu. K. Yanova, A. I. Kryukova, V. V. Dvoryanchikova, E. V. Nosuli. - 2nd ed., revised. and additional - Moscow: GEOTAR-Media, 2024. - 992 p.

Evaluation and grading:

Level 1 – knowledge assessment

To evaluate learning outcomes in the form of knowledge, the following types of control are used:

— oral survey;

Evaluation criteria:

“Excellent” (90-100 points) – the oral communication fully reveals the topic, the student answers all additional questions, talks; tells, practically without looking into the text. “Good” (80-89 points) – the oral message reveals the topic, but requires additions, the student answers all additional questions; tells based on the text, but without reading it. “Satisfactory” (70-79 points) - the oral message reveals the topic, but requires additions, the student cannot answer most of the additional questions, partially reads the text during the story. “Unsatisfactory” (0-69 points) - the oral message does not reveal the topic , the student cannot answer most of the additional questions, reads out the text.

— test;

Evaluation criteria:

“Excellent” – 90-100 correct answers. “Good” – 80-89 correct answers. “Satisfactory” – 70-79 correct answers. “Unsatisfactory” – 69 or less correct answers.

Level 2 – skill assessment

To assess learning outcomes in the form of skills, the following types of control are used:

— case problems;

Evaluation criteria:

“Excellent” (90-100 points) – the correct diagnosis has been made and justified, the optimal method of treatment has been proposed, errors in monitoring the patient are indicated. “Good” (80-89 points) – the correct diagnosis has been made and partially justified, the optimal method of treatment has been proposed, the not all patient observation errors. Satisfactory” (70-79 points) – a correct diagnosis has been made, but not substantiated, the optimal method of treatment has not been proposed, errors in monitoring the patient have not been indicated. “Unsatisfactory” (0-69 points) – a correct diagnosis has not been made and not substantiated, not the optimal method of treatment is proposed, errors in monitoring the patient are not indicated.

Level 3 – skills assessment

To assess learning outcomes in the form of skills, the following types of control are used:

— case problems;

Evaluation criteria:

The grade “excellent” is given if the student masters the algorithm for providing emergency care in full. The grade “good” if he does not fully master the algorithm for providing emergency care. The grade “satisfactory” if the student partially knows the algorithm for providing emergency care. The grade is “unsatisfactory” ", is set if the student does not know the algorithm for providing emergency care.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1.

Example of test control

1. What are the main symptoms of otosclerosis?

1) Progressive hearing loss and tinnitus

2) hearing loss

3) noise in the ear

4) pain in the ear.

Answer – 1.

2. What treatment tactics for otohematoma of the auricle?

1) Prescription of antibiotic therapy

2) UHF, semi-alcohol compresses

3) puncture of the hematoma

4) opening and drainage of the otohematoma, application of a pressure bandage, antibacterial therapy.

Answer – 4

Example of module No. 2

Task 1. A 24-year-old patient complains of pain in her left ear, which intensifies when chewing and radiates to her temple. She has been sick for 3 days, the disease is associated with trauma to the ear canal with a match. Objectively: the auricle is not changed, the external auditory canal is narrowed in the membranous-cartilaginous section due to a limited round-shaped infiltrate on the anterior wall, the skin is hyperemic. The eardrum is partially visible and

not changed. Palpation of the tragus and touching the auricle are painful. Hearing acuity is not impaired. Make a diagnosis, carry out a differential diagnosis and prescribe treatment.

Answer: Furuncle of the external auditory canal. Treatment is conservative, for abscess formation, opening and draining the boil.

Example of module No. 3

Assess the correctness of the algorithm for opening a paratonsillar abscess: 1. Mesopharyngoscopy2. Probing of paratonsillar abscess 3. Puncture of paratonsillar abscess 4. Opening of paratonsillar abscess 5. Separating the wound edges of the peritonsillar abscess 6. Sanitation of the oral cavity

Sample answer: 1. Wearing sterile gloves and holding a spatula in the right hand, we perform mesopharyngoscopy.

2. Using a blunt probe, we determine the area of fluctuation of the paratonsillar abscess.

3. Using a sterile syringe, we perform a puncture in the area of fluctuation of the paratonsillar abscess.

4. Using a scalpel, we make an incision into the mucous membrane in the area of the peritonsillar abscess puncture.

5. We separate the edges of the incision with a mosquito clamp of the peritonsillar abscess.

6. Sanitizing the oral cavity by rinsing with an aseptic solution.

OPHTHALMOLOGY

Teachers: Endzhe Minnullina
Building, Department, classroom Department of Ophthalmology, 1, 3
Contact details:

- Telephone number: 89872786671 (Endzhe Minnullina)
- E-mail address: enze-90@mail.ru
- Office and working hours: 1 (8-17)

Class hours:
Total hours — 72:
- Lectures 10 hours;
- Practical classes 32 hours;
- Independent work 30 hours.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material).

Course objectives: The purpose of mastering the discipline
The goals of mastering the discipline “Ophthalmology” are to develop in medical students systematic knowledge and skills of epidemiology, etiology, pathogenesis, diagnosis and clinic of acquired diseases of the organ of vision and its appendages.

Tasks of the discipline:

To form knowledge in the field of:

- teaching students the etiology, pathogenesis, clinical picture and pathomorphology of ophthalmological pathology in humans;
- education in the organization and technology of providing ophthalmological care to the population

Course topics:

Calendar plan of lectures

1. Introduction to ophthalmology. A brief history of ophthalmology. Kazan School of Ophthalmologists. Anatomical and physiological features of the organ of vision.
2. Physiological optics. Refraction, accommodation.
3. Corneal disease. Diseases of the eyelids, conjunctiva, lacrimal organs. Diseases of the lens.
4. Disease of the choroid. Injuries and burns of the visual organ.
5. Glaucoma. Pathology of the retina, optic nerve, orbit.

***Calendar plan* of practical lesson**

1. Introduction to ophthalmology. A brief history of ophthalmology. Kazan School of Ophthalmologists. Anatomical and physiological features of the organ of vision. Visual pathologies associated with diseases of the teeth and nasal cavities
2. Refraction, accommodation, astigmatism, presbyopia, anisometropia, selection of glasses.
3. Corneal disease.
4. Disease of the eyelids, conjunctiva and lacrimal organs.
5. Diseases of the lens. Disease of the choroid.
6. Glaucoma.
7. Injuries and burns of the organ of vision. Retinal diseases, diseases of the optic nerve, orbital disease. Modules

Text books and required supplies:

1. Kalla Gervasio-Travis Peck. The Wills Eye Manual : Office and Emergency Room Diagnosis and Treatment of Eye Disease / Kalla Gervasio-Travis Peck: Wolters Kluwer Health, 2022.
2. Gary H. Cassel. The Eye Book : A Complete Guide to Eye Disorders and Health / Gary H. Cassel: Johns Hopkins University Press, 2021.
3. Valerie Biousse-Nancy J. Newman. Neuro-Ophthalmology Illustrated / Valerie Biousse-Nancy J. Newman: Thieme, 2020
4. Kuldev Singh-William E. Smiddy-Andrew G. Lee. Ophthalmology Review : A Case-Study Approach / Kuldev Singh-William E. Smiddy-Andrew G. Lee: Thieme, 2019
5. Information Resources Management Association. Ophthalmology : Breakthroughs in Research and Practice / Information Resources Management Association: Medical Information Science Reference, 2018

Evaluation and grading:

Monitoring progress is carried by the end of each module (definitions, practical skills, medical history, emergency ophthalmology).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline (modules). Grading: 0–69 points – noncredit; 70–100 points – credit. Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Module No. 1. Terms

Ticket No. 1
1. Cataract
2. Keratitis
3. Myopia
4. Hypermetropia
5. Astigmatism

Ticket No. 2
1. Iritis
2. Cyclite
3. Choroiditis
4. Glaucoma
5. Conjunctivitis

Evaluation Criteria:
"Excellent" (91 - 100 points) the work answers the question fully, the correct interpretation of terms is given, the key issues of the topic are considered.
"Good" (81 - 90 points) the work answers the question in full, the correct interpretation of terms is given, the key issues of the topic are partially considered.
"Satisfactory" (71 - 80 points) the work answers the question posed, but not fully, the correct interpretation of the state is given, the key issues of the topic are partially considered.
"Unsatisfactory" (0 - 70 points) the work does not answer the question posed, misinterpreted terms, key issues of the topic are not addressed.

Module No. 2. Practical skills

Ticket No. 1
1. Visometry
2. Perimetry

Ticket No. 2
1. Tonometry
2. Ophthalmoscopy

Evaluation Criteria:
“Excellent” (91 - 100 points) the work answers the question fully, the correct interpretation of terms is given, the key issues of the topic are considered.
“Good” (81 - 90 points) the work answers the question in full, the correct interpretation of terms is given, the key issues of the topic are partially considered.
“Satisfactory” (71 - 80 points) the work answers the question posed, but not fully, the correct interpretation of the state is given, the key issues of the topic are partially considered.
“Unsatisfactory” (0 - 70 points) the work does not answer the question posed, misinterpreted terms, key issues of the topic are not addressed.

Module No. 3. Medical history

1. Myopia
2. Hypermetropia
3. Astigmatism
4. Cataract
5. Keratitis
6. Dacryoadenitis
7. Dacryocystitis
8. Coloboma of the century
9. Retinitis
10. Optic neuritis

Evaluation Criteria:
“Excellent” (91 - 100 points) the work answers the question fully, the correct interpretation of terms is given, the key issues of the topic are considered.
“Good” (81 - 90 points) the work answers the question in full, the correct interpretation of terms is given, the key issues of the topic are partially considered.
“Satisfactory” (71 - 80 points) the work answers the question posed, but not fully, the correct interpretation of the state is given, the key issues of the topic are partially considered.
“Unsatisfactory” (0 - 70 points) the work does not answer the question posed, misinterpreted terms, key issues of the topic are not addressed.

Module No. 4. Emergency ophthalmology

Ticket No. 1
1. Abscess of the century

Evaluation Criteria:
“Excellent” (91 - 100 points) the work answers the question fully, the correct interpretation of terms is given, the key issues of the topic are considered.
“Good” (81 - 90 points) the work answers the question in full, the correct interpretation of terms is given, the key issues of the topic are partially considered.
“Satisfactory” (71 - 80 points) the work answers the question posed, but not fully, the correct interpretation of the state is given, the key issues of the topic are partially considered.
“Unsatisfactory” (0 - 70 points) the work does not answer the question posed, misinterpreted terms, key issues of the topic are not addressed.

INTERNAL DISEASES. CLINICAL PHARMACOLOGY

Teachers: PhD Elena Andreicheva, Aigoul Zinnatullina
Building, Department, classroom: Hospital #18, Mavlutova str. 2, 2nd floor, classroom No. 1.
Contact details:
Telephone number: +7-9033-069-666 (Elena Andreicheva)
E-mail address: elena_andre@mail.ru

Discipline: 4,**5 and 6 semesters**
Total hours — 324 hours:
- Lectures 56 hours;
- Practical classes 124 hours;
- Independent work 108 hours;
-Exam -36 hours (6^{th} semester).

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2216).

Course objectives:
Tasks of the discipline: 1) to form students' understanding of the ethical and deontological aspects of medical activity in communication with colleagues, nursing staff, patients and their relatives; 2) to teach students to conduct and interpret the survey, physical examination, clinical examination, the results of modern laboratory and instrumental studies; 3) to form students' skills in identifying the main pathological symptoms and syndromes of diseases using knowledge of the fundamentals of biomedical and clinical disciplines, taking into account the laws of the course of pathology; 4) to teach students the correct diagnosis based on the survey, physical examination and the results of laboratory and instrumental studies; 5) to teach students to prescribe adequate treatment for patients in accordance with the diagnosis, to implement an algorithm for choosing drug and non-drug therapy for patients with diseases of a therapeutic profile; 6) to form a concept for students on the prevention of the onset of diseases, healthy lifestyle skills that help maintain their physical activity at the proper level, and eliminate bad habits.

The place of discipline in the structure of educational program

Discipline “Internal diseases. Clinical Pharmacology" is included incompulsory part of the work curriculum.

Previous courses, on which the discipline “ Internal Medicine.” Clinical Pharmacology "are

- in the cycle of humanitarian disciplines (philosophy, bioethics, pedagogy, psychology, jurisprudence, history of the Fatherland, history of medicine, economics, Latin, foreign language);

- in the cycle of mathematical, natural science, biomedical disciplines (mathematics, physics, chemistry, biochemistry, biology, medical informatics, normal anatomy, microbiology, histology, normal physiology, pathological anatomy, pathological physiology);

- in the cycle of professional disciplines (hygiene, healthcare organization, pharmacology, medical genetics, medical psychology).

Discipline " Internal Medicine. Clinical Pharmacology "is fundamental to the study of the following disciplines:

- General surgery, surgical diseases;
- Disaster medicine, life safety;
- Infectious diseases.

The field of professional activity of specialists studying the discipline "Internal Medicine. Clinical Pharmacology ” includes : a set of technologies, means, methods and methods of human activity aimed at maintaining and improving the health of the population by ensuring the proper quality of dental care (medical prophylactic, medical and social) and dispensary observation.

The objects of professional specialists , studying the discipline "Internal diseases. Clinical Pharmacology ” are : the patient, as well as the fields of science and technology in healthcare, which include a combination of technologies, means, methods of providing dental and first aid in emergency conditions.

Specialist in the field of Dentistry specialty is preparing for the following types of professional activity:

- preventive;
- diagnostic;
- medical;
- rehabilitation;
- psychological and pedagogical;
- organizational and management;
- research.

The development of competencies in the process of studying the discipline contributes to the formation of knowledge, abilities and skills that allow for effective work in areas, objects and types of professional activity.

Course topics:

Thematic plan of lectures

Module 1. Propedeutics of internal diseases (16 hours). Semester 4.

1.Methodology for examining a therapeutic patient. The concept of symptom and syndrome
2.Semiotics of respiratory diseases.
3. Main clinical syndromes of respiratory diseases.
4. Semiotics of diseases of the cardiovascular system.
5. Main clinical syndromes of diseases of the cardiovascular system.
6. Semiotics of diseases of the gastrointestinal tract and the main clinical syndromes
7. Semiotics of diseases of the liver and hepatobiliar zone.
8. Semiotics of diseases of the urinary system.

Module 2. Thematic plan of lectures (16 hours). Semester 5.

1. Pneumonia.
2. Bronchial asthma.
3. COPD
4. Arterial hypertension
5. Atherosclerosis. IHD, Classification of angina pectoris
6. Acute coronary syndrome. Acute left ventricular failure
7. Heart rhythm disturbances.

8. Chronic heart failure

Module 3. Thematic plan of lectures (24 hours). Semester 6.

1. Chronic gastritis.
2. Peptic ulcer disease
3. Gallbladder and biliary tract diseases
4. Liver cirrhosis. Liver failure
5. Glomerulonephritis- acute and chronic.
6. Acute kidney injury.
7. Chronic kidney disease
8. Anemia
9. Leukemias
10. Bleeding disorders
11. Diabetes mellitus
12. Approach to comas

Thematic plan of practical training.

Semester 4 (36 h +20 h IW).

1.Anamnesis, its sections and significance for diagnosis. Complaints, their classification. Details of complaints. Medical history. Anamnesis of life

2.The main methods of clinical examination of the patient. General (external) inspection

3. Methodology for examining a patient with respiratory diseases. Main clinical syndromes of respiratory diseases

4. Semiotics of diseases of the cardiovascular system.

5. Main clinical syndromes of diseases of the cardiovascular system.

6. Semiotics of diseases of the gastrointestinal tract and the main clinical syndromes

7. Semiotics of diseases of the liver and hepatobiliar zone.

8. Instrumental and laboratory examination methods for diseases of the urinary system. The main clinical and laboratory syndromes.

9. Semiotics of diseases of the hematopoietic system

Semester 5 (40 h +16 h IW).

1. Pneumonia. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Pleurisy. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
2. Bronchial asthma. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
3. COPD. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
4. Arterial hypertension. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
5. Atherosclerosis. IHD, Classification of angina pectoris. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
6. Acute coronary syndrome. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Myocardial infarction. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Acute left ventricular failure. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
7. Acquired heart diseases. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
8. Heart rhythm disturbances. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
9. Chronic heart failure. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.

Semester 6 (48 h +72 h IW).

1. Chronic gastritis. Peptic ulcer and duodenal ulcer. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
2. Gallbladder and biliary tract diseases. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.

3. Chronic hepatitis. Liver cirrhosis. Liver failure. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
4. Acute and chronic glomerulonephritis. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
5. Pyelonephritis. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
6. Acute renal injury. Chronic kidney disease. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
7. Diabetes mellitus. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Diabetic comas. Differential diagnosis. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
8. Diffuse toxic goiter. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Hypothyroidism. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
9. Anemia. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Bleeding disorders. Etiology. Pathogenesis. Classification. Diagnostics. Treatment. Leukemias. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
10. Emergency conditions in pulmonology. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.
11. Emergency conditions in cardiology. Etiology. Pathogenesis. Classification. Diagnostics. Treatment.

Text books and required supplies:

1. Internal Diseases. Volume I. - Москва : ГЭОТАР-Медиа, 2022. - 688 с. - ISBN 978-5-9704-6766-4. https://www.studentlibrary.ru/book/ISBN9785970467664.html
2. Internal Diseases. Volume II. - Москва : ГЭОТАР-Медиа, 2022. - 616 с. - ISBN 978-5-9704-6767-1. https://www.studentlibrary.ru/book/ISBN9785970467671.html
3. Internal Diseases. Clinical pharmacology. (Methods handbook). Module “Propedeutics of internal diseases”. For English-speaking students of the faculty of Dentistry /Khamitov R.F., Andreicheva E.N, Khayrullina A.R, Zinnatullina A.R.- Kazan: KSMU, 2020. — 156 p.
4. Internal Diseases. Clinical pharmacology. (Methods handbook). For English-speaking students of the faculty of Dentistry / Andreicheva E.N, Khamitov R.F., Khayrullina A.R, Zinnatullina A.R.- Kazan: KSMU, 2021. — 148 p.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

ATTENDANCE REQUIREMENTS

Students are expected to attend all training events. Presence is recorded in lecture and practice journals. In case of illness or other reasons why you will not be able to attend classes, you must notify the dean's office and department, provide a medical certificate or permission of the dean's office to skip classes for good reason. Practice missed lectures can be conducted on the educational portal. Teachers will tell you specific opening dates for resources. Practicing

missed practical classes will require the fulfillment of all types of tasks performed according to the discipline program in these classes.

Students who have missed more than 50% of the classes will need to retake the discipline.

CURRENT CONTROL

The current control of the development of the discipline is carried out by the teacher at each practical lesson through oral questioning, testing, checking the writing of a fragment of the medical history and evaluating the practical skills demonstrated by the student.

Independent work control

Independent (extracurricular) work of students consists of several sections:

- theoretical self-training of students in certain educational topics included in the thematic curriculum, mainly in modern laboratory and instrumental diagnosis of diseases of internal organs, clinical diagnosis of major syndromes, etc.
- the study of additional educational literature and other teaching materials that reinforce students' practical skills (training audio and video films, sets of laboratory tests, electrocardiograms, etc.)
- writing part of a medical history

The forms of control of students' independent work are determined by the teacher depending on the specific topic of the lesson and include the following

- oral survey
- analysis of messages (reports)
- checking abstract in a notebook
- check of abstracting (review) of journal articles
- assessment of student's demonstrated manual skills
- analysis of a student's abstract
- control of compiled diagrams, tables, electronic presentation
- checking solution to tasks
- verification of a student's writing a part of a medical history

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

GRADE SCALE DESCRIPTION

90–100 points - set if the student correctly answered 90% of the test questions.
80–89 points - set if the student answered correctly from 80% to 90% of the test questions.
70–79 points - set if the student answered correctly from 70% to 80% of the test questions.
Less than 70 points - set if the student correctly answered less than 69% of the test questions

Example of module No. 1. Propaedeutics of internal diseases

1. For aortic valve insufficiency is characteristic:
   a. Often formed with infectious endocarditis
   b. Diastolic murmur on the aorta
   c. Extension of the borders of the heart up and to the right
   d. Reducing diastolic blood pressure *
   D. Pulsus filiformis
2. Signs of circulatory failure in a small circle:
   a. Swelling of the legs
   b. Ascitis
   c. Hepatomegaly
   d. Rales in the lungs *
3. The most common cause of death in hypertrophic cardiomyopathy:
   a. Congestive Heart Failure
   b. Myocardial infarction with rupture of the heart
   c. Sudden death due to arrhythmia *
   D. Acute cerebrovascular accident

Example of module No. 2. Internal diseases. Clinical pharmacology

1. A 55-year-old patient showed a lag in the right half of the chest during breathing, dullness below the level of the 3rd rib, weakened breathing and bronchophony in the same place. X-ray - displacement of the heart to the left. Probable diagnosis:
a) exudative pleurisy *
b) croupous pneumonia
c) atelectasis
d) pneumocirrhosis
e) pneumothorax

2. Patient G., 44 years old, was admitted to the clinic in connection with a non-stopping attack of atrial fibrillation, a diagnosis of coronary heart disease, rhythm disturbance as paroxysm of atrial fibrillation. CHF II B Art. ". Complains of shortness of breath on exertion. From the anamnesis it is known that the patient systematically consumes alcohol, as he said, "on salary days." Pain in the heart does not feel.
On examination: pulse 120 in 1 min, arrhythmic, blood pressure 110/70 mm RT. There is no pathological pulsation in the region of the heart. The borders of the heart are percussion and radiological widened to the left by 3 cm. The tones are weakened, there are no noises. The liver is enlarged by 3 cm, slightly palpated on palpation. On the ECG - atrial fibrillation.

1. What is the cause of the changes in the heart?
2. Based on what the diagnosis of coronary heart disease is excluded?
3. What groups of drugs are needed in this case?

Answer:

1. The patient has alcoholic cardiomyopathy.
2. No pain, no medical history
3. Beta-blockers, aspirin, if necessary, cardiac glycosides

Example of module No. 3. Internal diseases. Clinical pharmacology

1. Which of the following drugs blocks H2-histamine receptors?

a) diphenhydramine
b) Methacin
c) almagel
d) atropine
e) famotidine *

2. The most effective inhibitor of gastric secretion of hydrochloric acid is:

1.Omeprazole *
2.Famotidine
3. Pirenzepine
4. Bismuth subcitrate
5.Almagel

3. "Hungry" pain occurs in:

1.chronic cholecystitis
2.duodenal ulcer *
3.gastric peptic ulcer
4.chronic pancreatitis
5.chronic atrophic gastritis

4. With secondary hypothyroidism, the level of thyroid-stimulating hormone in the blood serum:

a) reduced; *
b) increased;
c) not changed.

5. In hypothyroidism, damage to the respiratory system can manifest itself by:

a) emphysema of the lungs;
b) compaction of lung tissue;
c) attacks of bronchial asthma;
d) pleural effusion. *

The final control of students' knowledge and skills takes place in the form of an exam at the end of the 6th semester.

Example of exam ticket for the exam in the discipline "Internal Medicine, Clinical Pharmacology"

1 question. Pneumonia. Etiology, pathogenesis, classification, clinical picture, diagnosis.
2 question. Treatment of the duodenal peptic ulcer. Eradication therapy.
3 question. Cardiopulmonary resuscitation.
Blood test. Glucose 2.2 mmol\L
Write a prescription for: metoprolol in tablets

Evaluation of exam answer

100–90% – "excellent"

Systematic and in-depth knowledge of program material, basic and additional literature. The student must be able to identify connections with various aspects of internal diseases, identify knowledge of related clinical and theoretical disciplines in connection with the subject of the answer, show an understanding of various aspects of pathogenesis and the formation of the clinical picture, give a description and interpretation of additional

examination methods, be able to substantiate the clinical diagnosis as a whole and each of its components, prescribe an examination and treatment plan, determine prognosis and preventive measures. Accurately interprets data from laboratory research methods (clinical and biochemical blood tests, general or biochemical urine tests), or makes 1-2 minor errors. Successfully makes clinical and laboratory parallels and characterizes the clinical syndrome or condition to which the presented laboratory picture corresponds.

89–80% – "good"

The student has successfully mastered the program material and basic literature. He must know the etiology, pathogenesis, clinical manifestations, basic principles of examination and treatment of nosological units and syndromes that are indicated in the program, recognize the results of additional examination methods, prescribe an examination plan, determine the prognosis and indicate the main preventive measures. Makes 1-2 minor errors when interpreting data from laboratory research methods (clinical and biochemical blood tests, general or biochemical urine tests) or is confused about the norms of laboratory parameters, but answers correctly after leading questions.

79–70% – "satisfactory"

The student has mastered the basis of the curriculum, knows the factual material: the main principles of etiology and pathogenesis, the main clinical manifestations and principles of treatment, but cannot clearly formulate his knowledge. A student may not be able to fully cope with a specific exam task, but he has sufficient knowledge to eliminate the mistakes made and can continue his education and then work in his profession. When interpreting data from laboratory research methods (clinical and biochemical blood tests, general or biochemical urine tests), makes more than 1-2 significant errors, makes it difficult to carry out clinical and laboratory parallels and characterize the clinical syndrome or condition to which the presented laboratory picture corresponds.

69% and < – "unsatisfactory" = failed

A student who reveals ignorance of the basics of educational material makes fundamental mistakes when completing specific exam material. The student does not have a sufficient level of practical skills. Makes conceptual errors (3 or more) in the interpretation of data from laboratory research methods (clinical and biochemical blood tests, general or biochemical urine tests), is unable to characterize the clinical syndrome or condition to which the presented laboratory picture corresponds, does not know the norms of the presented laboratory parameters.

SURGICAL DISEASES

Teachers: PhD Volkov Dmitry, PhD Izmailov Aleksander,
Building, Department, classroom # Kazan Hospital for War veterans, surgery department, 5th fioor, room 527

Contact details:

- E-mail address: gs@kazangmu.ru
- Office and working hours: 527 (8.00-16.00)

Total hours: 216 h

Lecture hours 32 h
Class hours: 90 h
Self-study: 58 h
Control: 36 h

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University

Course objectives: The purpose of mastering the discipline
The aim of studying general surgery is to teach the student to collect and analyze information about the patient's health status, solve practical problems of diagnosis, treatment, rehabilitation of patients and disease prevention, skills of professional medical behavior, the basics of clinical thinking, and keeping medical documents.

Tasks of the discipline:

- Purposefully find out about the patient's complaints and medical case;
- Perform a physical examination of a surgical patient, including inspection, palpation, percussion, and auscultation;
- Outline a plan for the examination of a surgical patient;
- Organize surgical activities in accordance with aseptic rules in surgical hospitals and polyclinics, intensive care units, and emergency rooms;
- Carry out all necessary measures to care for surgical patients;
- Provide first aid and determine the type of transport for a patient;
- Perform standard medical diagnostic and procedures;
- Work as a nursing staff in surgical hospitals;
- Identify major surgical syndromes and diagnose major types of purulent infectious diseases, injuries and conditions.

Course topics:

Calendar plan of lectures

1.Asepsis, antiseptics. Sources and methods of surgical infection spread. The concept of aseptic. Organization of work in the surgical department and operating unit. Preparation of surgeon's hands for surgery. Preparation of operating field. The concept of antiseptic. Types of antiseptics. Mechanical antiseptic. Physical antiseptic. Chemical antiseptic. Biological antiseptic. Mixed antiseptic.
2.Pain and pain relief. Pain syndromes. Local and general anesthesia. Mechanisms and causes of pain. Characteristics of pain. Narcotic anesthesia. Means and principles of drug treatment for pain syndrome. Types of local anesthesia: pharmacochemical (terminal, infiltration, conduction) and physical. Drugs for local anesthesia, the mechanism of their action, the main characteristics. Indications for use, types and techniques of novocaine blockades. Components of general anesthesia. The methodology and clinical picture of modern general anesthesia, the stage of anesthesia. Complications of anesthesia and the immediate post-acute period, their prevention and treatment. Types of anesthesia.
3.Bleeding. Classification of bleeding. The protective and adaptive reaction of the body to acute blood loss. Clinical manifestations of external and internal bleeding. Clinical and instrumental diagnosis of bleeding.
4.Modern principles of blood loss treatment. The concept of blood type. Types and methods of blood transfusion. Hemostasis system research methods. Diseases that cause changes in the blood clotting system. Medications affectingthe hemostatic system. Prevention and treatment of thromboembolic complications.

5.The basics of purulent septic surgery. General issues of acute surgical infection. General principles of treatment purulent diseases, rational antibacterial therapy, immunotherapy, enzyme therapy, detoxification, stimulating and restorative therapy. General principles of surgical intervention techniques. Modern methods of treatment purulent foci.

6.General issues of injury surgery. Wounds. The concept of isolated, multiply and combined injuries. Wounds. Classification of wounds. Pathogenesis and phases of the wound process. Types of wound healing. Primary surgical treatment of wounds, its types. Secondary surgical treatment. Closure of the wound. Purulent wounds are primary and secondary. Radical surgical treatment of a purulent wound.

7. Closed soft tissue injuries. Bruises, sprains. Prolonged compression syndrome. Damage to soft tissues, tendons and joints. Bruises, sprains and tears, concussions and compression, prolonged compression syndrome.

8.Fractures and dislocations. Classification. The clinical picture. The basic principles of treatment: pain relief, reposition, immobilization, rehabilitation.

10.Burns: thermal, chemical, electrotrauma, radiation burns. Classification. Determination of the depth and area of burns. Burn disease - phases of the course. Principles of general and local treatment. Radiation and chemical burns.

11.Stages of treatment surgical patients. First aid. The concept of the first aid. The basic principles of the organization pre-medical and first aid at the pre-hospital stage. Ambulance and emergency medical services. The importance and functions of specialized emergency medical teams.

Ambulatory surgery. The structure of the surgical service of the polyclinic, trauma center.

12.The preoperative period. The period of the operation. The postoperative period. Inpatient surgery. The preoperative period. Absolute, relative indications for surgery in planned and emergency surgery. The concept of contraindications to surgery. Criteria for operational risk, ways to reduce it.

Preparing the patient for surgery. The objectives of the training.

The period of the operation. The concept of a surgical operation. Types of surgical operations: planned, urgent, emergency, radical and palliative. Minimally invasive surgery. Stages of surgical operation.

The postoperative period. The body's reaction to operational aggression. The concept of rehabilitation after surgical treatment. Bandages, suture removal, physiotherapy and physical therapy.

Calendar plan of practical classes

1.Aseptic techniques. Introduction to the topic. Getting acquainted with the clinic. The concept of surgery. Brief history of surgery. Current state of surgery. Organizational and legal basis of surgical activity. Ethical and deontological principles in surgery. Organization of work in the surgical department and operating unit. Preparation of surgeon's hands for surgery. Preparation of the operating field.

2.Antiseptic techniques: mechanical, physical, chemical, biological, combined.

3.Non-operative surgical procedures. Desmurgy. Types of dressings. The concept of dressings and dressing application. Methods of soft bandage application and retention.

4. Puncture, injections, and infusions. Drainage and packing of wounds and body cavities. Hollow organ drainage.

5.Pain and pain relief. Pain syndromes. Local anesthesia. Blocks. Relief of pain syndromes. Narcosis. Principles and methods of pharmacological management of pain. Types of Local Anesthesia. The use of various types of local anesthetic techniques, including novocaine blocks, is discussed. Indications, contraindications, and methods for their implementation are described, as well as possible complications and methods to prevent them.

6.General Anesthesia. Preparation of patients for general anesthesia is discussed, including premedication and methods for its administration. Inhalation and non-inhalation anesthesia

techniques, as well as the use of muscle relaxants, are also discussed. The benefits of combining these methods to achieve optimal results are highlighted.

7.Bleeding Control. Methods for stopping bleeding are discussed, including both temporary and permanent measures. Techniques for assessing the severity and volume of blood loss are presented, along with the use of various methods to control bleeding.

8.Modern Principles of Blood Loss Treatment. The basis of transfusiology. Blood and Component Transfusion. ABO Group System and Rh Factor System. Technique of Component Transfusion. Determination of Blood Groups. Modern Rules for Group-Specific ABO and Rhesus Blood Transfusion. Compatibility Testing for Hemotransfusion. Documentation Management. Filling Out Blood Transfusion Cards. Autohemotransfusion. Blood Reinfusion Technique. Blood Transfusion Reactions and Complications. Organization of Blood Donation Services in Russia. Blood Substitutes. Determination of Quality and Volume of Infusion Therapy in Surgical Diseases. Principles of Modern Component Infusion Therapy.

9.The basics of purulent septic surgery. General issues of acute surgical infection. General principles of treatment of purulent diseases, rational antibacterial therapy, immunotherapy, enzyme therapy, detoxification, stimulating and restorative therapy. General principles of surgical intervention techniques.

10. Examination of surgical patients. Purposeful clarification of the patient's complaints and the history of the disease. General clinical examination of the patient using examination, thermometry, palpation, percussion and auscultation. Assessment of the local status. Drawing up a patient examination plan. The role of laboratory and instrumental methods in the examination of a surgical patient. Determination of the need for urgent diagnostic and therapeutic measures.

11. Fundamentals of injury surgery. General issues of injury surgery. Damage to soft tissues, tendons and joints. Types of injuries and classification of wounds. The concept of isolated, multiple, combined and combined injuries. Complications and risks of injury: immediate, immediate and late. General principles of the organization of prehospital and inpatient trauma care. Damage to soft tissues, tendons and joints. Closed soft tissue injuries. Bruises, sprains and tears, concussions and compression, prolonged compression syndrome.

12. Wound. Classification of wounds. Pathogenesis and stages of the wound healing process. Types of wound closure. Principles of initial wound care. Primary surgical interventions for wounds, their types. Secondary surgical treatments. Closure of wounds. Infectious complications associated with wounds. General and local indicators of wound suppuration. Treatment of purulent wounds based on the stage of the wound progression. Modern approaches to surgical management of purulent wounds. Surgical treatment of chronic wounds. Enzyme therapy and antibacterial treatment. Prevention of postoperative wound infection.

13.Head, chest, and abdominal injuries. Head injury. Classification. Assessment of the severity of the victim. First aid for head injury. Features of patient transportation. Chest injury. The concept of pneumothorax. Types of first aid. Classification of pneumothorax. Features of assistance with strained, valvular and open pneumothorax. Principles of treatment. Hemothorax. Clinical manifestations of hemothorax. First aid for hemothorax. Features of transportation of patients with breast injury. Abdominal injury. Classification. Clinical, laboratory and instrumental diagnostics of damage to the organs of the abdominal cavity and retroperitoneal space.

14.Fractures and dislocations. Fractures and dislocations. Classification. The clinical picture. Basic principles of treatment: pain management, reposition, immobilization, rehabilitation. Complications of traumatic fractures: pain shock, fatty embolism, acute blood loss, the development of infection and their prevention.

15.Burns. Thermal damage. Classification. Determination of the depth and area of burns. First aid for burns. Burn disease - phases of the course. Principles of general and local treatment. Radiation and chemical burns. Electrical injury. Local and general effect of electric current. First aid for electrical injury. Features of further examination and treatment.

16. Inpatient surgery. The preoperative period. The period of the operation. Inpatient surgery. The preoperative period. Absolute, relative indications for surgery in planned and emergency surgery. The concept of contraindications to surgery. Criteria for operational risk, ways to reduce it. Preparing the patient for surgery. The objectives of the training. Preparation of the oral cavity, preparation of the gastrointestinal tract, skin. Choosing analgesia and preparing for it. Preparation for emergency operations. The legal and legal basis for conducting examinations and surgical interventions. The period of the operation. The concept of a surgical operation. Types of surgical operations: planned, urgent, emergency, radical and palliative. Types of operations: with the removal of a pathological lesion, reconstructive (reconstructive) and plastic surgery. The position of the patient on the operating table. Principles of choosing operational access. Minimally invasive surgery. Stages of surgical operation. The distribution of responsibilities between all participants in the operation during anesthesia and surgery. Monitoring of the patient's condition during surgery.

17. Postoperative period. The postoperative period. The body's reaction to operational aggression. Respiratory disorders, cardiac activity, gastrointestinal and urinary tract functions, thromboembolic complications. Their prevention, diagnosis and treatment. The patient's diet. Pain relief. Prevention, diagnosis and treatment of wound complications: bleeding, suppuration, eventration. The concept of rehabilitation after surgical treatment. Bandages, suture removal, physiotherapy and physical therapy.

18. Monitoring the independent work of students.

19. Outcome.

Topics of Self-study

Water-electrolyte disorders in surgical patients and principles of therapy.	The causes of water-electrolyte and acid-base disorders in surgical patients. Clinical and laboratory diagnostics. Indications, contraindications and methods of infusion therapy. Principles of infusion therapy, monitoring of its implementation. Solutions for infusion therapy of water-electrolyte disorders. Infusion program. Basic and corrective infusion therapy. The dangers and complications of transfusion of plasma-substituting solutions. First aid and treatment of these complications. Documentation of infusion therapy.
Endogenous intoxication in surgery and the principles of its correction.	The concept of endogenous intoxication. The main types of endotoxicosis in surgical patients. Toxicosis, endotoxemia. General clinical and laboratory signs of endotoxicosis. Criteria for the severity of endogenous intoxication. Principles of complex treatment of endogenous intoxication syndrome in a surgical clinic. Stimulation of natural detoxification, artificial detoxification, syndrome therapy. Surgical elimination of the source of intoxication.
Nutrition of surgical patients.	The etiological factors underlying eating disorders. Nutritional assessment. Enteral feeding. Nutritional media. Indications and methods for nasogastric and gastrostomy feeding. Gastrostomy and enterostomy procedures. Indications for parenteral feeding. Components of parenteral nutrient solutions. Methods and modalities of parenteral feeding delivery.

Critical life disorders in surgical patients.	Clinical assessment of the overall health of patients. Objective methods for determining the severity of a patient's or victim's condition. Types of disturbances in the vital functions of the body in surgical patients: acute respiratory distress, acute cardiac failure, acute kidney and liver failure. Multiple organ dysfunction syndrome. Types, signs, and diagnosis of end-stage conditions: pre-agonal state, agonal state, clinical death. Indicators of biological death. First aid in case of cessation of breathing and blood circulation. Criteria for successful resuscitation. Monitoring systems. Indications for the termination of cardiopulmonary resuscitation. Shock – types, pathogenesis, clinical presentation, diagnosis, stages, and phases of shock. Emergency treatment. Complex therapy. Success criteria for treatment.
Fundamentals of surgery for regional circulatory disorders.	Acute and chronic. The main causes of arterial blood flow disorders. General principles of clinical and instrumental diagnostics. The degree of acute ischemia and the stage of chronic arterial insufficiency. Surgical and conservative treatment. First aid for acute disorders of arterial circulation. Principles of complex treatment. Disorders of venous circulation. Acute venous thrombosis and chronic venous insufficiency. General principles of clinical and instrumental diagnostics. Prevention of complications. Principles of complex treatment. Disorders of lymph circulation. Lymphostasis. The main reasons. Principles of diagnosis and treatment. Necrosis. Clinical forms. Causes of occurrence. Gangrene, pressure sores, trophic ulcers. Dynamics of bedsore development. Prevention and principles of treatment.
Blood clotting disorders in surgical patients and methods of their correction.	The hemostasis system. Research methods. Diseases that cause changes in the blood clotting system. The effect of surgical operations on hemostasis. Medications that affect the hemostasis system. Prevention and treatment of thromboembolic complications. Prevention and treatment of hemorrhagic syndrome. DIC syndrome.
The basics of surgical treatment for parasitic infections.	The concept of surgical parasitic diseases. Echinococcosis. Alveococcosis. Ascariasis. Opisthorchiasis.
The basics of malformation surgery.	The concept of congenital pathology. Congenital malformations of organs and tissues. Malformations of the skull and brain. Malformations of the spine and spinal cord. Malformations of the face. Malformations of the chest and organs of the chest cavity. Congenital heart defects. Malformations of the abdomen and digestive organs. Malformations of the genitourinary system. Malformations of the limbs.
The basics of plastic surgery.	Autoplasty, alloplasty and xenoplasty. Plastic surgery of tissues and organs by various methods. The use of synthetic materials in plastic surgery.
The basics of transplantation.	The use of synthetic materials in transplantation. Limb replantation and understanding of microsurgical techniques. The concept of organ and tissue transplantation.

Text books and required supplies:

1. General surgery [Electronic resource] : textbook / Petrov S.V. - 4th ed., reprint. and additional - M.: GEOTAR-Media, 2012. - http://www.studmedlib.ru/book/ISBN9785970422816.html
2. General surgery [Electronic resource]: textbook / V. K. Gostischev. - 5th ed., reprint. and additional - M. : GEOTAR-Media, 2015. http://www.studmedlib.ru/book/ISBN9785970432143.html

Evaluation and grading:

Monitoring progress is carried by the end of each module (combination MSQ).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test or combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean change shoes, surgery scrub, face mask and medical cap
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example MSQ of module No. 1. Asepsis and Antisepsis

1.Which of the following methods help prevent contact infection?

a) Sterilisation of linen
b) Sterilisation of instruments
c) Sterilisation of suture materials
d) Surgical scrubbing
e) Washing of the operating field

Choose the right combination of answers

1.a, b,c,d, 2. a, c,d,e 3. a, b,c,e 4. b,c,d,e **5. a, b,d,e**

2. Which method is that mechanical antisepsis?
a) Through drainage
b) Vacuum drainage with electric motor
causing negative pressure in a closed drainage system
c) Primary surgical debridment
d) Ultrasonic cavitation of wounds
e) applying proteolytic enzymes
Choose the correct answer

3. How long sterilized instruments in an autoclave at a pressure of 1.5 atm
a) 20 minutes
b) 30 min
c) 45 min
d) 60 min
e) 90 min
Choose the correct answer

4. Asepsis – is a (the definition):
a) A set of measures aimed at combating infection in the wound.
b) A set of activities aimed at the complete destruction of microorganisms in the wound.
c) A set of measures aimed at preventing and complete destruction of microorganisms in the wound.
d) A set of measures aimed at preventing the ingress of pathogens into the wound.
e) A set of measures aimed at eliminating the inflammatory process.
Choose the correct answer

5. There are antiseptics:
a) surgical, mechanical, chemical, biological
b) The thermal, mechanical, chemical, surgical
c) Chemical, surgical, thermal, biological
d) mechanical, physical, chemical, biological
e) The surgical, mechanical, thermal, physical
Choose the correct answer

6. Which method is that of mechanical antisepsis?
A. Through drainage.
B. Vacuum drainage with electric motor causing negative pressure in a closed drainage system.
C. Primary surgical debridement.
D. Ultrasonic cavitation of wounds.
Choose the correct answer.

7. Methods of physical antisepsis are as follows:
1. Drainage of subcutaneous connective tissue.
2. Irrigation of the wound with chlorhexidine solution.
3. Necrectomy.
4. Ultrasonic cavitation.
5. Immunotherapy.
Choose the right combination of answers:
A. 1,2. B.2, 3. **C.1,4**. D. 2,4.

8. Agents that work as biological antiseptic are as follows:

1. Vaccines and sera.
2. Sulphonamides.
3. Nitrofurantoins.
4. Antibiotics.
5. Proteolytic enzymes.
Choose the right combination of answers:

9. The sterilization of the operating linen in autoclave under the pressure of two atmospheres should last for:
A. 2 hours.
B. 1 hour.
C. 45 minutes.
D. **20 minutes.**
Choose the correct answer

10. Which type of organism is metronidazole specifically useful against? Please select the one best answer
A. Aerobic organisms
B. Anaerobic organisms
C. Gram stain-positive organisms
D. Gram stain-negative organisms
E. Fungal infections

Example MSQ variant Midterm assessment and exams
1.Which of the following methods help prevent contact infection?
a) Sterilisation of linen
b) Sterilisation of instruments
c) Sterilisation of suture materials
d) Surgical scrubbing
e) Washing of the operating field

Choose the right combination of answers
1.a, b,c,d, 2. a, c,d,e 3. a, b,c,e 4. b,c,d,e **5. a, b,d,e**

2. Which method is that mechanical antisepsis?
a) Through drainage
b) Vacuum drainage with electric motor
causing negative pressure in a closed drainage system
c) Primary surgical debridment
d) Ultrasonic cavitation of wounds
e) applying proteolytic enzymes
Choose the correct answer

3. The following antibiotics exert toxic effect on the auditory nerve:
a) Penicillins
b) Aminoglycosides
c) Tetracyclines
d) Cephalosporines
e) Macrolides
Choose the correct answer

4. The concentration of Novocain used for infiltration anesthesia should be as follows

a) 1%
b) 0,5%
c) 0,25%
d) 10%
e) 5%
Choose the correct answer

5. The agents used in conventional premedication include the following:
a) Hexenal (thiopentone sodium)
b) Athropine sulphate (methacine)
c) Promedol (morphine fentanyl)
d) Strophanthin (corglucon)
e) Calcium gluconate (chloride)
Choose the right combination of answers
1.a, b,d, 2. c,d,e **3. b,c** 4.d,e 5. a, c,d,e

6. Melaena is characteristic of bleeding from which of the following organs:
a) Lungs
b) Upper intestinal tract
c) Rectum
d) Kidneys
e) Spleen
Choose the correct answer

7.The types of hemorrhage classified by clinical implication and relation to the environment include which of the following
a) Latent
b) External
c) Secondary
d) Capillary
e) Internal
Choose the correct answer

8. The cause of late secondary bleeding is which of the following

a) Rise in blood pressure
b) Purulent destruction of the thrombus
c) Loss of vessel spasm
d) Erosion of the vessel wall
e) The injury of vessels, slip of ligature
Choose the correct answer

9. Which blood component contains agglutinin?
a) Serum
b) White blood cells
c) Red blood cells
d) Platelets
e) Monocytes
Choose the correct answer

10. During blood grouping with cyliclones, monitoring the reaction of agglutination should last for:

a) 3-5 seconds
b) 20-30 seconds
c) 1 minute
d) 2 minutes
e) 2,5 minutes
Choose the correct answer

11. Haemodilution is one of the following
a) Direct blood transfusion
b) Blood dilution
c) Autologous plasma transfusion
d) Autologous blood transfusion
e) Exchanging blood transfusion
Choose the correct answer

12. Preparations for parenteral nutrition are combined with glucose

a) To dilute the main solution
b) To decrease the risk of anaphylaxis
c) To boost the energy value of the main solution
d) To decrease the risk of hypercoagulation
e) To accelerate assimilation of amino acids
Choose the correct answer

13. Which types of enema are used to prepare the patient for intestinal surgery
a) Hypertonic
b) Siphon
c) Cleansing
d) Nutritious
e) Magic
Choose the correct answer

14. A weight to press on the wound after operation is applied to
a) Prevent wound dehiscence
b) Relieve pain
c) Prevent infection
d) Prevent thrombosis and embolism
e) Prevent bleeding from wound
Choose the correct answer

15. The optimum temperature for storage of preserved blood:
a) -2 °
b) -1 °
c) 0 - 1 °
d) 2 - 6 °
e) 8 -12 °
Choose the correct answer

16. When should the shaving skin before planned surgery?
a) two days before surgery
b) one day before surgery

c) the night before surgery
d) in the morning before surgery
e) immediately before an operation, on the operating table
Choose the correct answer

17. Indications for amputation
a) trophic ulcer
b) osteomyelitis
c) gangrene
d) thrombophlebitis
e) phlegmone
Choose the correct answer

18.What is paronychia?
a) all the finger tissue inflammation
b) inflammation of the periungual bed
c) inflammation of the nail bed
d) interphalangeal joint inflammation
e) an inflammation of the finger tendon
Choose the correct answer

19. Place of the usual localization of hydradenitis:
a) the axilla
b) inguinal region
c) neck
d) back
e) face
Choose the correct answer

20. Recurrent erysipelas of the lower extremities is often complicated:
a) osteomyelitis
b) lymphostasis
c) sepsis
d) thrombophlebitis
e) periostitis
Choose the correct answer

21. Occlusive dressing is applied:
a) for hip fractures
b) with an open pneumothorax
c) for capillary bleeding
d) when a venous bleeding
e) if damaged soft tissue
Choose the correct answer

22. The main symptom of a brain injury?
a) dizziness
b) headache
c) vomiting
d) increased heart rate
e) loss of function of brain regions
Choose the correct answer

23. The main symptom of a brain concussion?
a) retrograde amnesia
b) increased reflexes
c) increased heart rate
d) mydriasis
e) deep rhythmic breathing
Choose the correct answer

24. What is the optimal time for primary debridement?
a) to 6 hours.
b) up to 8 h.
c) up to 12 h.
d) up to 18 h.
e) up to 24 h.
Choose the correct answer

25. As a chemical method of stopping bleeding calcium chloride is used intravenously in the following dosage:
a) 1% - 30.0
b) 2% - 20.0
c) 5% - 15.0
d) 10% - 10.0
e) 20% - 5,0
Choose the correct answer

26. What should be done primarily in a patient with an open fracture and bleeding from a major artery damaged?
a) immobilizing a limb
b) the introduction of cardiac and vasoconstrictor
c) the introduction of drugs for pain relief
d) use of a tourniquet on the limb
e) applying a wound dressing
Choose the correct answer

27. Which of these methods do you use to stop the parenchymal bleeding?
a) pressure bandage
b) tamponade
c) vascular suture
d) ligation of the bleeding blood vessels
e) leaving clamp on the bleeding vessel
Choose the correct answer

28. How long sterilized instruments in an autoclave at a pressure of 1.5 atm
a) 20 minutes
b) 30 min
c) 45 min
d) 60 min
e) 90 min
Choose the correct answer

29. For what purpose the patient before surgery is not allowed to eat?

a) it is difficult to introduce the probe into the stomach
b) possible regurgitation in breathing ways
c) difficult breathing control
d) difficulty in intubation
e) acidosis occurs
Choose the correct answer

30.At what concentration is used for hypertonic saline clyster?
a) 1%
b) 2%
c) 5%
d) 10%
e) 20%
Choose the correct answer

PEDIATRICS

Teachers: Assoc. Prof. PhD Elena Generalova, Senior Lecturer, PhD Maria Kazakova
Building, Department, classroom: Children Hospital №2, Safiullina str., building 14 (Department of Introduction in childhood diseases and Faculty pediatrics)
Contact details:

- Telephone number: +79510643089 (Assoc. Prof. Elena Generalova)
- E-mail address: elena_generalova@rambler.ru
- Office and working hours: Children Hospital №2, Safiullina str., building 14 (Department of Introduction in childhood diseases and Faculty pediatrics) (9-17)

Class hours: 108 h:
Lectures 16 hours;
Seminars 44 hours;
Independent work: 48 hours.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Seminars is usually devoted to detailed study of specific topics and it is being held in each academic group separately. They are aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher. The seminars involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Independent work: is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=445).

Course objectives:
The purpose of mastering the discipline is the formation of relevant competencies aimed at obtaining by students fundamental knowledge on the study of age-related individual organs and systems development features; methodological features of conducting research on the systems and organs of children at different ages; principles of rational nutrition of children; the main syndromes and symptoms of the most spread nosological forms of childhood diseases in their classical course, their methods of diagnosis, treatment and prevention.

Tasks of the discipline:

1. to teach students to recognize diseases and deviations from the norm in the state of health, to identify pathology risk factors;
2. to teach students to use in practical activities knowledge about child's body anatomical and physiological properties of different age;
3. to acquaint students with childhood diseases diagnosis, treatment and prevention rules;
4. to prepare students for the R&D in health assessment and preventive measures

Course topics:

Calendar plan of lectures

1. History of Pediatrics. Periods of childhood.
2. Anatomical and physiological features of organs and systems in different age periods. Features of the digestive organs of the child's body. Diseases of the gastrointestinal tract in children.
3. Modern concept of breastfeeding. Mixed and artificial feeding.
4. Features of mineral metabolism in children. Rickets in children.
5. Iron deficiency anemia in children.
6. Acute rheumatic fever in children.
7. Hemorrhagic diathesis in children.
8. Childhood infections: diphtheria, meningococcal infection etc.

Calendar plan of seminars

1. Physical and neuropsychic development of children, semiotics of disorders. Anatomical and physiological features of the skin, subcutaneous tissue; semiotics of disorders.
2. Anatomical and physiological features of the lymph nodes, musculoskeletal system, respiratory organs, cardiovascular system in children. Semiotics of major diseases. Terms and order of teething in children. Features of blood and hematopoiesis in children in different age periods.
3. Anatomical and physiological features of the digestive organs (oral cavity, stomach, intestines), urinary system and nervous system in children. Semiotics of major diseases. Advantages and scheme of natural feeding, calculation of the amount of nutrition, characteristics of milk mixtures. Artificial feeding and defects in its implementation as a cause of the pathology of the dentoalveolar system. Calculation of nutrition, drawing up a menu layout, assigning complementary foods.
4. Causes of development, clinic, diagnosis, treatment, prevention of rickets, iron deficiency anemia, chronic eating disorders in young children. The value of deficiency of vitamins and microelements in the formation of the pathology of the dentoalveolar system. Peculiarities of feeding children with dental diseases.
5. Pneumonia, ARD, bronchial asthma. Causes of development, classification, clinic, diagnosis, treatment and prevention Disorders of nasal breathing, connection with the formation of the pathology of the dentoalveolar system. Emergency care for an attack of bronchial asthma.
6. Acute rheumatic fever, non-rheumatic carditis. Causes of development, risk groups, clinical manifestations, diagnosis, treatment and prevention. Congenital heart defects, combination with anomalies of the dentoalveolar system. Emergency therapy for heart failure.
7. Kidney diseases in children: pyelonephritis, glomerulonephritis. Causes of development, clinical manifestations, diagnosis, treatment, prevention. Emergency measures for acute and chronic renal failure. The role of the dentist in the clinical examination of patients with kidney disease.

8. Gastrointestinal diseases in children: chronic gastritis, duodenal ulcer, biliary dyskinesia, chronic cholecystocholangitis. Causes of development, clinical manifestations, diagnosis, treatment, prevention, clinical examination. Changes in the oral mucosa in chronic gastritis and peptic ulcer.
9. Hemorrhagic vasculitis, hemophilia. Causes of development, clinic, diagnosis, treatment, prevention, clinical examination. Clinical manifestations on the oral mucosa in this pathology in patients with leukemia. Emergency treatment of bleeding in the practice of a dentist. Tactics of the dentist in the treatment of teeth and diseases of the oral cavity in patients with hemorrhagic vasculitis, hemophilia.
10. Neonatology: anatomical and physiological features of a newborn child. Full-term and premature babies, signs of prematurity. The nature of the anomalies of the dentoalveolar system due to prematurity and immaturity of the child.
11. Childhood infections: measles chicken pox, scarlet fever, infectious mononucleosis. Specific changes in the oral mucosa in rash infections. Diphtheria, whooping cough, mumps, acute intestinal infections (salmonellosis, dysentery). Vaccination calendar. Vaccination in a children's clinic

Text books and required supplies:

1. Nelson Essentials of Pediatrics / ed. by Karen Marcdante, Robert Kliegman, Abigail Schuh / 7th Edition. – Elsevier, 2014.
2. Hutchison's Clinical Methods. An integrated approach to clinical practice / ed. by Glynn M, Drake W / 23rd edition. – Saunders; 2012.
3. Guidelines for the management of common childhood illnesses / Second edition. – WHO; 2013.
4. Integrated Management of Pregnancy and Childbirth. Pregnancy, childbirth, Postpartum and Newborn Care: A guide for essential practice. – WHO; 2015.
5. Learning instructions in pediatrics for the english speaking students of the foreign medical faculty / I. G. Hmelevskaya, M. M. Gurova, V. A. Afanas'ev, I. G. Meteleva. - Kursk, 2004. - 40 p.

Evaluation and grading:

Monitoring progress is carried by the end of each module (written papers/oral examination/test/ case report or other).

Routine performance assessment (homework, transcript analyses, feeding task, cases, oral examination and tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Final control is held in form of test (MCQs). Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment

- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of final test

MCQs

Choose 1 correct answer:

1.What is duration of neonatal period?
a. from birth till 1 year
b. from birth till 7th day
c. from birth till 6 month
d. from birth till 28th day

2. What is normal respiratory rate in newborns?
a.16-18 per min
b. 30-40 per min
c. 20-30 per min
d. 40-60 per min

3. Which antipyretics are the drugs of choice for children?
a. nimesulide and paracetamol
b. analgin and ibuprofen
c. aspirin and analgin
d. paracetamol and ibuprofen

4. Which form of intrauterine infection is the most common?
a. asymptomatic
b. generalized
c. localized
d.prolonged

5.What is causative agent of measles?
a. RNA-containing myxovirus
b. b-hemolytic Streptococcus group B
c. b-hemolytic Streptococcus group A
d. DNA-containing myxovirus

6. Which type of pain syndrome is typical for duodenal ulcer?
a. epigastric pain on the left side, 20-40 minutes after eating
b. hungry pains, night pains in the epigastrium on the left side
c. epigastric pain on the left side, 30-90 minutes after eating
d. hungry pains, night pains in the epigastrium on the right side

DERMATOVENEROLOGY

Teachers: Prof. Bulat Shamov, PhD Irina Khismatulina

Building, Department, classroom # Republican Skin and Venerological Clinic, 4 Tolstoy str., 2nd floor, lecture hall, study room No. 2

Contact details:

- Telephone number: +79503166820 PhD Irina Khismatulina, +79600544559 Prof. Bulat Shamov
- E-mail address: xomenko-aa@mail.ru, shamovba@mail.ru
- Office and working hours: Department of Dermatovenerology (9:00-16:20)

Total hours — 108:

- Lectures 16 hours;
- Practical classes 44 hours;
- Independent work 48 hours;

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical classes are aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1125).

Course objectives: The purpose of mastering the discipline

The purpose of mastering the discipline dermatovenerology is formation of systematic knowledge of general and special dermatovenerology, the principles of diagnosis, treatment and prevention of dermatoses and sexually transmitted infections, according to the requirements of the modern healthcare system to ensure high quality medical care to the population (hereinafter - discipline).

Tasks of the discipline:

1. The formation of skills to recognize the clinical manifestations of the most common and severe skin and venereal diseases based on knowledge of the characteristics of the dermatovenereological status.
2. Forming systematic knowledge of students on methods of clinical examination of patients with skin and venereal diseases; diagnosis, identification of triggers, formation of an individual treatment plan for the patient in accordance with his diagnosis, indications and contraindications to treatment methods.
3. The formation of skills to use clinical tests, samples and methods, etc., to confirm the diagnosis, the ability to interpret data from clinical and laboratory research methods, to make a clinical or preliminary diagnosis, to carry out differential diagnosis.
4. Formation of systematic knowledge of students on principles of the main methods of primary and secondary prevention, with the basics of sanitary and educational work and organizational measures to reduce the incidence of infectious skin and venereal diseases.
5. Teaching students to provide emergency medical care in case of emergency conditions in dermatological practice.
6. Training in conducting dispensary supervision and rehabilitation of patients with chronic dermatoses;
7. Formation of skills in studying scientific literature and official statistical reviews, information about modern information technologies in medicine and healthcare; to study the principles of storing, searching, processing and analyzing biomedical information, including using computer technology; to master the methods of mathematical statistics necessary for studying other

academic disciplines and acquiring professional medical qualities as well as their further application in practical healthcare.

Course topics:

Calendar plan of lectures

№	Theme	Hours
1	Methods of examination of a dermatological patient. Morphological elements of the rash.	2
2	Eczema. Dermatitis. Toxicoderma.	2
3	Fungal diseases. Microsporia. Trichophytosis. Favus.	2
4	Viral and bullous dermatoses	2
5	Skin collagenoses.	2
6	Tuberculosis of the skin. Leprosy	2
7	Introduction to venereology. Syphilis the primary and secondary periods. Syphilis tertiary and congenital. Laboratory diagnosis of syphilis	2
8	Gonorrhea and non-gonorrheal urethritis.	2
		16

Calendar plan of practical classes

№	Theme	Hours
1	. Methods of examination of a dermatological patient. Morphological elements of the rash.	5
2	. Patient curation	5
3	. Psoriasis. Lichen planus.	5
4	. Eczema.Dermatitis. Toxicoderma.	5
5	. Fungal diseases. Microsporia. Trichophytosis. Favus.	5
6	. Fungal diseases. Pityriasis.vesicolor. Epidermophytia. Rubrophytia. Candidiasis.	5
7	. Introduction to venereology. Syphilis the primary and secondary periods.	5
8	. Syphilis tertiary and congenital. Laboratory diagnosis of syphilis.	5
9	. Gonorrhea and non-gonorrheal urethritis. Analysis and submission of medical history and independent work. Practical skills in the discipline of dermatovenerology.	4
	.	44

Text books and required supplies:

1. Fayzullina. E.V., Abdrakhmanov A.R. Dermatology. Manual. Part 1. / Kazan: KSMU, 2015. — 64 p.
2. Fayzullina. E.V., Abdrakhmanov A.R. Venerology (STD). Manual. Part 1. / Kazan: KSMU, 2015. — 70 p
3. Koshkin, S. V. Clinical Manifestations of Early Stages of Syphilis. Atlas / S. V. Koshkin, T. V. Chermnykh. - Москва : ГЭОТАР-Медиа, 2023. - 240 с. - ISBN 978-5-9704-7395-5, DOI: 10.33029/9704-7395-5-CMESS-2023-1-240. - ЭБС "Консультант студента" : [сайт]. URL: https://www.studentlibrary.ru/book/ISBN9785970473955.html

Evaluation and grading:

Monitoring progress is carried by the end of each module (written papers/oral examination/test/ assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, oral examination, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "unsatisfactory", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "perfect". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Standard control materials for the assessment of knowledge, skills, and (or) work experience characterizing the stages of competence formation in the process of program development

1. Level 1 – assessment of knowledge

The following types of control are used to evaluate learning outcomes in the form of knowledge:
– tests;

Choose one correct answer

Test examples

001 PRIMARY ELEMENTS FOUND IN TERTIARY SYPHILIS
A bump
B spot
C vesicle
D blister

002 SYPHILITIC TUBERCLES ARE CHARACTERIZED BY
A possibility of recurrence of scars
B positive symptom of Benier–Meshchersky
C dense consistency, painless on palpation
D positive Auspitz sign

003 SCARS IN TUBERCULAR SYPHILIS ARE
A bridge - like
B stamped

C hypertrophic
D mosaic

Answers: 001 – A, 002 – B, 003 –G

Evaluation criteria:
The score on the test is set in proportion to the proportion of correct answers:
90-100% - the score is "excellent"
80-89% - the score is "good"
70-79% - the score is "satisfactory"
Less than 70% of correct answers – the score is "unsatisfactory".

– oral answer;
Example of the topics of the reports
1. Infectious erythema of the skin.
2. Genodermatoses. (Ichthyosis)
3. Genodermatoses. (Daria's disease. Deverji disease).
4. Skin lymphomas
5. Skin angiitis

Evaluation criteria:
"Excellent" – the report fully reveals the topic, the student answers all additional questions; tells, practically without looking into the text.
"Good" – the report reveals the topic, but requires additions, the student answers all additional questions; tells, based on the text, but not reading it.
"Satisfactory" – the report reveals the topic, but requires additions, the student cannot answer most of the additional questions, partially reads the text during the story.
"Unsatisfactory" – the report does not disclose the topic, the student cannot answer most of the additional questions, reads out the text.

–interview;
Example of questions.
1. Viral skin diseases.
2. Clinical picture of herpes simplex.
3. With what diseases is it necessary to differentiate rashes with herpes simplex? Make a differential diagnosis of herpes simplex with streptococcal impetigo.
Evaluation criteria:
- the assessment is "excellent" – the resident demonstrates knowledge of the material in the section, based on familiarization with mandatory literature and modern publications; actively participates in the discussion; gives logical, reasoned answers to the questions posed.
- the assessment is "good" – the resident demonstrates knowledge of the material in the section based on familiarization with the mandatory literature; participates in the discussion with additional questions from the teacher; does not always give logical and reasoned answers to the questions posed.
- the assessment is "satisfactory" – the resident demonstrates insufficient knowledge of the material in the section, based on familiarization only with mandatory literature; does not participate in the discussion; finds it difficult to answer clarifying questions.
- the rating is "unsatisfactory" – lack of knowledge on the studied section; low activity in the discussion.

Level 2 – assessment of skills
The following types of control are used to evaluate learning outcomes in the form of skills:

– cases;
An example of a case.

A worker from the finished product coloring shop came to the reception with complaints about the phenomenon of redness on the skin of the face, neck, and hands. He is ill with periodic improvements throughout the year.
Objectively: the skin of the face, neck, hands and forearms is hyperemic, swollen, there are papules, microvesicles, weeping, serous crusts.
The boundaries of the foci are blurred.
What kind of disease can you think about?
Which studies will help to confirm the diagnosis?

The standard of the answer:
Professional eczema. It is necessary to conduct provocative tests outside the exacerbation of dermatosis.

Evaluation criteria
- excellent assessment – correct assessment of the proposed clinical situation; knowledge of theoretical material, a complete answer to the questions posed;
- rating "good" – correct assessment of the proposed situation, minor difficulties in answering questions;
- assessment "satisfactory" – difficulties in assessing the proposed situation; incomplete answer requiring leading questions from the teacher;
- the rating "unsatisfactory" is given to the resident if the work is not completed; incorrect assessment of the situation; incorrect answer to questions.
Level 3 – assessment of skills
The following types of controls are used to evaluate learning outcomes in the form of skills:

– cases for decision-making in a non-standard situation (a situation of choice, multiple alternatives, a problematic situation);
Example.
A 48-year-old patient, a calf calf, was referred from the FAP, with a diagnosis of trichophytia of the scalp. The woman was in contact with sick animals (young cattle), however, according to the words, the animals were vaccinated by the veterinary service of the state farm.
On the occipital surface of the scalp on the right there is a focus of infiltration with clear boundaries the size of a 5 kopeck coin, sharply delimited hemispherical nodes of a bluish-red color, with purulent discharge from each hair follicle.
1. Draw up and justify the patient's examination plan
2. Suggest the most likely diagnoses based on the survey data
3. Make a differential diagnosis of diseases in which there is a similar hair lesion?
4. Which systemic drug group would you recommend to the patient, with positive microscopic examination results for *Trichophyton verrucosum*, *Trichophyton mentagrophytes var. Gypseum*. in case of the absence of a greenish glow in the luminescent diagnosis?
5. What preventive measures are carried out when a contagious fungal disease is detected?

The standard of the answer

1. The patient is recommended to carry out:
1) Fluorescent diagnostics under a Wood lamp – with infiltrative suppurative trichophytia, there is no greenish glow of the affected hair, in the presence of this glow, it is assumed that a fungus of the genus microsporum is affected.

2)Microscopic examination: scraping from the affected area, hair examination to identify fungi of the genus *Trichophyton verrucosum*, *Trichophyton mentagrophytes var. Gypseum*.
3) Bacteriological examination for fungi
4)Definition of the triad of psoriatic phenomena to exclude psoriasis

2. Infiltrative suppurative trichophytia of the scalp, psoriasis, microsporia of the scalp and smooth skin.
Due to the presence of a number of diseases, the clinic of which is similar to the clinic observed in the patient, differential diagnosis is carried out with:
1. Microsporia (infiltrative form) of the scalp
2. Psoriasis
3. Folliculitis of the deep scalp

3. Microsporia of the scalp are characterized by rounded, sharply delimited large ones (up to 2-3 cm or more) foci, the surface of which is covered with a layer of tightly seated bran-like scales of grayish-white color against a background of weakly expressed erythema, hair breakage at a height of 6-8 mm above the skin; a green glow is noted in the rays of Wood's lamp.
For psoriasis, when the scalp is affected, diffuse peeling or sharply delimited layers of scales are characteristic, often capturing the surrounding, smooth skin; the hair itself is never affected; the lesion has a focal character, located on the back of the head, temples, crown, in the form of clearly towering plaques; at the same time, a symptom of the psoriatic triad, an isomorphic reaction; in There is no green glow in the rays of Wood's lamp.
Folliculitis of the scalp is characterized by the presence of cone-shaped pustules of large size (0.5-0.7 in diameter), completely engulfing the hair follicle, permeated with hair, opening with the release of pus; green glow is not observed in the rays of the Wood lamp.
4.The positive results of microscopic examination make it possible to assume that the hair is affected by fungi of the genus *Trichophyton verrucosum*, *Trichophyton mentagrophytes var. Gypseum.*
Systemic therapy with antifungal drugs is required. In infiltrative suppurative trichophytia, griseofulvin is used, which is prescribed at a dose of 12 mg / kg per day.
5. If mycosis is detected in a patient, it is necessary to carefully examine all family members, the work collective in which he was, and all persons who were in contact with him. Vaccination of young animals is carried out by the veterinary service of the organization.
Clothes and bed linen are boiled for 15-20 minutes and ironed. The current and final disinfection of the room is carried out.
In the institution where the case of infiltrative trichophytia occurred, quarantine is imposed: for trichophytia – for 3 weeks, with mandatory weekly clinical examination by a dermatologist.

Evaluation criteria:
"Excellent" – the answer is correct, scientifically reasoned, with links to the topics covered.
"Good" – the answer is correct, scientifically reasoned, but without references to the topics covered.
"Satisfactory" – the answer is correct, but not scientifically reasoned, or the answer is incorrect, but an attempt is made to justify it from alternative scientific positions covered in the course.
"Unsatisfactory" – the answer is incorrect and not scientifically reasoned.

MEDICAL REHABILITATION

Teachers: Prof. Takhavieva F.V., assistant Khayrutdinova O.S., assistant Bikchurin N.M.

Building, Department, classroom Healthcare Centre (OSC) Mayakovsky 11, 4th floor, classroom

Contact details:

- Telephone number: 89625624427 (Khayrutdinova O.S.)
- E-mail address: khayros.kzn@gmail.com
- Office and working hours: 9:00-17:00

Class hours: 72 h:

Lectures 10 h

Practical classes 32 h

Self-study 30 h

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline

The purpose of the discipline is to master the theory and practice of applying medical rehabilitation and wellness measures in dentistry, to form a willingness to determine the need for the use of natural healing factors, medicinal, non-medicinal therapy and other methods in patients with dental diseases in need of medical rehabilitation and sanatorium treatment.

Tasks of the discipline:

The objectives of the discipline are:

- study of the theoretical foundations of medical rehabilitation;
- student's mastery of the principles of medical rehabilitation in dentistry;
- acquisition by the student of practical skills in carrying out rehabilitation measures in dentistry;
- formation of behavior among patients and their relatives aimed at maintaining and improving the level of health, motivation to lead a healthy lifestyle.

A special feature of the discipline is the need to develop in students the ability, based on previously acquired knowledge, to conduct a comprehensive "supranosological" assessment of a person's condition (both sick and healthy), factors affecting his health, and to develop a program for his recovery.

Course topics:

Calendar plan of lectures

1. Organization of medical and physical education institutions.
2. Physical culture and sports as a means of promoting health. Forms and methods of control over the functional state of a person. Prevention of diseases, preservation and improvement of physical performance.
3. General principles of physical therapy and physiotherapy (FT). Physical therapy and FT in the medical rehabilitation system. Systematization of physical therapy and physiotherapy.
4. Physical therapy for diseases. The mechanism of action of physical exercises on the body of a healthy and sick person. Basic principles of physical exercise training.
5. Massage as the method of treatment and rehabilitation.

Calendar plan of practical classes

58. The tasks and the content of medical supervision of people engaged in physical education, sports, physical therapy.

59. Work in clinic of sports medicine and physical therapy. The scheme of medical examination of people involved in physical activity and sports. Research and assessment of physical development and features of musculoskeletal system; recommendations for the correction of physical development disorders.
60. Assessment of the functional condition of the body. Special functional tests. Determination of physical performance, preparation of a medical report. Definition of a medical group.
61. Medical and pedagogical supervision of persons engaged in physical education, sports, physical therapy.
62. Polyclinic cosultation for admission of various contingents to physical education and sports.
63. Module on topics 1-5.
64. General principles of physical therapy.
65. Organization of physical therapy in the hospital and polyclinic. Equipment of the gym for physical therapy. The procedure for prescribing therapeutic gymnastics and registration of card No. 42.
66. Classification of physical exercises with their demonstration. Accounting for the effectiveness of LG classes. Medical supervision of physical therapy classes.
67. Massage. Types of therapeutic massage. Basic techniques.
68. Basic FT methods. Methods and safety techniques. Registration of the FT recipe.
69. Medical rehabilitation in the clinic of internal Diseases, Neurology, obstetrics, surgery
70. Module on topics 7-12.
71. Clinical and physiological substantiation of the effects of physical training and FT; basic techniques, indications.
72. Medical rehabilitation in dentistry: inflammatory and traumatic lesions.
73. Clinical and physiological substantiation of the effects of physical training and FT; basic techniques, indications.
74. Rehabilitation of degenerative-dystopic dental lesions.
75. Clinical and physiological substantiation of the effects of physical training and FT; basic techniques, indications.
76. Module on topics 14-18.
77. Outcoming testing. Final test.

Text books and required supplies:

1. Educational and methodical manual on the discipline "Medical rehabilitation" for students (Methods handbook) [Electronic resource] / Kazan State Medical University. The University of Healthcare was growing. Russian Federation, Stomatological Faculty, Department of Neurology and Rehabilitation; [auth.-comp.: F. V. Takhavieva, A. T. Fayzutdinova, T. G. Sakovets]. - The electron. text data. (447 KB). - Kazan : KSMU, 2017. - 68 p.
2. Electrodiagnostics. Electrical stimulation: A methodological guide for students / Yu. E. Mikusev, T. G. Sakovets. - Kazan: KSMU, 2010. - 34 p.
3. Efanov O.I. Physiotherapy of dental diseases, Moscow, 1980.
4. Khabirov F.A., Takhavieva F.V., Kadyrova L.R. and others. Rehabilitation of patients with motor deficits after a cerebral stroke/ Textbook, Kazan, 2011, 32 pages.
5. Sakovets T. G., Bogdanov E. I., Altunbaev R. A. Medical rehabilitation for facial nerve neuropathy / KSMU., 2013. - 66 p.
6. Takhavieva F.V., Shagivaleeva T.P. The study of motor function in the practice of physical therapy with the basics of applied anatomy/ Textbook, Kazan, 2011, 55 p.
7. Epifanov V.A. Therapeutic physical culture: a textbook. Moscow: GEOTAR-Media, 2006. 567c

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1.

CHOOSE THE MOST CORRECT ANSWER.

1. In case of salivary stone disease, to stimulate the release of small stones, you can prescribe:

1) hydrotherapy
2) Microwave therapy
3) Sinusoidal modulated currents
4) UHF electric field

2. Severe pain in the temporomandibular joint can be eliminated:

1) local UV irradiation
2) ultrasound
3) massage
4) electrophoresis with anesthetics

3. Physiotherapeutic treatment of osteoarthritis in the temporomandibular joint is combined with:

1) surgical treatment

2) medical and orthopedic
3) medical
4) orthopedic

4. Massage is not used in dental practice:

1) stroking
2) rubbing
3) vibration
4) shaking

Evaluation criteria:

The test score is given in proportion to the proportion of correct answers:
90-100% - "excellent" score 80-89% - "good" score
70-79% - "satisfactory" score Less than 70% of correct answers – "unsatisfactory" score.

Example of module No. 2

2.1. During the Martinet-Kushelevsky test, it was revealed: initial PS = 12 beats per minute in 10 seconds, BP =117/76 mmHg. PS in the first 10 seconds after loading – 18 beats per minute, BP in the first minute of recovery - 147/75 mmHg, PS in the first 10 seconds the second minute of recovery was 15 beats per minute, blood pressure in the second minute of recovery was 128/72 mmHg, PS in the first 10 seconds of the third minute of recovery was 12 beats per minute, blood pressure in the third minute of recovery was 118/71 mmHg, at 4 and 5 minutes of recovery PS and blood pressure did not differ from the indicators 3 minutes of recovery time. What is the type of reaction of the cardiovascular system to a functional test? Justify the answer.
2.2. During weightlifting training camps, during an orthoclinostatic test, it was revealed that the pulse rate increase in three athletes (group 1) was 5-7 beats per minute, in four (group 2) 8-10 beats per minute, and in seven (group 3) 10-12. What are your recommendations for performing loads for each of these three groups of athletes?

Evaluation criteria:

"Credited" – the student demonstrates a thorough knowledge of the material in the section: the complete correct answer and its justification are given.;
"Not counted" – lack of knowledge in the section being studied: the answer is incorrect or incomplete, there is no justification.

Example of module No. 3

Topic: filling out a physical education student's examination card (for a real subject) with the preparation of an individual "fitness program"

Task 1.1. Interview the physical education student, note the specifics of his wishes, complaints, general and sports history.

Task 1.2. To conduct an objective examination of a physical education student (including sports somatoscopy, anthropometry, functional studies). Calculate the main indices of physical development of this athlete.

Task 1.3. Analyze the data obtained and make a conclusion about (a) physical development, (b) functional condition and (c) fitness of the athlete.

Task 1.4. Evaluate (a) contraindicated and (b) permitted sports and physical activity for this athlete. Give (c) recommendations on self-monitoring, as well as (if necessary) on follow-up, kinesiotherapy, nutrition correction, daily routine, and bad habits. Substantiate the answer.

Evaluation criteria:

An excellent grade is given to the student if the proposed wellness programs fully take into account the individual characteristics of the surveyed, as well as complete correct answers to all questions, scientifically reasoned, with links to the topics covered.

The student is rated "good" if the proposed wellness programs take into account the individual characteristics of the surveyed, but the remaining questions are answered briefly, scientifically reasoned, but without references to the topics covered.

A "satisfactory" grade is given to a student if he is generally guided in programming, but uses a non-individual "template" approach, admits inaccuracies in answering other questions; the answer is correct, but not scientifically substantiated, or the answer is incorrect, but an attempt is made to substantiate it from alternative scientific positions covered in the course.

An "unsatisfactory" grade is given to a student if he is fragmentary in his understanding of the problem under consideration, the answer is incorrect and not scientifically substantiated.

EPIDEMIOLOGY

Teachers: Prof. Gulshat Khasanova, Assoc. Prof. Niyaz Khakimov, Assoc. Prof. Saida Agliullina

Building, Department, classroom Red Building (6/30 Tolstoy St.), Department of Epidemiology and Evidence-Based Medicine, rooms 118, 214, 318

Contact details:

- Telephone number: +79503177208 (Assoc. Prof. Niyaz Khakimov)
- E-mail address: kafepidemiologiikgmu@mail.ru
- Office and working hours: ground floor (9 am to 5 pm)

Total hours — 72 h:

- Lectures 10 hours;
- Practical classes 32 hours;
- Independent work 30 hours.

Course description:

Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.

Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2822).

Course objectives:

The purpose of mastering the discipline is to master theoretical and practical skills for the prevention of infectious, parasitic and non-infectious diseases in medical institutions, among various contingents of the population at the individual, group and population levels, as well as in emergency situations (incidents caused by contact with blood or another body fluids).

Objectives of discipline mastering:

- the formation of the ability to use descriptive, analytical and experimental epidemiological studies to identify risk factors for infectious and non-infectious diseases with an assessment of the effectiveness of preventive and therapeutic measures in the framework of randomized clinical trials;
- the formation of ideas about the principles of the preventive work organization among various contingents of the population at the individual, group and population levels (primary, secondary and tertiary levels of prevention);
- the mastering of methods for organizing and conducting primary preventive and anti-epidemic measures for infectious diseases among the population both at the primary health care level and in extreme conditions, in the foci of mass destruction;

- mastering the methods of organizing and conducting measures for the prevention of nosocomial infections, as well as occupational diseases in medical institutions;
- mastering the skills of using regulatory and legal acts governing preventive and anti-epidemic measures and the sanitary and anti-epidemic regime in institutions;
- the formation of positive behavior among the population, aimed at maintaining and improving the level of health.

Tasks of the discipline:

The student have to know:

- epidemiology and prevention of the most common infectious and non-communicable diseases, including in dental practice;
- legal and ethical aspects of preventive and anti-epidemic measures.

The student have to be able to:

- collect an epidemiological history;
- identify the causes (risk factors) of the development of diseases;
- use antiepidemic agents in the organization and conduct of preventive and antiepidemic measures to maintain a sanitary and antiepidemic regime in medical institutions of dental profile, including in emergencies;

The student have to possess:

- an algorithm for conducting primary preventive and anti-epidemic measures in the foci of the most common infectious diseases;
- carrying out a complex of anti-epidemic measures in epidemic foci with single or multiple diseases;
- carrying out anti-epidemic measures, protecting the population in the foci of particularly dangerous infections, with the deterioration of the radiation situation and natural disasters.

Course topics:

Calendar plan of lectures

1. The paradigm of modern epidemiology. Epidemiological methods in clinical researches. Evidence-Based Medicine
2. Epidemic process. Basics of epidemiology of infectious diseases.
3. Vaccination as a method of control of infectious diseases.
4. Epidemiology of HIV-infection.
5. Epidemiology and Prevention of HAIs.

Calendar plan of practical classes

1. Epidemiological method with the basics of evidence-based medicine. Epidemiological research. Epidemic process. Epidemiological surveillance.
2. Disinfection, disinsection, diratization, sterilization.
3. Immunoprophylaxis of infectious diseases.
4. Organization of preventive and anti-epidemic measures for acute intestinal infections, respiratory tract infections.
5. Epidemiology and prevention of socially significant infections.
6. Epidemiology and prevention of healthcare-associated infections (HAIs).
7. Sanitary and antiepidemic support of the population in katastrophes.
8. Epidemiology of noncommunicable diseases.

Text books and required supplies:

1. Public health and epidemiology at a glance / Margaret Somerville, Kalyanaraman Kumaran, Robert Anderson. 2012

2. Principles of Epidemiology in Public Health Practice. 2012 CDC https://archive.cdc.gov/#/details?q=https://www.cdc.gov/csels/dsepd/ss1978/SS1978.pdf&start=0&rows=10&url=https://www.cdc.gov/csels/dsepd/ss1978/SS1978.pdf
3. Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 (Update: June 2024). URL: https://www.cdc.gov/infection-control/media/pdfs/Guideline-Disinfection-H.pdf
4. The global epidemiology of infectious diseases [electronic resource] / edited by Christopher J. L. Murray, Alan D. Lopez, Colin D. Mathers. World Health Organization 2004
5. WHO guidelines on hand hygiene in health care. 2009. 270 p.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Evaluation and grading:

Monitoring progress is carried by the end of each class (written papers/oral reports/test or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 and 10 – "excellent". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline (test). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, test results, midterm assessment results.

Examples of module test

Dental attachments are processed in ... before sterilization

A. A disinfectant solution
B. An ultrasonic machine*
C. An UV machine
D. A disinfection chamber

What factor improves the quality of disinfection?

A. Selection of the solution concentration according to the bactericidal mode in the departments of an antitubercular dispensary
B. The temperature of the disinfectant solution is 15 degrees

C. Absence of blood on the processed tool*
D. Presence of organic contamination on tools

Choose from the following risk factors for health care-associated infection:
A. Length of stay*
B. Number of instrumental interventions*
C. Presence of concomitant diseases*
D. Gender of patients
E. Middle age

What is used for decontamination of hospital air?
A. Solar radiation
B. Ozonizers
C. Humidifiers
D. Recirculators and UV irradiators*

The most effective measure of prevention of HBV infection is
A. Early detection
B. Condom use
C. Vaccination*
D. Isolation and treatment of the patient

Evaluation of the module test

There are three modules. Each module include 20 test questions. Module results are evaluated on a 100-point scale, where 0-69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

NEUROLOGY

Teachers: Prof. Enver Bogdanov, PhD Alexandr Kazantsev
Building, Department, classroom: RCH, Orenburgsky tract 138, bild. A, Department of Neurology, rooms 214, 217
Contact details: e-mail address: enver_bogdanov@mail.ru (head of department - Prof. Enver Bogdanov),
aisluzab@mail.ru (teaching assistant - PhD Aisylu Faizutdinova)
Total hours — 108:
- Lectures 16 hours;
- Practical classes 44 hours;
- Independent work 48 hours

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Practical classes is usually devoted to detailed study of specific topics and it is being held in each academic group separately. It involves active participation of students in problem discussion and requires preliminary preparation by the student. **Practical training** is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline

The objectives of mastering the discipline are to develop systemic knowledge, skills and competencies in the field of diagnostics, prevention and treatment of the most common neurological diseases in dental practice.

Tasks of the discipline:

1) to teach students the ability to study the nervous system, symptoms of its damage, diagnosis of symptoms and syndromes and making a topical diagnosis;
2) to develop knowledge about the basics of the etiology, pathogenesis, clinical manifestations, diagnostics of the most significant neurological diseases for dentists (neuralgia and neuropathy of the trigeminal nerve, neuropathy of the facial nerve, vegetative ailments, epilepsy and paroxysmal conditions, neuroinfections, hereditary diseases, cerebrovascular accidents, diseases of the peripheral nervous system, autoimmune diseases).;
3) to form in the student clinical neurological thinking, the ability to independently diagnose the most common neurological diseases and neurostomatological syndromes, treat emergency neurological conditions and prevent diseases of the nervous system;

Course topics:

Plan of lectures

1. Introduction to Neurology. Approach to the patient with a neurologic problem: Key steps in neurological diagnosis. Neurologic examination. Motor syndromes.
2. Sensory syndromes. Cranial nerves, Autonomic and PNS syndromes
3. Liquor-dynamic syndromes. Cognitive syndromes. Methods of laboratory and instrumental diagnostics in neurology
4. Disorders of the cerebrovascular system
5. Disorders of peripheral nerves. Disorders of muscle and the neuromuscular junction. Myasthenia. Etiology, pathogenesis, clinical features, treatment.
6. Demyelinating diseases of the nervous system. Infectious diseases of the nervous system.
7. Autonomic disorders. Epilepsy and paroxysmal conditions. Headaches. Disorders of higher cortical function. Neurologic changes of normal aging. Dementia. Alzheimer's disease
8. Introduction to Neurosurgery. Neoplasms of the nervous system. Head and spinal injury. Degenerative diseases of the nervous system. Hydrocephaly. Neurological syndromes in patients with Anomaly, Malformations and Degenerative diseases. Syringomyelia

Plan of practical classes

General Neurology (module 1 - 14 h.)

1. Introduction to neurological disorders. Clinical neuroanatomy and physiology. Cognitive functions. Syndromes of focal brain lesions. Autonomic disorders. Covers of brain. Cerebrospinal fluid.
2. Sensation and peripheral nerve pathology. Voluntary movements and it's disorders. Extrapyramidal and cerebellar disorders.
3. Brainstem and cranial nerves lesions. Topical diagnosis in neurology. Methods of investigation in neurology **(Module 1 control – test and practical skills)**

Clinical Neurology (module 2 – 30 h.)

4. Cerebrovascular brain diseases. Acute and chronic neurovascular syndromes
5. Multiple sclerosis. Encephalomyelities. Infectious diseases of the nervous system.
6. Peripheral nerve diseases. Diseases of spinal cord. Neuromuscular diseases

7. Extrapyramidal diseases. Parkinson's disease. Hyperkinetic syndromes
8. Degenerative diseases of the nervous system. Syringomyelia. Epilepsy and syncope. Autonomic dystonia.
9. Neoplasms of the nervous system. Head and spinal injury. **(Module 2 control – test)**

Final test and then calculation of the general rating of discipline in 1C.

Text books and required supplies:

1. Diseases of nervous system / V.A. Parfenov. — Moscow : Medical Informational Agency, 2023. — 432 p. [Электронный ресурс]
2. Bradley's Neurology in Clinical Practice / Robert B. Daroff , Joseph Jankovic , John C. Mazziotta, and Scott L. Pomeroy, Seventh Edition, 2016, Elsevier. ISBN: 978-0-323-28783-8 [Электронный ресурс]: https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20130000801
3. Duus' Topical Diagnosis in Neurology : anatomy, physiology, symptoms [Text] : учебник / M. Baehr, M. Frotscher ; with contributions by W. Kueker ; translated by E. Taub : 400 illustrations, most in color, by G. Spitzer, B. Gay . - 4th. rev. ed. - Stuttgart ; New York : [s. n.], 2005. - 517 p : il. ; 21 см. - Index : p. 497-517. - ISBN 3-13-612804-4 (97 экз.)
4. Fundamentals of Neurologic Disease [Text] / L. E. Davis with M. K. King, J. L. Schultz. - New York : Demos, 2005. - 235 p. : il ; 20 см. - Англ. - Index : p. 227-235. - ISBN 1-888799-84-6 (98 экз.)

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions

- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Forms of control

Module 1 "General Neurology" control include test tasks (50% of Mod. 1 rating) and practical skills (50% of Mod. 1 rating)

Example of test tasks

1. You have detected hypesthesia in the patient's right middle zone of Zelder, as well as hemihypesthesia on the opposite side of the body (left). The symptoms developed simultaneously. Specify the level of damage:
a) **brain stem on the right** (correct answer)
b) left hemisphere of the brain
c) right hemisphere of the brain
d) root of the trigeminal nerve on the left
d) brain stem on the left

2. The patient complains of a rash on the forehead on the left in the form of blisters filled with clear fluid. Your assumption:
a) damage to the second branch of the trigeminal nerve
b) damage to the Gasserian ganglion on the left with involvement of the third branch
c) damage to the facial nerve above the origin of the greater petrosal nerve
d) **damage to the Gasserian ganglion on the left with involvement of the first branch** (correct answer)
d) no correct answer

3. The patient has prosoparesis, increased lacrimation, hypogeusia. Determine the level of damage to the facial nerve.
1) in the area of the exit from the stylomastoid foramen
2) **above the exit of the chorda tympani nerve** (correct answer)
3) above the exit of the stapedius nerve
4) above the exit of the greater petrosal nerve
5) in the area of the geniculate ganglion.

Evaluation criteria:
The test score is given in proportion to the percentage of correct answers:
90-100% - excellent grade
80-89% - "good" rating
70-79% - "satisfactory" rating
Less than 70% of correct answers – "unsatisfactory" rating.

List of the practical skills

1. Mental status examination	h) CN XI (Accessory)
a) Memory	1) Head turning
b) Speech and language	2) Shoulder shrug
c) Praxis and gnosis	3) Sternocleidomastoid or trapezius atrophy
d) Mini Mental Status Examination	i) CN XII (Hypoglossal)
	1) Tounge atrophy or fasciculation
2. Cranial nerves examinations:	2) Rapidity and strength of tounge movements
a) CN I (olfactory):	3. Motor examination
Identification by smell…	a) muscle bulk
b) CN II (optic nerve)	b) muscle tone

1) Visual acuty 2) Visual fields c) CNs III, IV, VI (oculomotor, trochlear & abducens). 1) Pupils: size, shape, direct and consensual reaction light, reaction to accommodation 2) Eye movements 3) Nystagmus d) CN V (Trigeminal) 1) Corneal 2) Jaw jerk 3) Sensory 4) Motor CNVII (facial) 5) Eye closure 6) Smile 7) Wrinkling of forehead 8) Taste (anterior 2/3 of tounge) e) CNVIII Auditory& vestibular) 1) Auditory acuity f) CNIX (Glossopharyngeal) 1) Touch sensation of posterior pharyngeal wall 2) Gag reflex or swallowing 3) Elevation of Palate g) CNX (Vagus)	c) muscle strength 4. Types of involuntary movements a) tremor b) dystonia c) chorea d) tics e) myoclonus 5. Coordination a) Trunkal stability: stance and gait, Romberg's sign b) limb coordination; finger –to –nose test; heel-to-shin 6. Sensation (differentiate peripheral, segmental, central lesions) a) pain b) temperature c) vibration d) Touch 7. Reflexes (segmental innervation, nerve), scoring deep tendon reflexes a) Biceps jerk b) Triceps jerk c) Knee jerk d) Ankle jerk 8. Signs of meningeal irritation a) Nuchal rigidity b) Kernig's sign c) Brudzinski's sign 9. Autonomic function: reveal thermal and sweating deregulation, vasomotor and trophy disturbances, orthostatic hypotension.

Evaluation criteria:
"Excellent" (90-100 points) Fully knows and masters the technique of neurological examination, according to the department's program, masters clinical reasoning, can answer additional questions, has additional information
"Good" (80-89 points) Can and has mastered the technique of neurological examination, according to the department's program, partially has mastered clinical reasoning, can partially answer additional questions
"Satisfactory" (70-79 points) Can and has mastered the technique of neurological examination, according to the department's program, cannot answer additional questions, does not have mastered clinical reasoning
"Unsatisfactory" (0-69 points) Does not know how and does not possess the technique of neurological examination

Module 2 "Clinical Neurology" control include test tasks (50% of Mod. 2 rating) and clinical case (50% of Mod. 2 rating)

Example of test tasks and Evaluation criteria – see above.
Example of clinical case:

A 63-year-old female patient complained of sharp, paroxysmal pain in the upper jaw teeth on the right, radiating to the temple. She had been ill for about two weeks. Sometimes the attacks can be stopped by taking analgin. She can hardly eat, wash, or brush her teeth, as these actions cause sharp, shooting pains.
Neurological status: the patient is overnourished. Sits motionless, mouth half-open, face hypomimic, speaks cautiously, quietly, is afraid of recurrence of attacks. Shows the area of pain, but does not touch the skin with a finger. Detailed examination of the cranial nerve function is difficult. When trying to bare her teeth, an attack occurred: the patient screamed, held her breath, her face turned red, lacrimation appeared. The patient froze, the paroxysm lasted about 30 seconds. After the end of the attack, the examination was continued. Active movements of the limbs are in full. Tendon reflexes are lively, uniform, except for the Achilles reflexes, which are reduced. There are no pathological reflexes.

Questions and tasks:
1. Indicate the leading symptoms and syndromes of the disease;
2. Indicate the focus of the pathological process (topical diagnosis);
3. Indicate the nature of the pathological process (clinical, nosological diagnosis).
4.What additional studies need to be carried out?
5. Indicate the etiology, pathogenesis and basic principles of treatment of this disease.

Answers: 1. Right-sided prosoplasia.
2. Compression of the right root of the trigeminal nerve in the pontine-cerebellar angle by the pathologically tortuous superior cerebellar artery.
3. Neuralgia of the 2nd branch of the right trigeminal nerve in the acute stage.
4. X-ray of the paranasal sinuses, MRI of the brain, preferably according to the vascular program.
5. Carbamazepine in an individually selected dose. Surgical treatment according to indications.

Evaluation criteria:
"Excellent" (90-100 points) Correctly solves a clinical problem, knows the symptoms and syndromes of the main neurological diseases, has the correct direction in judgments about the problem, knows how and owns the algorithm for making a diagnosis, diagnostic search, prescribing adequate treatment, has additional information about nosology
"Good" (80-89 points) Correctly solves a clinical problem, knows the symptoms and syndromes of the main neurological diseases, has the correct direction in judgments about the problem, partially knows how and has mastered the algorithm for making a diagnosis, diagnostic search, appointment of adequate treatment
"Satisfactory" (70-79 points) Partially correctly solves a clinical problem, partially knows the symptoms and syndromes of the main neurological diseases, has a correct but inaccurate direction in judgments about the problem, partially knows how and owns the algorithm for making a diagnosis, diagnostic search, and prescribing an adequate treatments
"Unsatisfactory" (0-69 points) Cannot solve a clinical problem, does not know the symptoms and syndromes, does not know how and does not possess the algorithm for making a diagnosis, diagnostic search, prescribing adequate treatment

PHTHISIOLOGY

Teachers: Associate Prof., PhD Rustem Shaymuratov
Building, Department, classroom: Republic TB Hospital; Pribolnichnaya str. 1; Department of Phthisiology, Room # 1,2,

Contact details:

- Telephone number: +79179005510 (Rustem Shaymuratov)
- E-mail address: russtem@gmail.com
- Office and working hours: 1 (9-17)

Class hours:

Total hours — 36:
- Lectures 6 hours;
- Practical classes 16 hours;
- Independent work 14 hours;

Course description:

Lecture is an online (MTS-Link, https://my.mts-link.ru/j/92014727/1899585054/stream-new/339961092) real-time presentation, dedicated to most actual aspects of Tuberculosis management.

Practical (clinical) training is aimed at developing clinical competencies and skills for carrying out activities related to the prevention, diagnosis, and treatment of tuberculosis.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the KSMU (https://e.kazangmu.ru/course/view.php?id=2253).

Course objectives:

The purpose of «Phthisiology» mastering is to get the knowledge and practical skills which is necessary for the diagnosis, treatment and prevention of Tuberculosis (TB). Students will master the theoretical basis of etiology, pathogenesis, ways of transmission of TB, the methods of prevention, diagnosis and treatment of this disease. You will learn the ideas about the role, aims and tasks as a physician in the system of struggle against TB, carrying out anti-tuberculosis activities, medical, social and other types of help.

Tasks of the discipline:

- to gain knowledge about the role of general physician in the control and prevention of TB;
- to teach students to use modern clinical, laboratory and instrumental method of detection and diagnosis of pulmonary TB;
- to teach students how to provide primary care in case of emergency (pulmonary hemorrhage, spontaneous pneumothorax) of TB patients;
- to teach students how to prevent of TB, to restore and improvement patient's quality of life;
- to master the basis of prevention and early identification of high risk groups for TB

Course topics:

Calendar plan of lectures

1. Epidemiology of tuberculosis. Ways, factors of TB infection transmission. Pathogenesis of TB. TB as an infection and disease. Stages of TB development from transmission of TB infection to development of clinical forms of TB. TB as a manifestation of primary and secondary infection. Features of innate and acquired immunity in TB. Tuberculous granuloma.
2. Diagnosis of tuberculosis, methods of active case finding of TB. Examination of patients with tuberculosis. Features of of TB patient's anamnesis. Clinical masks of TB. Microbiological diagnostics of TB – sputum microscopy, culture on culture media (classical, BACTEC), PCR diagnostics. Role in diagnostics of resistance to anti-tuberculosis drugs. Features of microbiological diagnostics in various clinical forms of TB. Etiology of TB, types of *M.tuberculosis* (MBT).

3. Prevention of TB infection transmission. Specific prevention of TB – BCG vaccination. Indications and contraindications. Complications of BCG vaccination. Treatment of TB (chemotherapy, surgery, collapse therapy). General principles. Anti-tuberculous chemotherapy. Management of the chemotherapy.

Calendar plan of practical classes

1. Diagnostics of respiratory TB in a polyclinic, other general medical institutions and in anti-TB facilities. Clinical diagnosis of TB. Methods of chest X-ray examination of respiratory TB and TB with other localizations. Chest X-ray, plane tomography, indications for different types of radiography and tomography. Computed tomography in the diagnosis of Tb and other lung diseases, mediastinum and pleura.
2. The concept of primary infection, infection in past, LTBI, reinfection. Connection to age and morbidity in different countries. Immunodiagnostics methods. Mantoux test, Diaskintest, IGRA (Gamma Interferon release assay) tests: role in early diagnosis of TB, procedure performance, indications, contraindications, interpretation of the results. The concept of conversion of TST, LTBI, post-vaccination allergy, paraallergy: criteria for diagnosis and differential diagnosis. Tactics for detection, dispensary observation and examination of individuals with suspected LTBI and for the purpose of early diagnosis of TB. Pathogenesis of primary TB in children and adolescents. TB of intrathoracic lymph nodes (TITLN). Primary tuberculosis complex (PTC). Pathomorphology and pathogenesis of PTC.
3. Secondary TB. Disseminatred, Infiltrative TB, Focal TB, Caseous pneumonia, Tuberculomas of lung, TB Pleurisy, Cavitary (cavernous) TB of lung. Pathogenesis, clinical presentation, differential diagnostics. Chest X-ray forms, clinical features, clinical course. Treatment and outcomes. Prognosis. Differential diagnostics Complications of pulmonary Tb; clinical features, diagnostics.

Manuals and required supplies:

1. Koshechkin, Vladimir Anatol'evich. Tuberculosis: textbook : ucheb. posobie na angl. jaz. [*textbook in English*]/ V. A. Koshechkin, Z. A. Ivanova. - M. : GJeOTAR – Media. – 2008. – 271 s.
2. Perel'man M.I. Ftiziatrija: uchebnik [*Phthisiology: textbook*]/ Perel'man M.I., Bogadel'nikova I.V. // M. GJeOTAR – Media. – 2013. – 448 s.
3. Zimina V.N. Tuberkulez i VICh-infekcija u vzroslyh [*Tuberculosis and HIV infection in adults*]/ V.N. Zimina, A.V. Kravchenko, I.B. Viktorova, V.A. Koshechkin. // M.: GJeOTAR – Media. – 2020. – 256 s.
4. Mishin V.Ju. Ftiziopul'monologija. Uchebnik [*Phthisiology: textbook*] / Mishin V.Ju., Grigor'ev Ju.G., Mitronin A.V. i dr. // M.: GJeOTAR – Media. – 2010. – 504 s.

Evaluation and grading:

Evaluation of modules (in written form) in grades: "Excellent" (90-100 points) - the test answers the question in full, the terms are correctly interpreted, the key issues are covered; "Good" (80-89 points) - the test answers the question in full, the terms are correctly interpreted, the key issues of the topic are covered partially; "Satisfactory" (70-79 points) - the test answers the question, but not in full, the terms are correctly interpreted, the key issues of the topic are covered partially, "Bad" (less than 70 points) - the test does not answer the question, the terms are incorrectly interpreted, the key issues of the topic are not covered

Final controles are conducted in the form of MCQ. Grade: 0–69 – “bad”, 70-79 – “satisfactory”, 80-89 – “good”, 90-100 – “excellent”.

Overall student rating is build up from class attendance, module and test results, exam assessment results.

Classroom rules:

- Look professional: you have to wear clean white coat and change of shoes
- Be disciplined, don't be late for classes
- Be prepared for the classes
- Be active
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1. Epidemiology and Diagnosis of TB

1. Features of anamnesis of TB patients. Clinical mascs of TB
2. Factors and ways of transmission of TB infection.
3. Prevention of transmission of TB infection.
4. Main epidemiologic parameters of TB.
5. PCR diagnosis, BACTEC: procedure, diagnostic features, comparison, clinical value for the diagnosis of TB.

Example of module No. 2. Primary TB

1. Targets for TST, IGRA tests.
2. Diagnostic criteria of postvaccinational allergy.
3. Diagnostic criteria of conversion of TST.
4. Interpretation of TST results.
5. Pathogenesis of primary TB in children and adolescents.
6. TB of intrathoracic lymph nodes (TITLN).
7. Primary tuberculosis complex (PTC).

Examples of MCQ test on exam

1. Identification of *M.tuberculosis* under microscope related to capability…
1) to maintain it's color after processing with acid *
2) to stain with carbol-fuchsine
3) to stain with methylene blue
4) all mentioned

2. The name of lipid on external membrane of *M.tuberculosis*, which gives a virulence is …
1) CFP-10
2) ESAT-6
3) tuberculin
4) cord-factor*

3. More frequent localization of TB in adults is …
1) gastro intestinal tract
2) bones
3) lung tissue*
4) lymph nodes

4. Air-borne way of TB infection is more typical for following group of high risk ..
1) prison TB
2) HIV-infection
3) contact with SSP *
4) diabetes mellitus

5. Specific morphological reaction for tuberculosis inflammation is the accumulation in the focus of damage:
1) T-lymphoid cells
2) neutrophil cells
3) epithelioid cells and multinuclear giant cells of Pirogov–Langhance *
4) fibrous tissue

INFECTIOUS DISEASES

Teachers:
Irina Nikolaeva, Dr.Med.Sci, professor, MD – chair of the department
Alfiya Fazulzyanova, MD, PhD, associate professor
Elvira Khairutdinova, MD, PhD
Gulnara Shaikhieva, MD, PhD
Asiya Bulatova, MD, PhD

Building, Department, classroom
Republican Clinical Infectious Diseases Hospital, Department of Infectious Diseases
Contact details:

- Telephone number: 89600377017 (Prof. Irina Nikolaeva)
- E-mail address: irinanicolaeva@mail.ru, zolotova.alfiya@mail.ru
- Office and working hours: 8-17

Course: IV
Semester: 8
Total 72 hours.
Credit units of labor intensity (ZET) - 2
Lectures: 10 hours.
Practical classes: 28 hours.
Independent work: 34 hours.
Exam: -

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
A practical class is a form of academic work that is conducted in each academic group separately under the guidance of a teacher and involves the active participation and interaction of students. This type of lesson requires preliminary preparation on the part of the student, it is necessary to deepen the theoretical knowledge of students, convert it into practical skills and abilities.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/enrol/index.php?id=1731).

Course objectives:

The purpose of mastering the discipline
The purpose of mastering the discipline: to use in treatment and diagnostic activities knowledge about the main pathogens of infectious diseases and methods of their identification; about the etiology, pathogenesis and clinical manifestations of infectious diseases; to diagnose

them and carry out prevention; to participate in treatment and prescribe rational etiotropic and pathogenetic therapy; to provide emergency medical care in critical conditions of infectious genesis.

Objectives of mastering the discipline:
- to teach students to correctly collect and evaluate the medical history, highlighting diagnostically significant information characteristic of an infectious disease;
- to identify epidemiological medical history data and use them when constructing a diagnosis;
- to identify clinical syndromes during an objective examination of the patient that suggest an infectious disease;
- to determine the course options, severity, outcomes, possible complications;
- to draw up an algorithm for diagnostic search, a plan for laboratory and instrumental examination of the patient, to interpret the results;
- to carry out a set of therapeutic and preventive measures at the pre-hospital stage, during treatment at home and in hospital;
- to carry out a system of preventive and anti-epidemic measures;
- follow-up observation and medical examination after an infectious disease.

Course topics:

Calendar plan of lectures

1. Infectious diseases: general principles. Introduction
2. Viral hepatitis
3. HIV infection: basic principles
4. Acute intestinal infections
5. Influenza

Calendar plan of Practical classes

1. Introductory lesson. The structure of the infectious disease service, the requirements of the anti-epidemic regime in the structural units of the infectious disease service (hospital and outpatient clinic). The structure of the clinical hospital (a tour of the hospital). Organizational issues of students' stay in the infectious disease hospital during the educational process (special clothing, changeable footwear, compliance with hygiene skills, behavior in emergency situations); familiarization with the requirements of the department (class schedule, familiarization with the rating system). Methodology for examining of an infectious patient (using a specific patient as an example).

Meningococcal infection. Etiological features of the pathogen that have pathogenetic significance. Epidemiology. Pathogenesis of generalized forms. Clinical characteristics of cerebral edema syndrome, infectious toxic shock. Principles of diagnostics, differential diagnostics and treatment. Clinical analysis of case histories (situational tasks) of patients with various forms of meningococcal infection.

2. Influenza and other ARVI. Etiological structure of ARVI. Epidemiological features. Clinical characteristics of intoxication, respiratory and hemorrhagic syndromes. Principles of diagnostics, treatment of patients with influenza and ARVI, their complications. Specific prevention of influenza. Self-curation of patients.

3. Tonsillopharyngitis. Diphtheria in adults. Clinical classification. Leading syndromes. Differential diagnostics of tonsillopharyngitis of various etiologies. Principles of etiotropic and pathogenetic therapy. Diphtheria, relevance of the problem, its features in adults. Clinical classification. Leading clinical syndromes. Principles of etiotropic, pathogenetic and specific therapy.

Erysipelas. Etioepidemiological features. Pathogenesis of primary and recurrent forms. Features of formation of specific immune response. Clinical classification. Characteristics of leading

clinical syndromes. Differential diagnostics. Modern evolution of erysipelas. Principles of etiotropic and pathogenetic therapy. Prevention of formation of recurrent forms. Indications for bicillin therapy. Self-curation of patients.
4. Acute viral hepatitis. Normal bilirubin metabolism, bilirubin metabolism in hepatic jaundice. Principles of diagnosis and treatment of patients with enteral hepatitis. Principles of diagnosis and treatment of patients with parenteral hepatitis. Specific diagnosis. Discharge rules, outpatient observation. Self-curation of patients.
Chronic viral hepatitis. Natural course of chronic hepatitis B and C. Features of the clinical course, approaches to diagnosis. Modern diagnostic methods. Principles of treatment. Antiviral therapy. Liver cirrhosis as outcome of chronic viral hepatitis. Curation of thematic patients. Analysis of case histories.
5. Acute intestinal infections. Principles of diagnosis, treatment of patients with dysentery salmonellosis, food-borne diseases. Clinical analysis of thematic patients. Independent supervision of patients.
Cholera. Etiological and epidemiological features of modern cholera as a quarantine infection. Pathogenesis of diarrheal syndrome in cholera. Principles of diagnostics, treatment of patients with cholera. Diagnostics and treatment of patients with hypovolemic shock. Anti-epidemic measures in the cholera outbreak. Discharge rules, dispensary observation.
6. HIV infection. Epidemiological features. Etiopathogenesis. Clinical classification. Principles of diagnostics and treatment. AIDS-indicating diseases. Opportunistic infections of skin and mucous membrane in HIV infection. Opportunistic infections of gastrointestinal tract in HIV infection. Opportunistic infections of respiratory system in HIV infection. Opportunistic infections of CNS in HIV infection. Analysis of clinical cases and situational tasks.
7. Final test.

Text books and required supplies:

Infectious diseases: national guidelines / [M. G. Avdeeva et al.] ; chief editors: N. D. Yushchuk, Yu. Ya. Vengerov. - 2nd ed., reprint. and add. - Moscow: GEOTAR-Media, 2023. - 1104, [3] p.

Acute viral hepatitis: an educational and methodological guide for students / Kazan State Medical University. The University of Public Health grew. Federation, Office of Infection. diseases; [comp.: V. H. Fazylov, D. S. Enaleeva, A. I. Fazulzyanova]. - Kazan : MeDDoK, 2015. - 33 p.

Educational portal of KSMU. https://e.kazangmu.ru/course/view.php?id=1731

Evaluation and grading:

Rating assessment criteria for the discipline "Infectious diseases"

The rating assessment is calculated on a 100-point system, which includes:
1. The auditory rating for the discipline is calculated based on attendance at lectures and practical classes.
2. The certification rating for the discipline includes points (100-point system) for 3 modules and the final test.
3. Current assessment. Average assessment (10-point system).

The certification rating score includes the average grade for the cycle (on a 10-point scale), rating by modules (on a 100-point system), the level of acquisition of knowledge, practical skills and abilities obtained by the student during training in practical classes in the discipline. This score is an integral value characterizing the level of acquisition of specific theoretical knowledge about the etiology, pathogenesis, clinical picture, diagnostics and principles of treatment of infectious diseases studied within the framework of the discipline, as well as practical aspects of patient diagnostics in all sections from complaints to treatment planning, prevention. Within the

framework of this rating-point assessment, the classroom load in the form of attendance of lectures (missed/worked) is considered.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you must wear clean white coat and change shoes
- Eating is allowed only during breaks
- Using phone is allowed only during breaks

PSYCHIATRY

Teachers: Prof. Leyla K. Shaidukova, Prof. Svetlana V. Kuzmina.
Building, Department, classroom # Volkova, 80, Department of Psychiatry and medical psychology, 2d floor
Contact details:

- Telephone number: +78432643273 (prof. assistance Ellina Vladimirovna Kozlova)
- E-mail address: psykgmu@mail.ru
- Working hours: (9-15)

Total hours — 108:
- Lectures 16 hours;
- Practical classes 44 hours;
- Independent work 48 hours;

Course description:
Lecture The lectures are a brief summary of the program of the psychiatry and narcology cycle, reflect the latest research on the given topics, combine visual (presentations) and auditory (text) material.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training are devoted to questioning students' knowledge, explaining complex material, demonstrating video, educational presentations and analyzing complex cases from psychiatric practice. They combine theoretical and practical knowledge.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2168)

Course objectives: The purpose of mastering the discipline
The goals of mastering the Psychiatry is to obtain theoretical knowledge and practical skills, to combine theoretical and clinical disciplines, the ability to conduct examinations, make diagnoses, prescribe medications and create a program for further rehabilitation.
Tasks of the discipline:
To form knowledge in the field of:
- study the national and international classifications of mental illnesses of the tenth revision;

- study the organization of psychiatric care in Russia;
- study the features of dental care for patients with mental illnesses;
- to be able to assess the mental state of the patient and his possible reactions to pain;
- know the symptoms of mental disorders that are most often encountered in the work of dentists;
- to be able to provide first aid for an epileptic seizure, psychomotor agitation in a mentally ill patient;
- to be able to formulate a preliminary opinion on the mentally ill and competently the direction of a psychiatric or substance abuse facility;
- study the technique of psychotherapeutic intervention for anxiety and fear in dental patients.

Course topics:

Calendar plan of lectures (10 h.)

1. The object and purpose of Psychiatry. The main stages of development of psychiatry. The concept of mental disorders and diseases. Social and biological risk factors.
2. General Semiotics of mental disorders
3. Affective disorders.
4. Anxiety disorders.
5. Schizophrenia.
6. Drug addiction, substance abuse.
7. Mental disorders in organic brain lesions
8. Personality disorders

Calendar plan of practical classes

1. General psychopathology: concepts of non-psychotic, psychotic and deficit registers. Perception disorders: illusions, hallucinations, psychosensory disorders. Types of hallucinations, signs of these disorders. Affective disorders: concept of depression, types. BAR - bipolar affective disorder. Subtypes, clinical features, criteria according to classification, treatment. Mental examination.
2. Thought disorders: obsessive ideas, delusional ideas, types of delusions.. Schizophrenia: etiology, pathogenesis, types, stages of development, positive, negative, cognitive, affective symptoms, features of patients' thinking, treatment, rehabilitation. Schizoaffective disorders - differences from schizophrenia.
3. Organic disorders: amnestic syndrome, dementia. Types of dementia. Mental disorders in dementia, treatment, features of providing dental care to patients.
4. Organic disorders: delirium. Types of delirium, symptoms, emergency care. Schizophrenia-like organic psychoses. Epilepsy: etiology, pathogenesis, types of seizures, mental disorders, providing emergency care for epileptic status.
5. Anxiety disorders: GAD (generalized anxiety disorder), obsessive, phobic disorders. PTSD - post-traumatic stress disorder. Etiology, clinical presentation, drug and psychotherapeutic care.
6. Conversion and dissociative disorders. Somatoform disorders. Adjustment disorders. Etiology, clinical presentation, drug and psychotherapeutic care.
7. Personality disorders - clusters. Sexual disorders. Eating disorders. Sleep disorders. Classification, types, treatment.
8. Alcoholism and drug addiction: etiology, pathogenesis, stages of alcoholism and types of drug addiction. Behavioral disorders, personality changes in patients, psychoses. Treatment and rehabilitation.
9. Childhood mental disorders: ASD - autism spectrum disorders, mental retardation. Final test.

Text books and required supplies:

1.Psychiatry Manual./ Shaydukova L.K.- Kazan: KSMU, 2012. 130 p.

2.American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV).American Psychiatric Association Press. 1994.
3.Diagnostic and Statistiscal Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.
4. Examination Notes in Psychiatry/ Peter Buckley, Del Prewette, Jonathan Bird and Glynn Harrison.2005.Oxford University Press Inc.,198 Madison Avenue, New York, NY10016
5. Kaplan HI, Saddock BJ. Synopsis of Psychiatry, Eighth Edition, Williams & Wilkins. (1998).

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/mental status assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – «poor», 7 – «satisfactory», 8 – «good», 9 – «excellent» and 10 – «splendid». Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Exams are held in forms of knowledge and skills evaluation on the discipline including the test, problem cases, oral and written questions or their combination. Grading: 0–69 – «poor», 70-79 – «satisfactory», 80-89 – «good», 90-100 – «excellent». Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1. General psychiatry

A. Evaluation of individual interview (survey)

B. Tests:

1 Delusion is:

- a thought that the patient wants to get rid of;
- a false thought that cannot be convinced;
- a thought that the patient struggles with;
- a thought that is based on real events

2. What type of delusion does not exist:

- delusion of grandeur;
- delusion of persecution;

- delusion of vulnerability;
- delusion of jealousy;
- delusion of guilt;
- delusion of poisoning

3.What kind of mental mental disorder is depression?
- disorder of perception;
- disorder of consciousness;
- disorder of emotions;
- thought disorder;
- intellectual disorder;

4. What kind of mental disorder is delirium?
- disorder of perception;
- disorder of consciousness;
- disorder of emotions;
- thought disorder;
- intellectual disorder;

Example of module No. 2 on the section of psychiatry disorders

A. Case Studies

Case 1.

A young man was delivered by a psychiatric ambulance team. He laughed, talked a lot and quickly, sang songs, pestered people, exposed himself. In the hospital the man interrupted everyone, ran around the room, recited poetry, waved his arms. During a conversation with a doctor he correctly gave his name, address and date. What is the plan of action? What laboratory and medical-instrumental studies should be conducted? What is the presumptive syndrome? What is the diagnostic list of diseases? What should be used for differential diagnostics?

B. Tests:

1.In what disease is catatonic syndrome found?
- bipolar affective disorder;
- schizoaffective psychosis;
- schiophrenic-like psychosis;
- schizophrenia;
- schizotypal disorder

2.Positive symptoms of schizophrenia include:
- hallucinations;
- amnesia;
- apathy;
- asociality

3. Depressive syndrome in bipolar disorder is characterized by all of the following except:
- anergy;
- anhedonia;
- hypothymia
- amnesia

4.Delirium excludes the following symptom:
- disorientation;
- agitation;

- mania;
- hallucinations.

Each student should present specific topic by PPT.

EVALUATION OF THE ANSWER

Present PPT– marked in 100 score rates

the product of independent work of the student, which is a public speech on presentation of the results solve a specific teaching and practice, teaching and research or scientific theme.

Criteria for evaluation of the report:

1. Compliance Rules (5-7 min.);
2. Disclosure report topics;
3. Fluency in content;
4. Weight collected theoretical material;
5. Presentation report (using boards, diagrams, tables, etc.);
6. Ability to comply with a predetermined presentation form it;
7. Summary conclusion to address the issue;
8. Answers to questions from the audience;
9. Quality content and selection of demonstration material;
10. Making a report in the form of theses.

For each test point a maximum of 10 points.

Case Study– marked in 100 score rates

a problematic task, in which the learner is offered to understand the real situation of professionally-oriented, needed to solve the problem. The student independently formulates the goal, finds and collects data, analyzes it, infer, looking for solutions to the problem, draw conclusions, proves an optimal solution of the situation.

Description of the evaluation scale:

- And less than 70 points - the content job is not realized, a product of inadequate instructions;
- 70-79 points - the serious errors of logic and factual nature, attempt to draw conclusions;
- 80-89 points - the job is done, but admitted one or two minor errors of logical or factual conclusions made;
- 900-100 points - the job is done, conclusions are made.

Tests.

Testing is carried out to complete the module and is evaluated according to the provisions of GBOU HPE KSMU for "Balls and rating system."

Description of the evaluation scale:

- 90-100 points - set if the student answered 90% of the test questions.
- 80-89 points - set if the student answered correctly by 80% to 90% of the test questions.
- 70-79 points - set if the student answered correctly by 70% to 80% of the test questions.
- Less than 70 points - set if the student correctly answered at least 69% of the test questions

ORTHODONTICS

Teachers: Prof. Nailya Khamitova, TP Karam Hadef
Building, Department, classroom # 9 polyclinic, Department of children's dentistry, 31.05.03 Dentistry
Contact details:

- Telephone number: 89780332195 (TP Karam Hadef)
- E-mail address: karamhadef@yabdex.ru
- Office and working hours: 180h

Class hours – 180 hours:
Practical trainings hours: 76 h
Lectures hours: 26 h
Independent work (self-study): 42 h
Exam in 9th semester: 36 h

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline
The dynamic interaction of biologic processes and mechanical forces acting on the stomatognathic system during orthodontic treatment.
The etiology, diagnosis and treatment planning of various sagittal, vertical and transverse problems.
Various treatment modalities in Orthodontics – early treatment, adolescent treatment (extraction Vs non-extraction mechanics), adult orthodontics, interdisciplinary treatment, etc.
Factors affecting the long-term stability of orthodontic correction and their management.

Tasks of the discipline:
To form knowledge in the field of:
- Orthodontics deals with the development of dentoaveolar and craniofacial structures. This course comprises lectures, tutorials and clinical sessions, and aims to provide undergraduates with the skill and expertise to diagnose positional abberations of the teeth and jaws.
You need to know:
- etiology, clinic, methods of diagnosis and treatment of various forms of dental occlusion anomalies;
- features of dental prosthetics in children and adolescents;'
- main types of retention devices;
- computer technologies in orthodontics.
You must be able to:
- collect anamnesis, paying attention to heredity, method and timing of feeding, past diseases, bad habits, causes and time of premature tooth loss, the beginning of the change of baby teeth and the timing of eruption of permanent teeth;

- when examining the child, pay attention to his physical development, posture, proportionality of the face, the state of the dental system, the location of the upper and lower lip bridles, and the tongue;
- correctly formulate the clinical diagnosis according to the clinical data;
- carry out the necessary additional research methods for drawing up an orthodontic treatment plan;
- to choose the most optimal method of treatment of anomalies of occlusion of the dentition.

Course topics:

Calendar plan of lectures

1. Diagnosis and treatment of vertical occlusion abnormalities
2. Diagnosis and treatment of transversal occlusion abnormalities
3. Dental prosthetics in children and adolescents.
4. Management of congenital diseases of maxillofacial region
5. Retention of treatment results. Construction of retention devices
6. Computer equipment in orthodontic clinic.

Calendar plan of practical training

1. Diagnosis and treatment of sagittal occlusion abnormalities.
2. Diagnosis and treatment of vertical occlusion abnormalities.
3. Diagnosis and treatment of transversal occlusion abnormalities.
4. Dental prosthetics in children and adolescents.
5. Treatment of congenital diseases of maxillofacial region.
6. Retention of treatment results. Construction of retentive devices.
7. Computer equipment in orthodontic clinic.

Text books and required supplies:

1. Клиническая ортодонтия: учебное пособие / И.В.Токаревич [и др.]. БГМУ, 2019. – 202 с.
[1. Clinical orthodontics: a textbook / I.V.Tokarevich [et al.]. BSMU, 2019. 202 p.]
2. Общая ортодонтия: учебное пособие / И.В. Токаревич [и др.]. – Мн: БГМУ, 2016. – 159 с.
[2. General orthodontics: a textbook / I.V. Tokarevich [et al.]. Moscow: BSMU, 2016. 159 p.]
3. Персин, Л.С. Ортодонтия. Диагностика и лечение зубочелюстно- лицевых аномалий и деформаций. Учебник / Л.С. Персин, М.Я. Алимова, М.А. Колесов. – М.: ГЭОТАР-Медиа, 2015. – 640 с.
[Persin, L.S. Orthodontics. Diagnosis and treatment of maxillofacial anomalies and deformities. Textbook / L.S. Persin, M.Ya. Alimova, M.A. Kolesov. – M.: GEOTAR-Media, 2015. – 640 p.]
4. Ортодонтия. Тесты к государственному экзамену = Orthodontics. Tests for the state examination: учебное пособие / И.В. Токаревич и др. – БГМУ, 2019. – 33 с.
[Orthodontics. Tests for the state exam = Orthodontics. Tests for the state examination: a textbook / I.V. Tokarevich et al. – BSMU, 2019. – 33 p.]

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework

the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module 1

1. Decipher the term "distal occlusion".
2. What are the etiological factors leading to distal occlusion?
3. Name the facial signs of distal occlusion.
4. List intraoral disorders with distal occlusion.
5. What are the functional disorders in distal occlusion?
6. What forms of distal occlusion do you know?
7. What causes the dental-alveolar form of distal occlusion and what devices are used to treat it?
8. Describe the functional form of distal occlusion and the principles of its treatment.
9. What devices are used to treat skeletal distal occlusion? The principles of their operation.
10. What is the Eschler-Bittner test and what is it used for?
11. What types of Frankel function regulators are used to treat distal occlusion and at what age?
12. List the measures that are common for the treatment of various forms of distal occlusion.
13. Decipher the term "mesial occlusion"
14. List the factors contributing to the formation of mesial occlusion
15. Describe the different forms of mesial occlusion.
16. Describe the clinic of the true (gnatic) form of mesial occlusion
17. Describe the clinic of false mesial occlusion

Evaluation criteria:

- The grade is «excellent» – the student answered all the questions correctly and completely, demonstrated extensive knowledge on the topic.

- The grade is «good» – the student correctly answered the main points of the topic, made minor mistakes.;
- The grade is «satisfactory» – the student answered the questions with insufficient confidence, with significant theoretical errors, but will be able to solve this problem in practice;
- The grade is «unsatisfactory» – the student answered unsatisfactorily, does not have sufficient knowledge of the questions, made significant mistakes in the answers, incorrectly answered additional questions.

Example of module 2

Topic: diagnosis and treatment of transversal occlusion anomalies.

1. Define cross-occlusion.
2. Describe the types of cross-occlusion according to L.S.Persin's classification.
3. Indicate which causes lead to the formation of cross-occlusion.
4. List the types of cross-occlusion
5. Describe the facial features characteristic of cross-occlusion.
6. Give a description of palatine occlusion, lingual occlusion, vestibulo occlusion.
7. List the functional impairments in cross-occlusion.
8. Please indicate what the diagnosis of cross-occlusion is based on.
9. List the clinical examination data typical for cross-occlusion.
10. Specify the purpose for which measurements of tooth size, dentition width and apical bases are carried out.
11. Treatment of cross occlusion during lactic bite.
12. Application features of the Frenkel function regulator for the treatment of various forms of cross-occlusion.
13. Treatment of cross occlusion during the period of alternating bite.
14. Describe the principles of treatment and the design of devices for the treatment of single- and bilateral palatine occlusion.
15. Specify the principles of treatment and the design of devices for the treatment of single- and bilateral lingual occlusion.
16. Describe the design of the device for the treatment of bilateral vestibuloocclusion due to the upper dentition.
17. Treatment of cross occlusion during permanent bite.

Evaluation criteria:

- The grade is «excellent» – the student answered all the questions correctly and completely, demonstrated extensive knowledge on the topic.
- The grade is «good» – the student correctly answered the main points of the topic, made minor mistakes.;
- The grade is «satisfactory» – the student answered the questions with insufficient confidence, with significant theoretical errors, but will be able to solve this problem in practice;
- The grade is «unsatisfactory» – the student answered unsatisfactorily, does not have sufficient knowledge of the questions, made significant mistakes in the answers, incorrectly answered additional questions.

Example of module 3

1. Name the types of vertical occlusion anomalies.
2. Decipher the term "vertical incisor dysocclusion".
3. Etiology of vertical incisor dysocclusion.
4. Describe the pathogenesis of vertical incisor dysocclusion.
5. Describe the clinic of vertical incisor dysocclusion.
6. Describe the diagnosis of vertical incisor dysocclusion.

7. Describe the treatment of vertical incisor dysocclusion during lactation.
8. Describe the treatment of vertical incisor dysocclusion during tooth replacement.
9. Describe the treatment of vertical incisor dysocclusion during permanent bite.
10. Prognosis of treatment of vertical incisor dysocclusion.
11. Give a description of deep incisor occlusion and deep incisor disocclusion.
12. Name the etiology of deep incisor occlusion and dysocclusion.
13. Describe the morphological abnormalities in deep incisor occlusion and dysocclusion.
14. Name the facial and intraoral signs of deep incisor occlusion and dysocclusion.
15. Describe functional disorders in deep incisor occlusion and dysocclusion.
16. Decipher the basis for the diagnosis of deep incisor occlusion and dysocclusion.
17. List the main tasks of treating deep incisor occlusion and dysocclusion.
18. Describe the treatment of deep incisor occlusion and dysocclusion.
19. Describe the treatment of deep incisor occlusion and dysocclusion.
20. Describe the treatment of deep incisor occlusion and dysocclusion during permanent bite.

Evaluation criteria:

- The grade is «excellent» – the student answered all the questions correctly and completely, demonstrated extensive knowledge on the topic.
- The grade is «good» – the student correctly answered the main points of the topic, made minor mistakes.;
- The grade is «satisfactory» – the student answered the questions with insufficient confidence, with significant theoretical errors, but will be able to solve this problem in practice;
- The grade is «unsatisfactory» – the student answered unsatisfactorily, does not have sufficient knowledge of the questions, made significant mistakes in the answers, incorrectly answered additional questions.

Example of examination ticket 1

1. Intrauterine stage of development.
2. The role of bad habits in the formation of malocclusions.
3. Treatment of distal bite in primary and early mixed dentition.

Evaluation criteria:

The grade is «excellent» – the student answered all the questions correctly and completely, demonstrated extensive knowledge on the topic.

The grade is «good» – the student correctly answered the main points of the topic, made minor mistakes.;

The grade is «satisfactory» – the student answered the questions with insufficient confidence, with significant theoretical errors, but will be able to solve this problem in practice;

The grade is «unsatisfactory» – the student answered unsatisfactorily, does not have sufficient knowledge of the questions, made significant mistakes in the answers, incorrectly answered additional questions.

Example of examination ticket № 2

1. Katz' classification of malocclusions.
2. Functional-Guiding and functional-acting orthodontic appliances.
3. Types and forms of distal occlusion. Eschler-Bitner test.

Evaluation criteria:

The grade is «excellent» – the student answered all the questions correctly and completely, demonstrated extensive knowledge on the topic.

The grade is «good» – the student correctly answered the main points of the topic, made minor mistakes.;

The grade is «satisfactory» – the student answered the questions with insufficient confidence, with significant theoretical errors, but will be able to solve this problem in practice;

The grade is «unsatisfactory» – the student answered unsatisfactorily, does not have sufficient knowledge of the questions, made significant mistakes in the answers, incorrectly answered additional questions.

PEDIATRIC DENTISTRY

Teachers: docent Tanya Shiryak MD, PhD Airat Abdrakhmanov, Dilya Gainullina
Department of Pediatric Dentistry

Building, Department, classroom Pediatric dental clinic No. 9. Yamasheva 52.
KSMU Simulation Center, Amirkhana 16.
Contact details:

- Telephone number: 89046609524 (**Tanya Shiryak**)
- E-mail address: Tanya_shiryak@mail.ru
- Office and working hours: 9-17

- Total hours — 252 hours**:**

- Course: 4, Semester: 7
Total hours — 72 hours**:**
- Lectures 14 hours;
- Practical classes 36 hours;
- Self-study 22 hours;

- Course: 4; Semester: 8
Total hours — 72 hours**:**
- Lectures 14 hours;
- Practical classes 36 hours;
- Self-study 22 hours;

- Course: 5; Semester: 9
Total hours — 108 hours**:**
- Lectures 10 hours;
- Practical classes 35 hours;
- Self-study 27 hours;
- Control (exam) 36 hours.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical classes is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).

Course objectives: The purpose of mastering the discipline

– to give the dentist professional knowledge on the diagnosis and treatment of major dental diseases, depending on the age of children and anatomical and physiological characteristics of the child's body;

- to develop practical skills in the treatment of major dental diseases in children.

The tasks of mastering the discipline (module):

- to familiarize students with the principles of organization and operation of a pediatric dental clinic, prevention of nosocomial infections;
- to familiarize students with measures on occupational safety and health, prevention of occupational diseases;
- to master methods of prevention of dental diseases, and methods of preventing complications of dental diseases in children,
- to master the methods of diagnosis of dental diseases and deformities of the maxillofacial region in children;
- to master the methods of diagnosis of dental symptoms of internal diseases and infectious diseases in children.
- to master the methods of dental therapeutic, surgical treatment, methods of prevention of complications, rehabilitation of patients with diseases in the maxillofacial region;
- to familiarize students with the documentation (medical history) of the organization of work with medicines, the rules of their storage in a pediatric dental clinic;
- to develop students' skills in studying scientific literature and official statistical reviews, preparing abstracts in pediatric dentistry;
- to develop students' communication and interaction skills with the team, partners, children and adolescents, and their relatives.

Course topics:

Calendar plan of lectures

Module No. 1 (7 semester)

Topic 1.1. Introduction to therapeutic dentistry for children. Anatomical and physiological features of teeth in children. Methods of examination of the child. Etiology and pathogenesis of dental caries in children.

Topic 2.2. Classification of caries. Clinical features of the course of dental caries in children of different ages. Diagnostic methods.

Topic 2.3. Treatment of caries of baby teeth in children. The choice of filling material.

Topic 2.4. Treatment of caries of permanent teeth in children. Conservative treatment of initial caries.

Topic 2.5. The choice of sealing materials. Pathogenetic therapy of acute forms of dental caries in children.

Module No. 2 (8 semester)

Topic 3.6. Anatomical and physiological features of the pulp of milk and permanent teeth in children of different ages. Etiology, pathogenesis, classification of pulpitis in children.

Topic 3.7. Features of the clinical course of pulpitis of temporary teeth in children of different ages. Diagnostics. Treatment.

Topic 3.8. Features of the clinical course of pulpitis of permanent teeth in children of various ages. Diagnostics. Treatment.

Topic 3.9. Anatomical and physiological features of periodontitis in children of different ages. Etiology, pathogenesis, classification of periodontitis in children

Topic 3.10. Features of the clinical course of periodontitis in childhood. Differential diagnosis. Diagnostics
Topic 3.11. Methods of treatment of periodontitis in childhood.
Topic 3.12. Features of the treatment of complicated caries in permanent teeth with unformed roots.
Topic 4.13. Classification of non-carious lesions. Changes in hard tissues that occur due to a violation of the follicular development of the tooth: enamel hypoplasia (systemic, local, focal); various forms of fluorosis; staining of tooth tissues of other origin.
Topic 4.14. Hereditary disorders of the formation and structure of tooth tissues; enamel - imperfect amelogenesis; dentin - imperfect dentinogenesis; and enamel and dentin - imperfect odontogenesis (Stanton-Capdepon syndrome or Capdepon dysplasia).
Topic 5.15. Acute dental injury in children. Bruises and dislocations of teeth. Fractures of the crowns and roots of teeth.

Module No. 3 (9 semester)
Topic 6.16. Periodontal diseases in children.
Topic 6.17. Features of the treatment of periodontal diseases in children
Topic 7.18. Anatomical and physiological features of the structure of the oral mucosa in children of different ages. Etiology, pathogenesis, classification of diseases of the SOPR.
Topic 7.19. Diseases of the oral mucosa in children, treatment.

Calendar plan of Practical classes

Module No. 1 (7 semester)
Topic 1.1. Introduction to therapeutic dentistry for children. Anatomical and physiological features of teeth in children. Methods of examination of the child. Etiology and pathogenesis of dental caries in children.
Topic 1.1.1. Examination of children of different ages. Medical documentation, tools. Clinical aspects of dental development. X-ray semiotics of diseases of teeth and parotid tissues in childhood
Topic 2.2. Classification of caries. Clinical features of the course of dental caries in children of different ages. Diagnostic methods.
Topic 2.3. Treatment of caries of baby teeth in children. The choice of filling material.
Topic 2.4. Treatment of caries of permanent teeth in children. Conservative treatment of initial caries.
Topic 2.5. The choice of sealing materials. Pathogenetic therapy of acute forms of dental caries in children.
Topic 2.2.2. Caries of temporary teeth. Clinic. Differential diagnosis. Treatment of caries of temporary teeth. Traditional and alternative technologies.
Topic 2.2.3. Caries of permanent teeth. Clinic. Differential diagnosis. Treatment of permanent teeth. Features of the application of sealing materials and adhesive systems
Module No. 2 (8 semester)
Topic 3.6. Anatomical and physiological features of the pulp of milk and permanent teeth in children of different ages. Etiology, pathogenesis, classification of pulpitis in children.
Topic 3.7. Features of the clinical course of pulpitis of temporary teeth in children of different ages. Diagnostics. Treatment.
Topic 3.8. Features of the clinical course of pulpitis of permanent teeth in children of various ages. Diagnostics. Treatment.
Topic 3.9. Anatomical and physiological features of periodontal disease in children of different ages. Etiology, pathogenesis, classification of periodontitis in children
Topic 3.10. Features of the clinical course of periodontitis in childhood. Differential diagnosis. Diagnostics

Topic 3.11. Methods of treatment of periodontitis in childhood.
Topic 3.12. Features of the treatment of complicated caries in permanent teeth with unformed roots.
Topic 3.3.4. Pulpitis of temporary teeth in children. Etiopathogenesis, clinic, diagnosis. Features of treatment of pulpitis of temporary teeth in children.
Topic 3.3.5. Pulpitis of permanent teeth with formed and unformed roots in children. Etiopathogenesis, clinic, diagnosis.
Topic 3.3.6. Treatment of pulpitis of permanent teeth in children. Errors, complications, prognosis.
Topic 3.3.7. Periodontitis Anatomical and physiological features of the structure of teeth and jaws in children. Clinic, diagnosis of periodontitis of temporary teeth. The choice of the treatment method.
Topic 3.3.8. Clinic, differential diagnosis of periodontitis of permanent teeth with unformed and formed roots. The choice of the treatment method.
Topic 3.3.9. Errors and complications in the treatment of periodontitis of temporary and permanent teeth. Apexogenesis and apexification.
Topic 4.13. Classification of non-carious lesions. Changes in hard tissues that occur due to a violation of the follicular development of the tooth: enamel hypoplasia (systemic, local, focal); various forms of fluorosis; staining of tooth tissues of other origin.
Topic 4.14. Hereditary disorders of the formation and structure of tooth tissues; enamel - imperfect amelogenesis; dentin - imperfect dentinogenesis; and enamel and dentin - imperfect odontogenesis (Stanton-Capdepon syndrome or Capdepon dysplasia).
Topic 4.4.10. Acquired and hereditary malformations of hard dental tissues. Clinic. Differential diagnosis. Treatment.
Topic 5.15. Acute dental injury in children. Bruises and dislocations of teeth. Fractures of the crowns and roots of teeth.
Topic 5.5.11. Classification of traumatic dental injuries. Methods of examination. A bruise. Dislocation. Fracture of the crown, root of the tooth. Clinic. Differential diagnosis. Treatment, Prognosis.

Module No. 3 (9 semester)

Topic 6.16. Periodontal diseases in children.
Topic 6.17. Features of the treatment of periodontal diseases in children
Topic 6.6.12. Age-related features of the periodontal structure in children. Etiology, pathogenesis, clinic, diagnosis of periodontal disease in children. Methods of examination of children with periodontal diseases.
Topic 6.6.13. Features of the treatment of periodontal diseases in children. Prevention and medical examination in children with periodontal diseases.
Topic 7.18. Anatomical and physiological features of the structure of the oral mucosa in children of different ages. Etiology, pathogenesis, classification of diseases of the SOPR.
Topic 7.19. Diseases of the oral mucosa in children, treatment.
Topic 7.7.14. Anatomical and physiological features of the oral mucosa in children. Classification, clinic of diseases of the mucous membrane. Traumatic injuries of the oral mucosa.
Topic 7.7.15. Acute herpetic stomatitis in children. Clinic, diagnostics, and emergency medical care. Principles of treatment of children with acute herpetic stomatitis. Indications for hospitalization. Recurrent herpes.
Topic 7.7.16. Candidiasis in children. Etiology, pathogenesis, classification, clinic, treatment.
Topic 7.7.17. Damage to the mucous membrane of the oral cavity caused by a specific infection, allergy. Changes in the oral mucosa in diseases of various organs and systems.
Topic 7.7.18. Lesions of the oral mucosa in infectious and allergic diseases. Diseases of the lips and tongue.

Topic 8.8.19. Premedication and pain relief in children. Emergency dental care for children of all ages.
Outcoming testing. Final test.

Text books and required supplies:

1. J.A. Dean, D. R. Avery, R. E. McDonald. Dentistry for the Child and Adolescent / ELSEVIER ,- 2021-10th ed.- 640 p. https://cloud.mail.ru/public/XK4x/Qf6c8oBx8
2. M. E.J. Curzon, M. S. Duggal . Restorative techniques in paediatric dentistry : an illustrated guide to the restoration of extensively carious primary teeth./ London: M. Dunitz.- 124 p. https://e.kazangmu.ru/course/view.php?id=2939

3. Evaluation and grading:

Monitoring progress is carried by the end of each module (written papers/oral examination/test/ assessment of practical skills /abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, practical work, tests during classes, etc.) is carried out using 100 point scale, where 0-60 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90 – 100"excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module No. 1 on the section: Caries of primary and permanent teeth

(Practical skill)

. Restorative (operative) treatment the I class by Black the GIC.
Indirect pulp capping (IPC) with odontotropic CaOH- paste.

A permanent seal is a traditional chemical curing GIC (Cemion). One visit

	Stages. Этапы		Necessary tools, preparations. Необходимые инструменты, препараты
1.	Prepare the necessary tools and materials		Cotton pads, cotton balls, 2% chlorhexidine, ironer, medical pad, glass ionomer cement, caries marker, round burs. a high-speed dental handpiece
2.	Preparation without Straight - bevels the cavosurface .		
	Stage 1 - to open the carious cavity.		round bur for high-speed dental handpiece
	Stage 2 - to expand the carious cavity.		round bur for high-speed dental handpiece. Бор шаровидный для турбинного наконечника (larger size)
	Stage 3 - necrectomy.		round bur for low-speed handpiece. Spoon excavator
3.	To assess the quality of preparation.		Caries-apply the marker on the applicator for 10 seconds, rinse with water.
4.	Etch enamel and dentin		Conditioner (polyalkenoic acid) is applied to the walls of the carious cavity for 10 seconds.
5.	Rinse off the conditioner.		Saliva pump, water.
6.	Isolate from saliva. .		Cotton pads, saliva pump.
7.	antiseptic 2 % chlorhexidine		
8.	Dry the tooth.		Air or a cotton ball.
9.	Apply Ca-liner, remove excess iron		
	А	An aqueous suspension of CaOH.	CaOH put a corkscrew in the projection area of the pulp horn as a point, no more than 0.5 mm thick, dry with a cotton ball.
	Б	CaOH chemical curing pastes (Ca-salicylate cements)	Mix with a metal or plastic spatula in a 1: 1 ratio on a paper notebook a universal paste and a catalyst, apply the paste with a corkscrew point on the pulp horn.
	В	Light-cured CaOH.	Squeeze the CaOH from the syringe into the projection of the pulp horn, polymerize for 20 seconds.
	Г	Ca- varnish. Ca- лаки	Apply with an applicator, dry with air.
	permanent sealing glass ionomer cement (GIC) (Cemion).		
10.	prepare the GIC		Shake the powder.
			Mix the GIC with a plastic (metal) spatula on paper or glass of the GIC in the ratio: 1 drop - 3 spoons of powder.
11.	Sealing GIC		Apply the GIC with a condenser in one portion into the carious cavity
			Seal the GIC with a moistened and pressed cotton ball
12.	Check the occlusion.		Copy paper.
13.	Remove excess material.		Diamond flame bur or bud bur (without water), high-speed dental handpiece
14.	To polish. Полировать		Polishing disc (Sof-lex).
15.	Cover with an insulating varnish from a set of GIC.		Microbrash
16.	Remove the rollers, saliva		Tweezers.

Stages. Этапы		Necessary tools, preparations. Необходимые инструменты, препараты
	pump.	
17.	Give recommendations.	Do not eat for 2 hours, possible pain ((Non-steroidal anti-inflammatory drugs).). Observation!

Example of module No. 2 on the section endodontics of primary and permanent teeth

The child is 8 years old. There was an injury six months ago. The child did not go to the dentist. Teeth 1.1 and 2.1 are gray, intact, percussion is painless, after opening the pulp cavity, the pulp is painless.
The X - ray was taken after the canal was sealed.
1. Describe the clinical picture (X-ray)
2. What is the diagnosis?
3. Write a treatment plan+ medications (doses, courses if necessary).

Example of module No. 3 on the section: Periodontics and diseases of the oral mucosa

1. Anatomical and physiological features of periodontal tissues in children. Classification of periodontal diseases.
2. Acute gingivitis (K05.0, ICD-10) in children. Etiology, clinical signs, differential diagnosis, treatment, prevention.
3. Simple marginal (K05.10, ICD-10) (Chronic nonspecific gingivitis) Etiology, (Inflammatory enlargement) clinical signs, differential diagnosis, treatment, prevention.
4. Chronic hyperplastic gingivitis. (K05.11, ICD-10). Etiology (chronic gum injury: braces, playing the trumpet, drug induced enlargement: cyclosporine, diphenylhydantoin), clinical signs (generalized form), differential diagnosis, treatment, prevention.
5. Enlargement of alveolar ridge (NOS) (K08.82, ICD-10) in children – etiology (hormones), clinical signs (edematous form), differential diagnosis, treatment, prevention.

EVALUATION OF THE MODULE ANSWER

The module assessment consists of:
1) practical skills (preparation and restoration of teeth)
2) tests (test questions) on the theoretical part
3) solving clinical cases.
4) testing

Each task is assessed on a 100-point scale. The points are summed up and divided by 4.
90-100 points is an excellent answer.

80-90 is a good answer
70-80 is a satisfactory answer

Examination ticket № 1

1. Dental caries in primary occlusion (K02, ICD-10) in early childhood (early childhood caries-ECC). Etiology of caries. Risk factors of ECC. Features of dental caries. Methods of treatment of ECC. Silvering, indications, contraindications, medications.

2. Acute (primary) herpetic gingivostomatitis (B00.2X, ICD-10) in children. Etiology, clinical signs, differential diagnosis, treatment, prevention.

3. Classification of the hereditary pathology

EVALUATION OF THE EXAM TICKET

The exam ticket consists of 4 questions:
1) Caries or endodontics of primary and/or permanent teeth
2) Diseases of the mucous membrane or periodontal disease in children
3) dental genetics

Each answer is evaluated according to a 100-point system.
90-100 points is an excellent answer.
80-90 is a good answer
70-80 is a satisfactory answer

DENTISTRY: MODULE "CLINICAL DENTISTRY"

Teachers: Dilya Gainullina
Building, Department, classroom # NUK, Department of pediatric dentistry, Yamasheva, 52
Contact details:

- **Telephone number: 89376162167 (Dilya Gainullina)**
- **E-mail address: dilya.gainullina@mail.ru**
- **Office and working hours:**

Course: 5
Semester: 9, 10
Total 79 hours
Lectures: 10 h
Practical lessons 32 hours.
Independent work: 28 hours.
Exam: 10th semester 9 hours

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline

The goal of mastering the discipline (module) is to prepare a dentist capable of providing patients with comprehensive outpatient dental care using innovative teaching technologies, modern achievements of medical science and practice.

Tasks of the discipline:

- formation of practical skills necessary for independent work of a dentist in the conditions of medical institutions to provide qualified dental care to the population in compliance with the basic requirements of medical ethics and deontological principles;
- increasing the amount of knowledge on the organization of dental services in a medical institution;
- developing in students the ability to use modern methods of diagnosis and treatment of major dental diseases;
- training students in the principles of working on basic dental equipment using instruments, dental materials and compliance with sanitary and hygienic requirements, safety regulations;
- - mastering the skills of providing first pre-medical and emergency medical care for acute and exacerbation of chronic diseases in an outpatient setting;
- formation of practical skills and knowledge regarding the examination of temporary and permanent disability;
- **Course topics:**

9 semester.

Calendar plan of lectures

1 Antenatal prevention of dental caries. Prevention of dental diseases in pregnant women
2 Prediction of dental caries. Principles of drawing up individual programs for the prevention of dental caries.
3 Epidemiological examination methods in dentistry. Comprehensive prevention programs. Situational analysis is the basis for planning programs for the prevention of dental diseases.

Calendar plan of laboratory classes

1 Risk factors for caries. Cariogenic situation in the oral cavity. Methods for its identification and elimination. Enamel caries resistance, methods of determination. Mineralizing potential of saliva.
2 Features of the prevention of dental diseases in pregnant women and young children. Contents of dental education for pregnant women.
3 Prevention of dental caries in children of different ages and adults.

Control

1. Indicate an effective and accessible method for diagnosing focal demineralization:
1. visual
+2. vital coloring method
3. Rg research method
4. fluorescence
5. all listed

10 semester.

Calendar plan of lectures

1 New technologies in the treatment of dental caries in children
2 New technologies in the treatment of complicated dental caries in children.

Calendar plan of laboratory classes

1 Drawing up individual programs for the prevention of dental caries in children and adults
2 Planning a set of treatment and preventive measures in accordance with protocols for the management of patients with various nosological forms of dental diseases.
3 Carrying out preventive and therapeutic procedures as part of the provision of comprehensive outpatient dental care.
4 New technologies in the treatment of dental caries in children
5 New technologies in the treatment of complicated dental caries in children.
6 Planning a set of treatment and preventive measures in accordance with protocols for the management of patients with various nosological forms of dental diseases.

Control

Situational task №1. The child is 5 years old. He has no complaints. During the preventive examination, a deep carious cavity was revealed on the chewing surface of the 5.5 tooth, performed by a softened dentin. When dentin is evacuated, the tooth cavity is easily opened, gives a painful reaction, bleeding appears. Temperature irritants are a painful reaction to cold, which lasts for some time after the cessation of the irritant.

Question 1. Make a diagnosis.
Question 2. Do more research.
Question 3. Perform differential diagnostics.
Question 4. Setify the treatment plan.
Question 4. Stages of treatment.

Text books and required supplies:

1 Dental caries in children and adolescents [Text]: textbook. allowance / Kh. M. Saifullina. - M.: MEDpress, 2000. - 96 p.
2 Treatment of dental caries in childhood [Text]: method. recommendations for students, interns, dentists / Kazan. state honey. univ. Caf. dentistry children age; Compiled by: R. Z. Urazova, V. Yu. Khitrov. - Kazan: KSMU, 2000. - 12 p
3 New technologies in oral hygiene products [Text]: method. recommendations for students / Ministry of Health of the Russian Federation. Federation, Kazan. state honey. University, Dept. dentistry children age; [Compiled by: G. M. Akhmetova, G. Kh. Akhmetova, R. Z. Urazova]. - Kazan: KSMU, 2004. - 11 p.
4 Practical skills in pediatric dentistry [Text]: method. recommendations / Ministry of Health of Russia. Federation, Kazan. state honey. University, Dept. detistry children age; [Compiled by: R.Z. Urazova and others]. - Kazan: KSMU, 2002. - 58 p.
5 Schemes of medical histories of dental patients [Text]: method. recommendations / [compiled by: S. S. Ksembaev and others]. - 3rd ed., add. and processed - Kazan: [b. i.], 2012. - 111, [1] p.

Evaluation and grading:

Know:
The biological role of the dentofacial region, biomechanics of chewing, age-related changes in the maxillofacial region, features of the influence of the external and internal environment on it
Normal structure of teeth, jaws and structural disorders due to dental and facial anomalies&

Clinical picture, diagnostic methods, classification of diseases of the salivary glands, congenital, acquired anomalies of teeth, dentition, alveolar processes, jaws, face
The importance of special and additional research methods for the differential diagnosis of dental diseases

Modern equipment, instruments and materials used in dentistry
International Statistical Classification of Diseases and Related Health Problems
Basic criteria for a healthy lifestyle and methods for its formation

Principles of clinical observation in various categories of patients and among the population
Etiology, pathogenesis, prevention of common diseases of the maxillofacial area
Methods for the prevention of dental and facial anomalies in children and adults
Rules for the use of personal protective equipment
Basic criteria for a healthy lifestyle and methods for its formation
Social, hygienic and medical aspects of alcoholism, drug addiction, substance abuse, basic principles of their prevention

Be able to:
Identify general and specific signs of dental diseases
Interpret the results of the initial examination of patients
Conduct general clinical examination of children and adults
Justify the need to refer patients for consultation to medical specialists
Analyze the survey results, justify and plan the scope of additional research if necessary
Interpret the results of collecting information from patients (their relatives/legal representatives)
Interpret laboratory data
Interpret data from patient consultations with medical specialists
Interpret data from additional patient examinations
Conduct preventive examinations of various categories of citizens
Prevent diseases of the teeth, periodontium, oral mucosa, lips, jaw bone tissue, peripheral nervous system of the maxillofacial area, temporomandibular joint, salivary glands
Participate in anti-epidemic measures for infectious diseases (submitting emergency notification of an outbreak of infection, identifying and monitoring contacts)
Use methods of primary and secondary prevention
Know the methods of organizing primary prevention of dental diseases in any age group
Use personal protective equipment correctly

LESS 70% - Has fragmentary knowledge of methods of critical analysis and evaluation of modern scientific achievements, as well as methods of generating new ideas when solving research and practical problems
70-79% - Has general, but unstructured knowledge of methods for critical analysis and evaluation of modern scientific achievements, as well as methods for generating new ideas when solving research and practical problems
80-89% - Has developed, but contains some gaps, knowledge of the basic methods of critical analysis and assessment of modern scientific achievements, as well as methods of generating new ideas when solving research and practical problems, including interdisciplinary ones
90-100% - Has developed systematic knowledge of methods of critical analysis and evaluation of modern scientific achievements, as well as methods of generating new ideas when solving research and practical problems, including interdisciplinary ones

Classroom rules:

- Be respectful
- Be careful with equipment

- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module

Test assignments or other materials necessary for assessing knowledge, abilities, skills and (or) experience that characterize the stages of developing competencies in the process of mastering the educational program

Level 1 – knowledge assessment

tests;

1. Indicate an effective and accessible method for diagnosing focal demineralization:

1. visual

+2. vital coloring method

3. Rg research method

4. fluorescence

5. all listed

2. A method sufficient for the practical work of a doctor to determine the activity of dental caries in children is:

1. hygienic index

2. MDG - test

3. indexes KPU, kp, KPU+kp

4. lactobacilli test

Evaluation criteria:

The test score is given in proportion to the percentage of correct answers:

90-100% - “excellent” rating

80-89% - “good” rating

70-79% - “satisfactory” rating

Less than 70% of correct answers are rated “unsatisfactory.”

– questions for the colloquium:

1. Risk factors for caries.

2. Methods for identifying cariogenic situations in the oral cavity.

3. Prevention, its importance in the development of dental diseases.

4. Features of the prevention of dental diseases in pregnant women.

5. Epidemiological examination methods in dentistry.

Evaluation criteria:

An “excellent” grade is earned by a student who has demonstrated a comprehensive, systematic and deep knowledge of the educational material of the lesson, who has mastered the basic literature and is familiar with the additional literature recommended for preparing for the colloquium. As a rule, the grade “excellent” is given to postgraduate students of the acquired profession who have demonstrated creative abilities in understanding, presenting and using educational material.

A “good” grade is earned by a student who has demonstrated complete knowledge of the educational material and has mastered the basic literature recommended for the colloquium. As a rule, a “good” grade is given to a graduate student who has demonstrated the systematic nature of knowledge in the discipline and is capable of independently replenishing and updating it in the course of further educational work and professional activities.

A “satisfactory” grade is earned by a student who has demonstrated knowledge of the educational material to the extent necessary for further mastery of the discipline and who is familiar with the basic literature recommended for the lesson.

A “satisfactory” grade is given to a student who has made errors, but has the necessary knowledge to eliminate them under the guidance of a teacher.

An “unsatisfactory” grade is given to a student who has discovered significant gaps in knowledge of the basic educational material or made fundamental errors when answering questions.

Level 2 – skill assessment

To assess learning outcomes in the form of skills, the following types of control are used:

- essay;

1. “My attitude to the need to prevent dental diseases in pregnant women.”
2. “My attitude to the need to prevent dental diseases in children”
3. “My attitude to the preparation of individual programs for dental caries in children and adults.”

Evaluation criteria:

Evaluation "Excellent" (90-100 points) - clearly formulated own position, combination of scientific argumentation with personal experience, correct use of scientific terminology, clear logical structure of work.

Rating "Good" (80-89 points) - clearly formulated own position, predominance of personal reflection over scientific argumentation (or vice versa), correct use of scientific terminology, clear logical structure of work.

Rating "Satisfactory" (70-79 points) - implicitly formulated own position, the predominance of personal reflection over scientific argumentation (or vice versa), correct use of scientific terminology, implicit logic of work.

Rating "Unsatisfactory" (0-69 points) - implicitly formulated own position, either lack thereof, or a high proportion of borrowings, complete absence of scientific argumentation and terminology, implicit logic of work.

- report (thesis of the oral report).

Topics of the report:

Topic 1. Prevention of dental caries in children of different ages.

Topic 2. Features of oral hygiene in pregnant women.

Topic 3. Features of oral hygiene in children.

Evaluation criteria:

The grade "excellent" is given if the student has scored 90% of the maximum score.

The grade "good" is given if the student scored 80-90% of the maximum score.

The "satisfactory" score is given if the student has scored 70 - 80% of the maximum score.

The "unsatisfactory" score is given if the student scored less than 69% of the maximum score.

Level 3 - skills assessment

The following types of control are used to evaluate the results of training in the form of skills:

- situational tasks:

Situational task №1. The child is 5 years old. He has no complaints. During the preventive examination, a deep carious cavity was revealed on the chewing surface of the 5.5 tooth, performed by a softened dentin. When dentin is evacuated, the tooth cavity is easily opened, gives a painful reaction, bleeding appears. Temperature irritants are a painful reaction to cold, which lasts for some time after the cessation of the irritant.

Question 1. Make a diagnosis.
Question 2. Do more research.
Question 3. Perform differential diagnostics.
Question 4. Setify the treatment plan.
Question 4. Stages of treatment.
Evaluation criteria:
Evaluation "excellent" - the student freely, with a deep knowledge of the material correctly and fully solved the situational problem (completed all the tasks, correctly answered all the questions posed).

Grade "good" - the student quite convincingly, with minor errors in theoretical preparation and sufficiently mastered skills, answered the questions correctly or made small errors in the answer;

Assessment "satisfactory" - the student answered the questions of the situational problem with insufficient confidence, with significant errors in theoretical preparation and poorly mastered skills; with difficulties, but still able to solve such a situational problem in practice if necessary;

Assessment "unsatisfactory" - the student has a very weak idea of the subject and made significant mistakes in answering most of the questions of the situational problem, incorrectly answered the additional questions asked to him, cannot cope with the solution of such a problem in practice.

The final (rating) assessment consists of grades for modules (maximum 100 points per module), current assessment (maximum 10 points), grade received on the test (maximum 100 points).

Assessment and evaluation criteria:
0-69 (unsatisfactory):
Lectures:
Not attending lectures or a large number of absences
Lack of lecture notes
Unsatisfactory behaviour during the lecture
Practises:
Failure to attend practical classes or a large number of absences.
Incorrect answer or refusal to answer
No activity in class
Low level of material possession.
Self-employed:
Tasks for independent work are not performed, or there are many errors in them, or the percentage of plagiarism is high.
Lexical, grammatical errors in assignments.
70-79 (satisfactory)
Lectures:
Attending most of the lectures
Partial absence of lecture notes/incomplete notes
Practises:

Attending most of the practical classes
The answer is correct, but not enough
Low activity in class
Low level of material possession.
Self-employed:
Tasks for independent work are performed, but with errors or with an average level of borrowing
Lexical, grammatical errors in assignments.
80-89 (good):
Lectures:
Attending all lectures, absences only for a valid reason
Availability of notes of all lectures
Practises:
Attending all practises classes, absences only for a valid reason
Correct, sufficient answer.
Average activity in class
Average level of material proficiency.
Self-employed:
Tasks for independent work are performed mainly without errors and with a small share of borrowing.
There are no lexical, grammatical errors.
90-100 (excellent):
Lectures:
Attending all lectures, absences only for a valid reason
Availability of detailed notes of all lectures
Practises:
Attending all practises classes, absences only for a valid reason
Regular correct answers, including the use of additional literature
High activity in class
Free level of material proficiency.
Self-employed:
Tasks for independent work are performed without errors and borrowings
There are no lexical, grammatical errors.

DENTISTRY: MODULE "PREVENTION AND COMMUNAL DENTISTRY"

Teachers: Dilya Gainullina, Tatyana Shiryak
Building, Department, classroom , Department of pediatric dentistry, Pediatric dental clinic No. 9. Yamasheva 52, KSMU Simulation Center, Amirkhana 16.

Contact details:

- Telephone number: 89376162167 (Dilya Gainullina)
- E-mail address: dilya.gainullina@mail.ru
- Office and working hours:
- Class hours:

Course: 2,3,4
Semester: 3,4,5,6,7,8.

A total of 233 hours
Lectures 42 hours
Practical (seminar workshops) classes 102 hours
Independent work 89 hours
Test 8th semester
Exam 10 semester

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline

- The purpose of the module is to teach students methods of prevention of dental diseases among various populations.
- Tasks:
- to give students practical skills in:
- - identification and elimination of risk factors for dental diseases;
- - prescribing individual hygiene products and prevention of dental diseases;
- - methods of organizing and conducting preventive measures among various segments of the population at the individual and group levels;
- - methods of dental education and motivation of the population to maintain dental health;
- - skills in drawing up individual oral hygiene programs and programs for the prevention of dental diseases among various population groups.

Text books and required supplies:

Text books and required supplies:

1. J.A. Dean, D. R. Avery, R. E. McDonald. Dentistry for the Child and Adolescent / ELSEVIER ,- 2021-10th ed.- 640 p. https://cloud.mail.ru/public/XK4x/Qf6c8oBx8
2. C.M. Marya. A Textbook of Public Health Dentistry /JP Medical Ltd Books.- 2011 . -P.572.

Evaluation and grading:
Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

3 semester.

Course: 2
Semester: 3.
A total of 28 hours
Lectures 4 hours
Practical (seminar workshops) classes 12 hours
Independent work 12 hours

Course topics:

Calendar plan of lectures

3 semester.
Section 1. Introduction to the course "Prevention and communal dentistry"

Section 1. Introduction to the course "Prevention and communal dentistry". Topic 2.1. Dental deposits. The concept of biofilm. Hygiene indices. Dyes. Methods of brushing teeth.

Calendar plan of laboratory classes

3 semester.
Section 1. Introduction to the course "Prevention and communal dentistry"

1.Methods of dental examination. Anamnesis collection. Mastering the methods of examination of the maxillofacial area. Record of dental formula (graph-digital system; international designation of teeth - WHO).
2.The method of examination of the oral mucosa (cheeks, lips, palate, gums, periodontal tissues). Detection of abnormalities of the frenules, mucous membrane of the vestibule of the mouth and tongue. Comparative assessment of healthy and affected oral mucosa. Practical development of index definition.

3.Indicators characterizing the incidence of caries in the child population: prevalence, intensity, increase in intensity. Assessment of caries activity according to the method of T.F. Vinogradova. Reduction of caries.

Example of module
3 semester

Task 1.
1.Evaluate oral hygiene according to the Fedorov-Volodkina index
2. Which dye was used to detect plaque.

A B

3. Determine the PMA index (by the gum visible in the photo)

A total of 60 hours
Course: 2
Semester: 4.
Lectures 10 hours
Practical (seminar workshops) classes 24 hours
Independent work 26 hours

Calendar plan of lectures

4 semester.
Section 2. Individual oral hygiene.

Topic 2.2 Individual oral hygiene. Toothbrushes
Topic 2.3. Individual oral hygiene. Toothpastes.
Topic 2.4 Additional items and oral hygiene products.
Topic 2.5. Principles of drawing up individual oral hygiene programs depending on age and dental status.

Calendar plan of laboratory classes

4 semester.

Section 2. Individual oral hygiene.

1.Superficial formations on the teeth. Hygiene indices. Dyes for the determination of plaque. Methods of brushing teeth. Controlled brushing of teeth and the method of its implementation. Features of teaching oral hygiene to children of different ages.
2.Basic oral hygiene items. Toothbrushes: classification by type of bristles, size, shape of the handle, etc., structural features; requirements for them.
3.Basic oral hygiene products. Classification of toothpastes, the composition of the main components: abrasive, gel-forming, foaming substances, preservatives, their properties. The abrasiveness of toothpastes. Therapeutic and prophylactic additives.
4.Additional items and care products: dental floss, dental floss, interdental brushes, toothpicks, etc.
5. Features of oral care of patients depending on the age and condition of the mouth. Individual selection of hygiene products.

Example of module
4 semester

Task 1.
1.Describe the structure of this toothbrush.
2.Who is it intended for?
Answers
1. Head: adult (standard head)
Shape of the toothbrush head: compact, replaceable head
Spacing between the tufts: frequently.
Arrangement of the tufts: mixed
Tufts: brushing plane- multilevel, PowerTip, synthetic bristles, medium hardness
Shank: Straight,
Handle: materials for the toothbrush handles: acetate with rubber coating,
non-slip handle.

2. This brush is designed for adults and teenagers

5 semester.

A total of 30 hours
Course: 3
Semester: 6.
Lectures 14 hours
Practical (seminar workshops) classes 14 hours
Independent work 10 hours

Calendar plan of lectures

5 semester.
Section 3. Dental education of the population.

Section 3. Dental education of the population.

Calendar plan of laboratory classes
5 semester.
Section 3. Dental education of the population.

1. Hygienic training and education for the prevention of major dental diseases among children and adults.
2. Methods and means of dental education. Individual and group conversations with children of different ages, parents on oral hygiene and caries prevention.

Example of module
5 semester

Task1 .

A girl ??? years.

Complaints of tooth decay. She is very afraid of dentists, so she did not come to be treated. The examination revealed a lot of caries, soft plaque, gingivitis.

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C- caries, Decayed, кариес
P – pulpitis, пульпит
Pt- periodontitis, периодонтит
G- hypoplasia, гипоплазия
M (O)- the absence of tooth, Missing, отсутствует
F (П)–filling, Filled,
Cr (К)- crown, коронка
S-Silant, герметик, силант
R- radix, root, корень
- change tooth, смена

O	C	Pt		C	C	R	R	R	O	C	C	C	Pt	C	O
1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
O	CC	P	C	C	C	C	C	C	C	C	C	C	P	C	O

Questions:
1. How old is the child?
2. Count the DMFT index (dmft, DMFT+dmft) of teeth and the DMFS index (dmfs, DMFS +dmfs) of surfaces.
3. Determine the medical examination group for Vinogradova.
4. Make an individual oral hygiene plan for this patient.

A total of 29 hours
Course: 3
Semester: 6.
Lectures 6 hours
Practical (seminar workshops) classes 14 hours
Independent work 9 hours

Calendar plan of lectures

6 semester.

Section 4. Prevention of dental caries.

Topic 4.1. Exogenous and endogenous prevention of dental caries.
Topic 4.2 Fissure sealing is a method of primary prevention of dental caries. Sealing materials
Topic 4.3 Biology of the oral cavity. Mechanisms of resistance of dental diseases

Calendar plan of laboratory classes

6 semester.

Section 4. Prevention of dental caries.

1.Endogenous prevention of dental caries. 1.The role and importance of fluoride in the body. Indications, contraindications, advantages and disadvantages of methods of systemic use of fluorides. Tablets of fluorides and calcium.
2.Exogenous prevention of dental caries. Remineralizing agents, indications, contraindications, methods.
3.Prevention of caries. Sealing of fissures of intact teeth. Indications, materials for sealing fissures. Practical skills.

Example of module
6 semester

PROCEDURE OF PIT AND FISSURE SEALANT APPLICATION. Invasive techniques. Preventive resin restoration (PRR) technique. A widening of the fissures with rotary instrumentation.

Steps		score
Step 1: Prepare the Teeth	Clean the pit and fissure surfaces. Utilize a dry toothbrush, prophy cup with pumice or prophy paste, or air abrasion	
Rinse for 20–30 seconds	Промыть в течение 20-30 секунд	
Step 2. Mechanical preparation	Mechanical preparation of the fissure system using a thin bur or Fissurotom. We prepare enamel caries, deep fissures.	
Re-evaluate surface for residual or loose debris. Повторно оцените	Use an explorer to remove any debris in the pit or fissure	
Step 3: Isolate the Teeth. Adequate isolation is the most critical aspect of the sealant application process.	Use cotton rolls, dry angles, and/or rubber dam, saliva ejector	
Step 4: Dry the Surfaces. Шаг 3: высушите поверхности	Dry teeth with air for 20–30 seconds Check to make sure there is no moisture coming out of air syringe tip.	

Step 5: Etch the Surfaces . 37% orthophos-phoric acid. This is available as both a liquid solution and a gel.	One should always apply the etchant onto all the susceptible pits and fissures of the tooth and extend it up the cuspal inclines well beyond (at least 2 millimeters) the anticipated margin of the sealant: Usually between 30 and 60 seconds.	
Step 6: Rinsing and Drying the Teeth	Rinse surfaces for 60 seconds. Check for effectiveness of etchant by drying with air; surface should appear “chalky white”. If not, repeat etching procedure.	
Step 7. Placement of new cotton rolls and/or dry angles		
Step 8: Treatment of the tooth with an antiseptic	cotton ball (d=0. 5x0. 5 cm) with chlorhexidine	
Step 9. Dry teeth with air for 20–30 seconds.	.	
Step 10. Applying the bond (5th generation) with a brush.	Spread the binder evenly over the crack surface in a thin, shiny layer using air. Bond polymerization by lamp.	
Step 11: Application of Sealant Material. Light-curing: Apply with syringe provided by manufacturer	- do not reach occlusal marks and bumps. - The sealant should be visually and tactually inspected for complete coverage and absence of voids or bubbles. - use an umbrella or an endodontic file or a microbrush or brush to better penetrate the sealant into the fissure - the tip of the light guide on the minim distance: 1-2 mm. - polymerization after 5-15-20 seconds.	
Step 12. Remove cotton rolls, from the mouth, salivate ejector		
Step 13: Occlusal Evaluation	Check occlusion with articulating paper	
Step 14. Remove excess material with bur.	if necessary	
Re-evaluate	Check occlusion with articulating paper ((if necessary)	

A total of 32 hours
Course: 4
Semester: 7.
Lectures 6 hours
Practical (seminar workshops) classes 14 hours
Independent work 12 hours

Calendar plan of lectures

7 semester.
Section 5. Prevention of dental malocclusion

Topic 5.1 Stages of development of a child's bite. The morphological norm.
Topic 5.2 Risk factors for the occurrence and development of dental anomalies, their prevention.

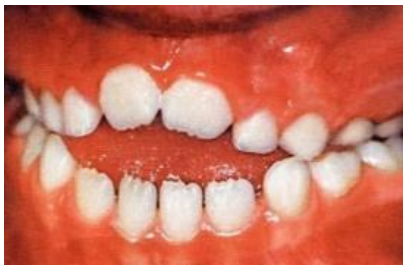
Calendar plan of laboratory classes

7 semester.

Section 5. Prevention of dental malocclusion.

1.Norm and pathology in orthodontist practice. Examination of an orthodontic patient, detection of malocclusion.
2.Prevention of dental anomalies. Risk factors for dental anomalies in children. The role of bad habits in the formation of anomalies and ways to eliminate them.
3.Methods and means of prevention of dental anomalies.
4.The importance of health education in the prevention of abnormalities in children.

Example of module
7 semester



Task 1.
Determine the bite of the child.
What are the causes of this orthodontic pathology?
What are the preventive measures for this pathology?

Course: 4
Semester: 8.
A total of 54 hours
Lectures 10 hours
Practical (seminar workshops) classes 24 hours
Independent work 20 hours

Calendar plan of lectures
8 semester.
Section 6. Innovative technologies in the prevention of major dental diseasesr.

Topic 6.1 Focal demineralization (initial caries)
Topic 6.2. Prevention of non-carious diseases of hard dental tissues
Topic 6.3 Prevention of periodontal diseases
Topic 6.4. Professional oral hygiene

Calendar plan of laboratory classes

8 semester.
Section 6. Innovative technologies in the prevention of major dental diseases.

1.Enamel demineralization. The concept of permeability, mineralization, demineralization, remineralization of enamel. Differential diagnosis with fluorosis, hypoplasia. Principles of treatment of focal demineralization. The use of remineralizing agents and solutions.
2.Prevention of non-carious lesions that occur before eruption. Risk factors for fluorosis, systemic and local hypoplasia and their elimination. Differential diagnosis of spots in fluorosis, hypoplasia and initial caries.
3.Prevention of non-carious lesions that occur after teething. Hyperesthesia of hard dental tissues. Selection of personal and professional hygiene products.

Example of module
8 semester

Task 1.
Pregnant 25 years, 32 weeks pregnant. The increase in the intensity of caries - 2 teeth. TER test = 80%. pH of saliva - 6.2. ISS - no crystals.

1) determine the prognosis for caries
2) draw up an individual prevention program
3) draw up an individual oral hygiene program.
4) write the WHO dental formula
5) antenatal prognosis for caries
3. Child 1 year old

II I I II - white spots in the cervical area, dull without clear boundaries.

1) determine the prognosis for caries
2) draw up an individual prevention program
3) draw up an individual oral hygiene program.
4) write the WHO dental formula
5) make a diagnosis
6) prescribe a set of therapeutic measures.

EVALUATION OF THE MODULE ANSWER

The question card of the module consists of 1 tasks
Questions 1 determine the prognosis for caries: favorable or unfavorable.
Questions 2 student write individual prevention program for this clinical situation: exogenous and endogenous.
Questions 3 student write individual oral hygiene program: basic and additional.
Questions 4 write the WHO dental formula for this clinical situation.
Questions 5 make a diagnosis and explain treatment

-Correct answer - 4-6 points depend on quantity questions.

EVALUATION OF THE MODULE ANSWER

The module assessment consists of:
1) practical skills (preparation and restoration of teeth)
2) tests (test questions) on the theoretical part
3) solving clinical cases.
4) testing

Each task is assessed on a 100-point scale. The points are summed up and divided by 4.
90-100 points is an excellent answer.
80-90 is a good answer
70-80 is a satisfactory answer

EVALUATION OF THE EXAM TICKET
in the discipline of Dentistry

The exam ticket consists of 4 questions according to the following modules:
1) Dental prevention.
2) Orthopedic dentistry.

3) Surgical dentistry.
4) Therapeutic dentistry.

Each answer is evaluated according to a 100-point system.
90-100 points is an excellent answer.
80-90 is a good answer
70-80 is a satisfactory answer

Examination ticket № 1 (a question about dental prevention)

1.Antenatal prevention. Prevention of dental caries in pregnant women.

MAXILLOFACIAL SURGERY

Teachers: PhD Associate Professor Olga Torgashova, PhD Elima Agatieva
Building, Department, classroom Department maxillofacial surgery and dental surgery. Chuikova str. 54, 5 floor, Kazan, Hospital 7
Contact details:

- Telephone number: 89172922518 (**PhD Associate Professor Olga Torgashova**)
- E-mail address: olga.torgashova @kazangmu.ru
- Telephone number: 89061100865 (**PhD Elima Agatieva**)
- E-mail address: elly87@mail.ru

- **Class hours:**
- **Course: 4, 5**
- **Semester: 7, 8, 9, 10**
- **Total hours — 360**
- **- Lectures 48 hours;**
- **- Practical classes 162 hours;**
- **- Independent work 132 hours;**
- **Exam 10 sem – 18 hours**

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2500).

Course objectives: The purpose of mastering the discipline
The objectives of mastering the discipline "Maxillofacial Surgery" are the training of dentists who will be able to diagnose inflammatory diseases and traumatic injuries of the maxillofacial region and provide assistance to patients in inpatient and outpatient conditions, and at the stages

of medical evacuation, of providing surgical care to patients with defects and deformities of tissues of the maxillofacial region, with diseases and injuries of nerves of the maxillofacial region, with diseases of the temporomandibular joint (TMJ) and contractures of the mandible, capable of diagnosing benign and malignant tumors and tumor-like lesions of the maxillofacial region and neck and providing assistance to patients.

Tasks of the discipline:

To form knowledge in the field of:

- master the diagnosis of non-gunshot and gunshot injuries of the face;
- study the clinical picture of injuries to soft tissues, teeth and bones of the face;
- to master the methods of treatment of victims with dislocations and fractures of teeth;
- master the methods of treatment of fractures and dislocations of the mandible;
- master the methods of treatment of fractures of the alveolar process;
- learn to distinguish the features of gunshot and non-gunshot wounds of the face;
- to master methods of rehabilitation of victims and wounded with facial trauma;
- to study the stages of the wound process;
- study the stages of primary surgical treatment of facial wounds;
- study the clinic and diagnosis of thermal injuries of the face;
- to study the principles of organization, scope and content of assistance to patients with facial injuries in peacetime and at the stages of medical evacuation during combat operations;
- know the medical equipment required for rendering aid to the wounded in the face and be able to wounded in the face and be able to conduct medical triage;
- to study the peculiarities of the course of combined and combined facial injuries;
- to master methods of diagnostics of complications of injuries of soft tissues and bones of the face;
- master diagnostic methods used in the examination of patients with various inflammatory and dystrophic processes of the face and neck;
- to develop indications for surgical treatment of patients with various inflammatory processes localized in the face and neck;
- to form students theoretical and practical skills for surgical treatment of patients with various inflammatory processes localized in the face and neck; to develop indications for surgical treatment of patients with various inflammatory processes localized in the face and neck
- training in methods of examination of patients with diseases and injuries of nerves of the maxillofacial region;
- learning indications for conservative and surgical treatment of patients with diseases and nerve injuries of the maxillofacial region;
- training in drawing up a treatment plan for patients with diseases and nerve injuries of the maxillofacial region;
- mastering the methods of conservative and surgical treatment in rendering assistance to patients with diseases and nerve injuries of the maxillofacial region;
- mastering the methods of rehabilitation of patients with diseases and injuries of nerves of the maxillofacial region;
- mastering methods of diagnostics of temporomandibular joint diseases of various genesis and contractures of the lower jaw;
- formation of skills to provide emergency care to patients with - diseases of temporomandibular joint of various genesis and contractures of the mandible;
- Formation of skills on drawing up a treatment plan for temporomandibular joint diseases of various genesis and contractures of the mandible;
- familiarization with methods of treatment and rehabilitation of patients with TMJ disorders and contractures;
- training in methods of examination of patients with defects and deformations of tissues of the maxillofacial region;

- mastering the indications for dental surgical treatment of patients with deformities and tissue defects of the maxillofacial region;
- training in drawing up a treatment plan for patients with defects and deformities of tissues of the maxillofacial region in outpatient and polyclinic conditions;
- mastering the methods of local tissue plasty;
- familiarization with the methods of plasty with flaps on a pedicle, free tissue flaps, round stem flap tissues, flaps with microvascular anastomoses;
- familiarization with orthognathic surgery;
- mastering the methods of rendering assistance to patients with defects and deformations of tissues of the maxillofacial region in outpatient and polyclinic conditions;
- familiarization with methods of rehabilitation of patients with defects and deformations of tissues of the maxillofacial region.
-Familiarization with cranio-facial pathology.
- Familiarization with the basics of aesthetic surgery.
- to know the methods of examination of patients with benign and malignant neoplasms of tissues of the maxillofacial region;
- know the clinical manifestations of oncologic processes in the maxillofacial region;
- to know the basic methods of diagnostics of benign and malignant neoplasms of tissues of maxillofacial region;
- be able to carry out differential diagnosis of tumors with similar pathological processes;
- know the principles of treatment of patients with benign and malignant neoplasms;
- to know the methods of surgical interventions for benign neoplasms performed in outpatient and polyclinic conditions;
- know the indications for the use of radiation therapy in onco-dentistry;
- know clinical manifestations and methods of treatment of osteoradionecrosis of the jaws;
- to know the methods of rehabilitation of patients with benign and malignant neoplasms of tissues of maxillofacial region.
- To possess deontological behavior when working with cancer patients.

- **Class hours:**
- **Course: 4**
- **Semester: 7**
- **Total hours — 46 hours;**
- **- Lectures - 6 hours;**
- **- Practical classes 20 hours;**
- **- Independent work 20 hours;**

Course topics:

Calendar plan of lectures 4course 7 semestr

1. Inflammatory diseases of the maxillofacial region. Classification. Etiology. Pathogenesis. Clinical picture. Diagnosis. Differential diagnosis. Principles of treatment.
2. Abscesses and phlegmons of the maxillofacial region. Classification, clinic, diagnosis, differential. Ways of spread of infection. Treatment of abscesses and phlegmons of maxillofacial region.
3. Principles of treatment of abscesses and phlegmons of the face and neck. Physiotherapy and rehabilitation of patients with inflammatory diseases of the face and neck. Peculiarities of anesthesia in inflammatory diseases of maxillofacial region.

Calendar plan of classes 4course 7 semestr

1. Abscesses and phlegmons of the face and neck. Classification. Pathogenesis. Principles of diagnostics. Changes in the immunological reactivity of the body in odontogenic inflammatory diseases. Abscesses and phlegmons adjacent to the lower jaw. Phlegmons of the submandibular, submental spaces and the floor of mouth. Topographic anatomy of

cellular spaces. Sources of infection. Possible ways of spreading the infection. Clinic, differential diagnosis. Operative surgical approach for drainage of a purulent focus.

2. 2. Abscesses and phlegmons adjacent to the lower jaw. Phlegmons of the perifaryngeal, pterygomandibular and retromandibular spaces. Phlegmons of the parotid-masticatory and submassetric regions. Abscess of the body and tongue root. Topographic anatomy. Sources of infection. Possible ways of spreading the infection. Clinic, diagnostics, differential diagnostics. Operative surgical approach for drainage of a purulent focus.
3. Abscesses and phlegmons adjacent to the upper jaw. Phlegmons of the infraorbital, zygomatic, buccal regions, phlegmons of the orbit. Phlegmons of the temporal region, infra temporal and pterygoid-palatine fossa. Topographic anatomy of cellular spaces. Sources of infection. Possible ways of spreading the infection. Clinic, diagnostics, differential diagnostics. Operative surgical approach for drainage of a purulent focus.
4. Putrefactive necrotic phlegmons of the face and neck. Etiology, pathogenesis. Features of the clinic and diagnostics.

Example of module head and neck diseases.

Test.

1.Boundaries of the pterygomandibular space includes all of the following except
a. Lateral pterygoid muscle
b. Parotid gland
c. Masseter muscle
d. Buccinator muscle

2. The incision for drainage in Ludwig's angina extends
a. Up to neck
b. To the angle of mandible
c. Floor of mouth
d. All of the above

3. After extraction of upper central incisor patient develops ophthalmoplegia, meningitis and lateral rectus paralysis. The diagnose is
a. Cavernous sinus thrombosis
b. Not related
c. Cellulitis
d. Ludwig's angina

Situational tasks and questions module head and neck diseases.

1. A 62-years-old patient appealed to the oral surgeon with complaints of strong constant, throbbing pain under the tongue on the left, which extends to the ear and temple, pain when eating. Mouth opening is difficult, general weakness. Disease started a week ago when on the lower jaw from the left the appeared pain in the tooth. After 2 days the body temperature increased to 38.9 C, general condition deteriorated. Objectively: crown of 37 tooth destroyed to 2/3, second degree of tooth mobility, percussion is painless. In the area of sublingual groove near the 36, 37 teeth infiltrate defined. Mucous membrane over it is hyperemic, edematous. During palpation the fluctuation was revealed. Hyperemia of the mucous membrane extends to the region of anterior palatal brackets. Pharynx is not changed. Formulate a clinical diagnosis.

2. A patient, 25 years old, complains of edema and suppuration in the right submandibular region. Objectively: there is a dense, woody, painless infiltrate with a diameter of about 2 cm in the right submandibular region. In the center of the infiltrate there is a fistula,

from which a small amount of tiny pus is released. Opening the mouth 4.5 cm, painless. The oral mucosa and teeth are intact. Establish a preliminary diagnosis.

3. A 47-year-old patient complains of fistulas in the right parotid-masticatory region, limited opening of the mouth. Three months ago, tooth 4.8 was removed for chronic periodontitis. Objectively: the face is asymmetrical due to swelling of the soft tissues. At the level of the angle of the lower jaw - fistulas with scanty, bloody-purulent discharge. The skin in this area is blue-purple in color. An infiltrate of woody density, moderately painful, is determined by palpation. In some places, foci of softening. The mouth opens 1-1.2 cm between the central incisors. The well of tooth 4.8 is completely healed. Teeth 4.7, 4.6 are intact. What is the most likely diagnosis?

- **Class hours:**
- **Course: 4**
- **Semester: 8**
- **Total hours — 72 hours;**
- - Lectures - 10 hours;
- - Practical classes 28 hours;
- - Independent work 34 hours;

Calendar plan of lectures 4course 8 semestr

1. Complications of inflammatory diseases of the maxillofacial region. Mediastinitis, meningitis, meningoencephalitis, brain abscess, sepsis, chronic intoxication.
2. Statistics and classification of injuries of the maxillofacial region. Damage to the soft tissues of the face. Clinic, diagnosis and treatment of injuries of soft tissues of the face. Dislocations and fractures of teeth and alveolar processes of jaws and facial bones. Clinic, diagnostics, treatment.
3. Non-gunshot fractures of the mandible. Clinic, diagnosis, differential diagnosis. Fractures of the upper jaw, bones of the middle zone of the face. Clinic, diagnostics, differential diagnostics.
4. Treatment of patients with non gunshot fractures of the mandible and midface. Methods of immobilization of fragments. Drug therapy. Complications of non-shot fractures of the jaws: suppuration of the bone wound, traumatic osteomyelitis, delayed consolidation, false joint, improper fusion of the fragments.
5. General characteristics, clinical course, diagnosis of gunshot wounds and injuries of the face and jaws. Combat injuries of soft tissues and bones of the face. Burns and combined lesions of the maxillofacial region. Principles of organization of stage treatment of wounded in the face. Organization of medical aid to maxillofacial wounded at the stages of medical evacuation.

Calendar plan of classes 4course 8 semestr

1. Putrefactive-necrotic phlegmons of the face and neck. Treatment of putrefactive-necrotic phlegmons of the face and neck. Disseminated and progressive phlegmons
2. Principles of treatment of abscesses and phlegmons of the face and neck. Physiotherapy and rehabilitation of patients with inflammatory diseases of the face and neck. Peculiarities of anesthesia in inflammatory diseases of the BFL.
3. Complications of odontogenic inflammatory processes of the face and neck. Sepsis. Clinic, diagnostics, treatment. Septic shock. Mediastinitis. Ways of infection spread to mediastinum. Features of clinic and diagnostics of odontogenic mediastinitis.

4. Thrombophlebitis of facial veins. Thrombosis of cavernous sinus. Causes, pathogenesis. Clinic, diagnostics, ways of infection spreading. Intensive therapy of patients with complications of inflammatory diseases of maxillofacial veins. Transfusion, detoxification therapy, methods of efferent therapy.
5. Statistics and classification of traumas of the BFD. Methods of examination of patients with injuries of soft tissues and bones of the face.
6. Non-gunshot fractures of the mandible. Classification, clinic, diagnostics.

Example of module head and neck diseases.

Test.

1. Caused by a direct blow that does not break the skin and characterized by discoloration
1) Contusion*
2) Abrasion
3) Puncture
4) Laceration
5) All the answers are correct

2. Scraping of skin
1) Abrasion*
2) Puncture
3) Contusion
4) Laceration
5) All the answers are correct

3. Caused by sharp pointed objects penetrating the skin
1) Abrasion
2) Puncture*
3) Contusion
4) Laceration
a. All the answers are correct

Situational tasks and questions module head and neck diseases.

1.Patient B., 42 years old, was admitted to the hospital with complaints of constant aching pain, swelling in the left temporal region, restriction of mouth opening, headache, general weakness, malaise.

Anamnesis of the disease development. Two months ago at work I received an injury: a blow to the parietal and temporal regions on the left side with a blunt metal object (metal part). The trauma was accompanied by hemorrhage in the temporal region. The patient was referred to the hospital. No skull bone fracture was detected. Local resorptive therapy was prescribed. A few days later, severe pain appeared in the temporal region on the left side, swelling increased. Subsequently, body temperature increased, headache was bothering. The patient went to the district polyclinic. He was referred to the maxillofacial department of the hospital.

Life history. Hepatitis, HIV, tuberculosis, syphilis denied. Allergoanamnesis without peculiarities. Chronic bilateral pyelonephritis.

Objective. General condition of average severity. Body temperature 38.2°C. BP 138/80 mm Hg. Heart tones rhythmic. HR 72 beats per minute. Edema of the temporal, suborbital areas on the left, eyelids of the left head. The skin is hyperemic. Opening of the mouth is limited. Painful on palpation inflammatory infiltrate with indistinct boundaries in the left temporal region is detected. In the temporal region the skin is not collected in a fold. The symptom of fluctuation is positive. The mucous membrane of the oral cavity is pale pink, moist. The tongue is clean, moist.

2. Patient K., 33 years old, was admitted to the hospital in serious condition with complaints of sharp constant pain in the left side of the face, inability to swallow, open the mouth, general weakness, chills, body temperature up to 40°C.
Anamnesis of the disease development. Two days ago, 2.7, 2.8 teeth were extracted in the polyclinic at the place of residence due to exacerbation of chronic periodontitis. After teeth extraction the pain in the upper jaw on the left increased, spread to the whole left half of the face and head, there appeared restriction of mouth opening, pain at swallowing.
Life history. Hepatitis, HIV, tuberculosis, syphilis denied. Allergoanamnesis without peculiarities. Suffers from symptomatic hypertension.
Objective. General condition is of average severity. The skin is pale. The patient is lethargic. Body temperature on admission is 40.2°C. BP 145/90 mm Hg. Heart tones muffled. Dyspnea. HR 90 beats per minute. Soft tissue edema in the temporal and parotid-cervical regions on the left side (hourglass symptom), as well as edema of the upper and lower eyelids of the left eye. The skin is not changed in color. At palpation in the lower part of the temporal region soft tissues are compacted. The symptom of fluctuation is not determined. Opening of the mouth is limited. In the oral cavity the mucous membrane on the vestibular side from 2.6 and in the place of missing 2.7, 2.8 teeth is hyperemic, edematous. On palpation, a painful inflammatory infiltrate is detected behind the maxillary tubercle. There is also edema of the mucous membrane of the soft palate on the left side.
3. Patient Sh., 62 years old, complained of swelling in the submandibular region on the left side.
Anamnesis of the disease development. The swelling was discovered accidentally during shaving two months ago. At that time, treatment of the lower molars on the left side was performed for complicated caries. Over the last two months the swelling has slightly increased in size, has become more dense, pain does not bother.
Life history. Notes frequent exacerbations of chronic tonsillitis. Denies HIV, hepatitis, tuberculosis, syphilis. No allergies.
Objective. General condition is satisfactory. Body temperature 37°C. The face is symmetrical. The skin is physiologically colored. In the submandibular region on the left side there is a roundish mass up to 2.0 cm in diameter, mobile, dense consistency, slightly painful. Opening of the mouth is free, painless. The mucous membrane of the oral cavity is pale pink, moist. The tongue is clean, moist. Transparent saliva is secreted from the mouths of the salivary gland ducts. There are no destroyed teeth in the oral cavity.

Class hours:

- **Course: 5**
- **Semester: 9**
- **Total hours — 150 hours;**
- **- Lectures - 18 hours;**
- **- Practical classes 67 hours;**
- **- Independent work 55 hours;**

Calendar plan of lectures 5course 9 semestr

1. Cancer alertness.. The structure of oncologic service. Organization of aid to patients with malignant tumors. Principles of the WHO international classification of tumors.
2. Diagnosis of neoplasms of the maxillofacial region.
3. Tumors, tumor-like lesions and cysts of the facial skin, red lip border and oral mucosa.
4. Benign tumors and tumor-like lesions of the red border of lips and oral mucosa.
5. Odontogenic and nonodontogenic cysts of the jaws. Clinic, differential diagnostics, treatment.
6. Surgical methods of treatment of patients with malignant tumors of maxillofacial region.

7. Operations on the lymphatic apparatus of the neck in case of metastasis. Organization of oncological care.
8. Cancer of the lower lip. Clinic, diagnostics, treatment. Cancer of the mucous membrane of the floor of the oral cavity with spreading to the bone tissue of the lower jaw. Clinic, diagnostics, treatment.
9. Cancer of the mucous membrane of the maxillary sinus and mucous membrane of the oral cavity with spread to the bone tissue of the upper jaw. Clinic, diagnostics, treatment. Tongue cancer. Clinic, diagnostics, treatment

Calendar plan of classes 5course 9 semestr

1. 1.Neognestrel fractures of the upper jaw. Fractures of the middle zone of the face (zygomatic bone, arch, bones of the nose). Classification, clinic, diagnosis.
2. Methods of temporary and permanent immobilization of jaw fragments (conservative orthopedic). Operative methods of immobilization of facial bone fragments (indications and methods of implementation). Features of anesthesia for non-hormonal injuries of the bones of the face.
3. Complications developing in the treatment of patients with non-acute trauma of soft tissues and bones of the face (hemorrhages, asphyxia, hematomas, bleeding, post-traumatic abscesses and phlegmons, nerve damage). Clinic, diagnosis, treatment, prevention.
4. Complications developing in the treatment of patients with non-acute trauma of soft tissues and bones of the face (traumatic sinusitis, traumatic arthritis, ankylosis, suppuration of bone wounds, delayed consolidation of fragments, false joint, fractures consolidated in a vicious position, traumatic osteomyelitis). Clinic, diagnosis, treatment, prevention.
5. The subject and tasks of military maxillofacial surgery and dentistry. Organization of surgical dental care for maxillofacial wounded in the Russian Army and Navy.
6. Organization of medical care for maxillofacial wounded at the stages of medical evacuation.
7. Combat injuries to the soft tissues of the face. Features. Clinic,Diagnostics.
8. Combat injuries to the bones of the face. Features. Clinic, diagnosis.
9. Primary surgical treatment of facial wounds, its features. The scope and procedure for providing assistance to the wounded at the stages of medical evacuation.
10. 10. Thermic lesions of MFS. Clinic, treatment. Volume and order providing assistance to the wounded during the stages of medical evacuation.
11. 11. Combined, combined lesions of MFA. Clinic, treatment.
12. The scope and procedure for providing assistance to the wounded during the evacuation stages.
13. 12.Early and late complications of gunshot and thermal wounds of the face.
14. 13. Features of medical care in extreme situations.
15. 14. Medical rehabilitation and examination of the wounded in the face.

Example of module head and neck diseases.
Test.

1.Chronic wound is
1) That has failed to progress through the phases of healing*
2) Wounds in elderly persons
3) Occur when the skin remains intact
4) Occur when the oral mucos remains intact
5) All the answers are correct

2. Chronic wound are not
1) Fractures*
2) Vascular ulcers
3) Pressure ulcers

4) Diabetic ulcers
5) All the answers are correct

3. Open wound is
1) The wound with exposed underlying tissue/ organs and open to the outside environment*
2) The wound with exposed major salivary gland to the outside environment
3) The wound which leads to CSF rhinorrea
4) All the answers are wrong
5) All the answers are correct

Example of module Oncodentistry and radiation therapy
Test.

1. Small palpable mass elevated above the epithelial surface is
1) Papule*
2) Macule
3) Plaque
4) Vesicle
5) All the answers are correct

2. Acantosis is
1) Increase in mitotic division
2) Increase in thickness of superficial layer
3) Increase in thickness of spinous layer*
4) Disruption of basal lamina
5) All the answers are correct

3. Which of the following epithelial changes commonly signify precancerous condition
1) Dyskeratosis*
2) Hyperkeratosis
3) Parakeratosis
4) Acanthosis
5) All the answers are correct

Situational tasks and questions module head and neck diseases.

1. A 30-year-old patient complains of pain in the region of the upper jaw, swelling of the upper lip, inability to chew, dizziness. From the anamnesis it was found out that 3 hours ago the patient received a blow with a fist to the face. On examination the upper lip is swollen, 12, 11, 21 and 22 are displaced to the back. Their mobility is noted on palpation. There is a rupture of the mucous membrane and hemorrhage along the transitional fold at the level of these teeth. What investigations should be performed to make a diagnosis?
2. A 22-year-old patient was admitted to the maxillofacial surgery department with an extensive wound of the left side of the face. The victim is conscious. Adequate. There is a wound of the left parotid-cervical region with transition to the cheek and temporal regions, the size is 10 x 15 cm, the edges are not even, in some places non-viable skin areas contaminated with soil are determined. The left parotid salivary gland and facial mimic muscles on the left side are exposed. 1. Make a diagnosis. 2. Peculiarities of the primary surgical treatment of this wound.
3. A 36-year-old patient has a bullet wound in the region of the mandible. A bilateral angular fracture of the mandible with pronounced displacement of the mandibular branches to the inside is clinically determined. The central fragment was displaced posteriorly. Bleeding from the wound channel is insignificant. The patient is conscious, notes difficulty in

breathing, pallor of the skin is determined. Respiratory insufficiency is increasing. What caused the appearance of difficult breathing? What type of asphyxia can be assumed in this case? Assess the patient's condition and determine the scope of medical care in the conditions of the company medical instructor;

Class hours:

- **Course: 5**
- **Semester: 10**
- **Total hours — 84 hours;**
- **- Lectures - 14 hours;**
- **- Practical classes 47 hours;**
- **- Independent work 23 hours;**
- **Exam 10 sem – 18 hours**

Calendar plan of lectures 5course 10 semestr

1. Neuritis (neuropathy) and neuralgia of trigeminal, facial nerve. Classification, diagnosis and treatment.
2. Clinic, differential diagnosis of diseases and injuries of the facial nerve. Methods of treatment, indications contraindications.
3. Temporomandibular joint. Methods of examination.
4. Inflammatory and dystrophic diseases of the temporomandibular joint. Etiology, clinic, diagnosis, treatment of dystrophic diseases of TMJ.
5. Ankyloses. Classification. Differential diagnosis. Etiology, clinic, diagnosis, surgical methods of treatment of TMJ ankyloses. Contracture.
6. Introduction to maxillofacial surgery. Tasks and peculiarities of restorative treatment in the maxillofacial region. Types of defects and deformities of the maxillofacial region. Planning of restorative treatment.
7. Operative interventions in congenital and acquired deformities of jaw bones.

Calendar plan of classes 5course 10 semestr

1. Introduction to maxillofacial surgery. Tasks and features of restorative treatment in the maxillofacial region. Types of defects and deformations of the maxillofacial region. Planning of rehabilitation treatment. The use of implants in maxillofacial surgery. Principles of plastic surgery with local tissues and flaps on the feeding leg. Principles of surgical interventions with the imposition of microvascular anastomoses.
2. Techniques of plastic surgery with local tissues. Complications. Preventive measures. Flaps on the feeding leg. Types, indications and contraindications for use. Complications in the pre and postoperative periods. Elimination of defects and deformations of tissues of the maxillofacial region by tissues of the round stem flap. Complications. Free skin grafting. Bone, cartilage, and fascia transplantation. Methods of fixation. Advantages and disadvantages. Flaps on microvascular anastomosis, used in maxillofacial surgery. Indications, contraindications
3. Surgical interventions for congenital and acquired deformities of the jaw bones. Cranio fascial operations. Indications, contraindications, general principles. Age-related changes in the tissues of the face and neck. Operations performed on soft tissues on the face and neck for aesthetic reasons. Aesthetic operations for congenital deformities of the nose and auricles. Acquired and congenital deformities of the zygomatic complex and nose. Clinic, differential diagnosis. Indications and contraindications for operations. Complications. Preventive measures. Congenital and acquired deformities of the mandible. Clinic, diagnosis. Complications before and after surgery. acute and chronic arthritis of the TMJ. Etiology, clinic, diagnosis, treatment of dystrophic diseases of the TMJ. Etiology, clinic, diagnosis,

4. Features of the diagnosis of neoplasms of the maxillofacial region Congenital fistulas and cysts of the face and neck. Clinic, diagnosis, treatment.
5. Tumors, tumor like lesions and cysts of the facial skin. Pre-cancerous diseases of the red border of the lips and oral mucosa.
6. Odontogenic and non-odontogenic jaw cysts. Clinic, differential diagnosis, treatment. Benign tumors and tumor-like lesions of the soft tissues of the maxillofacial region.
8. Benign and malignant odontogenic tumors. Clinic, diagnosis, treatment. Vascular neoplasms of the maxillofacial region. Cancer of the lower lip. Clinic, diagnosis, treatment.
9. Cancer of the mucous membrane of the bottom of the oral cavity with spread to the bone tissue of the lower jaw. Primary cancer of the mandible. Clinic, diagnosis, treatment. Cancer of the mucous membrane of the maxillary sinus and the mucous membrane of the oral cavity with spread to the bone tissue of the upper jaw. Clinic, diagnosis, treatment. Cancer of the tongue. Clinic, diagnosis, treatment. Sarcomas of the maxillofacial region. Surgery on the lymphatic apparatus of the neck for malignant tumors of the maxillofacial region.
10. Clinic, differential diagnosis of diseases and injuries of the facial nerve. Methods of treatment, indications and contraindications. Neuritis (neuropathy) and neuralgia of the trigeminal, facial nerve. Classification, diagnosis and treatment. Etiology, clinic, diagnosis, treatment of acute and chronic TMJ arthritis. Etiology, clinic, diagnosis, treatment of dystrophic diseases of the TMJ. Etiology, clinic, diagnosis, surgical methods of treatment of TMJ ankylosis. Contracture.

Example of module maxillofacial and gnathic surgery.
Test.

1. Which cyst is characteristically pear shaped?
1) Globulomaxillary cyst*
2) Median palatal cyst
3) Incisal canal cyst
4) Median mandibular cyst
5) All the answers are correct

2. Which cyst is considered a pseudocyst?
1) Traumatic bone cyst*
2) Dentigenerous cyst
3) Lymphoepithelial cyst
4) Primordial cyst
5) All the answers are correct

3. Which cyst develops in place of a tooth?
1) Dentigerous cyst
2) Primordial cyst*
3) Follicular cyst
4) Odonttogenic cyst
5) All the answers are correct

Example of module Oncodentistry and radiation therapy
Test.

1. Tobacco usage is associated with
1) Hyperkeratosis*
2) Erythema
3) Ulceration
4) All the answers are wrong
5) All the answers are correct

2. Yellow clusters of ectopic sebaceous glands commonly observed on the buccal mucosa and evaluated through clinical diagnosis are most likely
1) Lipomas
2) Fordyce's granules*
3) Check bites
4) Linea alba
5) All the answers are correct

3. Which of the following parotid malignancy shows perineuronal spread
1) Pleomophic adenoma
2) Adenoid cystic carcinoma*
3) Warthin's tumor
4) Ductal papilloma
5) All the answers are correct

Situational tasks and questions module Oncodentistry and radiation therapy.

1.A 39-year-old patient came to the clinic with a referral for chronic osteomyelitis of the mandibular body in the area of 34,35,36 teeth. From the anamnesis it was found out that there was no acute onset of the disease. Pains appeared about 3 months ago and were not strong, lasted no more than a week, then numbness of the lower lip on the left side and swelling of the body of the lower jaw from the vestibular surface at the level of 34,35,36 teeth appeared. No rise in body temperature was noted. Examination of the patient revealed that 34,35,36 teeth are externally intact, EOD of these teeth is over 200mA. At X-ray examination there is a rarefaction of the area of bone tissue of the lower jaw body on the left side without clear boundaries, up to 2.0 cm in diameter, which is adjacent to the left mandibular canal at the level of 35,36 teeth. After UHF-therapy (6 sessions) the intensity of the process intensified. On external examination, two lymph nodes are palpated in the left subjaw region, dense, painless, mobile, 1.5-2.0 cm in size.
1.Justify the preliminary diagnosis by differentiation
2.Make a final diagnosis and outline a treatment plan.

2.A 44-year-old patient complained of sharp soreness under the tongue on the right side. The pain has been bothering for more than two months. Recently, there has been difficulty in moving the tongue. The patient has no complaints about the general state of health. From anamnesis it was found out that the patient smokes a lot and drinks alcohol, especially in the last five years, likes spicy food. Extraoral examination revealed single, enlarged, mobile lymph nodes in the submandibular region and in the mid-lateral neck on the right side. Intraoral examination revealed an area of oral mucosa with pronounced hyperkeratosis with a length of more than 4.0 cm, located between the hyoid roll and the body of the mandible on the right side. In the center and in the depth of this area there is a slit-shaped ulcer with a length of about 2.0 cm. Palpation reveals a significant soft tissue thickening around the ulcer, adherent to the body of the mandible on the right side. Radiologic examination of the body and the mandibular branch on the right side reveals an area of resorption of the cortical plate of the inner surface of the mandibular body on the right side.
1.Make a preliminary diagnosis and give its justification
2.What additional methods of examination should be performed?
3.Indicate the source of the mandibular lesion.

3. A 66-year-old patient was found to have ulceroinfiltrative lesions of the lower lip tissues on the left side, characterized by cancer. A stone from the submandibular salivary gland on the right side was removed a year ago.
1.Describe the symptoms of osseous precancer in ulcerative forms of precancer.

2.What additional information and clinical findings are needed to make a definitive diagnosis and treatment plan?

Situational tasks and questions module maxillofacial and gnathic surgery.

1. Make a treatment plan for a patient with progenia.
2. Make a treatment plan for a patient with an open bite
3. Make a treatment plan for a patient with a mandibular defect after a gunshot wound

Text books and required supplies:

1. Oral Surgery : textbook / ed. by S. V. Tarasenko. - Москва : ГЭОТАР-Медиа, 2023. - 640 с. - ISBN 978-5-9704-7080-0, DOI: 10.33029/9704-7080-0-OST-2023-1-640. - Электронная версия доступна на сайте ЭБС "Консультант студента" : [сайт]. URL: https://www.studentlibrary.ru/book/ISBN9785970470800.html (дата обращения: 10.10.2024)
2. **Daniel B. Nissman** Emergency and Trauma Radiology: A Teaching File / Daniel B. Nissman. - [Б. м.] : Wolters Kluwer Health, 2016. - **ISBN** 9781469899480 : Б. ц. - Текст : электронный.
3. **Peter Thomson, Author** Oral Cancer: From Prevention to Intervention / Peter Thomson, Author. - [Б. м.] : Cambridge Scholars Publishing, 2019. - Б. ц. - Текст : электронный
4. **Jack Easley, Editor-Padraic Dixon, Editor-Nicole du Toit, Editor** Equine Dentistry and Maxillofacial Surgery / Jack Easley, Editor-Padraic Dixon, Editor-Nicole du Toit, Editor. - [Б. м.] : Cambridge Scholars Publishing, 2022. - **ISBN** 9781527576292 : Б. ц. - Текст : электронный.
5. Oral and Maxillofacial Surgery: Textbook, Part 1 / V.O. Malanchuk. – Vinnytsia: Nova Knyha Publishers, 2011. – P. 172-175. https://chirurgieomfio.usmf.md/wp-content/blogs.dir/109/files/sites/109/2017/09/Oral_and_Maxillofacial_Surgery_E-Book.pdf

Evaluation and grading:

Monitoring progress is carried by the end of each module (/written papers/oral examination/test/ /abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – “poor”, 70-79 – “satisfactory”, 80-89 – “good”, 90-100 – “excellent”.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Grading Criteria tests:
The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Grading Criteria Situational tasks and questions:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.
Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

Example of examination card.
Examination card No. 1
1. Odontogenic Osteomyelitis Definition. classification, pathogenic etiology, clinical picture, diagnosis, treatment.

2. Clinical and laboratory stages of manufacturing prostheses with an obturator for defects of the upper jaw.

3. The choice of the method of anesthesia for outpatient dental interventions in children.

Examination card No. 2

1. Arthrosis of temporomandibular joint. Classification .Clinical Presentation. Treatment.
2. Goals and objectives of maxillofacial orthopedics.
3. Trauma of permanent teeth in childhood. Classification. Diagnostics. The choice of treatment method.

Examination card No. 3

1. Arthrosis of temporomandibular joint. Classification .Clinical Presentation. Treatment.
2. The splints thet using for the treatment of jaw fractures. Overlay technique, Tigerstedt splint.
3. Congenital cleft lip. Diagnostics. Methods of surgical treatment. Rehabilitation.

Evaluation of the exam

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Evaluation of the final (rating) grade is made up of module grades (maximum 100 points per module), the current grade (maximum 10 points), and the grade obtained at the credit (maximum 100 points).
Assessment and assessment criteria:
0-69 (unsatisfactory):
- Lectures:
Failure to attend lectures or a large number of absences
Absence of lecture notes
Unsatisfactory behavior during lectures
- Practical classes:
Failure to attend practical classes or a large number of absences.
Wrong answer or refusal to answer
Lack of activity in class
Low level of mastery of the material.
- Independent work:
Self-work assignments are not completed, or there are numerous errors or a high percentage of plagiarism.
Lexical, grammatical errors in assignments.
70-79 (satisfactory):
- Lectures:
Attendance in most lectures
Partial absence of lecture notes/incomplete lecture notes
-Practical classes:
Attendance of most of the practical classes
Correct but insufficient response
Weak activity in class
Low level of mastery of the material.
- Independent work:
oSelf-work assignments are completed but with errors or average borrowings
Lexical, grammatical errors in assignments.
80-89 (Good):

- Lectures:
Attendance at all lectures, excused absences only
Availability of notes for all lectures
- Practical classes:
Attendance at all practicum sessions, absences only for valid reasons
Correct, sufficient answer.
Average activity in class
Average level of mastery of the material.
- Independent work:
Self-work assignments are completed mostly without errors and with little borrowing.
Lexical, grammatical errors are absent.
90-100 (excellent):
- Lectures:
Attendance at all lectures, absences only for valid reasons
Detailed notes of all lectures are available
- Practical classes:
Attendance of all practical classes, absences only for valid reasons
Regular correct answers, including the use of additional literature
High level of activity in the class
Fluent level of mastery of the material.
- Independent work:
Self-work assignments are completed without errors or borrowings
Lexical and grammatical errors are absent.

MAXILLOFACIAL SURGERY: MODULE "PEDIATRIC MAXILLOFACIAL SURGERY"

Teachers: Dilya Gainullina,
Building, Department, classroom # NUK, Department of pediatric dentistry, Yamasheva, 52
Contacts: Telephone number: 89376162167 (Dilya Gainullina)
Course: 4, 5
Semester: 7,8,9,10

- E-mail address: dilya.gainullina@mail.ru
- Office and working hours:
- **Class hours:**
- Total hours — 180 hours:
- - Lectures 30 hours;
- - Practical classes 78 hours;
- independent study - 60 hours

Exam 10 semester - 12 hours
Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline

The goals of mastering the **oral maxillary facial surgeon** discipline are the purpose of the course is training in the diagnosis of diseases of the maxillofacial region in children, correct diagnosis, treatment and prevention

Tasks of the discipline:

Identify general and specific signs of dental diseases;
Interpret the results of the initial examination of patients;
Interpret the results of re-examination of patients;
Justify the need and scope of laboratory research;
Justify the need and scope of instrumental research;
Conduct a general clinical examination of children and adults;
Interpret the results of collecting information from patients
Interpret laboratory data;
Interpret instrumental research data;
Provide emergency and emergency medical care;
Prescribe drug therapy for diseases in accordance with existing medical indications, taking into account the pharmacodynamics and pharmacokinetics of drugs;to prepare a dentist, with the formation of theoretical foundations and practical skills, to carry out therapeutic, diagnostic, preventive, advisory and organizational work in the scope of providing outpatient care to children with major surgical dental diseases, as well as diseases and injuries of the maxillofacial area.
students' mastery of diagnostic methods used in examining children with injuries and diseases of the maxillofacial area;
- formation in students of theoretical and practical skills in the surgical treatment of children with injuries and diseases of the maxillofacial area in outpatient settings.
- **Course topics:**

7 semester.
A total of hours
Course: 4
Semester: 7.
Lectures hours 6
Practical (seminar workshops) classes hours 12

Calendar plan of lectures 7 semester

1 Methods of local and general anesthesia in children.
2 Methods of tooth extraction in children
3 Features of the course of odontogenic inflammatory processes in children. Inflammatory processes of soft tissues

Calendar plan of laboratory classes 7 semester

1 Methods of local and general anesthesia in children.
Methods of general and local anesthesia and local anesthesia during outpatient dental surgery in children, indications and contraindications, features of the procedure. Premedication. Emergency conditions in outpatient dental practice.

2 Methods of tooth extraction in children
Tooth extraction surgery in children: indications and contraindications, features of removal of temporary teeth, complications and methods of preventing them. Tactics of a dentist in the presence of supernumerary and impacted teeth in children.
3 Features of the course of odontogenic inflammatory processes in children. Inflammatory processes of soft tissues

Control

Calculate the dosage of local anesthetic for a 4-year-old child weighing 20 kg. what anesthetic is allowed to be used at this age.

8 semester.
A total of hours
Course: 4
Semester: 8.
Lectures hours 6
Practical (seminar workshops) classes hours 16

Calendar plan of lectures 8 semester

1 Periodontitis and periostitis of the jaws in childhood.
2 Odontogenic osteomyelitis of the jaws in childhood
3 Hematogenous osteomyelitis of the jaws in childhood

Calendar plan of laboratory classes 8 semester

1 Periodontitis and periostitis of the jaws in childhood.
Etiology, pathogenesis, clinical picture of acute and chronic periodontitis. Indications for surgical treatment. Etiology, pathogenesis, clinical picture of acute and chronic periostitis of the jaws in children of different ages. Treatment, indications for hospitalization.
2 Odontogenic osteomyelitis of the jaws in childhood
Etiology. Theories of the pathogenesis of odontogenic osteomyelitis of the jaws. Clinical picture of acute and chronic osteomyelitis of the jaws in children of different ages. X-ray features of the course of osteomyelitis of the jaws. Complex treatment. Indications and timing of hospitalization for children.
3 Hematogenous osteomyelitis of the jaws in childhood
Etiology and pathogenesis of non-odontogenic osteomyelitis of the jaws in children. Features of the clinical course in different periods of childhood. Clinical and radiological features of the course of inflammatory processes. Treatment methods. Rehabilitation of patients with non-odontogenic osteomyelitis of the jaws.
4 Anatomical and physiological characteristics of the child's body. Etiology and pathogenesis. Features of the course of odontogenic inflammatory processes in children. Inflammatory processes of soft tissues of the face: lymphadenitis, abscess, phlegmon. Features of diagnostics. Types of basic and additional methods of examining children with inflammatory diseases of the maxillofacial area.

Control

Task 3

The child is 4 years old. Complaints about the presence of a fistula in the area of the 55th tooth. Objectively, the face is symmetrical, the skin is physiologically colored, the opening of the

mouth is free, painless, the mucous membrane along the transitional fold in the projection of the 55 tooth is moderately edematous, the fistula is determined. 55 tooth - there is a deep carious cavity, dentin is pigmented, softened, probing, percussion, reaction to thermal stimuli is painless. On the X-ray, the bone tissue is rarefied in the projection of the root tips of the 55 tooth with uneven fuzzy edges measuring 0.6 by 0.7 cm.

Make a diagnosis
Write a dental formula for a child of this age
Describe the treatment
Perform a differential diagnosis

9 semester.
A total of hours
Course: 5
Semester: 9.
Lectures hours 10
Practical (seminar workshops) classes hours 25

Calendar plan of lectures 9 semester

1. Odontogenic inflammatory cysts in children.
2. Acute mumps. Parenchymal and interstitial sialadenitis.
3. Trauma of soft tissues and teeth of the maxillofacial area in children.
4. Etiology, pathogenesis, classification of TMJ diseases in children
5. Primary bone and functional injuries of the TMJ

Calendar plan of laboratory classes 9 semester

1 Odontogenic inflammatory cysts in children.
Odontogenic inflammatory cysts of the jaw bones in children. Etiology. Pathogenesis. X-ray features. Clinical course. Treatment methods. Indications and contraindications for cystectomy and cystotomy. Causes of relapses. Possible complications.
2 Acute mumps. Parenchymal and interstitial sialadenitis.
Classification of diseases of the salivary glands in children. Acute mumps of the newborn, acute mumps, chronic parenchymal mumps.
Salivary stone disease. Etiology, pathogenesis, clinical picture, diagnosis, treatment, possible complications.
3 Trauma of soft tissues and teeth of the maxillofacial area in children.
Dislocations and fractures of teeth in children: treatment, immobilization methods.
Bruises and fractures of facial bones in children, methods of fixation of bone fragments, healing time of fractures, possible complications and methods of preventing them. Causes of damage to soft tissues of the oral cavity and face in children.
4 Etiology, pathogenesis, classification of TMJ diseases in children
Goals and objectives of orthodontic treatment, methods of preventing the development of osteoarthritis and ankylosis.
Etiology, pathogenesis, clinical manifestations.
Additional examination methods (electromyography, axiography, TMJ tomography). Diagnostics, treatment, prevention
5 Primary bone and functional injuries of the TMJ

Control

1. A characteristic type of injury to primary teeth is: -1) root fracture

- 2) tooth dislocation
- 3) tooth bruise
4) crown fracture
- 5) true 1) and 4)

2. In the coming hours after injuries to the tongue, soft palate, and tissues of the floor of the mouth, the child's life is endangered by:
- 1) speech disorder
2) eating disorder
- 3) asphyxia
- 4) tetanus
5) 1) and 2) are true

10 semester.
A total of hours
Course: 5
Semester: 10.
Lectures hours 8
Practical (seminar workshops) classes hours 25

Calendar plan of lectures 10 semester

1 Anomalies of attachment of the frenulum of the oral cavity, types of surgical treatment
2 Congenital cleft lip and palate. Congenital syndromes involving the maxillofacial region. Congenital cysts and fistulas of the face and neck.
3 Tumors and tumor-like conditions of soft tissues of the maxillofacial region in children.
4 Tumors and tumor-like conditions of the jaw bones in children.

Calendar plan of laboratory classes 10 semester

1Anomalies of attachment of the frenulum of the oral cavity, types of surgical treatment
congenital pathology of the oral mucosa: anomalies in the attachment of the frenulum and tongue, small vestibule of the oral cavity. Types of outpatient operations. Types of suture material. Method of suturing for various operations.
2 Congenital cleft lip and palate
Causes of disturbances in the embryonic development of the face and jaws. Congenital malformations, their types.
Congenital facial clefts: causes and mechanism of formation, types, prevalence. Methods and timing of surgical treatment. Positive and negative aspects of various methods of surgical treatment of patients with congenital malformations of the maxillofacial area.
3 Congenital syndromes involving the maxillofacial region. Congenital cysts and fistulas of the face and neck.
Congenital syndromes involving the maxillofacial region. Medical genetic counseling. Congenital cysts and fistulas of the face and neck. Dermoid, epidermoid cysts. Epithelioma of Malherbe. Clinic. Diagnostics. Methods of surgical treatment.
4 Tumors and tumor-like conditions of soft tissues of the maxillofacial region in children.
5 Tumors and tumor-like conditions of the jaw bones in children.
Benign and malignant tumors of soft tissues of the face and oral cavity in children. Classification, clinical picture, diagnosis. Tumors and tumor-like processes of the salivary glands in children.
Benign and malignant tumors of the facial bones in children. Odontogenic formations - cysts, odontogenic tumors of the jaws.
Tumors and tumor-like processes of the facial bones in children, clinical picture, features of the course. Odontogenic and non-odontogenic tumors of the jaw bones in children of different ages.

Diagnostic methods. Methods of surgical treatment and indications for them. Oncological alertness of the pediatric dentist.

Text books and required supplies:

1 Dentistry for children. Surgery [Text]: textbook / [S. IN. Dyakova, O.Z. Topolnitsky and others] ; edited by S.V. Dyakova. - M.: Medicine, 2009. - 381, [3] p. : figure, table, 1 l. portrait ; 25 cm - (Educational literature for students medical universities). - Bibliography: p. 381. - 3000 copies. – ISBN 5225-03431-4: 1300.00 rub. (Code 616.31 C 81)

2 Propaedeutics of surgical dentistry: textbook. allowance /M. M. Soloviev. - Moscow: MEDpress-inform, 2017. - 272 p.

3 Pediatric dentistry. Part 2. Surgery [Electronic resource]: textbook / O.Z. Topolnitsky [and others].- M.: GEOTAR-Media, 2016. – 320 p. http://www.studentlibrary.ru/book/ISBN9785970435533.html

4 Local anesthesia in dentistry [Electronicresource] / Bazikyan E.A., Volchkova L.V., Lukina G.I., Karpova V.M., Golovin K.I., Mamedov S.S., Shestakova S.S., Goncharov I.Yu., Zhuruli G.N., Bazikyan O.A. - M.: GEOTAR Media, 2014. http://www.studmedlib.ru/book/ISBN9785970430958.html

5 Pediatric maxillofacial surgery. Collection illustrated clinical tasks and tests [Electronic resource] / ed. O.Z. Topolnitsky, A.P. Gurgenadze - 2nd ed., revised. and additional - M.: GEOTAR-Media, 2015176s. http://www.studentlibrary.ru/book/ISBN9785970433522.html

6 Pediatric maxillofacial surgery. Guide topractical classes [Electronic resource] / ed. O.Z.Topolnitsky, A.P. Gurgenadze - M.: GEOTAR-Media,2015. -168 p. http://www.studentlibrary.ru/book/ISBN9785970433539.html

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful

- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of module

Test assignments or other materials necessary for assessing knowledge, abilities, skills and (or) experience that characterize the stages of developing competencies in the process of mastering the educational program

To evaluate learning outcomes in the form of knowledge, the following types of control are used tests:

1. Curettage of the hole when removing a temporary tooth is carried out
not carried out (+)
Always
when removing a single-root tooth
when removing a lot of root teeth
with effective pain relief
2. For children aged four to five years, the most typical type of injury is
tooth dislocation (+)
tooth fracture at crown level
tooth root fracture
jaw fracture
dislocation of the temporomandibular joint

Evaluation criteria:

The test score is given in proportion to the percentage of correct answers:
90-100% - “excellent” rating
80-89% - “good” rating
70-79% - “satisfactory” rating
Less than 70% of correct answers are rated “unsatisfactory.”

Level 2 – skill assessment

To assess learning outcomes in the form of skills, the following types of control are used:
– report (thesis of an oral communication).

Topics of the report:

1. Fibrous dysplasia – manifestations in the maxillofacial area.
2. New methods of treatment of vascular malformations of the maxillofacial region.
3. Methods of surgical treatment of abnormalities of the oral mucosa in children.

Evaluation criteria:

An “excellent” grade is given if the student scores 90% of the maximum score.
A “good” grade is given if the student scores 80-90% of the maximum score.
A “satisfactory” grade is given if the student scores 70–80% of the maximum score.
The grade “unsatisfactory” is given if the student scores less than 69% of the maximum score.

Level 3 – skills assessment

To assess learning outcomes in the form of skills, the following types of control are used:
– situational tasks:

Situational task No. 1
Child V., 6 years old.

According to the mother, the child was born on time. Birth weight 3300 g. The photograph shows the upper part of the oral cavity itself.

Questions and tasks:
Describe st. localis (see figure).
Make a diagnosis.
Indicate the possible causes of this pathology and the time of their impact.
List the functional disorders associated with this pathology.
Make a plan for comprehensive treatment and rehabilitation of the child.

DENTISTRY

Teachers: Proff. Mubarakova Larisa, assistant lecturerGuzel Gubadullina
Building, Department, classroom Department maxillofacial surgery and dental surgery. Chuikova str. 54, 5 floor, Kazan, Hospital 7, Simulation Dental Polyclinic of KSMU, Amirhana, 16, Kazan.
Contact details:

- Telephone number: 89600381036 (Mubarakova Larisa)
- E-mail address: mubarakova@yandex.ru
- Telephone number: 89874032773 (Guzel Gibadullina)
- E-mail address: ggilmanova-dentist@yandex.ru

- **Class hours:**
- **Course: 3, 4, 5**
- **Semester: 5, 6, 7, 8, 9, 10**
- **Total hours — 516**
- **- Lectures 76 hours;**
- **- Practical classes 216 hours;**
- **- Independent work 215 hours;**
- **Exam 10 sem. – 9 hours**

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2500).

Course objectives: The purpose of mastering the discipline

The main purpose of the course is to introduce the discipline of periodontology and its principles to the students. It covers the structure and function of periodontium in state of health and disease. It also provides the students with the required knowledge of etiology, pathogenesis, diagnosis and management plans of periodontal diseases. The course also ascertains major clinical management concepts and treatment options, re-evaluation and prevention strategies for common periodontal diseases. Also, the objectives of the course include: to form a concept of the anatomy of the TMJ and its biomechanics. Symptoms of different variations of TMJ pathology and treatment methods.

Tasks of the discipline:
- to know the methods and means of local anesthesia;
- to know about new methods and means of combined anesthesia in outpatient dental practice;
- to know how to use different methods of anesthesia in patients with concomitant pathology;
- be able to provide emergency medical care in the conditions of outpatient dental reception.
- to know the principles of organization of the department of surgical dentistry;
-to know the diagnostic methods used in the examination of patients with various inflammatory processes localized in the oral cavity;
- to know the methods of treatment of various pathological processes localized in the oral cavity;
- possess practical skills necessary for the treatment of inflammatory processes localized in the oral cavity;
- be able to treat patients with various inflammatory processes in outpatient and polyclinic conditions
- mastering the algorithm of diagnostics, planning and predicting the results of implantologic treatment;
- study of surgical techniques of implantologic treatment;
- study of approaches to prevent complications of implantologic treatment;
- study of indications for reconstructive interventions in preparation for dental implantation.
- Familiarization with orthognathic operations;
- mastering the methods of rendering assistance to patients with defects and deformations of tissues of the maxillofacial region in outpatient and polyclinic conditions;
- familiarization with methods of rehabilitation of patients with defects and deformations of tissues of the maxillofacial region;

- **Class hours:**
- **Course: 3**
- **Semester: 5**
- **Total hours — 86 hours;**
- **- Lectures -10 hours;**
- **- Practical classes 32 hours;**
- **- Independent work 44 hours;**

Course topics:

Calendar plan of lectures 3course 5 semestr

1. The subject and content of the disciplines of surgical dentistry. Organization of the Department of surgical dentistry. Examination of patients with pathology of the mouth and throat.
2. General anesthesia. Conscious sedation techniques. Local anesthetics used for local anesthesia. The pharmacologic and clinical properties of the classes of drugs known as local anesthetics and vasoconstrictors. The armamentarium for the administration of local anesthetics. Complications of anesthesia. Preventive meaures that are deemed necessary before surgery for a patient with a concomitant disease.
3. Techniques of Maxillary Anesthesia. Techniques of Mandibular Anesthesia.
4. Tooth extraction operation indications and contraindications. The stages of the tooth extraction operation are the technique of removing teeth and roots on the upper jaw. Tools. Features of tooth extraction surgery in people with concomitant diseases. The operation of a complex, atypical tooth extraction.
6. Local complications that occur during tooth extraction surgery. Prevention and elimination of complications. Complications that occur after tooth extraction. Early and late. Alveolitis. Prevention and methods of their elimination.

Calendar plan of classes 3course 5 semestr

1. Organization of a surgical department and an office in a dental clinic. Asepsis and antiseptics during operations on the face and in the oral cavity. Prevention of acquired immune deficiency syndrome (AIDS) and viral hepatitis.
2. Examination of the patient in the surgical department and the office of the dental clinic. Deontology and medical ethics.
3. Local anesthetics and medications used for local anesthesia. Types of local anesthesia. Anesthesia for surgical interventions on the upper jaw. Anesthesia for surgical interventions on the lower jaw.
4. General anesthesia. Indications and features of general anesthesia during operations on the face and in the oral cavity. Local complications with local anesthesia. Reasons. Diagnosis, treatment. Prevention. Common complications with local anesthesia. Reasons. Diagnosis, treatment. Prevention.
5. Tooth extraction operation. Indications and contraindications. The technique of removing teeth and roots on the upper and lower jaw. Tools. Wound healing after tooth extraction.
7. The technique of complex and atypical extraction of teeth and their roots. Features of tooth extraction in people with concomitant diseases.
8. Complications that occur during tooth extraction. Complications arising after tooth extraction Causes, diagnosis, treatment, prevention.

Example of Module Local Anesthesia and Anesthesiology in Dentistry.
Test.

Posterior superior alveolar (dental) block takes care of
- the first premolar, second premolar,
- the first molar, second molar, third molar and the mucous membrane of the alveolar process and cheeks of the vestibular region in the projection of these teeth
- the central incisor, lateral incisor, canine
- the mucous membrane of the alveolar process and cheeks of the oral region in the projection of the central incisor, lateral incisor, canine
- the central incisor, lateral incisor, canine and the mucous membrane of the alveolar process and cheeks of the oral region in the projection of these teeth

Which teeth are anesthetized during posterior superior alveolar (dental) the block?
- molars of the upper jaw
- premolars of the upper jaw
- molars and premolars of the low jaw
- molars of the low jaw

- premolars of the upper jaw

What are the ester local anesthetics?
- cocaine, procaine
- benzocaine
- tetracaine
- chloroprocaine
- **all the answers are correct**

Situational tasks. Module Local Anesthesia and Anesthesiology in Dentistry

1. Choose an anesthetic method for tooth 1.2
2. Choose an anesthetic method for tooth 3.6
3. Choose an anesthetic method for tooth 2.8

Example of Oral Surgery Module.
Test.

All patients having third molars (particularly lower) removed will have:
- **Some pain or discomfort**
- Root canal treatment
- Abscess.
- Sinusitis
- tonsillitis

Mandibular dentoalveolar abscess arise mainly from;
- the canine of upper jaw
- the last molar of the upper jaw
- **extraction of tooth 3.6**
- extraction of tooth 2.4
- extraction of tooth 1.2

Dentoalveolar abscess is:
- inflammation of jaw bones
- caries development of the tooth
- **abscess development under the periosteum**
- no right answer
- damage to the tongue

EVALUATION OF THE MODULE ANSWER

The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Situational tasks.
Module Oral Surgery Module.

1. Choose the instrument for tooth extraction1.2
2. Choose the instrument for tooth extraction3.6
3. Choose the instrument for tooth extraction2.8

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded

if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.
Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

- **Class hours:**
- **Course: 3**
- **Semester: 6**
- **Total hours — 62 hours;**
- **- Lectures 6 hours;**
- **- Practical classes 26 hours;**
- **- Independent work 30 hours;**

Calendar plan of lectures 3course 6 semester

1. Odontogenic inflammatory diseases of the jaws. Classification, etiology, pathogenesis, pathological anatomy. Acute and chronic periodontitis. Etiology, pathogenesis, clinic, diagnosis, treatment.
2. The principle of treatment periapical inflammation. Apical surgery.
3. Classification of Impacted Teeth. Methods of Surgical Extraction of Impacted Teeth.

Calendar plan of classes 3course 6 semester

1. Odontogenic inflammatory diseases of the jaws. Classification, etiology, pathogenesis, pathological anatomy.
2. Periodontitis. Classification. Pathological anatomy. Acute periodontitis. Clinic, diagnosis, treatment. Chronic periodontitis. Clinic, diagnosis, Differential diagnosis.
3. Surgical methods for the treatment of chronic periodontitis. Root apex resection, hemisection, root amputation. The operation of tooth replantation and implantation. Indications and contraindications. Preparation and stages of the operation, complications
4. Acute odontogenic periostitis of the jaws. Pathological anatomy. Clinic, Diagnosis, differential diagnosis, treatment.
5. Teething diseases. Reasons. Clinic, diagnosis, treatment. Difficult eruption of the third lower molar. Clinic, diagnosis, Complications of difficult eruption of wisdom teeth, treatment.

Example of Oral Surgery Module.

Test.

1. Clinical features of periapical periodontitis?
1) pulpitis in anamnesis tender to percussion, localised, severe throbbing pain *
2) body temperature 38 C
3) vomiting
4) swelling of half of the face
5) no right answer

2. What are the causes of apical periodontitis?
1) microbial, trauma, chemical*
2) only microbial
3) electrical
4) no right answer
5) all answer

3. Odontogenic microbiology:
1) normal indigenous bacteria, polymicrobial*
2) no right answer
3) only fungi
4) only rods
5) isolated

EVALUATION OF THE MODULE ANSWER

The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Situational tasks Oral Surgery Module.

Situational task 1.

After treatment of 16 by the methods of necrotizing pulp (acute diffuse pulpitis) in 48 hours (in two days) after arsenic paste application the patient suffers from pain, which appears at biting on the tooth and also painful sensation in the intradental space. At examination: bandage on 16 is preserved, horizontal and vertical percussion of 16 is painful. The gingival papilla between 16 and 17 has dark staining, painful at palpation. Form a diagnosis. Your tactics.

Situational task 2

The patient,reffered to the dentist after objective examination, had a diagnosis of acute purulent periodontitis 15. Your tactics.

Situational task 2

A 37-year-old patient complains of the upper lip deformation. Tooth 21 is intact, the crown has changed its color. There was a trauma earlier. Roentgenogram shows a bone resorption focus with rounded margins of 2 cm size in the projection of root apex 21. Diagnosis: radicular cyst of the upper jaw in 21. What is the doctor's tactics? Substantiate the plan of treatment.

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded

if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.
Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

- **Class hours:**
- **Course: 4**
- **Semester: 7**
- **Total hours — 52 hours;**
- **- Lectures 8 hours;**
- **- Practical classes 16 hours;**
- **- Independent work 28 hours;**

Calendar plan of lectures 4course 7 semestr

1. Acute and chronic odontogenic periostitis: etiology, pathogenesis, pathologic anatomy. Clinic, diagnosis, treatment.
2. Odontogenic osteomyelitis: etiology, pathogenesis, pathologic anatomy. Acute stage of odontogenic osteomyelitis: clinic, diagnosis, treatment. Chronic stage
3. Differential diagnosis of acute periodontitis, periostitis and odontogenic osteomyelitis of the jaws.
4. Lymphadenitis of the face and neck. Clinic of acute lymphadenitis. Diagnosis, differential diagnosis. Treatment. Furuncle. Carbuncle. Carbuncle inflammation/

Calendar plan of classes 4course 7 semestr

1. Etiology and pathogenesis of odontogenic inflammatory diseases. Classification of inflammatory diseases of the maxillofacial region. Immunobiological features of tissues of the maxillofacial region. The effect of antibacterial resistance of oral tissues on the development of odontogenic infection. Ways of spreading odontogenic infection. Causes of exacerbation of chronic odontogenic infection. Odontogenic osteomyelitis of the jaws. Classification. Etiology. Modern ideas about pathogenesis, pathological anatomy. Acute stage of osteomyelitis of the jaws. Clinic, diagnosis, differential diagnosis, treatment.
2. Subacute and chronic stages of odontogenic osteomyelitis of the jaws. Clinic, diagnosis, differential diagnosis, treatment. Differential diagnosis of acute periodontitis, periostitis, osteomyelitis of the jaws.

3. Odontogenic sinusitis. Pathogenesis. Classification. Clinic, diagnostics, differential diagnostics. Methods of conservative and surgical treatment of odontogenic sinusitis. Perforation and fistula of the maxillary sinus. Reasons. Clinic, diagnostics, doctor's tactics, treatment.
4. Acute lymphadenitis of the face and neck. Classification. Clinic, diagnosis, differential diagnosis, treatment. Chronic lymphadenitis. Clinic, diagnosis, differential diagnosis, treatment. Manifestations of HIV infection in the maxillofacial region.

Example of Oral Surgery Module.

Test.

1. Complications of mandibular dentoalveolar abscess is:
1) phlegmon, neck & mediastinal involvement*
2) cancer
3) furuncle
4) pleurisy
5) all of the above.

2. How can dentoalveolar abscess be treated:
1) extraction of the jaw
2) replacement of the jaw
3) antibiotic therapy, extraction of tooth, drainage of fluid in subperiosteal space and clean with antiseptics*
4) only antibiotic therapy
5) only surgical

3. Dentoalveolar abscess can be managed by:
1) dental therapist
2) dental surgeon *
3) ear, nose and throat doctor
4) dental orthopedist
5) all of the above

EVALUATION OF THE MODULE ANSWER

The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Situational tasks Oral Surgery Module..

1. A 19-year-old patient complains on staining tooth 21. In anamnesis there was a trauma of frontal 12, 11, 21, 22 dental groups. The teeth are intact. Percussion is painful. The mucous membrane above 21 has cyanosis staining. Roentgenogram shows a bone resorption focus with rounded margins of 0,5 x 0,5 cm size in root apex 21. Your diagnosis. Your plan of treatment.

2. The patient refers to the doctor, pursuing an objective of mouth sanation. After analizing anamnesis a diagnosis is formed: chronic granulating periodontitis 46. In anamnesis it is pointed out, that the patient has polyarthritis, the patency of medial canals is poor. What methods of treatment can be used in this case to attain rehabilitation?

3. A 20-year-old student complains of long pulsating pains in the tooth on the low jaw to the left, which irradiate to the ear, temple. Malaise, headache, sleep disturbances are marked. The tooth has been aching during 3 days. It used to hurt earlier, too. A week ago the patient

endured acute respiratory disease (ARD). Objectively: the mouth is half open, tooth 24 is mobile, there is a deep carious cavity on the masticatory surface, not communicating with the dental cavity. Percussion is painful. Roentgenogramm shows thinness (rarefaction) of bone tissue with obscure margins of 0,2 x 0,3 cm size, in root apex 24.Ennumerate diseases, concerning the symptomatology.Name a probable diagnosis. Choose all the essential data from the task, confirming the diagnosis. Indicate medical measures, necessary to be carried out at the first visit.

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.

Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

- **Class hours:**
- **Course: 4**
- **Semester: 8**
- **Total hours — 48 hours;**
- **- Lectures 10 hours;**
- **- Practical classes 22 hours;**
- **- Independent work 16 hours;**

Calendar plan of lectures 4course 8 semestr

1. Odontogenic maxillary sinusitis. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis. Methods of conservative and surgical treatment.
2. Specific inflammatory diseases of the head, neck and jaw region. Actinomycosis. Etiology, pathogenesis, clinic, diagnostics, differential diagnostics, treatment.
3. Anatomy and physiology of salivary glands. Classification of salivary gland diseases. Methods of research of salivary glands. Malformations of salivary glands development. Inflammations of salivary glands. Reactive-dystrophic diseases of salivary glands (sialoadenosis). Etiology,

pathogenesis, pathologic anatomy, clinical picture, treatment. Guger-Shegren's syndrome, Mikulich's disease (syndrome).
4. Inflammations of salivary glands. Acute sialoadenitis. Chronic sialoadenitis (interstitial and parenchymatous). Salivary stone disease. General information, etiology, pathogenesis, clinical picture, diagnosis, treatment.
5. Cysts and tumors of salivary glands. Etiology, pathogenesis. Cysts of small salivary glands. Cyst of hyoid salivary gland (ranula). Cysts of parotid and submandibular glands.

Calendar plan of classes 4course 8 semestr

1. Specific inflammatory processes of the face, neck and jaw region. Actinomycosis. Etiology, pathogenesis. Classification. Clinic, diagnostics, differential diagnostics. Treatment of actinomycosis of the face, neck and jaws. Tuberculosis, syphilis of the face, neck and jaw region. Peculiarities of clinic. Diagnosis. Treatment.
2. Furuncle, carbuncle of the face. Carbuncle inflammation
3. Anatomy and physiology of salivary glands. Classification of salivary gland diseases. Methods of research of salivary glands. Malformations of salivary glands. Inflammations of salivary glands. Acute sialadenitis. Chronic sialadenitis (interstitial and parenchymatous. Reactive-dystrophic diseases of salivary glands (sialadenosis). Etiology, pathogenesis, pathologic anatomy, clinical picture, treatment. Guger-Shegren's syndrome. Mikulich's disease (syndrome)
4. Inflammations of salivary glands. Acute sialadenitis. Chronic sialadenitis (interstitial and parenchymatous).
5. Salivary stone disease. General information, etiology, pathogenesis, clinical picture, diagnosis, treatment. Complications after surgical treatment. Damage of salivary glands. Salivary fistula. Constriction (stricture) of the duct. Closure of the salivary duct. Traumatic cyst of the salivary gland (salivary tumor). Treatment of salivary gland injuries.

Example of Oral Surgery Module.

Test.

1. WHICH FORMS OF SALIVARY STONES ARE MORE OFTEN FOUND IN THE DUCTUS GLANDUS:
    1) elongated; +
    2) rounded.
    3) stellate.
    4) circular.
    5) rhomboidal.

2. WHICH FORMS OF SALIVARY STONES ARE MORE OFTEN FOUND IN THE PARENCHYMA OF THE GLAND:
    1) elongated;
    2) rounded. +
    3) star-shaped.
    4) circular.
    5) rhomboidal.

3. WHAT COMPLAINTS INCLUDE SYMPTOMS OF "SALIVARY COLIC" ?:
    1) swelling and irradiating pain in the salivary gland, and a feeling of tumescence, appearing during meals; +
    2) contraction of the salivary gland, which is accompanied by a sharp increase in salivary secretion;
    3) contraction of the salivary gland, which is accompanied by a decrease in salivation.
    4) pain in the TMJ area
    5) pain on an empty stomach

EVALUATION OF THE MODULE ANSWER

The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Situational tasks Oral Surgery Module..

1. A 34-year-old woman presents with bilateral face swelling for 6 months. She has a history of dental caries, oral candidiasis and dry eyes. She denies history of diabetes. She does not drink alcohol nor smoke cigarette. Physical examination reveals mild nontender swelling of both parotid. No lymphadenopathy is noted. Her oral mucosa is unremarkable. Her conjunctiva has dilated vessels with reduced tear production by Schirmer test. Laboratory tests, including glucose and IgG4, are within normal range. Biopsy of the parotid reveals diffuse fibrosis, focal lymphocytic infiltrate and reduced number of acini. What is most likely the diagnosis?
A. Acute sialadenitis
B. IgG4 related dacryoadenitis and sialadenitis
C. Pleomorphic adenoma
D. Sjogren syndrome
E. Squamous cell carcinoma

2. A 34-year-old woman presents with bilateral face swelling for 6 months. She has a history of dental caries, oral candidiasis and dry eyes. She denies history of diabetes. She does not drink alcohol nor smoke cigarette. Physical examination reveals mild nontender swolling of both parotid. No lymphadenopathy is noted. Her oral mucosa is unremarkable. Her conjunctiva has dilated vessels with reduced tear production by Schirmer test. Laboratory tests, including glucose and IgG4, are within normal range. Biopsy of the parotid reveals diffuse fibrosis, focal lymphocytic infiltrate and reduced number of acini. What serum test is likely to be abnormal?
A. Anti-SSA
B. IgG4
C. IgE
D. Immunofixation
E. Rapid plasma reagin

3. A 5-year-old boy presents with a vesicle at his lower lip. His past medical history is unremarkable. Physical examination reveals a 0.5 cm vesicle with clear fluid contents. Biopsy reveals an intrastromal collection of mucin like material with neutrophilic infiltrations. No cytological atypia is seen. What is the diagnosis?
A. Bullous pemphigoid
B. Dermatitis herpetiformis
C. Herpes
D. Lichen planus
E. Mucocele

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student

correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.
Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

- **Class hours:**
- **Course: 5**
- **Semester: 9**
- **Total hours — 114 hours;**
- **- Lectures 16 hours;**
- **- Practical classes 53 hours;**
- **- Independent work 45 hours;**

Calendar plan of lectures 5course 9 semestr

1. Preprosthetic surgery
2. Surgical methods of treatment of periodontal diseases.
3. Regenerative methods of treatment of periodontal diseases.
4. Mucogingival Therapy: Periodontal Plastic Surgery
5. Introduction in Implants in Restorative Dentistry
6. Implants in the Posterior Dentition
7. Treatment Planning for Implant Therapy in the Periodontally Compromised Patient. Role of Implant–Implant- and Tooth–Implant-Supported Fixed Partial Dentures. Complications Related to Implant-Supported Restorations.
8. Peri-implant Infections. Trauma from Occlusion: Peri-implant Tissues. Peri-implant Mucositis and Peri-implantitis/

Calendar plan of classes 5course 9 semestr

1. Introduction to surgical paradontology. Examination of a patient with periodontal pathology. Modern methods of examination of patients with periodontal pathology.
2. Surgical methods for the treatment of periodontal tissue diseases. Surgical preparation of the oral cavity for orthopedic treatment. Features of the choice of surgical method depending on the nosological severity of the pathological process.
3. Curettage in the treatment of periodontal tissue diseases
4. Gingivotomy surgery in the treatment of periodontal tissue diseases
5. Flap operations in the treatment of periodontal tissues
6. Corrective surgery on the vestibule of the oral cavity in the treatment of periodontal diseases. Planning stages.

7. Bone regeneration in periodontal diseases.
8. Soft tissue augmentation in periodontal diseases.
9. Etiology and pathogenesis of changes in the TMJ in pathological processes in the dental system.
10. Diagnostic methods for TMJ diseases.
11. Surgical methods of treatment for TMJ diseases.

Example of clinical dentistry module.

Test.

1. Inflammatory changes in the soft tissue surrounding an implant is diagnosed as
1) peri implant gingivitis
2) peri implantitis
3) peri- implant mucositis*
4) peri-implantosis

2. Parodontal disease in diabetic patient follows
1) Consistent pattern
2) Distant pattern
3) Circadian pattern
4) No consistent pattern*
5) All the answers are wrong

3.Which of the following clinical indications most strongly suggests gingivitis has progressed to parodontitis?
1) Absence of stippling
2) Radiographic loss of alveolar bone *
3) Parodontal pocket formation
4) Ulceration of marginal and papillary gingiva
5) All the answers are wrong

Example of Implantology module.

Test.

1.Inflammatory changes in the soft tissue surrounding an implant is diagnosed as
a) peri implant gingivitis
b) peri implantitis
c) peri- implant mucositis
d) Peri-implantosis
2. A non invasive way of evaluating implant stability by impact resistance
a) periotest
b) trans gingival probing
c) bone sounding
d) probing
3.Most plausible factor for dental implant fracture
a) peri implantitis
b) Bending over loads
c) Non passive fit prosthesis
d) Manufacturing imperfections

Example of Gnathology and functional diagnosis of TMJ module.

Test.

1.TMJ is a
1) Fibrous joint

2) Hinge joint
3) Ball and socket joint
4) Diarthroidal and ginglymoidal joint *
5) All the answers are wrong

2. Initial clicking of TMJ while opening is due to
1) Lateral displacement of the condyle
2) Retruded condyle in respect to articular disc *
3) Protruded condyle in respect to articular disc
4) Perforated disc
5) All the answers are wrong

3. The joint cavity can be examined in detail without much surgical exposure by
1) Sialography
2) Arthroscopy *
3) Biopsy
4) Endoscopy
5) All the answers are wrong

EVALUATION OF THE MODULE ANSWER

The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Situational tasks of clinical dentistry module.

1.Mucogingival surgery Drawing up a treatment plan for a patient together with dentists, general practitioners and dentists, orthopedists. Preoperative patient preparation, choice of surgical treatment method. Operations within the free, attached gums and mucous membrane of the alveolar ridge (frenulotomy, plastic surgery of the short frenum of the lips and tongue, vestibuloplasty, closing of isolated gum recession): indications, surgical procedures, postoperative management of the patient. A comprehensive examination of patients with marginal periodontal disease caused by pathology of the frenum of the lips, vestibule of the oral cavity. Clinical analysis of patients. Demonstration of multimedia presentations. Interpretation of data from radiation research methods. Monitoring the progress of diagnostic tests and surgical interventions in the office of a dental surgeon.

2.Osteomongingival operations Drawing up a treatment plan for a patient with a disease of marginal periodontal disease together with dentists and therapists and dentists orthopedists. Preoperative preparation of patients with marginal periodontal diseases, choice of surgical treatment method. Operations on the gum, alveolar mucous membrane and on the bone tissue of the alveolar ridge (patch operations according to Widman; patchwork operations according to Neuman; modified patchwork operations according to Kirkland, Ramfiord, Nissle; operations apical displacement of the flap): indications, surgical procedures, postoperative patient management. Targeted tissue regeneration. Osteoinductive materials. Clinical analysis of patients. Interpretation of data from radiation research methods. Demonstration of multimedia presentations. Monitoring the progress of diagnostic studies and surgical interventions in the office of a dental surgeon.

3. **Surgical preparation of an oral cavity for prosthetics.**

Situational tasks of Implantology module

1. The goals of implantation.

2. Types of Implants
3. Indications for treatment of edentulous patients.

Situational tasks of implanthology and functional diagnosis of TMJ module.

1. A 19-year-old patient complained of severe limitation of mouth opening. A dentist cannot perform sanitation of the oral cavity. In early childhood he suffered osteomyelitis of the body of the lower jaw. Currently, the deformity of the lower part of the face is pronounced. Crossbite. Question: What pathology of TMJ can we think about?
2. A 32-year-old patient came to the clinic with complaints of pain when opening her mouth wide, clicking in the area of the temporomandibular joint and displacement of the lower jaw to the right. Objectively: the dentition is intact, the bite is orthognathic. History: 3 months ago traumatic extraction of tooth 4.8. Question: Make a diagnosis
3. A 35-year-old patient complained of pain in the area of the right temporomandibular joint (TMJ) and difficulty opening the mouth. The anamnesis revealed: has been ill for about 7 days, when pain appeared when opening the mouth and pain radiating along the mandibular nerve, she went to the clinic at her place of residence, where teeth 48 and 44 were removed for the purpose of sanitation. There was no improvement. Objectively, the skin and visible mucous membranes are clean and of normal color. Heart sounds are muffled and rhythmic. HELL – 120/80 mm Hg. Art. Pulse – 80 beats. per minute Vesicular breathing RR – 16 per minute. The abdomen is soft and painless. The liver is not enlarged. The spleen is not palpable. The symptom of tapping on both sides is negative. Stool and diuresis are not disturbed. Local status: facial contours are not changed. Opening the mouth is difficult and painful. Palpation in the area of the right TMJ is painful. When moving the lower jaw, a “crunching” and clicking sound is noted in the area of the right TMJ. Question: Justify the diagnosis.

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.

Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

- **Class hours:**

- **Course: 5**
- **Semester: 10**
- **Total hours — 145 hours;**
- **- Lectures 26 hours;**
- **- Practical classes 67 hours;**
- **- Independent work 52 hours;**

Calendar plan of lectures 5course 10 semestr

1. Features of the choice of surgical treatment depending on the nosology and severity of the process: Surgical Extractions of a Tooth.
2. Features of the choice of surgical treatment depending on the nosology and severity of the process: Periodontal Pathology.
3. Stages of planning plastic surgery in the Periodontal Pathology.
4. Decision-Making Criteria in Socket Management After Extraction. Immediate Postextraction Implant Placement.
5. Alveolar Ridge Preservation and Augmentation. Periodontal Plastic Surgery to Optimize Soft Tissues at Peri-implant Sites.
6. Periodontal Plastic Surgery to Optimize Soft Tissues at Peri-implant Sites.
7. Peri-implant Keratinized Tissue Augmentation. Esthetic Augmentation of Peri-implant Soft Tissue.
8. Peri-implant Soft Tissue Conditioning Using Restorations. Orthodontic Development for Implant Sites. Treatment of Esthetic Failures in Implant Dentistry.
9. Etiology and pathogenesis of temporomandibular joint (TMJ) changes in pathological processes in the dental system: Understanding the TMJ.
10. Specialty imaging in pathological processes in temporomandibular joint
11. Modalities Used at inflammatory TMJ Imaging
12. The use of Cone beam computed tomography imaging (CBCT) and Magnetic resonance imaging (MR) in the study of the non inflammatory disease TMJ.
13. Conservative and surgical methods of treatment of TMJ diseases

Calendar plan of classes 5course 10 semestr

1. Surgical techniques for dental implantation
2. Complications of implantation. Classification. Diagnostics and prophylaxis
3. Types of reconstructive interventions on jaw bones and technique of their performance
4. Corrective surgeries on fibrous tracts, frenulum of lips and tongue.
5. Corrective surgeries on fibrous tracts, frenulas of lips and tongue.
6. Directed osteogenesis in surgical methods of treatment of periodontal tissue diseases.3.
7. Directed osteogenesis in surgical methods of treatment of periodontal tissue diseases.
8. Directed osteogenesis in surgical methods of treatment of periodontal tissue diseases.
9. Inflammatory diseases of the TMJ.
10.Non-inflammatory TMJ disorders.
11. Conservative and surgical methods of treatment of TMJ disorders.
12. Diagnosis and implantation planning.
13. Instruments for implantation

Example of clinical dentistry module.

Test.

1. What is the length of Junctional epithelium?
1) 0.25 - 1.35 mm*
2) 0.2 - 1 mm
3) 0.5 - 2 mm

4) 1- 3 mm
5) All the answers are correct

2. Which of the following are non-keratinized ?
1) Interdental col *
2) Junctional epithelium
3) Sulcular epithelium
4) All the answers are correct
5) All the answers are wrong

3. Which of the following cells serve as “Tactile receptors”?
1) Langerhans cells
2) Melanocytes
3) Merkel cells *
4) Keratinocytes
5) All the answers are wrong

Example of Implantology module.

Test.

1.First implant system developed by
a) Noble biocare branemark
b) Noble biocare steri oss
c) ITI – strauman
d) Astra
2.The minimum mesiodistal space required for the placement of two standard diameter implants between teeth is
a) 8mm
b) 20mm
c) 10 mm
d) 14 mm
3.hydroxyapatite coating of dental implants was introduced by
a) Deroot
b) Hahn and polich
c) Kay
d) Clemow

Example of Gnathology and functional diagnosis of TMJ module.

Test.

1. Unilateral TMJ ankylosis is associated with the following features, except
1) Multiple carious teeth
2) Facial asymmetry with fullness on the normal side of the mandible *
3) Chin deviated towards the affected side
4) Prominent antegonial notch on the affected side
5) All the answers are wrong

2. Frequent dislocation of TMJ is due to
1) Spasm of muscles of mastication
2) The articular eminence being smaller *
3) Decreased freeway space
4) All of the above
5) All the answers are wrong

3. Commonest cause of TMJ ankylosis is
1) Trauma *
2) Developmental disturbances
3) Infections
4) Atrophy
5) All the answers are wrong

EVALUATION OF THE MODULE ANSWER

The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Situational tasks of clinical dentistry module.

1. Patient Z., 18 years old, complains of tissue growth in the 4.6 tooth, pain and bleeding when eating. Objectively: on the chewing surface of the 4.6 tooth there is a deep carious cavity filled with granulation tissue; upon probing, the formation bleeds and is painful. What examination methods are needed to clarify the diagnosis?
2. Surgical preparation of an oral cavity for prosthetics; teeth operations 16 Radectomy, amputation of a fang, tooth hemisection, coronary-radicular separation. Bone preprosthetic operations. Inspection and planning of complex ortopedo-surgical treatment. Indication and technology of carrying out alveoloplastika, removal of osteophytes, palatal torus, outside slanting lines. Increase in height (augmentation) in alveolar shoots, sine lifting.
3. . Bone preprosthetic operations. Alveoloplasty, removal of osteophytes, palatine torus, increase in height (augmentation) of the alveolar processes, sinus lift. Examination and planning of complex orthopedic and surgical treatment. Indications and technique of bone preprotective operations. Clinical analysis of thematic patients. Interpretation of data from radiation diagnostic methods. Monitoring the progress of diagnostic tests and surgical interventions in the office of a dental surgeon. Demonstration of multimedia presentations.

Situational tasks of Implantology module

1) Dental implant components
2) Surgical planning
3) Surgical Procedure (One-stage, Two-stage surgery).

Situational tasks of Implantology and functional diagnosis of TMJ module.

1. A 20-year-old patient was admitted with complaints of pain, stiffness and clicking in the TMJ on both sides. In the morning, mouth opening is limited. From the medical history, 12 months ago, treatment was carried out for rheumatoid arthritis of the knee joints. Blood composition is within normal limits. Objectively: there is swelling and hyperemia in the joint area. On the tomogram, the joint spaces are widened. Which related specialist does the patient need to consult?
2. A 19-year-old patient complained of severe limitation of mouth opening. The dentist cannot perform oral sanitation. In early childhood he suffered osteomyelitis of the body of the lower jaw. Currently, the deformity of the lower part of the face is pronounced. Crossbite. List the examination methods necessary to clarify the diagnosis.
3. A 22-year-old patient complained of the inability to open his mouth, which gradually developed from childhood, when he suffered from otitis media. From the age of 13-14 I noticed facial asymmetry. My teeth hurt, the dentist refused to treat me because I couldn’t open my mouth. What disease can we think about based on complaints and

anamnesis? Sample answer: Based on complaints and medical history, it can be assumed that the patient has TMJ ankylosis.

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.

Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

Text books and required supplies:

1. Oral Surgery : textbook / ed. by S. V. Tarasenko. - Москва : ГЭОТАР-Медиа, 2023. - 640 с. - ISBN 978-5-9704-7080-0, DOI: 10.33029/9704-7080-0-OST-2023-1-640. - Электронная версия доступна на сайте ЭБС "Консультант студента" : [сайт]. URL: https://www.studentlibrary.ru/book/ISBN9785970470800.html (дата обращения: 10.10.2024).
2. Oral and Maxillofacial Surgery: Textbook, Part 1 / V.O. Malanchuk. – Vinnytsia: Nova Knyha Publishers, 2011. – P. 172-175. https://chirurgieomfio.usmf.md/wp-content/blogs.dir/109/files/sites/109/2017/09/Oral_and_Maxillofacial_Surgery_E-Book.pdf
3. Oral Healthcare and Technologies : Breakthroughs in Research and Practice. Critical Explorations or English-speaking students of the faculty of denstry/ Kazan: KSMU, 2017. — 1162p.
4. Laura C. Barritt, Barbara J. O'Kane. Neuroscience for Dentistry. For English-speaking students of the faculty of denstry/ Kazan: KSMU, 2022. — 154p.
5. Robert B. Kerstein. Handbook of Research on Clinical Applications of Computerized Occlusal Analysis in Dental Medicine. for English-speaking students of the faculty of denstry/ Kazan: KSMU, 2020. — 88p.
6. André Antonio Pelegrine, Author-Marcelo Lucchesi Teixeira , Author-Marcelo Sperandio, Author-Peter Karyen Moy, AuthorProcedures in Implantology, Prosthodontics and Surgery / André Antonio Pelegrine, Author-Marcelo Lucchesi Teixeira , Author-Marcelo Sperandio, Author-Peter Karyen Moy, Author. - [Б. м.] : Cambridge Scholars Publishing, 2021. - ISBN 9781527569775 : Б. ц. - Текст : электронный.

Evaluation and grading:

Monitoring progress is carried by the end of each module (/written papers/oral examination/test/ /abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.

Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of

the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

Example of examination card.

Examination card No.1

1. Composite filling materials. Classification of composite filling materials. Properties. Indications for use.
2. The individual spoons, methods of manufacture and packing. The methods of obtaining functional impressions from toothless jaws.
3. Typical and atypical tooth extraction, complications, their prevention and treatment.
4. Risk factors of occurrence and main directions of etiopathogenetic prevention of dental caries.

Examination card No.2

1. Restoration of teeth. Therapeutic concept of restoration. Modern technologies.
2. The replacement of the wax base of the prosthesis with plastic, methods of plastering in a cuvette.
3. Acute sialoadenitis. Diagnosis of sialoadenitis. Integrated treatment of sialoadenitis.
4. Prevention of non-carious lesions of hard tissues of teeth. Optimal and potentially harmful doses of fluorides. Etiology of fluorosis, prevention. Antenatal and postnatal prevention of systemic enamel hypoplasia. Prevention of local hypoplasia.

Examination card No.3

1. Endodontic treatment. Filling of root canals. Methods. Materials for filling root canals.

2. The pathological tooth abrasion, etiology, pathogenesis. Prevention and orthopedic methods of treatment of pathological tooth abrasion.

3. Position of the patient in the chair while removing of teeth on the lower jaw. Position of a doctor during the removing of teeth on the lower jaw.

4. Manual toothbrushes. Classification. Indications for the appointment.

Evaluation of the exam

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – “poor”, 70-79 – “satisfactory”, 80-89 – “good”, 90-100 – “excellent”.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Evaluation of the final (rating) grade is made up of module grades (maximum 100 points per module), the current grade (maximum 10 points), and the grade obtained at the credit (maximum 100 points).
Assessment and assessment criteria:
0-69 (unsatisfactory):
- Lectures:
Failure to attend lectures or a large number of absences

Absence of lecture notes
Unsatisfactory behavior during lectures
- Practical classes:
Failure to attend practical classes or a large number of absences.
Wrong answer or refusal to answer
Lack of activity in class
Low level of mastery of the material.
- Independent work:
Self-work assignments are not completed, or there are numerous errors or a high percentage of plagiarism.
Lexical, grammatical errors in assignments.
70-79 (satisfactory):
- Lectures:
Attendance in most lectures
Partial absence of lecture notes/incomplete lecture notes
-Practical classes:
Attendance of most of the practical classes
Correct but insufficient response
Weak activity in class
Low level of mastery of the material.
- Independent work:
oSelf-work assignments are completed but with errors or average borrowings
Lexical, grammatical errors in assignments.
80-89 (Good):
- Lectures:
Attendance at all lectures, excused absences only
Availability of notes for all lectures
- Practical classes:
Attendance at all practicum sessions, absences only for valid reasons
Correct, sufficient answer.
Average activity in class
Average level of mastery of the material.
- Independent work:
Self-work assignments are completed mostly without errors and with little borrowing.
Lexical, grammatical errors are absent.
90-100 (excellent):
- Lectures:
Attendance at all lectures, absences only for valid reasons
Detailed notes of all lectures are available
- Practical classes:
Attendance of all practical classes, absences only for valid reasons
Regular correct answers, including the use of additional literature
High level of activity in the class
Fluent level of mastery of the material.
- Independent work:
Self-work assignments are completed without errors or borrowings
Lexical and grammatical errors are absent.

FORENSIC MEDICINE

Teachers: Associate professor Liliya Aleksandrova, assistant Victor Kalyanov, assistant Andrei Anisimov
Building, Department, classroom: Tolstogo 6, Forensic Medicine Department, 101, 116
Contact details:

- Telephone number: +79872967072 (Associate professor Liliya Aleksandrova)
- E-mail address: lilya-aleksandrova@yandex.ru
- Office and working hours: 101, 116 (9-17)

Class hours: 72 h

- Lectures - 10 hours;
- Practical classes – 32 hours;
- Independent work – 30 hours.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Laboratory classes contain experimental scientific research activities. It requires the use of special equipment, facilities and materials. To be held in teaching laboratories.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1828).
Course objectives:
• training in theoretical and practical issues of forensic medicine to the extent necessary for the successful performance of specialist duties during initial investigative actions;
• familiarization with the morphological features of the course of pathological processes under various types of external influences and extreme conditions;
• familiarization with the legal regulation and organization of forensic medical examination, the responsibility of the doctor for causing harm to health in the process of providing medical care and committing professional and professional-official offenses.
Tasks of the discipline: acquisition by students of knowledge that provides the ability and readiness to analyze socially significant problems and processes, analyze and evaluate the quality of medical care, the health status of the population, the impact of lifestyle factors, the environment and the organization of medical care, to establish clinical and biological death, as well as to analyze and interpret the results of modern diagnostic technologies taking into account the physiological characteristics of the patient's body for successful treatment and preventive activities, participation in the implementation of an examination of working capacity and forensic medical examination.
Course topics:

Calendar plan of lectures

1. Procedural and organizational foundations of forensic medical examination
2. Forensic thanatology. Examination of a corpse at the scene of discovery
3. Forensic medical examination of victims, accused, suspects and other persons
4. Forensic medical traumatology: injuries caused by blunt objects, transport trauma and falls from a height
5. Forensic medical traumatology: injuries caused by sharp objects
6. Forensic medical traumatology: gunshot injuries

7. Injuries and death from exposure to physical and chemical factors
8. Forensic medical examination in cases of bringing medical workers to justice for poor quality medical care and professional offenses

Calendar plan of laboratory classes

1. Procedural and organizational foundations of forensic medical examination. Contents of the subject of forensic medicine. Structure of the forensic medical service of Russia, objects of research. Rights, duties of an expert. Types of examinations. Reasons and procedure for appointing examinations. Requirements for the execution of forensic medical documentation. Rules for filling out a medical death certificate.
2. The class covers the issues of regulation and procedure for examining a corpse at the place of its discovery in accordance with the criminal procedure legislation of the Russian Federation, the tasks of a specialist doctor when examining a corpse, stages of examination, familiarization with techniques for identifying and describing damage to clothing and the body of a corpse, assessing cadaveric phenomena, conducting supravital reactions in order to establish the time of death, familiarization with the rules for detecting, seizing and sending material evidence of biological origin.
3. Familiarization of students with the basic rules of forensic medical examination of corpses, diagnostics of pathological changes and correct description of bodily injuries. Documentation of the production of forensic medical examination (research) of a corpse. Rules for the removal and sending of material for laboratory research. Features of forensic medical examination of corpses of fetuses and newborns. Issues resolved during forensic medical examination of corpses of fetuses and newborns.
4. Introducing students to the types of injuries encountered when exposed to blunt hard objects, falls from great heights and on flat surfaces. Examination of injuries caused by rail, trackless and water transport.
5. Introducing students to the classification of sharp objects. Morphological characteristics of the resulting damage. Possibility of establishing the properties of the object that caused the injury. Classification of firearms, explosives, differential diagnostic signs of wounds, features of expert examination.
6. General and local effects of high and low temperatures; examination of corpses found in the fire and in cases of death in the cold. Electrical injury. Correction of knowledge using tables, diagrams, slides. Familiarization of students with various types of poisoning, foodborne toxic infections, potent and narcotic drugs. Pathogenesis and thanatogenesis, manifestations and causes of death in poisoning with individual groups of poisons. Establishing the fact of alcohol consumption and the degree of intoxication. Drug addiction and toxicomania. The role of laboratory tests in the diagnosis of death from poisoning.
7. Familiarization of students with the methodology and tactics of a forensic medical expert in cases of examination of living persons with the determination of the nature and mechanism of occurrence, duration and extent of harm caused to health with the preparation of forensic medical documentation. Forensic medical examination of sexual conditions and crimes.
8. To familiarize students with medical deontology, responsibility for professional and professional-official offenses of medical workers in accordance with the Criminal Code of the Russian Federation, the fundamentals of the legislation of the Russian Federation on the protection of citizens' health, and the specifics of conducting commission forensic medical examinations.

Text books and required supplies:

1. Forensic Medicine. Textbook / Yu. I. Pigolkin, I. A. Dubrovin. — Moscow : ГЭОТАР-Медиа, 2023. — 464 p. : il.
2. Pigolkin Yu.I. Sudebnaya meditsina [Forensic medicine] / Yu.I. Pigolkin, V.L. Popov. - Rostov-on-Don. : Phoenix, 2015. - 551 p. [In Russian]

3. Beran, R.G. (2013). Legal Medicine and Medical Law. In: Beran, R. (eds) Legal and Forensic Medicine. Springer, Berlin, Heidelberg.
4. Forensic medicine. 5 th ed., Pererab. Ed. Kryukov, VN / Sudebnaya meditsina. 5-e izd., pererab. Pod red. Kryukova V.N.

Evaluation and grading: Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Situation task assessment is a form of knowledge and skills evaluation on the discipline or on a part of it. It gives the description of one forensic scenario with questions which require the full developed answer. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Module assessment is held in forms of test, situational task, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Final assessment MCQ (zachet) is held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of situational task

It is known from the resolution on the appointment of a forensic medical examination that on August 2, 1999, during a fight, citizen S., aged 18, was hit in the head with a metal object, after which S. sought medical assistance at the trauma center. The outpatient medical record submitted for examination noted that at the initial appointment, S. complained of sharp pain in the left cheek, which intensified when opening his mouth and trying to clench his teeth tightly. There was no nausea or vomiting. Objectively: the general condition is satisfactory, consciousness is clear. Oriented in space and time. Pathological neurological symptoms are not determined. A swelling of a bluish-purple color, irregularly oval in shape, measuring 7x2 cm, located in the vertical direction was found on the skin of the zygomatic region on the left. A skull

X-ray in 2 projections shows a linear transverse fracture in the middle third of the left zygomatic arch without displacement of the fragments. The patient was treated as an outpatient for 24 days.

During the forensic medical examination conducted four weeks after the incident, the patient had no complaints, no facial asymmetry was found. The movements of the lower jaw are painless, in full, the bite is unchanged. No bodily injuries were found at the time of the examination.

Task 1. Determine the presence and list the bodily injuries found in the victim, their nature and localization?

Task 2. Determine the mechanism of injury and what caused them (type of tool and means).

Task 3. Determine the time since the injury was caused.

Task 4. Determine the severity of the harm caused to health and by what classification feature.

Example of MCQ test

8. Crimes against the person include the following, except:
A - failure to provide assistance to a patient;
B - abandonment in danger;
C - illegal issuance of prescriptions entitling to receive narcotic drugs;
D - HIV infection;
E - causing death by negligence.

9. Crimes against public health and public morality include:
A - negligence;
B - illegal placement in a psychiatric hospital;
C - abandonment in danger;
D - illegal trafficking of potent or poisonous substances
E - HIV infection.

10. Skin burns with hot liquid are characterized by:
A - significant depth of damage
B - the presence of singed hair;
C - the shape of the burn wound, resembling traces of drips;
D - the presence of soot on certain parts of the body;
E - signs of burning of clothing.

11. All of the listed signs indicate the formation of flame burns during life, except:
A - the presence of fibrin in the fluid of burn blisters
B - migration of leukocytes to the damage zone;
C - the presence of arterial thrombi in the vessels of the damaged areas;
D - charring of tissues;
E - detection of more than 30% carboxyhemoglobin in the blood.

5. The phenomenon of “cat pupil”.
A - in 15-30 minutes.
B - in 2-4 o'clock.
C - in 24 hours.
D - more than 3-5 days.
E - the first months.

Final assessment questions

1. Forensic medicine, its meaning, content and tasks.
2. Procedural foundations of forensic medical examination in the Russian Federation.

3. Definition and concept - bodily injuries. Classification of injuries
4. Abrasions, wounds and bruises as objects of examination.
5. The procedure for describing injuries.
6. Features of the autopsy technique for various injuries.
7. Types of blunt objects, mechanism of action, possibilities of examination.
8. Car injury and its types.
9. Causes of death due to mechanical injury.
10. Sharp objects, classification.
11. Diagnosis of lifetime (postmortem) formation, prescription, sequence and mechanism of injury.
12. Physical factors. Classification.
13. Forensic medical classification of poisons and poisonings. The concept of poisons.
14. Routes of entry of toxic substances and features of forensic medical examination.
15. The main stages of forensic examination in cases of poisoning.
16. The tasks of a medical specialist at the scene of the incident when examining a corpse.
17. Features of examining corpses at the scene of the incident in case of different types of death.
18. Examination of exhumed corpses.
19. Laboratory diagnostics of vitality and age of injuries.
20. Determining the age of death.
21. Forensic examination of living persons: types, reasons, organization.
22. Forensic examination of the degree of harm caused to human health.
23. Forensic examination of age.
24. Forensic examination of material evidence.
25. Forensic examination based on materials of investigative and court cases.
26. Forensic examination of professional offenses of medical workers.
27. Forensic medical examination of official violations of medical workers.
28. Criminal Code on the exclusion of criminal liability of medical workers.
29. Reasons for conducting a forensic medical examination of a corpse.
30. Mandatory forensic medical examinations.

ORTHOPEDIC DENTISTRY

Teachers: Mustakimova Rezeda Faritovna, Shakirov Eduard Iurevich, Shakirova Leisan Rinatovna, Denisov Nikolay Dmitrievich.
Building, Department, classroom: Butlerova 16, Dental clinic Kazan SMU, Department of Prosthetic Dentistry; Amirkhana 16, Dental Simulation Clinic.
Contact details:

- Telephone number: 89625881635 (Denisov Nikolay)
- E-mail address: dr.denisov.nikolay@gmail.com
- Office and working hours: Butlerova 16, Dental clinic Kazan SMU; Monday-Friday 8:00-18:00.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Practical classes is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher. Practicing manual skills.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

The purpose and objectives of mastering the discipline "Dentistry".

The purpose of the discipline is to train a dentist who is able to provide orthopedic dental care, taking into account knowledge about modern dental materials and their properties, the functional interaction of components of the chewing system, taking into account knowledge of ethics, medical law, able to think clinically in the examination and treatment of patients with complete loss of teeth, pathologies of hard tissues of teeth and defects of the dentition.

Module: Dental material science

Course: 1
Semester: 2
Lectures: 18 hours.
Practical classes: 48 hours.
Self-study: 52 hours.
A total of 118 hours.

The content of the lecture course:

1. Dental materials science. The historical aspect of dental materials science. The subject of dental materials science, the main content, tasks and research methods. Safety information for working with dental materials.
2. Methods of processing materials. Dental laboratory equipment.
3. Physical, chemical and mechanical properties. Theoretical strength and stress concentration. Properties of natural tooth tissues and restorative materials. Adhesion, adhesive and substrate, adhesive and cohesive forces. Classification of adhesive compounds in dentistry. Types of adhesive bonds. Factors affecting the perception of appearance. Subjective and objective methods for assessing aesthetic properties.
4. Biomaterial, bioinertness, biocompatibility. Types of biomaterial effects on the body. Categories of dental biomaterials. The biocompatibility test program.
5. Metals and alloys for reconstructive dentistry. General characteristics. Advantages and disadvantages. Metals and alloys used in combined designs of dentures. The main technological processes for the manufacture of prostheses from metals and alloys. Casting technique: heating, casting, gating system development.
6. Dental ceramics. Basic ideas about the composition, properties and manufacturing processes. Dental ceramics in combined designs of dentures. Solid cast ceramics. Materials for CAD-CAM technology. Ceramic blocks for CEREC. Prospects for the development of dental ceramics.
7. Auxiliary materials in orthopedic dentistry. Classification of auxiliary materials.
8. Auxiliary materials at the stages of manufacturing dentures.
9. Definition and general characteristics of amalgam. Composition and hardening mechanism. Classification and properties. Metal "mercury-free" filling materials.

The content of practical classes:

1. Classification of dental materials by purpose and chemical nature. Properties of dental materials and their influence on the choice of material to restore the lost function of the dentofacial system. The concepts of load and deformation associated with the choice of material during restoration of the dentofacial system. The main types of loading and deformations under load during the functioning of structures in the oral cavity. Methods for determining the strength of materials. The influence of the chemical nature of materials on their behavior under loading. The concept of dimensional accuracy when choosing an impression material. Indicators that determine the dimensional accuracy of impression materials.

2. Surface properties of dental materials. Hardness and methods for its determination. The concepts of roughness, abrasiveness, surface wear.

3. Quality criteria of dental materials. Biological evaluation of dental materials, efficacy and safety.

4. The procedure for testing and registration of dental materials. Systems of international and national standards.

5. Classification and General characteristics of basic (structural) restorative materials for prosthetic dentistry.

6. Polymeric materials as the main (basic) structural materials for prosthetic dentistry. Main concepts of polymers and polymerization processes.

7. Polymeric materials for manufacturing bases of removable dentures.

8. Methods of estimation of technological and manipulative properties of acrylic polymeric materials for manufacturing bases of removable dentures. Comparison of the properties of acrylic materials for the manufacture of prosthetic bases of different curing methods. Manufacturing technology.

9. The concepts of porosity, residual monomer, water absorption. Artificial teeth. Materials used for the manufacture of artificial teeth. Basic requirements for artificial teeth.

10. Modeling materials, investment materials, abrasive materials, classification, composition, properties, dimensional changes during hardening. Welding, soldering.

11. Wax in dentistry, properties, types, structure.

12. Classification and general characteristics of impression materials. Gypsum (plaster) in dentistry. Thermoplastic compounds. Elastomeric impression materials. General information about the composition and properties. Hydrocolloid impression materials. Alginate impression materials.

13. Composition and purpose of inorganic cements. Basic properties and norms of the standard. Technological and manipulative properties of dental cements. Classification according to the composition and appointment. Comparison of properties of inorganic and polymeric cements. The mechanism of hardening of cements. Cements dual-curing mechanism.

14. Adhesion and adhesion systems, purpose, composition, properties.

15. Materials and methods of creating compounds with dental tissues. Mechanisms and conditions of formation of adhesive compounds. Methods for determining the adhesive strength. Features of adhesive connection with enamel and dentin of the tooth.

16. The concept of temporary material. Difference between temporary material and permanent structural material. Requirements for temporary materials. Temporary materials in prosthetic dentistry for the manufacture of temporary crowns and bridges. Temporary materials in therapeutic dentistry. Zinc sulfate cement, dentin paste, temporary light curing material, composition, properties, application.

Examples:

1. Colourless dental wax stick-like is used to modeling:
1) wax pattern of acrylic crown+
2) metallic framework dentures
3) pontic
4) the base of removable dentures

2. Other materials used in the laboratory of dental technique are:
1) metals and noble alloys
2) packing, isolating and degreasing materials+
3) acrylates used to manufacture fixed dentures
4) acrylates used to manufacture removable dentures

3. Pinlay represents a microdenture:
1) total coronary covering
2) intratissular without pine
3) intratissular with pine+
4) extratissular

4. According to their destination inlays can be:
1) temporary elements in pulp protection
2) temporary elements of paradontiuma protection
3) multidental elements
4) an aggregation element in varieties prosthetic dentures+

5. According to the number of tooth surfaces that come in contact with extratissular inlay we distinguish the next microprosthesis:
1) one side+
2) point-shap
3) suspended
4) tangent

Module: Propaedeutics of dentistry

Course: 2
Semester: 3
Lectures: 20 hours.
Practical classes: 50 hours.
Self-study: 40 hours.
A total of 110 hours.

The content of the lecture course:

1. Phylogenesis and ontogenesis of the masticatory apparatus and temporomandibular joint.
2. Bones of the chewing apparatus, features of the structure of the jaws due to their functional load. The structure of the palatine bone. Age-related changes in the bone tissue of the jaws – morpho-biochemical changes. Topography and functions of the muscles of the maxillofacial region: masticatory muscles-raising, lowering, shifting back and forth, to the side-the lower jaw. The point of attachment and the mechanism of action.
3. Features of the structure of the oral mucosa. Soft tissues of the oral cavity, functional anatomy of the oral mucosa: the mucous membrane – its "mobility" and "pliability". Topography of the frenulum folds of the mucous membrane. Changes in the mucous membrane with age and in the lose of teeth. Salivary glands, and the role of saliva in the initial period of digestion.
4. Biomechanics of the mandible. The apparatus, reproducing the movements of the lower jaw.
5. Articulation, occlusion, its types. Muscular, articular and dental signs of various types of occlusion.
6. Issues of organization of dental care, dental department. Structure of dental clinic, prosthetic department, dental laboratory.
7. Equipment and tools for clinical admission of patients. Dental unit. Basics of preparation. Basic principles of dissection. Biological aspects of preparation.

8. Methods of examination of the dental patient. Clinical methods of examination. Survey of the patient (anamnesis).
9. Additional methods of examination of the patient. Paraclinic methods of examination. Instrumental (an electromyography, electroodontodiagnosis, chewing samples and other methods). – 2 hours.
10. X-ray methods of examination. Types of research, advantages and disadvantages. Indications. Reading techniques.

The content of practical classes:

1. Introduction to the dentistry (the purpose and objectives of dentistry, dental schools, the main stages of development of dentistry). Dentistry as a single branch of General medicine. The connection dentistry with other sciences (physics, mathematics, chemistry, metallurgy, materials science, etc.). The place of propaedeutics in the system of dental education.

2. The main parts of the masticatory-facial area. Organ, the dental system, oral cavity. Dental system as a single anatomical and functional complex. The function of the masticatory system: mastication, swallowing, sound production, speech, breathing.

3. Definition of the concepts "chewing force", "chewing pressure", "chewing efficiency". Physiological basis of movements of the mandible. Temporomandibular joint: topographical relations of elements of the joints. Age-related features of joint formation under the influence of function and type of bite.

4. Anatomical and functional structure of temporary, permanent teeth: signs of teeth. Anatomical and functional structure of dentition: dentition, their shape on the upper and lower jaws. Factors that ensure the stability of the teeth (occlusal contacts, circular and interdental ligaments, the slope of the teeth, the location of the roots). Dental, alveolar and basal arches. Anatomical and functional structure of the periodontium: determination; periodontal endurance to chewing pressure in normal and pathological conditions; reserve forces of the periodontium. Physiological and pathological mobility of teeth.

5-6. Biomechanics of the chewing apparatus: phases of chewing movements of the lower jaw (mandible) when biting and chewing food. Sagittal movements of the lower jaw. The nature of condyle movement of the mandible. Angle of the sagittal articular and incisal guidance. The ratio of dentition in the protrusion (extension) of the lower jaw. Lateral movements of the lower jaw. The nature of the movement of the heads of the lower jaw. The definition of "working" and "balancing" the sides. Angle of the transversal articular and incisional pathways. Definition of concepts – "height of the lower part of the face in the Central occlusion", "height of the lower part of the face in the position of the lower jaw in relative physiological rest of the masticatory muscles". The apparatus, reproducing the movements of the lower jaw. Occlusion, types of occlusion. Borderline (transitional) types of bite. Abnormal types of bite.

7. Safety in the clinic and in the dental laboratory. Sanitary and hygienic standards for prosthetic offices and dental laboratories: disinfection, sterilization, means of protection of medical personnel and patients. Rules of processing of tools, impressions and dentures. Cleaning of the hands of a dentist. Asepsis, definition, types of sterilization by solutions of chemical substances. Antiseptics, definition of species. Antiseptic preparation. The main classes of antiseptics and disinfectants. Samples to check the quality of disinfection of used tools. Prevention of cross-infection.

8-9. Material and technical equipment of prosthetic department – modern types of dental installations; work of turbine handpieces, micromotors, the gun-mixer, the saliva ejector, etc. mechanisms; chairs (their designs, rules of operation and leaving). Dental furniture. The equipment for preparation of teeth: burs, discs, heads. Varieties. Indications for use. Cutting tool requirements. Means of isolation from saliva. Basic principles of preparation. Biological

aspect. A set of equipment for the initial examination of the patient and stages of treatment. Special tools and devices of dental laboratory. Ergonomic basics of four-handed operation.

11. Additional methods of examination of the patient. Paraclinic methods of examination. Instrumental (an electromyography, electroodontodiagnosis, chewing samples and other methods). Types of radiological examination methods. Laboratory methods of examination. Complete blood count. Histological examination. Biopsy. Saliva studies, etc.

Examples:

1. Which of the following teeth have more than one occlusal form_____?
A- Maxillary 1st molar+
B- Maxillary 2nd premolar
C- Maxillary 1st premolar
D- Mandibular 1stmolar

2. If a mandibular canine has bifurcated roots, they are most commonly placed_____?
A- Facial and lingual+
B- Mesiobuccal and distobuccal
C- Mesial and distal
D- Mesiolingual and distolingual

3. Largest cusp in permanent mandibular first molar is_____?
A- Mesiobuccal+
B- Mesio lingual
C- Distobuccal
D- Distal

4. Palatogingival groove is found in_____?
A- Maxillary lateral incisor+
B- Maxillary first molar
C- Maxillary first premolar
D- All of the above

5. The shape of the occlusal surface of the permanent maxillary first molar is_____?
A- Rhomboidal+
B- Trapezoidal
C- Oval
D- Triangular

Module: Propaedeutics of dentistry

Course: 2
Semester: 4
Lectures: 6 hours.
Practical classes: 28 hours.
Self-study: 18 hours.
A total of 52 hours.

The content of the lecture course:

1. Stages of the diagnostic process. General methodology.
2. Treatment plan, steps. Preparation of the oral cavity for prosthetics.
3. Removable and non-removable prostheses.

The content of practical classes:

1-2. Methodology. Definition of the "symptom", "syndrome", "pathological condition", "disease", "nosological form". Tasks of prosthetic treatment. Stages of the diagnostic process. Preliminary and final diagnosis. Nosological form. Classification of ICD-10.

3-4. Treatment plan, stages. Surgical and therapeutic preparation of the oral cavity for prosthetics. Classification of dentition defects. Removable and non-removable prosthetics: types, classifications, indications and contraindications. The main structural elements.

Examples:

1. The widest incisal embrasure is normally found between which of the following permanent maxillary teeth _____?

A- Central and lateral incisors+
B- Central incisors
C- Lateral incisor and canine
D- First and 2nd premolar

2. Divergence from contact area in proximal surfaces causes embrasures_____?

A- Lingually+
B- Facially
C- Cervically
D- Facially, lingually , cervically & occlusally

3. The largest embrasure in posterior teeth is the_____?

A- Distal+
B- Buccal
C- Lingual
D- Occlusal

4. In maxillary 1st permanent molar, the 2 obtuse angles are_____?

A- Distofacial and mesiolingual+
B- Mesiofacial and distolingual
C- Mesiolingual and mesiofacial
D- Distofacial and mesiofacial

5. In the mandibular arch, in which tooth maximum lingual inclination is present_____?

A- 1st premolar+
B- Lateral incisors
C- 3rd molar
D- Canine

Module: Ethics, law, management

Course: 2

Semester: 4
Lectures: 10 hours.
Practical classes: 20 hours.
Self-study: 30 hours.
A total of 60 hours.

The content of the lecture course:

1. Ethical aspects of the professional activities of the dentist. Ethics in dentistry. Ethical and moral aspects of medical dental work. Dentist as a subject of law. Control and self-control of the professional competence of the dentist from an ethical perspective. Ethics and morality within a paid medical dental service.

2. Common law in dentistry: legal acts and their systematization in dentistry. Law regulation of labor relations in dentistry. Medical law in dentistry. Legal aspects of information in dentistry. Medical law in dentistry. Legal qualification of medical errors in dentistry. The principle of voluntary informed consent in dentistry. Responsibility for harm to health in dentistry.

3. Quality management in dentistry.

4. The organizational structure of the dental clinic (department). Automation of processes in the dental organization (department). Strategic management of a dental organization. Business models of a dental organization.

5. The formation of the market for dental services. Concept and components of dental services. Marketing system of the dental clinic. Legal aspects of marketing in dentistry.

The content of practical classes:

1. Ethical aspects of the professional activities of the dentist. Ethics in dentistry. Ethics in dentistry. Ethical and moral aspects of the relationship between the dentist and colleagues, the patient and his relatives. Formation and application of ethical norms and rules in professional activities. Corporate ethics. Ethical and legal compromises in dental practice. Dentist as a subject of law and a citizen. Control and self-control of the professional competence of the dentist from an ethical perspective. Ethics and morality as part of a paid dental service.

2. Medical law in dentistry. Categories and types of crimes in dental practice, personal and group responsibility. Information in dentistry: forms, legal aspects, organizational and legal methods of protection and protection. Responsibility associated with medical records. Responsibility for the disclosure of secrets. Confidentiality of personal and official data. The legislation of the Russian Federation in the field of healthcare. Normative legal acts and their application in dentistry. Legal awareness and legal culture of a dentist. Legal relations and offenses. Labor law in dentistry: competence and education. The rights of patients and their violations. Mechanisms for resolving legal conflicts. Types of legal liability in dentistry. Legal qualification of medical errors. The concept of harm to health and life caused by improper provision of medical care, the responsibility for causing it. Information security, data privacy. The principle of voluntary informed consent in dentistry. Responsibility for harm to health due to improper performance by a doctor of professional duties.

3. Licensing in dentistry. Compliance with sanitary and epidemiological and technological requirements. Medical technology in dental practice. Quality management in dentistry. The concept of expertise in dentistry, its types, order of appointment and production. Rights and obligations, responsibility of the expert. The challenge of the expert. Examination of the quality of dental care. Causal relationship as a tool during the examination. Departmental and non-departmental expertise in dentistry.

4. Management and management issues in dentistry. The organizational structure of the dental clinic (department). The organizational structure of the dental clinic, process

automation, document management, economic security. Dental service. The concept of dental services, its types and components. Features of the formation of the dental services market in the Russian Federation.

5. Dental clinic marketing. Marketing system of the dental organization: external and internal marketing, information system. Levels of marketing services in a dental organization: administrative, medical. Methods of promoting dental services, performance evaluation. Legal aspects of marketing. Commercial responsibility of the staff of the dental organization.

Examples:

1. Medical law is:
1. a complex branch of law that includes a set of legal norms regulating public relations in the field of medical activity; +
2. border complex department of Russian national law that regulates healthcare and other closely related relations;
3. a separate set of legal norms that is a specific part of the branch of law and regulates a certain type of public relations;
4. the section of science about the role of moral principles in the doctor's work, his highly humane attitude to the patient as a necessary condition for treatment and strengthening human health
5. no correct answer

2. A Legal institution is:
1. a complex branch of law that includes a set of legal norms regulating public relations in the field of medical activity;
2. border complex branch of Russian national law regulating healthcare and other closely related relations;
3. a separate set of legal norms that is a specific part of the branch of law and regulates a certain type of public relations; +
4. the section of science about the role of moral principles in the doctor's work, his highly humane attitude to the patient as a necessary condition for treatment and strengthening human health
5. no correct answer

3. The availability of health information is understood as
1. presentation by the attending physician of information about the causes of the disease, its course and prognosis; +
2. familiarizing the patient with the medical history;
3. talking to the patient about desease;
4. familiarizing the patient with the results of medical examinations
5. no correct answer

4. The Main documents granting the right to engage in private medical practice of a certain type or private pharmaceutical activity in Russia are
1. doctor's diploma, specialist's certificate, license;
2. doctor's degree and license to practice private medicine; +
3. doctor's diploma and certificate of completion of advanced training courses;
4. doctor's diploma and specialist's certificate.
5. no correct answer

5. List the functions of medical law
1. regulatory and social;

2. protective and regulatory; +
3. protective and social;
4. health care.
5. no correct answer

Module: Prosthetic treatment of dentition.

Course: 3
Semester: 5
Lectures: 10 hours.
Practical classes: 32 hours.
Self-study: 44 hours.
A total of 86 hours.

The content of the lecture course:

1. Pathology of the hard tissues of the teeth. Classification and etiological factors. Survey methods. Diagnostics. Differential diagnosis. Methods of orthopedic treatment using fixed structures of dentures. Types of dentures that restore the anatomical shape of the tooth.
2. Prosthetic treatment of dental hard tissue defects with inlays. Types of inlays. Principles of formation of cavities beneath the inlays. Indications for different types of inlays. Direct and indirect method of making inlays. Modern technologies for manufacturing inlays in prosthetic dentistry. Impressions.
3. The principle of choosing the type of orthopedic structure and the material for its manufacture using CEREC, depending on the clinical situation. Rules for preparing teeth for the manufacture of orthopedic structures using CEREC.
4. Prosthetic treatment of dental hard tissue defects with artificial crowns. Types of artificial crowns. Principles of preparation of teeth in the treatment of artificial crowns.
5. Types of prosthetic pin structures (pin teeth and stump crowns). Indications and contraindications for various types of pin structures. Preparation of the root. Modern technologies for manufacturing pin structures. Complications of orthopedic treatment.

The content of practical classes:

1 Diseases of hard tissues of teeth. Etiology and pathogenesis. Classification. Methods of examination in the clinic of prosthetic dentistry (static and functional). Methods of prosthetic treatment of patients with dental hard tissue defects. Choice of treatment method, prognosis of its effectiveness. Prosthetic treatment of dental hard tissue defects with inlay, onlay, overlay, pinlay.

2. Prosthetic treatment of dental hard tissue defects with artificial crowns. Types of crowns. Types of preparation for crowns, control of the thickness of preparation of hard tissues of teeth. Indications and contraindications.

3. Clinical and laboratory stages of manufacturing fixed prosthesis structures for defects in hard dental tissues: inlay, onlay, overlay, pinlay, veneers; pin structures; artificial crowns.

4. Methods of examination, diagnosis, and prevention of patients with dental defects for the manufacture of fixed structures of prostheses. Classification of dental defects (Kennedy and etc.). Partial absence of teeth, causes of development. Gnathodinamometry, measurement of tooth mobility with a two-parameter periodontometer, assessment of the functional state of the periodontal teeth by comparing their mobility before and after a dosed load. Biological, clinical and biomechanical substantiations of orthopedic treatment with fixed bridges. Choice of treatment method, prognosis of its effectiveness.

5. Methods of prosthetic treatment of patients with defects of dentition with fixed constructions. Features of preparation of supporting teeth. Types of bridges: stamped-soldered, solid-cast, "Maryland" systems. Possible complications and errors in the treatment of bridges.

6. Clinical and laboratory stages of manufacturing fixed structures of prostheses for defects in dentition. Clinical and laboratory stages of manufacturing: soldered bridge prostheses; cast all-metal bridge prostheses; cast bridge prostheses with facing (metal-ceramic, metal-plastic); adhesive bridges

Examples:

1.The type of margin recommended for preparing a tooth for an all porcelain crown is
A- Shoulder+
B- Shoulder with bevel
C- Heavy chamfer
D- Feather edge

2.What is an abutment?
A- The tooth or root that retains or supports the bridge and is united with the bridge proper by means of the attachment+
B- The portion of the bridge that unites the retainer with the pontic
C- The suspended unit of a fixed bridge that replaces the lost natural tooth
D- The portion of the bridge fiat unites the abutment tooth with the suspended portion of the bridge

3.The following statements are true for ovate pontic design EXCEPT
A- It is used for maxillary anteriors only+
B- It is mainly used for esthetic reasons
C- There is maxim tissue contact
D- Socket preservation techniques should be performed like ridge augmentation

4.During metal copying try-in. we chock for the following EXCEPT
A- Clearance+
B- Proper contacts
C- Proper margin adaptation
D- Accurate fit

5.These are factors that affect tooth preparation design in fixed denture prosthodontic EXCEPT
A- None of the above+
B- Crown length
C- Periodontal health

Module: Prosthetic treatment of dentition.

Course: 3
Semester: 6
Lectures: 12 hours.
Practical classes: 34 hours.
Self-study: 27 hours.
A total of 73 hours.

The content of the lecture course:

1. Partial absence of teeth: basic concepts, terms, definitions, identification. Causes of development. Classification of dentition defects (Kennedy, Betelman, Gavrilov). Preparation of the oral cavity for prosthetics with bridges. Biological, clinical and biomechanical substantiations of orthopedic treatment with fixed bridges. The effect on the functional state of the dentoalveolar system is the partial absence of teeth. The goal of treatment with partial absence of teeth. Classification of prostheses. Types of bridge prostheses: stamped-soldered. Clinical and laboratory stages of manufacturing bridges. Features of the preparation of the abutment teeth.
2. Indications for orthopedic treatment with removable prostheses. Features of prosthetics of the removable dentures are included at the end of the defects. Objective methods of examination of prosthetic bed tissues. Methods for the diagnosis of patients with dental row defects for the manufacture of removable denture structures. The choice of supporting teeth. Types of removable dentures, their positive and negative properties.
3. Clinical and laboratory stages of manufacturing partial removable prostheses. Biomechanics of removable plate prosthesis.
4. The concept of articulation, central occlusion and the central ratio of the dentition and jaws. Methods for determining the central occlusion and the central ratio in various clinical variants of dentition defects. Guidelines for the selection and placement of artificial teeth.
5. Methods of fixing partial removable dentures (adhesion, clamp fixation, interdental spaces). Types of fixation of plate, clasp and removable bridge prostheses: single-shoulder bent, support-holding clasps, telescopic fastening system, lock connections (attachments, magnets). The variety of clasps.
6. Packing and applying a removable prosthesis. Physiological basis of adaptation to removable dentures. Possible complications and methods of correction. The immediate prosthesis, the indications, characteristics. Hygienic knowledge bases for patients using removable dentures.

The content of practical classes:

1. Methods of examination, diagnosis, prevention of patients with defects in the dentition for the manufacture of removable structures of prostheses. Classification of dentition defects. Partial absence of teeth, causes of development. The structure and properties of the mucous membrane of the mouth, classification.
2. The concepts of "prosthetic field" and "prosthetic bed", TMJ. Stationery, measurement of compliance of the mucous membrane of the prosthetic bed. The choice of the treatment method, the prognosis of its effectiveness.
3. Methods of orthopedic treatment of patients with dental row defects with removable denture structures. Classification of removable dentures. Indications for the use of various types of removable dentures.
4. Types of fixation of plate and clasp prostheses: single-shoulder bent clasps, support-holding clasps, telescopic fastening system, lock connections (attachments, magnets). Overlapping dentures.
5. Clinical and laboratory stages of manufacturing removable structures of dentures with defects in the dentition. Clinical and laboratory stages of manufacturing removable dentures with different bases: plastic, metal, metallized, double-layer.
6. Systems of fixation of removable dentures of plate, clasp, removable bridge-shaped: clamp, beam, lock, magnetic retention.

Examples:

1. The most informative methods of examining patients with complete loss of teeth are
1) clinical
2) radiological
3) biometric
4) all of the above together +

2. By using the functional motor tests, it is possible to identify
1) displacement of the lower jaw
2) functional abnormalities in the muscles
3) functional abnormalities in the temporomandibular joints
4) all of the above +

3.With the help of speech tests and motor functions test, it is possible to determine
1) ratio of jaws to tooth loss
2) the amount of vertical overlap of teeth
3) optimal height of the lower third of the face
4) all of the above +

4. On the X-ray examination of patients with complete loss of teeth, attention should be paid
1) for the presence of a cyst
2) to assess the supporting properties of the prosthetic bed
1) for the presence of remnants of roots, sequesters
2) for all of the above +

5. Using an unsatisfactory prosthesis may cause
1) displacement of the lower jaw
2) decrease in interalveolar height
3) change in the nature of muscle contractions (chewing, facial, tongue)
4) all of the above +

Module: Complete absence of teeth.

Course: 3
Semester: 6
Lectures: 10 hours.
Practical classes: 28 hours.
Self-study: 28 hours.
A total of 66 hours.

The content of the lecture course:

1. Reconstruction of the organs of the maxillofacial region due to the complete loss of teeth. The structure and the ratio of the edentulous jaws, their classification. Methods of examination of patients with complete absence of teeth. Diagnosis, prognosis.
2. Choosing a treatment method, predicting the results. Biophysical and functional factors underlying the fixation of removable dentures on toothless jaws. The concept of the valve zone. Pliability and mobility of the oral mucosa. Classification.
3. The doctrine of fixation and stabilization of prostheses. Anatomical and functional casts from toothless jaws. Methods of making individual spoons. Functional tests according to Herbst. Impression materials.

4. Anatomical and physiological method of restoration of occlusal ratios of the height of the lower part of the face. Fixation of the central ratio of the toothless jaws. Anthropometric landmarks and anatomical patterns of facial structure in orthognathic occlusion.
5. Checking the design of dentures on toothless jaws (anatomical, aesthetic, phonetic, functional).

The content of practical classes:

1. Methods of examination of patients with complete absence of teeth. Reconstruction of the organs of the maxillofacial region due to the complete loss of teeth. Features of clinical examination in the complete absence of teeth. Determination of the morphological features of the tissues of the prosthetic bed; the degree of bone atrophy of the alveolar processes of the upper jaw and the alveolar part of the lower jaw (classification of Schroeder, Keller, V. Yu.Kurlandsky, A. I. Doynikov). Choosing a treatment method, predicting the results. Classification flexibility and mobility of the mucosa (Supply), pain sensitivity of the mucous membrane.
2. Methods of fixing and stabilizing removable dentures in the complete absence of teeth. Methods of making individual spoons for the upper and lower jaws (wax, plastic). Methods of storing individual spoons made of plastic. Functional tests according to Gerbst et al. The boundaries of the bases of prostheses in the complete absence of teeth. Obtaining functional impressions, their classification. Impression materials.
3. Determination of the central ratio of the jaws in the absence of teeth. Methods for determining the height of the lower part of the face. Clinical and anthropometric guidelines for the selection and placement of teeth. Biomechanics of the lower jaw. Regularities of articulation and occlusion of dentition in physiological types of occlusion. Bonneville's Law of articulation, Hanau. Articulators, principles of design of medicinal products. Recording the movements of the lower jaw and transferring the data to individual articulators.
4. Features of the design of prostheses with the orthognathic ratio of dentition in the occludator and articulator, on the glass. Setting according to individual occlusal curves. Artificial teeth. The "spherical" theory of articulation and its implementation in the practical restoration of dentition in the complete absence of teeth. Features of the construction of dentition in prostheses with a progenic and prognatic ratio of the jaws.
5. Checking the design of prostheses in the absence of teeth. Possible errors in determining and fixing the central ratio of the jaws, the causes and methods of their elimination. Analysis of medical errors in determining the central ratio of the jaws-causes, consequences, methods of elimination
6. Storing and applying removable dentures in the absence of teeth. Adaptation to the dentures. Rules for the use of removable dentures. Features of orthopedic treatment of patients with complete absence of teeth during repeated prosthetics, reducing the height of the lower part of the face. Correction of prostheses. Complications with the use of plate prostheses. Methods of prevention and elimination. Clinical and laboratory stages of manufacturing complete removable dentures with various designs of bases (plastic, metal, metallized, double-layer) in the complete absence of teeth.

Examples:

1. The central ratio of edentulous jaws when placing teeth in full removable dentures on a spherical surface is determined using:
   a) Larin apparatus
   b) a special line consisting of intraoral spherical and extraoral parts+
   c) Spatula
   d) Compass

2. Determination of the central relationship of the jaws in the complete absence of teeth begin
   a) with the formation of the vestibular oval on the upper occlusal roller+
   b) with the fit of the lower wax base with occlusal rollers according to the height lower face
   c) with the application of clinical landmarks for tooth placement
   d) with fixation of the central ratio of the jaws
   e) with the formation of the prosthetic plane on the upper occlusal roller

3. For the clinical stage "Checking the design of a removable prosthesis" from the laboratory
   a) models with wax bases and occlusal rollers
   b) models with wax bases and artificial teeth
   c) models with wax bases and artificial teeth fixed in articulator+
   d) wax bases with artificial teeth
   e) unpolished dentures
4. When deciding on the removal of one remaining tooth, it is necessary to consider
   a) the possibility of better fixation of the prosthesis
   b) preservation of interalveolar height
   c) determination of the central ratio of the jaws
   d) all of the above is true +

5.When deciding on the removal of one remaining tooth, it is necessary to take into account
   a) the possibility of using the tooth root as a support for a removable prosthesis (attachments, magnets, etc.)
   b) transmission of chewing pressure through the preserved root
   c) an increase in the chewing efficiency of the prosthesis
   d) all of the above +

Module: Complex dental prosthetics

Course: 4
Semester: 7
Lectures: 14 hours.
Practical classes: 38 hours.
Self-study: 20 hours.
A total of 72 hours.

The content of the lecture course:

1. Orthopedic treatment with clasp prostheses with partial absence of teeth. Clinical indications for treatment with clasp prostheses. Parts of clasp prostheses.
2. Clasp prostheses with a clasp fixation system, manufacturing methods.
3. Parallelometry. Parallelometer. Basic structural elements. Work principles. Definition of the concept of "prosthetic equator" ("line of sight", "boundary line", "common equatorial line", "clinical equator" - synonyms); change in its topography depending on the position of the dentition of the model to the diagnostic pin; relationship with the choice of the type of support-retaining clasp and the axis of insertion (fitting) of the frame of the clasp prosthesis.
4. Orthopedic treatment of partial absence of teeth with clasp prostheses with telescopic, locking and beam fixation systems.
5. Definition of the concepts of "combined dentures" - non-removable and removable (combined).

6. Pathological abrasion of teeth. Etiology and clinic. Definition of the concepts of "physiological", "delayed" and "pathological" abrasion of hard tissues of dental crowns. Methods of objective examination. The study of diagnostic models. Classification of pathological abrasion according to severity and extent. Tasks of orthopedic treatment of localized form. The role of surgical interventions (compact osteotomy) in (acceleration of the restructuring of the bone tissue of the alveolar processes. Generalized form.
7. Clinical manifestations with and without a decrease in the height of the occlusion Costen's syndrome. Otoneurological syndrome. Tomography of the TMJ. a form of pathological wear with intact dentition without a decrease in the height of the lower face in central occlusion Diagnosis The concept of "myotatic reflex according to Rubinov" and its restructuring in the second or third degree of severity of the disease.

The content of practical classes:

1. Orthopedic treatment with clasp prostheses in the partial absence of teeth. Clinical indications for treatment with clasp prostheses.
2. Orthopedic treatment with clasp prostheses with a fixation system using support-retaining clasps. Influence on the choice of the clamp design, the location on the occlusal surface of the lining and shoulders, the defect class - with a "distal" restriction and a natural tooth "without a distal" restriction. The "operation" of the clamp and the "artificial saddle" when applying a chewing load.
3. Methods of manufacturing clasp prostheses. The sequence of clinical and laboratory stages of the manufacture of clasp prostheses. Casting technique. Packing and checking the frame of the clasp prosthesis in the clinic, criteria for evaluating its quality.
4. Parallelometry. Parallelometer. The main structural elements. Principles of operation. Definition of the concept of "prosthetic equator" ("line of sight", "boundary line", "general equator line", "clinical equator" are synonyms); change of its topography depending on the position of the dentition of the model to the diagnostic pin; relationship with the choice of the type of support-retaining clamp and the axis of introduction (landing) of the frame a clasp prosthesis.
5. Orthopedic treatment of partial absence of teeth with clasp prostheses with telescopic, lock and beam fixation systems.
6. Definition of the concepts of "combined dentures" – fixed and removable (combined). Clinical and laboratory stages of manufacturing. Casting technology.
7. Pathological erasability. Methods of orthopedic treatment. A differentiated approach in the complex treatment of pathological erasability.
8. Features of treatment with the preserved integrity of the dentition and partial absence of teeth.

Examples:

1.Clasp prosthesis consists
1) from arch and artificial teeth
2) from archwire, artificial teeth and clasps *
3) from the arch, artificial teeth, clasps and saddle part
4) from arc and clasps
5) from the arch and saddle parts

2.Clasp shoulder adheres to the tooth surface
1) at 1 point
2) at two points
3) at three points

4) along its entire length *
5) does not fit

3.In the manufacture of clasp prostheses, materials are used to obtain impressions
1) solid crystalline
2) elastic *
3) thermoplastic
4) crystallizing
5) there is no right answer

4.The arch of the clasp prosthesis on the lower jaw is located
1) at the necks of the teeth
2) in the middle of the distance between the necks of the teeth and the transitional fold of the mucous membrane of the floor of the mouth *
3) at the transitional fold of the mucous membrane of the floor of the mouth
4) on the lingual surface of the teeth
5) at the transitional fold, squeezing the mucous membrane

5.Parallelometry is carried out
1) when fitting and checking the frame of the clasp prosthesis in the clinic
2) when fitting a cast frame on a model in a laboratory
3) when modeling the skeleton of a clasp prosthesis *
4) at the stage of polishing and grinding of the clasp prosthesis
5) when duplicating a model

Module: Complex dental prosthetics

Course: 4
Semester: 8
Lectures: 18 hours.
Practical classes: 60 hours.
Self-study: 62 hours.
A total of 140 hours.

The content of the lecture course:

1. Orthopedic treatment of patients with periodontal disease. Methods for studying the condition of the periodontium and their diagnostic significance: probing, determining the mobility of teeth (periodontometry), occlusography, the study of odontoparodontograms (panoramic x-rays). Orthopedic methods of treatment of periodontal diseases. The basics of choosing designs for medical devices.
2. Traumatic overload of the periodontium. Identification of areas of the teeth that block the movement of the lower jaw. Occlusogram. Selective grinding of teeth that block the movement of the lower. Orthopedic methods of treatment of periodontal diseases. Fixed and removable tires. Use in the treatment of periodontal disease. Permanent and temporary tires in the treatment of periodontal diseases. Indications for temporary splinting.
3. Direct prosthetics in the complex treatment of periodontal diseases, manufacturing methods. Immediate prostheses.
4. Complex therapy of periodontitis. Indications for extraction of teeth in periodontal diseases. The method of temporary splinting, as a therapeutic stage, aimed at creating

stability of the teeth and dentition in general. Indications for the use of temporary splints. Temporary removable lamellar dentures - immediate dentures.

5. Indications for manufacturing, their purpose: elimination of aesthetic and phonetic defects when extracting teeth with affected periodontium, redistribution of masticatory pressure and achievement of the splinting effect. Fixed and removable types of immediate prostheses. The main stages in the manufacture of immediate prostheses. Preparation of plaster models in the manufacture of immediate prostheses.
6. Deformation of the dentition and bite in the partial absence of teeth. Pathogenesis. Classification. Clinic. Mistakes and complications in orthopedic treatment with removable and non-removable orthopedic structures.
7. Orthopedic treatment of patients with complete absence of teeth with repeated prosthetics. Features of orthopedic treatment of patients with complete absence of teeth with repeated prosthetics, lowering the height of the lower face. Complications when using lamellar prostheses.
8. Orthopedic treatment of patients with somatic diseases. Features Orthopedic treatment of patients with chronic diseases of the oral cavity.
9. Diagnosis and orthopedic treatment of patients with extensive defecations of the dentition and single teeth and teeth roots preserved on the jaws. Covering prostheses. Clinical picture, examination methods.

The content of practical classes:

1. Orthopedic treatment of patients with periodontal diseases. The study of X-ray images, filling in the odontoparodontogram and its analysis. Taking impressions. The study of diagnostic models in the medium-anatomical articulator, the identification of characteristic sites of closure and supercontacts (premature contacts). Comparison with occlusogram data.
2. Orthopedic methods of treatment of periodontal diseases. Drawing up a comprehensive treatment plan for periodontitis, an integrated approach to radiation. The role of oral hygiene in patients with dentures in periodontal diseases.
3. Traumatic periodontal overload. Focal periodontitis. Substantiation of the design of the splint (or splint-prosthesis) and its length on the basis of examination data and analysis of odontoparodontograms. Types of stabilization and their justification.
4. Direct prosthetics in the complex treatment of periodontal diseases, manufacturing methods. The technique of applying immediate prostheses. Application of complex splints and prosthetic splints.
5. Deformations of the dentition. The study of diagnostic models in an occluder (articulator). Biometrics of models.
6. Radiography. Overview radiography. Diagnostics. Differential diagnosis. Formulation of the diagnosis. Substantiation of the tactics of management of patients with this pathology.
7. Errors and complications in orthopedic dentistry. Diagnosis and prevention of complications and errors in orthopedic treatment of various types of dentures and devices.
8. Mistakes made at various clinical and laboratory stages of orthopedic treatment (prosthetics with pin structures, crowns, bridges, clasp, partially removable prostheses).
9. Features of orthopedic treatment of patients with complete absence of teeth during repeated prosthetics. Correction of prostheses. Methods of prevention and elimination.
10. Features of orthopedic treatment of patients with somatic diseases.
11. The choice of orthopedic structures with chronic somatic diseases.

12. Diagnostics and orthopedic treatment of patients with extensive defects of the dentition and single teeth preserved on the jaws, and the roots of the teeth. Covering prostheses. Clinical picture, methods of examination.

Examples:

1. Horizontal, vertical, mixed erasure corresponds to the classification:
   a) according to the depth of the lesion
   b) by stage of development
   c) along the plane of the lesion +
   d) by the extent of the lesion
   e) according to the sensitivity of dentin

2. Etiological factors of increased erasability associated with functional overload of teeth
   a) malocclusion +
   b) alimentary insufficiency
   c) chemical effects
   d) physical impact
   e) direct bite

3. The form of increased erasability of the hard tissues of the teeth depends on
   a) from the shape of the dentition
   b) from the type of bite +
   c) depending on the size of the teeth
   d) from the type of teeth
   e) all answers are correct

4. With increased erasability of hard tissues of teeth of the first degree: orthopedic treatment is carried out
   a) in one stage +
   b) in two stages
   c) in three stages
   d) more than three stages
   e) all answers are correct

5. Localized, generalized erasability corresponds to the classification:
   a) according to the depth of the lesion
   b) by stage of development
   c) along the plane of the lesion
   d) according to the sensitivity of dentin
   e) by the extent of the lesion +

Module: Implantology

Course: 5
Semester: 9
Lectures: 10 hours.
Practical classes: 28 hours.
Self-study: 24 hours.
A total of 62 hours.

The content of the lecture course:

1. History of formation, current state and prospects for the development of dental implantology. Possibilities of patient rehabilitation with dental implants.
2. The phenomenon of osseointegration. Prerequisites and factors affecting the interaction of the implant with bone tissue. Indications and contraindications of dental rehabilitation with dental implants.
3. Diagnosis and treatment planning of patients using dental implants. Surgical instruments and medical support for dental implantation. Application of biocomposite materials in dental implantology and reconstructive surgery of the oral cavity.
4. Types of implants and features of various implant systems. Sinus lift and subantral implant options. Veneer plastic surgery and intercortical osteotomy. Basic methods of directed tissue regeneration. Use of membrane technology and titanium frames.
5. Orthopedic stage of implant treatment. Designs of various types of prostheses on dental implants.

The content of practical classes:

1. T
he history of the formation of dental implantology. Regulatory and legal framework. Prospects and trends in the development of implantology as a science. Possibilities of modern implantology. Causes of bone loss in the area of missing teeth and their consequences. The problem of choice – implant or bridge, arguments for and against. The current state of domestic implantology. Possibilities of patient rehabilitation with the help of dental implants.
2. A
natomical prerequisites for dental implantation. The phenomenon of osseointegration, factors affecting the optimization of this process. Morphological features of bone wound healing. Morphological features of the bone-implant contact zone. Types of defects and deformities of the alveolar part of the jaws. Indications and contraindications for the use of dental implants.
3. D
iagnosis and treatment planning of patients using dental implants. Basic and additional examination methods necessary for planning treatment with dental implants. Types of surgical guides and methods of their manufacture. Surgical instruments used in the placement of dental implants and in reconstructive interventions on the jawbones. Drug support for implantation and related reconstructive interventions.
4. O
ne-stage and two-stage approaches to the use of dental implants. Implantation in complex clinical cases. Modern ideas about osteoplastic materials. Their use in dental implantology and in reconstructive interventions in the oral cavity, tooth-preserving operations. Types of reconstructive interventions on the jaw bones and the technique of their implementation.
5. I
mplant prosthetics. General principles. Features of prosthetics using various implant systems. Features of prosthetics with a one-stage technique implantation. Features of prosthetics in the two-stage implantation technique.
6. P
revention and treatment of complications arising in the early postoperative period and in the remote stages of the dental implantation. Features and justification of professional oral hygiene during implantation and reconstructive interventions on the jawbones.

Examples:

1. Location of the intraosseous implant arms in relation to the cortical plate following:
a) the shoulders are located at the level of the cortical plate
b) above the cortical lamina
c) 2-3 mm below the cortical plate+
d) 2-3 mm above the cortical plate
e) depending on the condition of the bone

2. Undergo regular monitoring of the patient who has received treatment with the help of implantation:
a) not required
b) depending on the patient's desire
c) is required within the first year
d) regular monitoring is required+
e) is required within the first six months

3. After implantation, the sutures are removed
a) after 3 weeks
b) after 7-8 days+
c) after 2-3 days
d) after 10-12 days
e) after 4-5 days

4. The term "osseointegration" was introduced by
a) P.I.Branemark+
b) N.N.Znamensky
c) G.B.Brahman
d) H.E.Brukel

5. The requirements for the implant include everything except
a) do not injure the surrounding tissue around the implant
b) do not cause allergic reactions
c) have corrosion resistance and be bioinert
d) be reusable+

Module: Dentistry for the elderly persons

Course: 5
Semester: 9
Lectures: 2 hours.
Practical classes: 12 hours.
Self-study: 14 hours.
A total of 28 hours.

The content of the lecture course:

1. Features of orthopedic treatment of senile patients with fixed and removable dentures. Features of orthopedic treatment of patients with chronic diseases of the oral mucosa against the background of somatic pathology.

The content of practical classes:

1. Features of orthopedic treatment of senile patients with non-removable prostheses. Features of orthopedic treatment of elderly patients with removable dentures. Problems of restoration of speech function (sound formation in prosthetics of patients with missing teeth.
2. Diagnosis and prevention of complications and errors in orthopedic treatment of various types of dentures and devices in elderly patients. Diagnosis and orthopedic treatment of patients with extensive defects of the dentition and single teeth preserved on the jaws, the roots of the teeth. Problems of speech function restoration
3. Features of orthopedic treatment of patients with somatic diseases. Orthopedic treatment of patients with chronic oral diseases.

Examples:

1. The central ratio of edentulous jaws when placing teeth in full removable dentures on a spherical surface is determined using:

a) Larin apparatus
b) a special line consisting of intraoral spherical and extraoral parts+
c) Spatula
d) Compass

2. Determination of the central ratio of the jaws in the complete absence of teeth begins

a) with the formation of the vestibular oval on the upper occlusal roller+
b) With the fit of the lower wax base with occlusal rollers in accordance with the height of the lower part of the face
c) with the application of clinical landmarks for tooth placement
d) with fixation of the central ratio of the jaws
e) with the formation of the prosthetic plane on the upper occlusal roller

3. For the clinical stage "Checking the design of a removable prosthesis", the laboratory receives

a) models with wax bases and occlusal rollers
b) models with wax bases and artificial teeth
c) models with wax bases and false teeth fixed in the articulator+
d) wax bases with artificial teeth
e) Unpolished dentures

4. Options for fixing the body of the removable implant prosthesis

a) push-button lock mount+
b) beam type lock fastening
c) screw fixation
d) fixation on cement

5. The main difference between prosthetics with two-stage implantation is

a) in the removal of the impression
b) crown fixation
c) modeling of wax composition
d) in the manufacture of the working model, laboratory analogues are used-implant negatives+

Module: Clinical Dentistry

Course: 5
Semester: 10

Lectures: 4 hours.
Practical classes: 42 hours.
Self-study: 25 hours.
A total of 71 hours.

The content of the lecture course:

1. Modern methods of orthopedic treatment with fixed structures of prostheses.
2. Prosthetics on implants.

The content of practical classes:

1. Communication with patients. Psychodiagnostics and psychocorrection of the patient's emotional state at a dental appointment. Motivation of the patient for dental treatment.
2. Modern methods of orthopedic treatment with fixed structures of prostheses.
3. Modern methods of orthopedic treatment with removable structures of prostheses. Prosthetics of dental row defects on implants.
4. Building a treatment plan depending on the clinical situation.
5. Surgical methods of dental implantation. One-stage and two-stage approaches in the use of dental implants. Implantation in complex clinical cases. Modern ideas about osteoplastic materials. Their use in dental implantology and in reconstructive interventions in the oral cavity, tooth-preserving operations.
6. Types of reconstructive interventions on the jaw bones and the technique of their implementation.
7. Prosthetics on implants. General principles. Features of prosthetics using various implant systems.
8. Features of prosthetics with a single-stage implantation technique. Features of prosthetics with a two-stage implantation technique. Prevention and treatment of complications arising in the early postoperative period and in the long term of dental implantation. Features and justification of professional oral hygiene during implantation and reconstructive interventions on the jaw bones.
9. Diagnostics and orthopedic treatment of patients with extensive defects of the dentition and single teeth preserved on the jaws, the roots of the teeth. Problems of speech function restoration. Features of orthopedic treatment of patients with somatic diseases. Orthopedic treatment of patients with chronic diseases of the oral cavity.

Examples:

1. In the complete absence of teeth on the lower jaw, a statement is necessary for the manufacture of a non-removable structure
   a) 4-6 implants
   b) 8-10 implants
   c) 2-4 implants
   d) 6-8 implants+

2. Alloys are used for the manufacture of the implant
   a) aluminum
   b) chrome-nickel
   c) titanium+
   d) chromium-cobalt

3. The most common technology for increasing the volume of bone tissue
   a) enlargement of the alveolar ridge by bone autoblocks
   b) distraction of bone tissue
   c) orthodontic root extension with bone block
   d) enlargement of the alveolar ridge with osteoplastic materials using membranes+

4.The most optimal bone structure for implantation is characterized by the following type of jaw according to the classification of S. Misch
   a) D1
   b) D2+
   c) D3
   d) D4

5. Recommended axis of placement of push-button clamps of the subperiosteal implant
   a) transverse in the frontal section
   b) transverse in the middle section+
   c) transverse in the distal section
   d) diagonal

Module: Gnatology

Course: 5
Semester: 10
Lectures: 20 hours.
Practical classes: 28 hours.
Self-study: 16 hours.
A total of 64 hours.

The content of the lecture course:

1. Gnathology as a scientific and practical direction in orthopedic dentistry.
2. Methods for determining the central occlusion and the central ratio of the jaws.
3. The functional state of the dentoalveolar system in the partial absence of teeth. Instrumental functional diagnostics of the dentoalveolar system with partial absence of teeth.
4. Diagnosis and orthopedic treatment of functional overload of periodontal tissues. Causes of functional overload of periodontal tissues. Traumatic occlusion. Direct and reflected traumatic nodes. Morphofunctional changes in periodontal tissues during its functional overload. Functional overload of the periodontium in periodontitis. Secondary deformations of the dentition in periodontitis.
5. Instrumental methods for diagnosing occlusal relationships in functional overload of the periodontium. Orthopedic treatment of functional overload of periodontal tissues. Selective grinding of teeth.
6. Features of the diagnosis of occlusal disorders in deformities of the dentition and occlusion associated with the pathology of hard dental tissues, with parafunctions, partial absence of teeth.
7. Pathogenesis of vertical and horizontal deformations of the dentition. Clinic, classification, hardware functional diagnostics of dentition deformities.
8. Methods of orthopedic treatment of patients with deformities of the dentition Violations of occlusion with multiple defects in the hard tissues of the teeth and partial absence of teeth. The pathogenesis of deep incisal overlap and distal displacement of the lower jaw.

9. Clinical-instrumental and instrumental methods of examination of patients with TMJ pathology. Classification, etiology, pathogenesis, clinic, diagnosis and treatment.
10. Pathological conditions of the masticatory muscles, their relationship with the TMJ and occlusion, compensatory changes in the work of the masticatory muscles, treatment of pathological conditions of the masticatory muscles.

The content of practical classes:

1. Diagnostics and orthopedic treatment of patients with deformities of the dentition and bite.
2. Features of the diagnosis of occlusive disorders in deformities of the dentition and bite.
3. Planning of orthopedic treatment of dental defects or dentition defects complicated by deformations of the dentition in an individually configured articulator. Malocclusion with multiple defects of the hard tissues of the teeth and partial absence of teeth.
4. Methods of orthopedic treatment of patients with deformities of the dentition. Planning (in an individually configured articulator) orthopedic treatment of dental defects and dentition complicated by deformities of the dentition.
5. Diagnostics and orthopedic treatment of patients with TMJ pathology. Devices for examination of patients with TMJ pathology (facial arches, articulators, axiographs). Pathological conditions of the masticatory muscles. Medical tactics and types of orthopedic devices and prostheses used in the treatment of patients with TMJ pathology.

Examples:

1. The thumbs of the doctor's hands when adjusting the dislocation of the lower jaw are placed on:
a) angles of the lower jaw
b) the frontal group of teeth
c) molars on the right and left or alveolar processes +
d) chin
e) branches of the lower jaw

2. Acute arthritis of the TMJ must be differentiated from:
a) acute otitis +
b) acute maxillary sinusitis
c) parotid hyperhidrosis
d) fracture of the upper jaw
e) phlegmon of the submandibular region

3. Acute arthritis of the TMJ must be differentiated from:
a) phlegmon of the submandibular region
b) acute maxillary sinusitis
c) parotid hyperhidrosis
d) fracture of the upper jaw
e) fracture of the condylar process of the mandible +

4. Additional methods of investigation of patients with decompensated form of increased erasability of hard tissues of teeth
a) clinical blood test
b) palpation of the temporomandibular joint
c) biochemical blood analysis
d) x-ray examination of teeth and jaws+

e) allergic tests

5. Which muscle is attached to the TMJ disk
a) temporal
b) zygomatic
c) medial pterygoid
d) lateral pterygoid+
e) actually chewing

Text books and required supplies.

1) Electronic Library of Kazan State Medical University - https://lib-kazangmu.ru
2) National Library of Medicine - National Library of Medicine - https://pubmed.ncbi.nlm.nih.gov
3) «Clinical Aspects of Dental Materials: Theory, Practice, and Cases», Marcia Gladwin, Michael Bagby. LWW, Year: 2017.
4) «Functional Aesthetic Dentistry: How to Achieve Predictable Aesthetic Results Using Principles of a Stable Occlusion», Neeraj Khanna. Publishing; Springer, Year: 2020.
5) «Digital Restorative Dentistry: A Guide to Materials, Equipment, and Clinical Procedures», Faleh Tamimi, Hiroshi Hirayama. Publisher: Springer International Publishing, Year: 2019.
6) «Treatment Planning in Restorative Dentistry and Implant Prosthodontics», Antonio H. C. Rodrigues. Publisher: Quintessence Publishing Company, Ltd., Year: 2019.
7) «Manual of Clinical Procedures in Dentistry», Nairn Wilson (ed.), Stephen Dunne (ed.). Publisher: Wiley-Blackwell, Year: 2018.
8) «Diseases and conditions in dentistry : an evidence-based reference», Moharamzadeh, Keyvan. Publisher: Wiley, Year: 2018.
9) «Esthetics in dentistry», Chu, Stephen J.; Goldstein, Ronald E.; Lee, Ernesto A.; Stapert, Christian F. J. Publisher: Wiley Blackwell, Year: 2018.
10) «Dental implant prosthetics», Misch, Carl E. Elsevier Mosby, Year: 2015.
11) «Dental Implant Treatment in Medically Compromised Patients», Quan Yuan. Springer International Publishing, Year: 2020.
12) «Color Atlas of Dental Implant Surgery», Michael S. Block DMD. Saunders, Year: 2014.

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70-79% - "satisfactory" rating
Less than 70% of correct answers are rated "unsatisfactory".

CLINICAL ANATOMY AND RADIOLOGY IN DENTISTRY

Teachers: Mustakimova Rezeda Faritovna, Shakirov Eduard Iurevich, Shakirova Leisan Rinatovna, Denisov Nikolay Dmitrievich.
Building, Department, classroom: Butlerova 16, Dental clinic Kazan SMU, Department of Prosthetic Dentistry; Amirkhana 16, Dental Simulation Clinic.
Contact details:

- Telephone number: 89625881635 (Denisov Nikolay)
- E-mail address: dr.denisov.nikolay@gmail.com
- Office and working hours: Butlerova 16, Dental clinic Kazan SMU; Monday-Friday 8:00-18:00.

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Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

The purpose and objectives of mastering the discipline " Clinical Anatomy and Radiology in Dentistry ".
The purpose of mastering the discipline is to ensure that students acquire a set of fundamental knowledge and practical skills in the field of radiology that will allow them to competently develop and implement measures for a differentiated selection of basic radiological methods (taking into account the advantages and disadvantages of each of them) used in the diagnosis and evaluation of the results of treatment of underlying diseases in dentistry and maxillofacial surgery deepening knowledge regarding the functioning of the most advanced radiological equipment and devices sold on the medical equipment market, basic knowledge in the field of an individualized approach to their selection, the formation of skills in using specific radiological methods in the diagnosis and evaluation of treatment results for the above-mentioned pathological processes, and further improvement of practical experience in this area.

Course: 3
Semester: 6
Lectures: 10 hours.
Practical classes: 32 hours.
Self-study: 30 hours.
A total of 72 hours.

The content of the lecture course:

1. X-ray method in dentistry. Organization of specialized dental X-ray rooms. X-ray equipment.

2. Methods of X-ray examination. Interpretation of radiological data. Errors in the execution and interpretation of radiographs, ways to eliminate them.
3. Basic patterns of vital activity and structure of bone tissue and teeth.
4. X-ray diagnostics of injuries of the maxillofacial region.
5. X-ray diagnostics of tumors and tumor-like formations of the jaw bones.

The content of practical classes:

1. _____ Technical features of modern specialized X-ray equipment designed for different types of radiography, layer-by-layer and contrast studies of the dentoalveolar system and other parts of the facial skull. Radiation loads and ensuring the safety of studies. Methods of intra- and extraoral radiography, indications for use.
2. _____ Methodological methods and basics of standardization of the X-ray diagnostic process in diseases of the maxillofacial region.
3. _____ Age and functional variants of the structure of teeth and jaws.
4. _____ Radiosemiotics of dental and periodontal disease. Radiosemiotics of periodontal disease.
5. _____ Radiological manifestations of fractures of the mandible, middle and upper areas of the facial skull. Radiological examination in inflammatory changes and radionecrosis of jaw bones.
6. _____ Radiosemiotics of benign and malignant tumors, cysts, systemic and tumor-like lesions of jaw bones of different genesis. Radiological examination of odontogenic and non-dontogenic diseases of the maxillary sinuses.

Examples:

1. For X-ray examination of the bones of the maxillofacial region, the following are used:
a) radiography of the skull in direct and lateral projections
b) axial and semi-axial radiographs
c) examination of the temporomandibular joint
d) examination of the floor of the oral cavity
e) all of the above+

2. When conducting telerentgenography, the distance between the object of study and the radiation source is:
a) 3 m
b) 2 m
c) 1 m
d) 2.5 m
e) 1.5 m+
e) 0.5 m

3. Tomography is used in the examination of the following organs of the maxillofacial region: a) temporomandibular join;
b) paranasal sinuses
c) the subclavian and wing-palatine pits
d) salivary glands
e) lower jaw

f) nose bones
g) all of the above+

4. Radio-cinematography is
a) radiography at a distance
b) radiography in the prone position
c) radiography of moving objects+
d) radiography while sitting
e) X-ray examination in which the source is inserted into the oral cavity

5. Types of contrast liquids:
a) fat-soluble
b) water-soluble
c) acid-soluble
d) alkali -soluble
e) true a) and b)+

Text books and required supplies.

1. Electronic Library of Kazan State Medical University - https://lib-kazangmu.ru
2. National Library of Medicine - National Library of Medicine - https://pubmed.ncbi.nlm.nih.gov
3. «3D Radiology in Dentistry: Diagnosis Pre-Operative Planning Follow-Up». Emanuele Ambu, Roberto Ghiretti, Riccardo Laziosi. Publisher: Elsevier, 2013.
4. «Dental Radiology». Fuhrmann. Thieme Medical Publishers, 2015.
5. «Essentials of dental radiography and radiology». Drage, Nicholas;Whaites, Eric. Churchill Livingstone Elsevier, 2015.

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The purpose and objectives of mastering the discipline " Maxillofacial surgery ".
The purpose of mastering the discipline is to ensure that students acquire theoretical knowledge and practical skills in maxillofacial prosthetics in the discipline of maxillofacial surgery, necessary for a dentist in outpatient and inpatient settings.

Module: Maxillofacial prosthetics

Course: 5
Semester: 9
Lectures: 8 hours.
Practical classes: 22 hours.
Self-study: 24 hours.
A total of 54 hours.

The content of the lecture course:

1. Tasks of the orthopedic stage in the complex rehabilitation of patients with diseases and injuries of the maxillofacial region.
2. Organizational and therapeutic measures in the staged rehabilitation of patients with multiple trauma.
3. Fractures of the upper jaw. Classification of devices and prostheses. Methods of fixation of maxillofacial and prostheses in the treatment of patients with fractures of the upper jaw.
4. Classification of maxillofacial apparatuses and prostheses. Methods of retention in the treatment of mandibular fractures. Features of hygienic care for the prosthesis and prosthetic bed. Orthopedic treatment of patients with complicated jaw injuries.

The content of practical classes:

1. Prospects for the development of maxillofacial prosthetics.
2. Multidisciplinary approach in diagnostics, treatment planning of patients with diseases and injuries of the maxillofacial region.
3. Clinical and laboratory stages of manufacturing maxillofacial and prostheses in the treatment of patients with fractures of the upper jaw.

4. Orthopedic treatment of mandibular fractures. The method of obtaining impressions and features of the manufacture of a plaster model. Clinical and laboratory stages of manufacturing. Features of hygienic care for the prosthesis and prosthetic bed.
5. Features of taking impressions in the manufacture of maxillofacial prostheses in patients with resection of the upper jaw with oncological diseases.

Examples:

1. Reposition:
a) _____ M
atching and moving the fragments to the correct position.+
b) _____ F
ixing the fragments in the correct position.
c) _____ F
usion of fragments.
d) _____ G
. Medical treatment aimed at preventing complications.
e) _____ T
here is no right answer.

2. Immobilization:
a) _____ F
ixing fragments in the correct position.+
b) _____ M
atching and moving fragments to the correct position.
c) _____ F
usion of fragments.
d) _____ G
. Medical treatment aimed at preventing complications.
e) _____ T
here is no right answer.

3. Consolidation:
a) _____ F
usion of fragments.+
b) _____ F
ixing fragments in the correct position.
c) _____ M
atching and moving fragments to the correct position.
d) _____ M
edical treatment aimed at preventing complications.
e) _____ d
. There is no right answer.

4. The solution of the main problem in the treatment of patients with jaw fractures includes:
a) _____ A
ll possible answers are correct.+
b) _____ I
mmobilization.
c) _____ V
. Drug treatment aimed at preventing complications.

d) G
. Physical methods of treatment.
e) R
eposition

5. Pressure dressings are indicated for:
a) F
ractures of the lower jaw outside the dental arch.+
b) A
fter the initial surgical treatment of the wound.
c) M
alocclusion pathology.
d) G
. Lack of consciousness in the patient.
e) T
here is no correct answer.

Module: Maxillofacial prosthetics

Course: 5
Semester: 10
Lectures: 10 hours.
Practical classes: 24 hours.
Self-study: 34 hours.
A total of 68 hours.

The content of the lecture course:

1. Classification of postoperative defects in patients with oncological diseases of the maxillofacial region. Prosthetics for resection of the upper.
2. Orthopedic stage of complex treatment of patients with oncological diseases of the lower jaw. The main bioadapted polymeric materials used in the manufacture of facial prostheses.
3. Features of orthopedic treatment of patients. Types of prostheses for the rehabilitation of patients with congenital and acquired defects of the soft and hard.
4. Modern diagnostic methods in maxillofacial prosthetics.
5. Implantology in maxillofacial prosthetics.

The content of practical classes:

1. T
ypes and clinical and laboratory stages of manufacturing dental prostheses for the treatment of patients with oncological diseases of the lower jaw.
2. T
ypes and clinical and laboratory stages of manufacturing dental prostheses for the treatment of patients with congenital and acquired defects of the soft and hard palate.
3. F
eatures of care for patients with defects in the maxillofacial region.
4. C
lassification of maxillofacial and facial prostheses, methods of retention. The method of obtaining impressions and the features of making a plaster model of the face, auricle, intraocular space. Features of hygienic care for the prosthesis and prosthetic bed.

5. _____ P
rosthetics on implants. General principles in patients with maxillofacial defects. Features of prosthetics using various systems of implants. Orthopedic treatment planning using CAD/CAM technologies. Obtaining models by computer prototyping (stereolithography). Application of methods of radiation diagnostics (MSCT, MRI) in the planning of complex rehabilitation of patients.

Examples:

1. The causes leading to acquired defects of the maxillofacial region:
   a) Everything is true +
   b) Sports injury
   c) Household injury
   d) Oncological diseases
   e) Gunshot injury

2. Congenital defects of the maxillofacial region are:
   a) Cleft palate +
   b) Malignant neoplasms
   c) Hematoma
   d) Postresection defects
   e) All answers are correct

3. Contraindication to replantation is:
   a) Pronounced destruction of dislocated tooth +
   b) Initial caries
   c) Initial caries
   d) Minor destruction of dislocated tooth
   e) There is no correct answer among the presented

4. Parietal-chin bandage according to Hippocrates:
   a) There is no correct answer among the proposed ones +
   b) It is indicated for fractures of the base of the skull, it fixes fragments
   c) It is indicated for fracture of the zygomatic bones, it acts as an alternative to surgical jamming of fragments for their further fixation
   d) It is indicated for bruises, sprains of the ligamentous apparatus of the CHLO and hematomas, to restrain an increase in volume
   e) For fractures of the jaws, the bandage causes displacement of fragments, thereby providing functional reposition

5. Limberg plaque:
   a) Fixed with bandages or with rubber bands (rubber traction) to the headband or cap +
   b) Shown in fractures of the base of the skull, it fixes the fragments
   c) It is indicated for fracture of the zygomatic bones, it acts as an alternative to surgical jamming of fragments for their further fixation
   d) It is indicated for bruises, sprains of the ligamentous apparatus of the CHLO and hematomas, to restrain an increase in volume
   e) For fractures of the jaws, the bandage causes displacement of fragments, thereby providing functional reposition

<u>Text books and required supplies.</u>

1. Electronic Library of Kazan State Medical University - https://lib-kazangmu.ru
2. National Library of Medicine - National Library of Medicine - https://pubmed.ncbi.nlm.nih.gov
3. «Oral & Maxillofacial Surgery Review A Study Guide». Lam Din, Laskin Daniel. Publisher: Quintessence Publishing Co, 2019.
4. «Orthodontics for the Oral and Maxillofacial Surgery Patient». Michael R. Markiewicz, Veerasathpurush Allareddy, Michael Miloro. Series: The Clinics: Oral and Maxillofacial Surgery Clinics of North America Volume 32 Issue . Publisher: Elsevier, 2020.
5. «Reconstructive Oral and Maxillofacial Surgery». Carlos Navarro Vila (eds.) Publisher: Springer International Publishing, 2015.

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AESTHETIC ASPECTS OF PROSTHETIC TREATMENT

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The purpose and objectives of mastering the discipline "Aesthetic aspects of prosthetic treatment".

The purpose of mastering the discipline is to ensure that students master the basics of modern aesthetic knowledge in dentistry. To train a dentist who is able to provide patients with high-quality outpatient dental care for dental hard tissue pathologies and dental row defects, taking into account high aesthetic requirements.

Course: 4
Semester: 7
Lectures: 10 hours.
Practical classes: 32 hours.
Self-study: 30 hours.
A total of 72 hours.

The content of the lecture course:

1. Introduction to aesthetics.
2. Modern methods of aesthetic treatment.
3. Teeth color correction. Whitening.
4. Photography is a means of achieving an aesthetic result.
5. The aesthetic component in the prosthetics of defects in the dentition with fixed structures.

The content of practical classes:

1. Introduction to aesthetics. Basic concepts, definitions. Anthropometric regularities of the structure of the human body. constitutional types. Facial proportions. Golden section. facial harmony. Smile analysis. Facial proportions. face components. Fundamentals of aesthetic analysis. cephalometric analysis. Proportionality of the face. Reference lines (horizontal, vertical). Profile view: line E, nasolabial angle and lips). Classification of face profiles. Disharmony of horizontal lines. Facial index according to Isar IFM. Ideal face proportions. Analysis of the position of the lips and teeth. Lip movements. Visualization of dentition at rest. Cutting edge. Types of smiles Smile line. Smile width. Lip gap. Cheek corridor. Occlusal plane and commissural lines.
2. Phonetic analysis. Teeth analysis. Morphology of the dentition. Morphology of teeth. color theory. Physical, optical and biological aspects of color perception. Evaluation of the length of the incisors. Assessment of the height of the central occlusion. Evaluation of the incisal edge profile. Evaluation of the position of the teeth. Morphology of the dentition. Morphology of teeth (incisors, canines). Morphology of teeth (premolars, molars). Shape and color of teeth. Characteristics of teeth inherent in different age groups. visual illusions. Micro and macro texture of the tooth. Shape and contour. Dimensions and proportions. Incisal edge and buccal surface profile. Evaluation of the dentition. color theory. Physical, optical and biological aspects of color perception. The main problems of color perception in aesthetic restorations of teeth. Psychophysical perception of color. Intuitive color matching method. Age features of a person in the selection of colors, color adaptation. Optimal conditions for correct color determination.
3. Methods for determining the color of teeth. Modern methods of aesthetic treatment. Comparative characteristics of restorations. Electronic devices for determining the color of teeth: spectrophotometers, colorimeters, digital cameras, shadowless lamps. Teeth color correction. Whitening. Influence of bleaching agents on tooth tissues and oral mucosa.

4. _____ Photography is a means of achieving an aesthetic result. Dental photography. Oral photography technique. Types of photography to achieve an aesthetic result. Accessories for intraoral photography. Intraoral mirrors. Focus points. Photography technique. Image display software. Interpretation of the received data.
5. _____ The aesthetic component in the prosthetics of defects in the dentition with non-removable structures.
6. _____ Aesthetic component in the prosthetics of dentition defects on implants. Building an aesthetic treatment plan depending on the clinical situation.

Examples:

1. The formula: Wide part of the head * Long part of the head / 100 determines:
A) The length of the facial region;
B) The shape of the head;+
C) The height of the lower third of the face;
D) The shape of the face;
E) The height of the cerebral region of the skull.

2. The mesocephalic shape of the head matters (Wide part of the head * Long part of the head / 100)
A) up to 75.9;
B) from 76 to 80.9;+
C) from 81 to 85.4;
D) from 85.5 to 100;
E) from 100 or more.

3. The formula: Morphological height of the face, The largest zygomatic width × 100 determines:
A) The morphological index of the face shape; +
B) The shape of the face;
C) The shape of the head;
D) Morphological index of the head shape;
E) The shape of the skull.

4. What number of face shapes determines the morphological index of the face shape?
A) 2;
B) 3;
C) 4;
D) 5;+
E)6.

5. According to the Morphological Index of Face Shapes, the average face has the following value:
A) up to 78.9;
B) 79.0-83.9;+
C) 84.0-87.9;
D) 88.0-92.9;
E) 93.0 and above.

Text books and required supplies.

1. Electronic catalog of the scientific library of Kazan State Medical University. http://lib.kazangmu.ru/jirbis2/index.php?option=com_irbis&view=irbis&Itemid=521&lang=en
2. Electronic library system of KSMU https://lib-kazangmu.ru/english
3. Student electronic library Student's Konsultant, Books in English https://www.studentlibrary.ru/ru/catalogue/switch_kit/x2018-207.html
4. Scientific Electronic Library Elibrary.ru http://elibrary.ru
5. Reference information system https://mbasegeotar.ru/cgi-bin/mb4x
6. Medical journals and articles PubMed https://pubmed.ncbi.nlm.nih.gov/
7. Archive of scientific journals of foreign publishers NEIKON http://arch.neicon.ru/xmlui/
8. "Functional Aesthetic Dentistry: How to Achieve Predictable Aesthetic Results Using Principles of a Stable Occlusion". Neeraj Khanna. Springer International Publishing; Springer, 2020.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Evaluation and grading:

Evaluation criteria:
The test score is given in proportion to the share of correct answers:
90-100% - "excellent" grade
80-89% - "good" grade
70-79% - "satisfactory" rating
Less than 70% of correct answers are rated "unsatisfactory".

ELECTIVE "PROPAEDEUTIC DENTISTRY"

Teachers: Associate Professor, Ph.D. Krikun Elena Valerievna, assistant Urdyakov Ilyas Zinnurovich .
Venue: Dental Clinic of KSMU, 2nd floor, office 26 (classrooms of the Department of Therapeutic Dentistry).
Contact information:
Phone: (843) 238-27-92 (assistance)
- mail address: konferentciyakzn@mail.ru
Office and working hours: (08.00-16.00), 3rd floor. Assistant's office of the Department of Therapeutic Dentistry

Classroom and independent work hours:
Total 72 hours, including:

Lectures 10 hours;
Practical classes 32 hours;
Independent work 30 hours.

Course Description:
A lecture is an oral presentation by a teacher of a particular branch of science or discipline. It is usually given to an entire course of students at the same time.
Practical classes are aimed at applying theoretical knowledge in practice and are held in each academic group separately. Skills and abilities are practiced in the process of solving multi-level situational problems, performing practical manual tasks under the guidance of a teacher.
Independent work is work with specialized literature or educational materials (literary sources, video and audio materials, multimedia programs and simulators) on the university's educational portal (http://www.kgmu.kcn.ru:40404/moodle/login/index.php) .
Target development disciplines : The purpose of the discipline: pre-clinical training, mastering by students the theory and practice of basic dental manipulations, initial professional skills of a dentist for further training at clinical dental departments.
Tasks of the discipline:
- to familiarize with the organization of the dentist's work and the equipment of the dental office;
- to teach the principles of working on dental equipment using tools, dental materials and compliance with sanitary and hygienic requirements, safety regulations;
- to teach the basic professional manual skills of a dentist on head phantoms, dental simulators, including using virtual technologies;
- to teach the basic methods of examination of a dental patient and the rules of filling medical records of a dental patient;

Thematic plan of lectures:
1. Preparation of carious cavities.
2. Filling of carious cavities.
3. Topographic features of the structure of the dental cavity in different groups of teeth.
Endodontic instruments. Classification, standardization. Methodology of work.
5. Preparation of root canals. Methods. Instruments, sequence of their use. Medicinal treatment of root canals of teeth.
6. Filling of root canals of teeth. Errors and complications in endodontic treatment.

Thematic plan of practical classes:
1. Principles and stages of preparation of carious cavities. Instruments for preparation of carious cavities.
2. Classification of filling materials. Requirements, their properties.
3. Methods of restoring the contact point when filling cavities of classes II, III, IV. Matrices and matrix holders . Interdental wedges.
4. Topographic features of the structure of the dental cavity in different groups of teeth.
Endodontic instruments. Classification, standardization. Methodology of work.
5. Manual preparation of root canals. Instruments, sequence of their use. Medicinal treatment of root canals of teeth.
6. Classification of filling materials for root canals. Filling of tooth root canals (pastes, gutta-percha). Lateral condensation technique.
Errors and complications in endodontic treatment.
7. Credit.

Literature:
1. Propaedeutics of dental diseases: textbook for university students / edited by N.N. Abolmasov , A.I. Nikolaev – 2nd ed. (el.) – M.: MEDpress-inform , 2016. – 784 p.: ill.

2. Maksimovsky Yu.M. Phantom course in therapeutic dentistry. – M.: Medicine, 2005. – 328 p.
3. Nikolaev A.I., Tsepov L.M. Phantom course of therapeutic dentistry. – M.: MEDpress-inform , 2009. – 436 p.
4. Pozharitskaya M.M., Simakova T.G. Propaedeutic dentistry. – M.: Medicine, 2004. – 304 p.
5. Propaedeutic dentistry / Ed . E.A. Bazikyan . – M.: GEOTAR-Media, 2008. – 768 p.
6. Therapeutic dentistry / Ed. by Yu.M.Maksimovsky . – M.: Medicine, 2002. – 640 p.
Further reading:
1. Bazhanov N.N. Dentist / In the book: “Introduction to the Specialty”. Ed. by I.A. Sychenikov . – M.: Medicine, 1980. – P. 79–87.
2. Budylina S.M., Degtyareva V.P. Physiology of the maxillofacial region. – M.: Medicine, 2000. – 352 p.
3. Bykov V.L. Histology and embryology of human oral cavity organs. – St. Petersburg : Special Literature, 1998. – 248 p.
4. Gorbunova I.L. Clinical anatomy of human teeth. – M.: Medical book, 2006. – 136 p.
5. Nikolaev A.I., Tsepov L.M. Practical therapeutic dentistry. – M.: MEDpress-inform , 2013. – 928 p.
6. Nikolaev A.I., Tsepov L.M., Nakonechny D.A. Sanitary and hygienic regime in therapeutic dental offices (departments). - M.: MEDpress-inform , 2013. - 280 p.

List of resources of the information and telecommunications network "Internet" necessary for mastering the discipline:

1. www.stom.ru - Russian Dental Portal.
2. Electronic catalog of the Scientific Library of KSMU. http://library.kazangmu.ru/ jirbis2/ index.php? option = com_irbis&view = irbis&Itemid =108
3. Electronic library system of Kazan State Medical University. http://old.kazangmu.ru/lib/
4. Integrated information and library system – Cluster. http://old.kazangmu.ru/lib/index.php?option=com_content&view=article&id=1053&Itemid=100
5. Student consultant: electronic library. http://www.studmedlib.ru/http: //www.studentlibrary.ru/
6. Physician consultant: electronic medical library. http://www.rosmedlib.ru/
7. Scientific electronic library eLIBRARY.RU http://elibrary.ru/
Scopus Abstract Database . https://www.scopus.com/ 9.
Web Publication Abstract Database. of Science . http://apps.webofknowledge.com/
10. Electronic database on clinical medicine ClinicalKey . https://www.clinicalkey.com
11. Electronic versions of books (28 foreign copies) . Ebscohosthttp://web.b.ebscohost.com/
12. Electronic books (9 foreign copies) on the platform
13. ScienceDirecthttp://www.sciencedirect.com/science/bookbshsrw

Springer Electronic Scientific Information Resources . http://link.springer.com/
1. Electronic resources of SpringerNature publishing house . http://www.nature.com/siteindex/index.html
2. Medical newspaper: electronic version. http://www.mgzt.ru/ 3. Archive of scientific journals NEIKON. http://arch.neicon.ru/xmlui/ 4. Archive (review) of media publications. Polpred.com http://www.polpred.com/ 5. Consultant plus: reference legal system. Access from library computers

Teaching aids
1. Pulpitis, periodontitis: method . individual for students (VI semester) / compiled by: S.L. Blashkova , M.V. Martyanova. – Revised and supplemented publ. – Kazan: Kazan State Medical University, 2012. – 84 p .
2. Endodontics. Study guide for students, part 2. Edited by: S.B. Kovyazina , Yu.V. Fazylova. Kazan: 2013. - 85 p.

Evaluation and grading :
Progress monitoring is carried out during and at the end of each semester (written assignments, tests, solving situational problems, assessing practical skills, medical history, etc.).

The assessment of current academic performance (oral survey) is conducted on a 10-point scale, where 0-6 is “unsatisfactory”, 7 is “satisfactory”, 8 is “good”, 9 is “excellent” and 10 is “excellent”.
An unsatisfactory grade during the current assessment, as well as missing practical classes and lectures, is considered an academic failure of the student.
To retake the debt, the student can attend the missed/failed class with another academic group (the teacher must be notified of this in advance), or complete the work using e-learning, distance learning technologies or in another way determined by the teacher. Failure to retake (work off) the academic debt entails expulsion from the university.

Midterm assessment is a form of knowledge and skills assessment for a discipline module (test/oral survey/solving situational problems, defending a medical history). Assessment of test tasks: 0-69 - "unsatisfactory", 70-79 - "satisfactory", 80-89 - "good", 90-100 - "excellent". Assessment of oral and written questions, medical history on a 10-point scale, where 0-6 is "unsatisfactory", 7 is "satisfactory", 8 is "good", 9 is "excellent" and 10 is "excellent".
A student is given no more than 2 attempts to pass the midterm assessment within one year. Failure to pass the assessment results in expulsion from the university.
The assessment is carried out in the form of testing, solving multi-level situational problems, simulators, oral and written questions, or a combination of these.
Test task assessment: 0-69 - "unsatisfactory", 70-79 - "satisfactory", 80-89 - "good", 90-100 - "excellent".
Assessment of oral and written questions: on a 10-point scale, where 0-6 is “unsatisfactory”, 7 is “satisfactory”, 8 is “good”, 9 is “excellent” and 10 is “excellent”.
Assessment of the performance of tasks on simulators: 0-69 points – “fail”, 70-100 points – “pass”.
The overall student rating is based on class attendance, module and test results, midterm assessment results, and course exam results.

Rules of conduct during classes:
– Be respectful.
– Be careful with the equipment.
– Be disciplined.
– Be ready for classes.
– Be involved in the process, don’t be shy about asking questions.
– Look professional: You should wear a clean white coat and change of shoes.
– Eating is permitted only during breaks in specially designated areas.
– Use of the phone is permitted only during breaks between classes.

Examples of assignments for the final module:
Test tasks:

1. Sequence of stages of preparation of carious cavities:
1) anesthesia, necrectomy , finishing , expansion
2) expansion of the cavity, necrectomy , finishing , opening,
3) opening, expansion, necrectomy , formation, finishing edge
4) finishing of edges, anesthesia, opening, expansion of carious cavity
2. How to properly insert light-curing composite into a carious cavity?
1) layer by layer, in oblique layers

2) 1-2 servings
3) in small portions, rubbing against the walls
4) one serving
3. Practical requirements for root canal materials:
1) easy removal if necessary
2) plasticity
3) good manipulative properties
4) all of the above is correct
4. Topography of the cavity of the first upper molars:
1) irregular quadrilateral*
2) triangle
3) rectangle
4) rhombus
5. The first stage of instrumental processing using the " Step-Back " technique:
1) formation of the apical stop
2) formation of the middle part of the root canals
3) formation of the orifice part of the root canals
4) root canal passage and determination of working length

Situational tasks:
1. After filling the root canal of tooth 35 using a pin, the radiograph showed a lack of filling material in the apical area. Was an error made when filling this tooth?
2. During the treatment of pulpitis of tooth 23, the root canal was filled with zinc -eugenol paste with a pin. Was the root canal filling performed correctly?

Exercise machines:
1. Preparation of class 2 carious cavity.
2. Place a composite filling into a class 2 carious cavity.
3. Perform instrumental treatment of the root canal.
4. Fill the root canal using the lateral condensation technique.

Assessment of responses to module assignments:

Each module consists of computer test tasks (20 tests, generated by random sampling from the discipline test bank. The test task is presented in a closed form (with a choice of one or several answers), 1st multi-level situational tasks with 5 questions and 1 task - a simulator for assessing manual skills.

Test assignment evaluation criteria:
An "excellent" grade means that the student scored 90% or more of the maximum test score.
Grade "good" – the student scored 80–89% of the maximum test score.
The grade is "satisfactory" – the student scored 71–79% of the maximum test score.
A fail grade means the student scored less than 70% of the maximum test score.

Criteria for assessing situational tasks:
The grade " excellent " means that the student freely, with a deep knowledge of the material, correctly and completely solved the situational problem (completed all the tasks, correctly answered all the questions).
The grade " good " means that the student answered the questions correctly or made minor errors in the answer in a sufficiently convincing manner, with minor errors in theoretical preparation and sufficiently mastered skills;

The grade " satisfactory " - the student answered the questions of the situational task without sufficient confidence, with significant errors in theoretical preparation and poorly mastered skills; with difficulties, but still able, if necessary, to solve a similar situational task in practice;
The grade “ unsatisfactory ” means that the student has a very weak understanding of the subject and made significant mistakes in answering most of the questions in the situational task, answered additional questions asked of him incorrectly, and cannot cope with solving a similar task in practice.

Criteria for assessing the performance of training tasks:
The grade “excellent” means error-free completion of the task, fluent knowledge of the methods of selecting the necessary tools and working with diagnostic equipment; error-free interpretation of the data obtained with justification of one’s own conclusions.
The grade “good” means completing the task with minor errors that were independently discovered and corrected; correct explanation of the results obtained with the help of additional questions from the teacher; correct interpretation of data, justification of own conclusions with the help of additional questions from the teacher.
The grade “satisfactory” – the assignment was completed with errors that distorted the result obtained, but the progress of the task was corrected after additional questions or explanations from the teacher; erroneous interpretation of the research data, but correction of the interpretation after additional questions or explanations from the teacher; lack of justification for one’s own conclusions.
The grade "unsatisfactory" - the completion of the task with errors that distort the result obtained, the lack of correction of the progress of the task after additional questions or explanations from the teacher; the lack of explanation of the results obtained; erroneous interpretation of the research data, the lack of correction of the interpretation after additional questions or explanations from the teacher, the lack of justification of one's own conclusions.

ELECTIVE COURSE «INNOVATIVE TECHNOLOGIES IN PERIODONTICS».

Lecturers: Associate Professor, Candidate of Medical Sciences Fazylova Yulia Vildanovna, Associate Professor, Candidate of Medical Sciences Krikun Elena Valerievna, Candidate of Medical Sciences Khadyeva Madina Nayilevna.

Venue: Dental Polyclinic of KSMU, 2nd floor, office 26 (study rooms of the Department of Therapeutic Dentistry).

Contact information:
Phone: (843) 238-27-92 (assistant's office)
E-mail address: konferentciyakzn@mail.ru

Office and working hours: (08.00-16.00), 3rd floor. Assistant's room of the Department of Therapeutic Dentistry.

Teaching hours and independent work:
72 hours in total, including
Lectures 10 hours
Practical classes 30 hours;
Independent work 32 hours.

Course description:
A ***lecture*** is an oral presentation by a teacher of a particular branch of science or discipline. It is usually given to the whole class at the same time.
Practical classes are designed to put theoretical knowledge into practice and are conducted separately in each academic group. Skills and abilities are practised in the process of solving multi-level situational tasks, performing practical manual tasks under the guidance of the teacher.
Independent work is the work with special literature or educational materials (literature sources, video and audio materials, multimedia programmes and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).

The aim of mastering the discipline:
The purpose of mastering the discipline "Innovative technologies in periodontology" - acquisition of knowledge by students about modern methods of diagnosis and treatment of periodontal diseases; improvement of practical skills.

Tasks of mastering the discipline of choice 'Innovative technologies in periodontology':
– mastering by students of methodological foundations of patient examination in order to establish the diagnosis and prognosis of the disease, their justification, differential clinical diagnosis and prescription of treatment for patients with periodontal diseases;
– development of clinical thinking, including knowledge of the main directions of pharmacokinetics and pharmacodynamics of medicinal materials and differentiated approach to the choice of drugs used in the treatment of periodontal diseases, taking into account age and individual characteristics;
– formation of students' practical skills for fulfilment of professional duties of a dentist in the field of periodontology;
– formation of students' knowledge of methods of surgical intervention on periodontal tissues;
– formation of professional medical behaviour in communication and interaction with colleagues, patients and their relatives.

Topics of the discipline.
Thematic plan of lectures:
1. Modern views on the etiology and pathogenesis of periodontal diseases. Modern nosological positions in classification and terminology.
2. Modern aspects of clinical manifestations of periodontal diseases. Diagnosis and prognosis in periodontology.
3. Drawing up a treatment plan for patients with periodontal pathology. Treatment protocols. Features of pharmacotherapy of aggressive forms of periodontitis.
4. Modern provisions of professional oral hygiene. Laser technologies in periodontology.
5. Modern methods of surgical treatment of periodontal diseases. Innovative technologies of anaesthesia.

Thematic plan of practical classes:
1.Modern aspects of clinical manifestations of periodontal diseases. Diagnosis and prognosis in periodontology.
2.Drawing up a treatment plan for patients with periodontal pathology. Treatment protocols. Features of pharmacotherapy of aggressive forms of periodontitis.
3. Combined manifestations of endodontic and periodontal diseases. Endodontics in periodontal pathology.
4.Modern provisions of professional oral hygiene.

5.Laser technologies in periodontology. Modern methods of surgical treatment of periodontal diseases.
6.Innovative technologies of anaesthesia. Credit.

Educational literature.

Primary literature:

1. Therapeutic stomatology [Electronic resource]: textbook / O.O. Yanushevich, Y.M. Maksimovsky, L.N. Maksimovskaya, L.Y. Orekhova - Moscow: GEOTAR-Media, 2016. - http://www.studentlibrary.ru/book/ISBN9785970437674.html
2. Therapeutic dentistry [Text]: textbook in 3 parts. Part 2: Diseases of the periodontium / ed. by G.M. Barer. - Moscow: 'Geotar-Media', 2009. - 224, (2) p., fig., tabl. - ISBN 978-5-9704-1391.
3. Therapeutic stomatology [Electronic resource]: textbook in 3 parts. Part 2. Periodontal diseases / ed. by G.M. Barer. - Moscow: 'Geotar-Media', 2015 - 224 pp.
4. http://www.studmedlib.ru/http://www.studentlibrary.ru/
5. Diseases of teeth and oral cavity [Electronic resource]: textbook / I.M. Makeeva, S.T. Sokhov, M.Y. Alimova [et al]. - M., 2012. - 248 c. - Access mode: http://www.studmedlib.ru/ru/book/ISBN9785970421680.html
6. Periodontal diseases. Modern view on clinical-diagnostic and therapeutic aspects [Electronic resource]: textbook / edited by O.O. Yanushevich. - M., 2010. - 160 c. - Access mode: http://www.studmedlib.ru/ru/book/ISBN9785970410370.html
7. Radiation diagnostics in stomatology [Electronic resource]: textbook / A.Yu. Vasiliev, Yu.I. Vorobyev, N.S. Serova. - M., 2008. - 176 c. - Access mode: http://www.studmedlib.ru/ru/book/ISBN9785970407455.html -
8. Dictionary of professional dental terms [Electronic resource]: textbook / E.S. Kalivrajiyan, E.A. Bragin, S.I. Abakarov [et al]. - Moscow: GEOTAR-Media, 2014. - 208 c. - Access mode: http://www.studmedlib.ru/ru/book/ISBN9785970428238.html
9. Therapeutic Dentistry. [Electronic resource]: National manual: textbook / edited by L.A. Dmitrieva. - M.: GEOTAR-Media, 2009, 912 p. http://www.rosmedlib.ru/
10. Stomatology. Recording and maintaining the history of the disease [Electronic resource]: manual / ed. by V. V. Afanasiev, O. O. Yanushevich. V. Afanasyev, O. O. Yanushevich. - 2nd ed., revised and supplemented. - M.: GEOTAR-MEDIA, 2013. - 160 c. -
11. http://www.studmedlib.ru/http://www.studentlibrary.ru/
12. Parodontology [Electronic resource]: national guide / edited by L.A. Dmitrieva. - Moscow: GEOTAR-Media, 2014. - 712 c. http://www.rosmedlib.ru/
13. Local anaesthesia in dentistry [Electronic resource]: textbook for students studying in the speciality 'Stomatology' / edited by E.A. Bazikyan. - Moscow: GEOTAR-Media, 2016
14. http://www.studmedlib.ru/http://www.studentlibrary.ru/
15. Therapeutic Dentistry [Text]: textbook for students of stomatological faculties. Adopted by the Department of Educational Institutions and Personnel Policy of the Ministry of Health of the Russian Federation. - M. 'Medicine', 2002. - 638c. - 197
16. Periodontology [Text]: manual-atlas / G. F. Wolf, E. M. Ratejtshak, K. Ratejtshak ; translated from German. ; ed. by G. M. Barer. - Moscow: MEDpress-Inform, 2008. - 548 c.
17. Diagnostic methods of inflammatory periodontal diseases [Text]: a guide for doctors / A. I. Grudyanov, O. A. Zorina. - M.: MIA, 2009. - 112 c.
18. Etiology and pathogenesis of inflammatory periodontal diseases [Text]: scientific edition / A. I. Grudyanov, E. V. Fomenko. - M.: MIA, 2010. - 89 c.
19. Diseases of the endodontium, periodontium and oral mucosa [Text]: scientific edition / S. A. Dzeh [et al]; ed. by A. K. Iordanishvili, review: V. A. Drozhzhzhina, L. Y. Orekhova, M. M. Soloviev. - Moscow: MEDpress-Inform, 2008. - 343 c.
20. Reading radiographs of teeth and jaws in different age periods in norm and pathology [Text]: textbook / L. M. Lukinykh, O. A. Uspenskaya ; Nizhny Novgorod State Medical

Academy. - 5th ed. - N. Novgorod : Nizhny Novgorod State Medical Academy, 2013. - 42,[2] c.

21. Emergency conditions in stomatology. Clinic, diagnostics, first medical aid [Text]: textbook for dentists / G. G. Mingazov, V. I. Avramenko, Y. N. Shestakov; Bashkir State Medical University. - Ufa: BSMU Publishing House, 2008. - 95 c.
22. Diseases of the endodontium, periodontium and mucous membrane of the oral cavity [Text]: scientific edition / S. A. Dzeh [et al] ; ed. by A. K. Iordanishvili, review: V. A. Drozhzhzhina, L. Y. Orekhova, M. M. Soloviev. - Moscow: MEDpress-Inform, 2008. - 343 c.

Periodicals:

1. Journal 'Institute of Stomatology'
2. Journal 'New in Dentistry'
3. Journal 'Periodontology'
4. Journal 'Clinical Dentistry'.

Evaluation and grading:

The control of academic progress is carried out during the entire period of study of the discipline (control written works, tests, essays, solution of situational tasks, evaluation of practical skills, case histories or other).

The procedure of evaluation of learning outcomes of the discipline of choice 'Innovative technologies in periodontology' is carried out on the basis of the Regulations of Kazan State Medical University on the forms, frequency and order of current control of progress and intermediate attestation of students.

The following types of learning activities of students of the discipline of choice 'Innovative technologies in periodontology' are subject to the current control of academic progress (hereinafter - TCP): attendance of practical classes, results of independent work, including on the educational portal.
TCU is conducted by a teacher assigned to implement the educational programme in a particular academic group or a teacher responsible for the types of learning activities of students.
TCU of the discipline of choice 'Innovative technologies in periodontology' is carried out in the form of assessment of the performance of tasks for independent work in workbooks or on the educational portal, the performance of control written works, test control, as well as by evaluating the performance of reports and presentations.
Current control of the results of independent work is carried out at each lesson selectively for 30-50% of students. At the end of each section of the thematic plan TCU is conducted for all students of the group. For each learning task or group of tasks, showing the mastery of a particular skill - a separate mark is given.
Assessment of students' performance on a separate topic is expressed on a 10-point scale, on the module in a 100-point scale. The grade is necessarily reflected in the academic journal.

At carrying out intermediate certification (credit) the results of TCU during the semester are taken into account and the point-rating system is applied, approved by the 'Regulations of Kazan State Medical University on forms, frequency and procedure of current control of academic progress and intermediate certification of students.

Assessment is carried out within the classroom hours allocated for mastering the academic discipline.
The final (rating) assessment is composed of assessments on modules (maximum 100 points per module), current assessment (maximum 10 points), assessment received at the credit (maximum 100 points).

Evaluation and grading criteria:

0-69 (unsatisfactory):

– Practical sessions:
– Failure to attend practical sessions or a large number of absences.
– Incorrect answer or refusal to answer
– Lack of activity in the class
– Low level of mastery of the material.
– Independent work:
– Assignments for independent work are not completed, or there are many errors in them, or a high proportion of plagiarism.
– Lexical, grammatical errors in the assignments.

70-79 (satisfactory):

– Practical classes:
– Attendance in most of the practical classes
– The answer is correct but insufficient
– Weak activity at the lesson
– Low level of mastery of the material.
– Independent work:
– Self-work assignments are completed, but with errors or with an average level of borrowing
– Lexical, grammatical errors in assignments.

80-89 (good):

– Practical Exercises:
– Attendance at all practical classes, absences only for valid reasons
– Correct, sufficient answer.
– Average activity in class
– Average level of mastery of the material.
– Independent work:
– Self-work assignments are completed mostly without errors and with a small proportion of borrowings.
– There are no lexical, grammatical errors.

90-100 (excellent):

– Practical classes:
– Attendance at all practical classes, absences only for valid reasons
– Regular correct answers, including the use of additional literature.
– High activity at the class
– Free level of mastery of the material.
– Independent work:
– Assignments for independent work are completed without errors and borrowings
– There are no lexical, grammatical mistakes.

Rules of behaviour during the class:

– Be respectful.
– Be careful with equipment.
– Be disciplined.
– Be prepared for class.
– Be engaged in the process, feel free to ask questions.
– Look professional: You must be dressed in a clean white coat and a change of shoes.
– Eating is only allowed during breaks in designated areas of the room
– Phone use is only allowed during breaks between classes.

Examples of final module assignments:

Test assignments:

1. Methods of functional diagnosis used in periodontology:

2) rheoparodontography, osteometry

3) reoparodontography, polarography

4) reoparodontography, osteometry, polarography, biomicroscopy

5) osteometry, polarography

2. X-ray examination method allows to determine:

1) the contents of the paradontal pockets

2) level of resorption of the alveolar space

3) parodonte regional geo-dynamics

4) par-cysial pressure of oxygen in tissues

3. Indications for osteogingivoplasty:

1) gingival recession

2) chronic gingivitis

3) chronic periodontitis of mild degree

4) chronic generalised periodontitis of severe degree

Situational tasks:

Task 1: The patient is 45 years old. He complains of bleeding gums, mobility of teeth, difficulties in biting and chewing hard food, bad breath. Oral cavity examination revealed: swelling, hyperaemia, loosening of gums of various degrees of severity on the upper and lower jaw. Abundant deposition of dental plaque, supragingival and subgingival tartar, purulent exudate discharge from gingival pockets. Periodontal pockets of different depth, in some places reaching up to 6-8 mm. Tooth mobility of I-III degree.

Task: make a diagnosis, justify it and make a treatment plan.

Task 2: A 27-year-old patient went to the dentist with complaints of tooth mobility, missing teeth 11 21 31, bleeding gums, pus discharge, pain, bad odour from the oral cavity, frequent cases of gingival swelling, which are accompanied by pain and increased body temperature up to 37.9 degrees Celsius. There is a history of diabetes, fasting peripheral blood glucose level 7.5 mmol/l. External examination: skin without visible changes, regional lymph nodes are not palpated. Oral cavity examination: mucous membrane of lips, cheeks without pathological changes. Gingiva in the area of existing teeth is congestively hyperaemic, purulent discharge from periodontal pockets is noted. Periodontal pockets 6-9 mm pathological mobility of teeth I-III degree.

Task:

1. Name the groups of periodontal diseases to which this pathology may belong.
2. Name the anamnesis data that should be clarified to clarify the diagnosis.
3. Name the methods of examination necessary to clarify the diagnosis. Make a preliminary diagnosis.
4. Outline the plan of therapeutic measures.
5. Justify the remote prognosis of the disease.

Simulators:

1. Remove dental deposits: plaque, supra- and sub-gingival tartar using GBT technology.
2. Splint teeth for periodontal pathology using the cable splinting technique.
3. Determine the periodontal status of the patient using modern computerised systems.
4. Select instruments and materials to perform PDT for periodontal disease.
5. Complete a multifactorial individual periodontal risk profile chart.

Assessment of the answer to the module tasks:

Each module consists of computer-based test tasks (20 tests formed by random selection from the discipline's test bank. The test task is presented in a closed form (with the choice of one or

more answers), 1 different-level situational task with 5 questions and 1 task-trainer for the assessment of manual skills.

Criteria for evaluation of test tasks:
Assessment 'excellent' - the student scored 90% or more of the maximum test score.
Assessment 'good' - the student scored 80-89% of the maximum test score.
Assessment 'satisfactory' - the student scored 71-79% of the maximum test score.
Unsatisfactory' - the student scored less than 70% of the maximum test score.

Criteria for evaluating situational tasks:
Assessment 'excellent' - the student freely, with a deep knowledge of the material correctly and completely solved the situational task (fulfilled all tasks, answered all questions correctly).
Assessment 'good' - the student is convincing enough, with minor errors in theoretical preparation and sufficiently mastered skills in essence correctly answered the questions or made small errors in the answer;
Evaluation 'satisfactory' - the student is not confident enough, with significant errors in theoretical preparation and poorly mastered skills answered the questions of the situational problem; with difficulties, but still can solve a similar situational problem in practice if necessary;
Unsatisfactory' - the student has a very poor understanding of the subject and made significant errors in answering most of the questions of the situational task, answered incorrectly to additional questions posed to him, can not cope with the solution of a similar problem in practice.

Criteria for evaluating the fulfilment of tasks and simulators:
Assessment 'excellent' - error-free fulfilment of the task, free possession of methods of selection of necessary tools and work on diagnostic equipment; error-free interpretation of the obtained data with justification of own conclusions.
Assessment 'good' - performance of the task with minor errors, self-discovered and corrected; correct explanation of the results obtained with the help of additional questions from the teacher; correct interpretation of data, justification of own conclusions with the help of additional questions from the teacher.
Evaluation 'satisfactory' - performance of the task with errors that distort the obtained result, but correction of the course of performance after additional questions or explanations of the teacher; erroneous interpretation of the research data, but correction of the interpretation after additional questions or explanations of the teacher; lack of justification of own conclusions.
The grade 'unsatisfactory' - performance of the task with errors that distort the obtained result, lack of correction of the course of performance after additional questions or explanations of the teacher; lack of explanation of the obtained results; erroneous interpretation of the research data, lack of correction of interpretation after additional questions or explanations of the teacher, lack of justification of own conclusions.

IMMUNOLOGY, CLINICAL IMMUNOLOGY

Teachers: Assoc. Prof. Tsybulkin N.A., Assis. Prof. Valeeva A.R., Assis. Prof. Khakimova M.R.
Building, Department, classroom: 1) Republican Clinical Hospital, Polyclinic department (terminal 4), Department of Clinical Immunology and Allergology, rooms 512, 515, 516; 2) 21 st Polyclinic, educational unit, room of Department of Clinical Immunology and Allergology
Contact details:

- Telephone number: 89179117010 (Assist. Prof. Alina Valeeva)
- E-mail address: aliv05@mail.ru, immunal@mail.ru
- Office and working hours: Republican Clinical Hospital, Polyclinic department (terminal 4), Department of Clinical Immunology and Allergology, rooms 513 (9-16)

Total hours — 108:
- Lectures 16 hours;
- Practical training 45 hours;
- Self-study 47 hours;

Course description:
Lecture is an oral presentation about particular subject by the lecturer. It is usually held for the course of students at the same time.
Practical training is aimed to apply theoretical knowledge into practice. The skills are developed during problem solving process with supervisor.
Self-study is a work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=1257)

Course objectives: The purpose of mastering the discipline:

The purpose of mastering the discipline
-to develop the ability to analyze the patterns of immune system functioning, to validate the main methods of clinical and immunological investigations, to assess the functional state of the organs of the immune system, to provide medical care for urgent and life-threatening conditions in patients with immune system disorders.

Tasks of the discipline:
- To form knowledge in the field of structure, functions, age-related features of the immune system
- To form knowledge in the field of basic methods of clinical and immunological investigations
-To develop the skills for performing immunological investigations and interpretation their results in order to identify the immune disorders
- To form knowledge in the field of pathogenesis and principles of diagnosis of the immune system disorders
- To form knowledge in the field of providing medical care for urgent and life-threatening conditions associated with immune system disorders

Course topics:

Calendar plan of lectures

1. Introduction to immunology. The system of innate immunity
2. The interaction between innate and adaptive immunity
3. Characteristics of cells of adaptive immunity
4. Humoral immune response
5. Cell-mediated immune response
6. Anti-infection immunity
7. Pathogenetic basics of immunopathology
8. Allergic diseases. Emergency care for acute allergic reactions.

Calendar plan of practical trainings

1. Innate immunity. Phagocytosis.
2. Humoral factors of innate immunity. Complement system.
3. Organs of immune system
4. Cells of immune system
5. Module 1.
6. Antigens
7. Antibodies
8. Antigen- antibody interactions
9. Vaccines. Antibody preparations
10. Immune response
11. Module 2.
12. Age-related features of the immune system. Immune status assessment.
13. Diagnostic programs in allergology.
14. Allergic diseases of the respiratory system and skin.
15. Anaphylactic shock. Module 3.

Text books and required supplies:

1.Khaitov, R. M. Immunology : textbook / Rakhim M. Khaitov. - 2nd updated edition. - Moscow : GEOTAR-Media, 2022. - 272 p. - 272 c. - ISBN 978-5-9704-7089-3. URL : https://www.studentlibrary.ru/book/ISBN9785970470893.html
2. Handbook on discipline "Immunology, clinical immunology" / Skorohodkina O.V., Vasilyeva A.A., Khakimova R.F., Tsybulkin N.A., Valeeva A.R., Kurmaeva N.S. – Kazan: KSMU, 2023. – 70 p.
3. Basic concepts in immunology: / V. Tsybulkina, N. Tsybulkin. — Kazan : Medicine, 2014. — 170p. ISBN 978-5-7645-0543-5.

Evaluation and grading:

Monitoring progress is carried by the end of each module (written papers/oral answer/test/ /reports/presentation).
Routine performance assessment (homework, tests during classes, oral answers, solving clinical cases etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University. For tests: Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (oral answer).
"Excellent" grade (9-10 points) is given to the student if the aim was set correctly, the presentation content corresponds with the aim, the student understands the material, critically evaluates the sources of information, uses the sources published in the past 10 years.
"Good" grade (8-9 points) is given to the student if the aim was set correctly, the presentation content corresponds with the aim, the student understands the material, gives answers to the questions.
"Satisfactory" grade (7-8 points) is given to the student if the aim was set correctly, the student understands the material, gives answers to the questions.
"Poor" grade (less than 7 points) is given to the student if the presentation was not prepared by the student, the content does not correspond with objectives of the topic.

"Credit" grade - is given to the student if the aim was set correctly, the student understands the material, gives answers to the questions
"Non-credit" grade - is given to the student if the presentation was not prepared by the student, the content does not correspond with objectives of the topic.
Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Example of module No. 1.

Ticket 1
1. Classical pathway of complement system activation.
2. Subpopulations of adaptive T lymphocytes. Phenotypical and functional characteristics

Ticket 2
1. Bactericidal peptides.
2. Natural killers. Origin, markers, properties.

Example of module No. 2

Ticket 1
1.Antigens: definition, properties, classification.
2. Stages of humoral immune response.

Ticket 2
1. Immunoglobulins and antibodies. Affinity and avidity of antibodies.
2. Intercellular interactions during cellular immune response. The concept of "immunological synapse"

Example of module No. 3

Ticket 1
1. Effector properties of antibodies.
2. Anaphylactic shock. Definition, etiology, pathogenesis.

Ticket 2
1. Central organs of immune system. Structure. Functions.
2. Allergic urticaria / angioedema. Etiology. Classification. Clinical manifestations.

EVALUATION OF THE MODULE ANSWER

"Excellent" grade (9-10 points) is given to the student if the answer corresponds with the question, the student understands the material, the answer is complete and detailed.
"Good" grade (8-9 points) is given to the student if the answer corresponds with the question, the student understands the material, but the answer is incomplete.
"Satisfactory" grade (7-8 points) is given to the student if the answer corresponds with the question, the student understands the material, but unable to highlight the key points and the answer is incomplete.
"Poor" grade (less than 7 points) is given to the student if the answer does not correspond with the question.

FIRST AID

Teachers: Prof. Ainagul Bayalieva, assistant lecturer Timur Turaev, assistant lecturer Alexander Antonov
Building, Department, classroom # NUK, Anesthesiology and Reanimatology, Disaster Medicine Department, Chair of Department, 5 floor, room 515,516,517,519,521,526
Contact details:
- Telephone number: 8(843) 236 05 33 (Prof. Ainagul Bayalieva)
- E-mail address: airmk@mail.ru
- Office and working hours: 517 (9-17)

Total hours — 72:
- Lectures 10 hours;
- Practical classes 30 hours;
- Independent work 32 hours;

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (http://www.kgmu.kcn.ru:40404/moodle/login/ index.php).__

Course objectives: The purpose of mastering the discipline
mastering the academic discipline (module) of First aid:
• mastering knowledge of the main issues of pathogenesis and clinical manifestations of pathological conditions developing as a result of accidents and acute therapeutic, surgical, gynecological, nervous diseases in adults and children that threaten the life of the patient (victim) and require first aid, as well as the principles of first aid in these conditions, the algorithm of actions in providing pre-medical care in case of disasters and emergency situations.
• formation and development of competencies among graduates of the specialty "pharmacy" aimed at restoring and improving the health of patients by providing appropriate quality medical care.
• early immersion in the specialty with the formation of the foundations of general cultural and professional skills and competencies under the guidance of a teacher in conditions close to real.
Tasks of the discipline:
To form knowledge in the field of:
The tasks of mastering the discipline:
• to form the fundamental knowledge and skills of providing any emergency medical first aid;
• teach students the principles of diagnosing life-threatening emergencies,
• teach students to perform intensive care activities competently;
• teach students to use standard remedies to temporarily stop bleeding;
• teach students how to inject medicines;
• teach students to apply standard transport tires;
• teach students how to apply bandages to wounds;

• to form fundamental knowledge in the field of clinical toxicology (poisoning) and teach how to use antidotes;
• to inform about the organization and structure of the emergency medical service and to form students' knowledge about the role, place and algorithm of the pharmacist's actions in this structure of emergency care in case of disasters and emergencies;
• teach students the basics of asepsis and antiseptics;
• to teach students the rules of transportation of the sick and injured;
• to teach students the rules of patient care;
• to develop students' stable practical skills in providing pre-medical care for the most common emergency conditions
• to develop students' skills in studying scientific literature and official statistical reviews;
• to develop students' communication skills with the patient, taking into account ethics and deontology, depending on the identified pathology and characterological characteristics of patients;
• to form the student's communication skills with the team.

Course topics:

Calendar plan of lectures

18. First aid: tasks, scope and basic principles of first aid. Organizational foundations of emergency and emergency care. The history of the emergency medical service. Ethics and deontology in working with a patient. "Terminal condition" Clinical symptoms. Stages of terminal condition. Cardiopulmonary resuscitation.
19. Acute respiratory failure. Asphyxia. Laryngeal stenosis (Quincke's edema, foreign body of the upper respiratory tract and bronchi, false croup, laryngeal diphtheria - true croup). Suffocation. Asthmatic status. An attack of cardiac asthma. An attack of bronchial asthma. Clinic. Diffdiagnostics. The algorithm of first aid.
20. Shock. The main pathogenetic mechanisms. The clinical picture of traumatic, hypovolemic, cardiogenic and septic shock. Examination of the patient and criteria for assessing the severity of the condition. The basics of differential diagnosis. Phases of shock. First aid.
21. Coma. Types of com. Features of the examination of the patient. Criteria for assessing the patient's state of consciousness. The main pathogenetic mechanisms. Features of clinical symptoms of diabetic (ketoacidotic, hyperosmolar, hyperlactacidemic, hypoglycemic) coma, infectious coma, hepatic coma, hypochloremic coma. Diffdiagnostics. The algorithm of first aid..

    Epileptic status and other convulsive conditions. delirium. Excitement. Hallucinations. The clinical picture. Differential diagnostic criteria. The algorithm of first aid..
22. Emergency conditions in pediatrics. Neurotoxicosis. Intestinal toxicosis. Acute respiratory failure in children. Acute poisoning. Features of providing first aid to children.
23. Emergency care in obstetric and gynecological practice. Pregnancy (trimesters, criteria for assessing the condition of a pregnant woman). Childbirth. Childbirth outside the hospital. Clinical symptoms. Features of the flow. Providing first aid to a woman in labor and a newborn. Bleeding. "Acute abdomen" in gynecological practice. Pre-medical diagnostics. The algorithm of first aid.

Calendar plan of laboratory classes

1. First aid: tasks, scope and basic principles of first aid. Organizational foundations of emergency and emergency care. The history of the emergency medical service. Ethics and deontology in working with a patient.
2. Acute respiratory failure. The algorithm of first aid.
3. First aid in case of shock. The main pathogenetic mechanisms.
4. The algorithm of first aid in case of coma.
5. Rules of first aid for various types of poisoning.
6. The algorithm of first aid for epileptic status and other convulsive conditions.

a. First aid for traumatic, internal and other types of bleeding.Module on topics 1-7
7. Emergency conditions in pediatrics. Features of providing first aid to children.
8. Emergency care in obstetric and gynecological practice. Providing first aid to a woman in labor and a newborn.
9. Desmurgy, transport immobilization, transportation of victims
10. First aid for injuries, burns, frostbite and freezing.
11. Module on topics 8-12
12. Outcoming testing. Final test

Text books and required supplies:

a) basic literature:

1. First aid [Text] : textbook. the manual; edited by V. M. Velichenko, G. S. Yumashev; [V. M. Velichenko, G. S. Yumashev, H. A. Musalatov, etc.] . - M. : Medicine , 1989. - 272 p. : ill. - (Educational literature. For students of pharmaceutical institutes) . - 0-80
2. Rogova N. V. First aid [Text] : textbook. a student's manual. III course of pharm. full-time and part-time forms of education / Rogova N. V. ; edited by V. I. Petrov; Ministry of Health of the Russian Federation, VMA, Kaf-ra clinic. pharmacology . - Volgograd : Publishing House of the Volga , 2002 . - 182 p. - Bibliogr.: pp.182 . - 27-96

b) additional literature:

1. Disaster medicine [Text] : textbook. the manual ; edited by V. M. Ryabochkin, G. I. Nazarenko; [author : Yu. V. Aksenov, A. A. Alexandrovsky, T. I. Borovskikh, etc.] . - M. : INI Ltd , 1996. - 262 p. : ill. - (Educational literature. for students of secondary medical schools) . - 26-00 ; 35-50 ; 60-00
2. Emergency care at the prehospital stage/ Zhavoronkov V.F., Antonov A.M..Kazan. :KSMU, 2002-38c.
3. Guidelines for Primary Health Care, 2006 [Text] : with adj. on the CD : for doctors providing primary medical care. Help : [study. a manual for the system of occupational health and safety of doctors] ; chief editors : A. A. Baranov, I. N. Denisov, A. G. Chuchalin ; Assoc. med. ob-v on quality. Moscow : GEOTAR-Media , 2006 . - 1521 p. + 1 CD-ROM. - (National project "Health") . - Prem. Decree : pp. 1535-1521 . - 860-00
4. Nagnibeda A. N. Paramedic of the ambulance [Electronic resource] : practice. guide / Nagnibeda A. N. - St. Petersburg : SpetsLit , 2009 . - Access mode: http://www.studmedlib.ru
5. Levchuk I. P. Medicine of catastrophes [Electronic resource]: a course of lectures / Levchuk I. P., Tretyakov N. V. - M. : GEOTAR-Media , 2011 . - 220 p. - Access mode: : http://studmedlib.ru
6. Kornilov N. V. Traumatology and orthopedics [Electronic resource] : textbook. student's handbook. universities on spec. 020100 Medical business, 020200 Pediatrics / Kornilov N. V., Gryaznukhin E. G., Shapiro K. I., etc. ; edited by N. V. Kornilov. - 2nd ed. St. Petersburg : Hippocrates , 2005. - 538 p. : ill. - (Educational literature for students of medical universities) . - Auth. col. it is indicated on the back of tit. l . - Bibliogr.: pp.533 . - 262-50 - Access mode: : http://studmedlib.ru

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/laboratory works assessment/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – “poor”, 7 – “satisfactory”, 8 – “good”, 9 – “excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework

the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Exams are held in forms of test, problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

ATTENDANCE REQUIREMENTS

Attendance will be recorded in lecture and seminar journals.
In case of illness or other reasons for which you will not be able to attend classes, you must notify the dean's office and department, provide a medical certificate or permission from the dean's office to miss classes for a good reason. Working off the missed lectures can be carried out on the educational portal. Your tutors will give you specific deadlines for reopening resources. Working off missed seminars will require the fulfillment of all types of practical tasks provided for by the discipline program in these classes.
Students who missed more than 50% of classes will have to retake the discipline.
Students who believe that the assessment of his work was affected by extraordinary circumstances can write a reasoned explanation to the head of the department or to the dean's office.

CURRENT CONTROL

Requirements for current control

Written test:

example questions:

1. The pathogenesis of true drowning in salt water.
2. Definition and first aid in case of fainting.
3. Types of allergens.
4. What diseases lead to a sharp increase in myocardial oxygen demand?
5. Trial ulcers of the stomach, intestines (clinic, definition, first aid).
6. What diseases are most often accompanied by fever?
7. Poisoning with lead and its compounds (clinic, first aid).

Oral interview on the following issues:
Sample questions:
1. Bleeding. Definition. Classification of bleeding.
2. Signs of arterial, capillary, venous, mixed bleeding.
3. General signs of internal bleeding, determination of the volume of blood loss.
4. Ways to temporarily stop external bleeding. Anterior nasal tamponade.
5. Rules for applying a hemostatic tourniquet.
6. Principles of providing assistance to those who have suffered significant blood loss.
7. Classification of blood substitutes.
8. Methods for determining blood type and Rh factor.
9. Rules for the preparation of a system for blood transfusion and blood substitutes.
10. Criteria for the goodness of canned blood.
11. Technique of performing blood transfusion tests.
12. Rules of blood transfusion and blood substitutes and prevention of transfusion complications.

INTERIM CERTIFICATION
The discipline "FIRST AID" ends with an intermediate certification in the form of a test.
The account includes:
The presence of passed tests on all topics and the final test.
The student must have 100% attendance of both lectures and practical classes or work them out by the end of the course of the discipline.
During the passage of the discipline, the student in the journal of practical exercises should have at least 3 marks:
The answer is evaluated during the survey,
Protection of the abstract message,
Answer during the analysis of a situational problem.
Providing an intermediate grade for completing the course.

RUSSIAN LANGUAGE IN PROFESSIONAL COMMUNICATION

Teachers: Department of Russian and Tatar languages
Building, Department, Auditorium No. NUK, Department of Russian and Tatar Languages, 4th floor (Auditorium 427-460)
Contact information:
- Phone: 89046617617 (Lecturer Leysen Gabdulnurovna Yusupova)
- E-mail address: asleisen@mail.ru
- Office and opening hours: 427 (9-17)

Class Hours: total 72 h:
Practical classes – 54 h,
Self-study – 18 h.
Course Description:

A lecture is an oral presentation by a teacher of a particular branch of science or discipline. It is usually given to the entire course of students at the same time.

The seminar is usually devoted to the detailed study of specific topics and is conducted in each academic group separately. The seminar involves active participation of students in the discussion of problems. It requires prior preparation on the part of the student.

Practical classes are aimed at applying theoretical knowledge in practice. Skills are practiced in the process of solving problems under the guidance of the teacher.

Laboratory classes contain experimental research activities. They require the use of special equipment, apparatus and materials. They are conducted in teaching laboratories.

Independent work is work with special literature or training materials (literary sources, video and audio materials, multimedia programs and simulators)

Course Objectives:

The objectives of mastering the academic discipline "Russian language in professional communication" are:

- achieving the necessary level of culture of educational and professional communication in Russian;
- solution of professional-communicative tasks of future doctors in the industrial-practical sphere.

Discipline Objectives:

- to promote foreign students' mastering of linguistic, speech and communicative skills, practical realization of different types of linguistic intents;
- to teach foreign students to use language means correctly, to orient and realize communicative intentions according to their social status in different situations and spheres of communication, including professional ones;

Course Topics:

1. The oral cavity. Chewing apparatus. Formation of short adjectives. Homonyms. Synonyms (reading, retelling, answering questions, making a plan, compression of the text)
2. Digestive system. Stomach. Intestines. Liver The participial turn. Repetition of cases (reading, retelling, answering questions, performing pre-, pre- and post-textual tasks, plan).
3. articulation apparatus. Formation of present active participles (reading, retelling, answering questions, performing pre-, pre- and post-textual tasks).
4. endocrine system. Mucous membrane of the oral cavity. Salivary glands. Compound sentence (reading, retelling, performing pre-, pre- and post-textual tasks).
5. Control of the studied material (performance of written exercises)
6. Relationship between oral health and digestive system function (reading, retelling, answering questions, doing pre-, pre- and post-textual tasks, discussion)
7. Control of the studied material.
7. Features of the structure of children's and permanent teeth and their hygiene (reading, retelling, answering questions, performing pre-, pre- and post-textual tasks).
8. Fundamentals of abstracting. Features of scientific style of speech Structure of work (Working with texts, making a plan; performing exercises).
9. Rules of text compression. Features of the oral form of scientific style of speech (Work with texts, compression. Preparation of a report, presentation).
10. Abstract conference, report, presentation

Textbooks and required supplies:

1. Russian language to the future dentist: textbook / V. V. Belyi, V. A. Stadnik. - 2nd ed. - Minsk: BGMU, 2015. - 143 c.
2. Dentistry: a textbook on the study reading of texts of dental profile for foreign students of dental faculties of higher medical educational institutions of IV level of accreditation / Vladimirova V.I., Yufimenko V.G. - Poltava: LLC "ASMI", 2013. - 318 c.
3. Textbook on Russian language for students of the Faculty of Stomatology / T.G. Grigoryan, S.R. Nalbandyan, I.A. Karakhanyan, T.G. Asatryan.- Yer. Geratsi, 2017, 130 pp.
4. Biology: human being. Introduction to scientific style of speech: a collection of texts on the Russian language for foreign students of II year of medical faculty, studying in English / compiled by L.I. Fidaeva, I.B. Vagapova, L.S. Yakubova, L.G. Yusupova. L.I. Fidaeva, I.B. Vagapova, L.S. Yakubova, L.G. Yusupova. Kazan: KSMU, 2015. 96 c.
5. Living and learning in Russia : grammar workbook. - 6th ed. - St. Petersburg: Zlatoust, 2016. - 188 c.

Grades and credits:

Auditorium work

Evaluation Criteria:

- correctness of control work fulfillment (less than 70 points - less than 50% of tasks are fulfilled; 70-79 points - more than 50% of tasks are fulfilled; 80-89 points - 10 mistakes are allowed; 90-100 points - 3-5 mistakes/inaccuracy are allowed);
- correctness of test performance (less than 70 points - less than 50% of tasks are completed; 70-79 points - more than 50% of tasks are completed; 80-89 points - 3 mistakes are allowed; 90-100 points - 1 mistake/inaccuracy is allowed);
- independence in performing the work (0 points - the work is not performed independently; 5 points - partially performed independently; 10 points - fully independent work);
- correctness and literacy in the design of written work (outline) (less than 70 points - the work is executed with errors, illiterate; 70-79 points - the work has errors, mistakes, carelessness in the design; 80-89 points - the work is completed competently, designed according to the rules, inaccuracies are allowed; 90-100 points - the work is flawless);
- competent, logical presentation of oral material, free retelling, answers to questions (less than 70 points - cannot retell, present his/her work; 70-79 points - presents work uncertainly, answers some questions; 80-89 points - presents material competently, retells, makes minor mistakes, inaccuracies; 90-100 points - free command of language, perfect presentation of material);
- activity in the classroom (0 points - not active; 5 points - shows interest and answers 2-3 questions; 10 points - active, shows interest, asks questions and seeks answers);
- level of preparation for practical training (0 points - not ready for training; 10 points - ready for training).

Independent work

- level of preparation for practical training (0 points - not ready for training; 10 points - ready for training).
- correctness and literacy in the design of written work (outline) (less than 70 points - the work is executed with errors, illiterate; 70-79 points - the work has errors, mistakes, carelessness in the design; 80-89 points - the work is completed competently, designed according to the rules, inaccuracies are allowed; 90-100 points - the work is flawless).

Interim assessment:

- performance of the final test (level I of Russian language proficiency in the academic and scientific sphere) (less than 70 points - less than 50% of tasks are completed; 70-79 points - more than 50% of tasks are completed; 80-89 points - 10 mistakes are allowed; 90-100 points - 4 mistakes / inaccuracies are allowed);
- reading a scientific text (less than 70 points - reads with mistakes, slowly, does not understand what is read; 70-79 points - reads and understands the text, but makes mistakes; 80-89 points - reads and understands what is read, makes inaccuracies; 90-100 points - reads fluently, is oriented in the read text);
- competent writing of a text plan (less than 70 points - cannot write a text plan; 70-79 points - the plan is made carelessly, with mistakes; 80-89 points - the plan is made according to the rules, inaccuracies are allowed; 90-100 points - the work is perfect);
- retelling (less than 70 points - cannot retell the text; 70-79 points - retells with reference to the text; 80-89 points - retells with reference to the plan; 90-100 points - confidently retells the text);
- answers to questions (less than 70 points - cannot answer questions; 70-79 points - answers some questions; 80-89 points - answers questions, makes minor mistakes, inaccuracies; 90-100 points - freely answers all questions).

Classroom Rules of Behavior:

- Be respectful

- Take care of the equipment
- Be disciplined
- Be ready for class
- Be involved in the process, don't hesitate to ask questions
- Look professional: you should be dressed in a clean white coat and a change of shoes
- Only meals are allowed at breaks.
- Phone use is only allowed during breaks.

Module 1.

1. answer the questions for the texts.

1. Что такое артикуляционный аппарат?
2. Что такое жевательный аппарат?
3. Что происходит при неправильном уходе за зубами?
4. Какую функцию выполняют слюнные железы
5. Как состояние полости рта влияет на работу пищеварительной системы?

5. Слова и словосочетания в скобках употребите в нужном падеже, согласуя их в роде, числе и падеже.

1. При болезнях (зубы) или их утрате нарушается акт обработки (пища) во рту. 2. Твердые ткани представлены (кости и зубы), мягкие – (кожа), (мышцы). 3. Это осуществляется (путь) изменения (состояние) жевательной (мускулатура). 4. Жевательный аппарат принимает участие в (дыхание), (речь) и (жевание). 5. При (заболевание) слюнных (железы) или языка человек не может пережевывать (пища) даже при наличии (зубы). 6.Человек, у (который) жевательный аппарат здоров, всегда отличается (полноценный аппетит). 7. Для правильной (работа) (жевательный аппарат) важно, чтобы все органы, составляющие его были здоровы.

2. Match words that have the same root:

Ухо, челюстной, язык, кожа, слюна, ушной, слюнная, поднёбный, подъязычный, челюсть, кожный, языковой.

3. From these verbs form nouns with the suffixes - ени -, - ани -.

Проходить, прощупывать, образовать, соединять, формировать, смачивать, расщеплять.

4. From the given words form all possible word combinations.

Зуб, мышца, полость, железа, раковина.

Слюнная, ушная, коренной, подчелюстная, жевательная, челюстно-подъязычная, ротовая.

5. Use the words and phrases in brackets in the correct case, agreeing them in gender, number and case.

1. При болезнях (зубы) или их утрате нарушается акт обработки (пища) во рту. 2. Твердые ткани представлены (кости и зубы), мягкие – (кожа), (мышцы). 3. Это осуществляется (путь) изменения (состояние) жевательной (мускулатура). 4. Жевательный аппарат принимает участие в (дыхание), (речь) и (жевание). 5. При (заболевание) слюнных (железы) или языка человек не может пережевывать (пища) даже при наличии (зубы). 6.Человек, у (который) жевательный аппарат здоров, всегда отличается (полноценный аппетит). 7. Для правильной (работа) (жевательный аппарат) важно, чтобы все органы, составляющие его были здоровы.

Module 2.

B) Check the grammar level by selecting the correct one response.
ответ.
1) Трубочки образованы железистым … .
а) эпителия;
б) эпителий;
в) эпителию;
г) эпителием;
д) эпителии.

2) Слюна – секрет больших и малых … желез.
а) слюнных;
б) слюнные;
в) слюнным;
г) слюнную;
д) слюнной.

3) Околоушная железа частично … жевательную мышцу.
а) прикрывать;
б) прикрывает;
в) прикрывают;
г) прикрывается;
д) прикрываются.

4) Слюнные железы разбросаны почти … всей поверхности слизистой оболочки ротовой полости и языка.
а) от;
б) в;
в) с;
г) по;
д) для.

Instructions for the test: The time of the test is 1.5 hours. The test consists of 3 parts. It is not allowed to use a dictionary when taking the test. The test contains sentences (1, 2, 3 ...) on the left, and choices (A, B, C, D) on the right.

Evaluation criteria

Correctness of test performance (less than 70 points - less than 50% of tasks are completed; 70-79 points - more than 50% of tasks are completed; 80-89 points - 3 mistakes are allowed; 90-100 points - 1 mistake/inaccuracy is allowed).

Scoring.

Topics for writing essays:

1. Влияние состояния полости рта на работу пищеварительной системы.
2. Особенности артикуляционного аппарата и их влияние на дикцию
3. Особенности молочных и постоянных зубов.
4. Гигиена полости рта. Уход за молочными и постоянными зубами.
5. Уход за молочными зубами. Профилактика заболеваний полости рта.

Evaluation criteria

- independence in performing the work (0 points - the work is not performed independently; 5 points - partially performed independently; 10 points - fully independent work);
- correctness and literacy in the design of written work (outline) (less than 70 points - the work is executed with errors, illiterate; 70-79 points - the work has errors, mistakes, carelessness

in the design; 80-89 points - the work is completed competently, designed according to the rules, inaccuracies are allowed; 90-100 points - the work is flawless);

- competent, logical presentation of oral material, free retelling, answers to questions (less than 70 points - cannot retell, present his/her work; 70-79 points - presents work uncertainly, answers some questions; 80-89 points - presents material competently, retells, makes minor mistakes, inaccuracies; 90-100 points - free command of language, perfect presentation of material);

MEDICAL INFORMATICS

Teachers: Ildar Iskandarov, Azalya Amirova, Dinara Nigmatullina
Building, Department, classroom # NUK, Department of Public Health and health organization, 311, 313
Contact details:

- Telephone number: 236-08-81
- E-mail address: oz-kgmu@mail.ru
- Office and working hours: 306 (9-17)

Course: 1
Semester: 1
Total: 72 hours.
Lectures: 10 h
Class hours: 30 h
Self-study: 32 h

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

Course objectives: The purpose of mastering the discipline
The goals of mastering the discipline: to provide the knowledge and skills necessary for a future doctor to work in the field of public health. To form students' knowledge about the essence of information, informatics and information processes; to provide information about modern information technologies in medicine and healthcare; to study the principles of storage, search, processing and analysis of biomedical information, including using computer technology; to master the methods of mathematical statistics necessary for the study of other academic disciplines and acquisition of professional medical qualities
Tasks of the discipline:
To teach students:
• study of methods, software and hardware of medical statistics used at various stages of obtaining and analyzing biomedical information
• provide students with information about modern computer technologies used in medicine and healthcare

• provide knowledge about informatization methods used in the therapeutic and diagnostic process
• be able to use Internet for the search of medical and biological information

Course topics:

Calendar plan of lectures

1. Medical statistics, its importance in assessing the health of the population and the activities of health authorities and institutions.
2. Graphic representations in medicine and healthcare.
3. Calculation, analysis and evaluation of indicators of the variation series, dynamic series, standardization
4. Organization and stages of statistical research.
5. WHO. Demography

Calendar plan of practical classes

1. Medical statistics, its importance in assessing the health of the population and the activities of health authorities and institutions. Relative values in the practice of a doctor.
2. Graphic images in medicine and healthcare. Visual representation of the results of a statistical study.
3. Calculation, analysis and evaluation of the indicators of the variation series. Average values: arithmetic mean, mode, median. The standard deviation. Coefficient of variation. The normal Gaussian distribution.
4. Application of standardization methods in medicine. The methodology of the direct standardization method
5. Analysis of dynamic series indicators.
6. Parametric methods for assessing the significance of statistical research results
7. Correlation analysis. Organization and stages of statistical research. Determination of the sample size for the implementation of medical and statistical research.
8. Organization and stages of statistical research. Determination of the sample size for the implementation of a medical statistical study
9. Introduction to medical informatics. Definitions, terminology. The concept of information
10. Informatization of healthcare.
11. A unified information space for healthcare and the social sphere. The movement of information in healthcare and medicine (general characteristics of the processes of collecting, transmitting, processing and accumulating information in the healthcare system).
12. Regulatory and legal supportfor healthcare informatization. Basic concepts and definitions in the field of information security and information protection.
13. Medical information systems. Medical and technological systems for monitoring and controlling body functions.
14. Information systems of medical institutions. Information systems in health management at the territorial and federal levels.
15. Telecommunication technologies and Internet resources in medicine. Telemedicine.

Text books and required supplies:

1. Intelligent Systems for Healthcare Management and Delivery / Nardjes Bouchemal. – IGI Global, 2019. – 377. – ISBN // 9781522570714
2. Mobile Health Applications for Quality Healthcare Delivery / Moumtzoglou, Anastasius. - IGI Global,2018. – 327. – ISBN // 9781522580218
3. Improving Usability, Safety and Patient Outcomes with Health Information Technology :From Research to Practice / Bliss, Gerry-Bartle-Clar, John A.-Lau, Francis. – IOS Press, 2019. – 548. – ISBN // 978-1-61499-950-8
4. Health Informatics Meets EHealth : Biomedical Meets EHealth – From Sensors to Decisions Proceedings of the 12th EHealth Conference / Schreier, Günter-Hayn, Dieter. - IOS Press, 2018. – 248. – ISBN // 978-1-61499-857-0

5. Data, Informatics and Technology: An Inspiration for Improved Healthcare / A. Hasman-P. Gallos-J. Liaskos-M.S.Househ-J.Mantas. - IOS Press,2018. – 251. – ISBN // 978-1-61499-879-2
6. Informatics Empowers Healthcare Transformation / J. Mantas-A. Hasman-G. Gallos. - IOS Press, 2017 – 238. – ISBN // 978-1-61499-780-1
7. Informatics for Health: Connected Citizen-Led Wellness and Population Health / R. Randell-R. Cornet-C. McCowan. - IOS Press, 2017. – 235. – ISBN // 978-1-61499-752-8
8. Medical Statistics at a Glance / A.Petrie-C.Sabin. – Blackwell Publishing, 2005. – 157. – ISBN // 978-1-4051-2780-6 URL: https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.cmua.nl/cmua/Wetenschap_files/Medical%2520Statistics%2520at%2520a%2520Glance%25202nd%2520Ed.pdf&ved=2ahUKEwiQ5viJ0KeJAxXgVKQEHaN5BysQFnoECBcQAQ&usg=AOvVaw3m-6V0jZsQdzhl3jRU0ujs

Evaluation and grading:

Monitoring progress is carried by the end of each module (colloquia/written papers/oral examination/test/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Test (final) are held in forms of problem cases, practical exercises, oral and written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Level 1 – assessment of knowledge

The following types of control are used to evaluate learning outcomes in the form of knowledge:

— test;
Examples of tasks:
Medical informatics is:
-the science that studies the quantitative side of mass phenomena;
- mathematics;
-prevention;
- hygiene.
Evaluation criteria:
"Excellent" (90-100 points) "Good" (80-89 points) "Satisfactory" (70-79 points) "Unsatisfactory" (0-69 points).

Level 2 – assessment of skills

The following types of control are used to evaluate learning outcomes in the form of skills:
— case tasks;
Examples of tasks:
- Calculate the required number of round-the-clock inpatient beds for children. The total population is 61,800, children - 12,200. The standard of provision of pediatric beds is 113.74 per 1000 residents.
A simple bed, due to the turnover of the bed, is planned for 1 day. The average length of a patient's stay in a bed is 9 days. 2500 deliveries were delivered at the maternity hospital, including 401 with surgical interventions. Among the surgical interventions there were 66 cesarean sections. 2 cases of maternal mortality have been registered.
Calculate:
1. The proportion of surgical interventions.
2. The proportion of cesarean sections.
3. Maternal mortality rate.
4. Give a conclusion.

Evaluation criteria:
"Excellent" (90-100 points) – the task is clearly completed, your own position is formulated, the scientific terminology is used correctly. "Good" (80-89 points) – the task is clearly completed, but one's own position is not formulated, scientific terminology is correctly used.
"Satisfactory" (70-79 points) – the task is not fully completed, one's own position is not formulated, scientific terminology is not correctly used. "Unsatisfactory" (0-69 points) – the task has not been completed, one's own position has not been formulated, scientific terminology has not been used correctly.

Level 3 – assessment of skills

The following types of control are used to evaluate learning outcomes in the form of skills:
— tasks for decision-making in a non-standard situation (situations of choice, multiple alternatives to solutions;
Examples of tasks:
Clinical trials of a new drug that can be used in the applied treatment regimen instead of an old drug available on the market, but less effective, were conducted in a medical organization. Suggest a method of economic justification for the need to use a new drug.
Evaluation criteria:
"Excellent" (90-100 points) – the answer is correct, scientifically reasoned, with links to the topics covered. "Good" (80-89 points) – the answer is correct, scientifically reasoned, but without references to the topics covered. "Satisfactory" (70-79 points) – the answer is correct, but not scientifically reasoned, or the answer is incorrect, but an attempt is presented to substantiate it from alternative scientific positions covered in the course. "Unsatisfactory" (0-69 points) – the answer is incorrect and not scientifically reasoned.

CLINICAL CLERKSHIP “RESEARCH WORK”

Teachers: Mustakimova Rezeda Faritovna, Shakirov Eduard Iurevich, Shakirova Leisan Rinatovna, Denisov Nikolay Dmitrievich.
Building, Department, classroom: Butlerova 16, Dental clinic Kazan SMU, Department of Prosthetic Dentistry; Amirkhana 16, Dental Simulation Clinic.
Contact details:

- Telephone number: 89625881635 (Denisov Nikolay)
- E-mail address: dr.denisov.nikolay@gmail.com
- Office and working hours: Butlerova 16, Dental clinic Kazan SMU; Monday-Friday 8:00-18:00.

Course description:
Practical classes is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

The purpose and objectives of mastering the discipline "Research work practice".

The objectives of the "Research work practice" are:
- mastering the methodology of organizing and conducting research work in dentistry;
- mastering the basic methods and techniques of scientific research work;
-formation of skills and competencies to independently carry out research work.

Course: 3
Semester: 5
Practical classes: 20 hours.
Self-study: 88 hours.
A total of 108 hours.

The content of practice:
1. Search for and work with medical information:
   - basic medical terminology;
   - the use of professional terms, rules for writing scientific articles, and participation in conducting research;
   - working with texts of professional content. The use of information computer systems in medicine.
2. Application of the principles of evidence-based medicine in dental research:
   - the use of professional terms and rules for conducting scientific research;
   - working with texts of professional content;
   - presentation of an independent point of view, analysis and logical thinking.

Practice reporting forms: report and presentation.

Examples:

Topic: modern methods of prosthetics of included dentition defects with non-removable structures.

Task: To study the indications for the use of solid-cast metal-plastic and metal-ceramic prostheses. To analyze the strength, aesthetic properties, indications and contraindications to their use.

Criteria for evaluating the report:
1. Compliance with the rules (5-7 min.).
2. Disclosure of the topic of the report.
3. Fluency in content.
4. Completeness of the collected theoretical material.
5. Presentation of the report (using a blackboard, diagrams, tables, etc.).
6. Ability to follow a given form of presentation, speech.
7. A brief conclusion on the issue under consideration.
8. Answers to listeners' questions.
9. High-quality content and selection of demonstration material.
10. Presentation of the report in the form of abstracts.

Criteria for the evaluation of the abstract:
For each point of the criteria, a maximum of 10 points

The assessment takes into account:
Preparation of an abstract message
The stated understanding of the abstract as an integral author's text determines the criteria for its evaluation: the novelty of the text; the validity of the choice of source; the degree of disclosure of the essence of the issue; compliance with design requirements.

Novelty of the text:(20 points) a) relevance of the research topic; b) novelty and independence in problem formulation, formulation of a new aspect of a known problem in establishing new connections (interdisciplinary, integration); c) ability to work with research, critical literature, systematize and structure the material; d) identification of the author's position, independence of assessments and judgments; e) stylistic unity of the text.

The degree of disclosure of the essence of the issue:(30 points) a) the correspondence of the plan to the topic of the abstract; b) the correspondence of the content to the topic and the plan of the abstract; c) the completeness and depth of knowledge on the topic; d) the validity of methods and methods of working with the material; f) the ability to generalize, draw conclusions, compare different points of view on one issue (problem).

The validity of the choice of sources:(20 points) a) evaluation of the literature used: whether the most well-known works on the research topic are involved (including journal publications of recent years, the latest statistical data, summaries, references, etc.).

Compliance with registration requirements:(15 points) a) how well the references to the literature used and the list of references are drawn up; b) assessment of literacy and culture of presentation (including spelling, punctuation, stylistic culture), knowledge of terminology; c) compliance with the requirements for the volume of the abstract.

Literacy (15 points): absence of spelling and syntactic errors, stylistic errors; absence of typos, abbreviations of words other than the generally accepted ones; literary style.

Description of the assessment scale:
90-100 points are awarded if all the requirements for writing and defending an abstract are met: the problem under consideration is identified and one's own position is logically stated,

conclusions are formulated, the topic is fully disclosed, the volume is maintained, the requirements for external design are met, and the correct answers to additional questions are given.
80-89 points – the basic requirements for the abstract and its defense are fulfilled, but there are shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical consistency in judgments; the volume of the abstract is not maintained; there are omissions in the design; incomplete answers are given to additional questions during the defense.
70-79 points – there are significant deviations from the requirements for abstracting. In particular: the topic is only partially covered; factual errors were made in the content of the abstract or in answering additional questions; there is no conclusion during the defense.
Less than 70 points – the topic of the abstract is not disclosed, there is a significant misunderstanding of the problem.

Text books and required supplies.

1. Electronic catalog of the scientific library of Kazan State Medical University. http://lib.kazangmu.ru/jirbis2/index.php?option=com_irbis&view=irbis&Itemid=521&lang=en
2. Electronic library system of KSMU https://lib-kazangmu.ru/english
3. Student electronic library Student's Konsultant, Books in English https://www.studentlibrary.ru/ru/catalogue/switch_kit/x2018-207.html
4. Scientific Electronic Library Elibrary.ru http://elibrary.ru
5. Reference information system https://mbasegeotar.ru/cgi-bin/mb4x
6. Medical journals and articles PubMed https://pubmed.ncbi.nlm.nih.gov/
7. Archive of scientific journals of foreign publishers NEIKON http://arch.neicon.ru/xmlui/
8. Journal of Prosthodontics
9. The International Journal of Prosthodontics
10. Journal of Prosthodontic Research (Official Journal of Japan Prosthodontics Society)
11. Journal of Prosthetic Dentistry
12. Journal of Indian Prosthodontic Society
13. The Journal of Advanced Prosthodontics

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

CLINIKAL CLERKSHIP "EMERGENCY CARE IN THERAPEUTIC PRACTICE"

Teachers: PhD Elena Andreicheva, Aigoul Zinnatullina
Building, Department, classroom: Hospital #18, Mavlutova str. 2, 2nd floor, classroom No. 1.
Contact details:

Telephone number: +7-9033-069-666 (Elena Andreicheva)
E-mail address: elena_andre@mail.ru

Discipline is being studied in the 5th semester
Total hours — 72 hours:
- Lectures 10 hours;
- Practical classes 32 hours;
- Independent work 30 hours;
- Control – final testing.

Course description:
Lecture is an oral presentation of particular branch of science or discipline by the teacher. It is usually held for the course of students at the same time.
Practical class (workshop) is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.
Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Independent work is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=2216).

Course objectives:
The goals of mastering the discipline: mastering knowledge about the most common emergency conditions in the clinic of internal diseases, the ability to independently examine patients, develop a strategy for diagnostic and therapeutic actions.

Tasks of the discipline:
- students acquire knowledge of etiology, pathogenesis, classifications, clinical manifestations of the most common emergency therapeutic conditions;
- training students in the most important examination methods that allow diagnosing an emergency therapeutic condition;
- teaching students the ability to identify leading clinical signs, symptoms, syndromes;
- training students to select optimal methods of clinical and instrumental examinations for emergency therapeutic conditions and drawing up an algorithm differential diagnosis;
- development of skills for students to provide first aid to therapeutic patients in case of emergency conditions.

Place of discipline in the structure of the educational program
The discipline “Emergency care in therapeutic practice” is an elective discipline and belongs to the cycle of professional disciplines.
The previous courses on which the discipline “Emergency care in therapeutic practice” is directly based are:
1. in the cycle of natural sciences, medical and biological disciplines (biochemistry, biology, medical informatics, normal anatomy, microbiology, histology, normal physiology, pathological anatomy, pathological physiology);
2. in the cycle of professional disciplines (internal medicine, clinical pharmacology, healthcare organization, pharmacology, medical psychology).

The discipline “Emergency care in therapeutic practice” is fundamental for the study of the following disciplines:
1. Disaster medicine, life safety;
2. Infectious diseases.

The area of professional activity of specialists studying the discipline “Emergency care in therapeutic practice” includes: a set of technologies, means, methods of human activity aimed at preserving and improving the health of the population by ensuring the appropriate quality of dental care (therapeutic and preventive, medical and social) and dispensary observation.

The objects of professional activity of specialists studying the discipline “Emergency care in therapeutic practice” are: the patient, as well as areas of science and technology in healthcare, which include a set of technologies, tools, and methods of providing dental and first aid in emergency conditions.

Specialist in the area of Dentistry specialty prepares for the following types of professional activities:

1. preventive;
2. diagnostic;
3. medicinal;
4. rehabilitation;
5. psychological and pedagogical;
6. organizational and managerial;
7. research.

Mastering competencies in the process of studying the discipline contributes to the formation of knowledge, skills and abilities that allow effective work in areas, objects and types of professional activities.

Course topics:

Thematic plan of lectures (10 hours)

1. Acute coronary syndrome. Pulmonary embolism
2. Asthmatic status.
3. Acute kidney injury. Anaphylactic shock
4. Diabetic comas.
5. Bleeding disorders. Diarrhea

Thematic plan of practical training (32 hours)

- Acute coronary syndrome. Cardiogenic shock. Pulmonary edema. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment.
- Hypertensive crisis. Rhythm and conduction disturbances. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment.
- Asthmatic status. Pulmonary embolism. Anaphylactic shock. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment.
- Spontaneous pneumothorax. Pulmonary hemorrhage. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment.
- Gastrointestinal bleeding. Acute diarrhea. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment.
- Acute renal failure. Renal colic. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment.
- Diabetic comas. Etiology. Pathogenesis. Classification. Diagnostics. Emergency care. Treatment. Final test.

Basic educational literature:

1. Levchuk, I. P. First aid in case of accidents and disasters / I. P. Levchuk, M. V. Kostyuchenko. - Москва : ГЭОТАР-Медиа, 2023. - 128 с. - ISBN 978-5-9704-7374-0. - https://www.studentlibrary.ru/book/ISBN9785970473740.html
2. Internal Diseases. Volume II. - Москва : ГЭОТАР-Медиа, 2022. - 616 с. - ISBN 978-5-9704-6767-1. https://www.studentlibrary.ru/book/ISBN9785970467671.html

3. Internal Diseases. Volume I. - Москва : ГЭОТАР-Медиа, 2022. - 688 с. - ISBN 978-5-9704-6766-4. https://www.studentlibrary.ru/book/ISBN9785970467664.html
4. Levchuk, I. P. Disaster Medicine/ I. P. Levchuk, M. V. Kostyuchenko. - Москва : ГЭОТАР-Медиа, 2021. - 240 с. - ISBN 978-5-9704-6074-0. https://www.studentlibrary.ru/book/ISBN9785970460740.html

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Evaluation and grading:

Monitoring progress is carried by the end of module (colloquia/written papers/oral examination/test/abstracts/reports/medical records, reports or other).

Routine performance assessment (homework, laboratory work, tests during classes, etc.) is carried out using 10 point scale, where 0-6 – "poor", 7 – "satisfactory", 8 – "good", 9 – "excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism (including lectures) is considered to be a student academic debt. In order to rework the debt the student can attend missed/failed class with a different academic group (the teacher is to be notified in advance) or to do the rework using e-learning or distance technologies or in other ways determined by the teacher. Abandoned academic debt is leading to dismissal from the University.

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Module is held in forms of test, written questions or their combination. Grading: 0–69 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90-100 – "excellent".

Overall student rating is build up from class attendance, module and test results, midterm assessment results.

GRADE SCALE DESCRIPTION

90–100 points - set if the student correctly answered 90% of the test questions.
80–89 points - set if the student answered correctly from 80% to 90% of the test questions.
70–79 points - set if the student answered correctly from 70% to 80% of the test questions.
Less than 70 points - set if the student correctly answered less than 69% of the test questions

The final (rating) grade is composed of module grades (maximum 100 points per module), current grade (maximum 10 points), and grade obtained in the test (maximum 100 points).
Assessment and evaluation criteria:
0-69 (unsatisfactory):
• Lectures:
o Failure to attend lectures or a large number of absences

o Lack of lecture notes
o Poor behavior during lecture
• Practical exercises:
o Failure to attend practical classes or a large number of absences.
o Incorrect answer or refusal to answer
o Lack of activity in class
o Low level of mastery of the material.
• Independent work:
o Tasks for independent work are not completed
70-79 (satisfactory):
• Lectures:
o Attending most of the lectures
o Partial absence of lecture notes/incomplete note-taking
• Practical exercises:
o Attending most of the practical classes
o The answer is correct, but insufficient
o Poor activity in class
o Low level of mastery of the material.
• Independent work:
o Tasks for independent work are completed, but with errors
80-89 (good):
• Lectures:
o Attendance at all lectures, absences only for a valid reason
o Availability of notes for all lectures
• Practical exercises:
o Attendance at all practical classes, absences only for a valid reason
o Correct, sufficient answer.
o Average activity in class
o Average level of knowledge of the material.
• Independent work:
o Tasks for independent work are completed mostly without errors .
90-100 (excellent):
• Lectures:
o Attendance at all lectures, absences only for a valid reason
o Availability of detailed notes of all lectures
• Practical exercises:
o Attendance at all practical classes, absences only for a valid reason
o Regular correct answers, incl. using additional literature
o High activity in class
o Fluent level of mastery of the material.
• Independent work:
o Tasks for independent work are completed without errors.

Example of MCQs for the testing in "Emergency care in therapeutic practice"

1.What drug is prescribed for thrombolysis?
a) Heparin
b) Aspirin
c) Tenecteplase *
d) Nitroglycerin
e) fraxiparine

2. What drug can reduce bleeding?
a) Aspirin
b) Heparin
c) Alteplaza
d) Tranexamic acid *
e) Clopidogrel

3. What are NOT the causes of anaphylactic shock?
a) Taking penicillin
b) Contact with allergens
c) Taking usual drugs for patient *
d) Taking NSAID
e) Bee sting

1. What kind of coma is characterized by the presence of ketone bodies in the blood?
a)hypoglycemic
b)Ketoacidotic *
c)Lactic acid
d)Hyperosmolar

CLINICAL CLERKSHIP "PRACTICE ON OBTAINING PROFESSIONAL SKILLS AND EXPERIENCE OF PROFESSIONAL ACTIVITY (ASSISTANT OF A DOCTOR - DENTIST (SURGEON))".

Teachers: PhD, associate professor Olga Torgashova
Building, Department, classroom: Department maxillofacial surgery and dental surgery. Chuikova str. 54, 5 floor, Kazan, Hospital 7
.**Contact details:**

- Telephone number: 89172922518 (**PhD, associate professor Olga Torgashova**)
- E-mail address: olga.torgashova @kazangmu.ru

Class hours:
Course: 4
Semester: 7
Total hours — 108
Practical work on the basis of practice -72
Independent work 36 hours;
Practice of KSMU students is an integral part of the basic educational program of higher and secondary professional education. The total duration of practice "Assistant of doctor - dentist (surgeon)" is 2 weeks. Practice of students is the most important part of educational process at preparation of highly qualified specialists with higher and secondary professional education and represents systematic and purposeful activity of students on deepening consolidation of theoretical knowledge and mastering the basics of the chosen profession by means of competence formation.
Course description:
Workshop is usually devoted to detailed study of specific topics and it is being held in each academic group separately. The workshop involves active participation of students in problem discussion. It requires preliminary preparation by the student.

Practical training is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University (https://e.kazangmu.ru/course/view.php?id=424).

Course objectives: The purpose of mastering the discipline

Practice is an inseparable part of the educational process and is the most important link in the training of a doctor - dentist (surgeon).
The purpose of industrial practice in surgical dentistry: improvement of practical skills and consolidation of theoretical knowledge obtained by students during the study of the course of surgical dentistry.

Objectives of discipline mastering

The main objectives of industrial practice:
- formation of clinical thinking, mastering the necessary elements of medical ethics and deontology;
- acquaintance with working conditions of a doctor - dentist (surgeon) of a dental polyclinic and organization of surgical dental care;
- acquisition and consolidation of necessary practical skills in examination of surgical dental patients, diagnosis, differential diagnosis and treatment of odontogenic inflammatory diseases of maxillofacial region;
- mastering all types of anesthesia used in outpatient dental practice;
- improvement of manual skills in tooth extraction and treatment of possible complications;
- acquiring the necessary skills of independent registration of current and reporting medical documentation of the surgical dental office.

Course topics:

Calendar plan of classes

1. Organization of surgical dental care
2 Examination of surgical dental patients
3. Anesthesia at operations on the face and in the oral cavity
4. Basics of emergency care in dental practice 4.
5. Operation of tooth extraction. Outpatient dental operations
6. Prevention and treatment of complications arising during and after tooth extraction:
7. Traumatology of the maxillofacial region
8. Tumors of the maxillofacial region
9. Diseases of the nervous system of the face and TMJ.

Text books and required supplies:

1. Oral Surgery : textbook / ed. by S. V. Tarasenko. - Москва : ГЭОТАР-Медиа, 2023. - 640 с. - ISBN 978-5-9704-7080-0, DOI: 10.33029/9704-7080-0-OST-2023-1-640. - Электронная версия доступна на сайте ЭБС "Консультант студента" : [сайт]. URL: https://www.studentlibrary.ru/book/ISBN9785970470800.html (дата обращения: 10.10.2024).
2. Oral and Maxillofacial Surgery: Textbook, Part 1 / V.O. Malanchuk. – Vinnytsia: Nova Knyha Publishers, 2011. – P. 172-175. https://chirurgieomfio.usmf.md/wp-content/blogs.dir/109/files/sites/109/2017/09/Oral_and_Maxillofacial_Surgery_E-Book.pdf

Evaluation and grading:

Midterm assessment is a form of knowledge and skills evaluation on the discipline or on a part of it (test/oral exam/paper). Grading: 0–69 points – noncredit; 70–100 points – credit. Student is given not more than 2 attempts to pass midterm assessment within one year. Failure is leading to dismissal from the University.

Overall student rating midterm assessment results is build up from class attendance, work on the educational portal of the University and test results.

During the internship the student is obliged to:
to timely perform all types of work provided by the program of practice and requirements of the practice base;
obey the rules of internal labor regulations of the internship base;
to show initiative in solving the tasks set by the internship and apply the theoretical knowledge and skills obtained;
keep a diary of work record according to the requirements described in the methodical guidelines for the corresponding type of practice;
to fulfill individual assignment (to take part in research work on the assignment of the specialized department), to prepare materials for participation in the work of the interregional student scientific-practical conference on the results of practice;

Example of module No. 1. Organization of dental care. Questions of therapeutic, orthopedic dentistry, children's dentistry and orthodontics. Methods of examination of a dental patient: basic and additional methods. Stages of the diagnostic process. The concept of differential diagnosis. Basic principles of making a treatment plan. Case history. Deontological aspects. Diseases of the hard tissues of the tooth. Dental caries. Non-carious lesions. Complications of caries. Pulpitis. Periodontitis. The concept of pulpitis, periodontitis. Classification, etiology, pathogenesis, clinic, diagnostics, methods of treatment and prevention.

Organization of outpatient and inpatient admission of dental patients. Types of dental care (therapeutic, surgical, orthopedic, orthodontic, children's). Features of examination and treatment of patients with dental diseases. Modern diagnostic methods. Diseases of hard tooth tissues in children and adults. Caries, pulpitis, periodontitis, periodontitis. Stages of teething in children. Prevention of carious and non-carious lesions of the teeth. Emergency care and treatment principles**.**

Example of module No. 2 Main aspects and problems of pain in dentistry. Local anesthetics used for local anesthesia. Potentiation of local analgesia, premedication. Choice of analgesia and preparation of the patient for intervention in concomitant diseases and in the elderly. Types of local anesthesia. Local and General complications. The operation of removing the tooth. Indications and contraindications. Tools.
Types of local anesthesia. Choice of analgesia and preparation of the patient for intervention in concomitant diseases and in the elderly. Analgesia for surgical interventions on the upper and lower jaw. The operation of removing the tooth. Indications and contraindications to the operation of tooth extraction. Method of removing teeth and their roots on the upper and lower jaw. Tools. Wound healing after tooth extraction.

EVALUATION OF THE MODULE ANSWER

Interview questions for zachot.

1. Subjective examination of dental patients. Complaints. Dental health history. General health history
2. Methods of examination of the maxillofacial region (face, oral cavity).
3. Extraoral examination.
4. Intraoral examination.
5. Writing a dental formula.
6. Dental tools.
7. Preparation of the patient for tooth extraction surgery, preparation of the doctor’s hands, preparation of the surgical field.
8. Indications for tooth extraction.

9. Contraindications for tooth extraction.
10. Instruments for removing teeth on the upper and lower jaw.
11. The position of the doctor and the patient when removing certain groups of teeth and tooth roots on the upper and lower jaw.
12. Stages of removal of individual groups of teeth and tooth roots on the upper and lower jaw.
13. Wound healing after tooth extraction.
14. Recommendations to the patient after tooth extraction.
15. Complications after tooth extraction surgery.
16. Treatment of complications.
17. Etiology, pathogenesis and pathological anatomy of acute purulent periostitis.
18. The clinical picture and treatment of periostitis of the jaw.
19. Periodontitis. Etiology, pathogenic, classification, treatment.
20. Pericoronitis. Etiology, pathogenic, classification, treatment.
21. Anesthesia's that is conducted on a lower jaw: indications and contra-indications, technique, possible complications and ways of their warning.
22. Anesthesia's that is conducted on a upper jaw: indications and contra-indications, technique, possible complications and ways of their warning.
23. Local anesthetic preparations, their clinical-pharmacological description.
24. Differential diagnostics of pain syndrome is in stomatology.

Evaluation criteria of the situational task:100-90 (excellent) - comprehensive assessment of the proposed clinical situation; knowledge of theoretical material taking into account interdisciplinary links; full answer to the question to the illustrative material, correct diagnosis, proposal of several treatment options with the choice of modern drugs, taking into account the clinical situation;.80-89 (good) - comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material , incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical substantiation of theoretical issues with additional comments of the teacher; 70-79 (satisfactory) - difficulties with complex assessment of the proposed situation; incomplete answer, including to the question to the illustrative material, requiring leading questions of the teacher; one treatment option is proposed, without taking into account modern materials, correct,.0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material, requiring leading questions of the teacher; 0-69 (unsatisfactory) - incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to deterioration of the situation, violation of the patient's well-being;

Example of test:

1.What tissues of the periodontium can be evaluated radiographically?

periodontal ligament space, lamina dura, alveolar bone, palate

bone marrow
papilla
gams
all of them

2. In which clinical cases the wisdom tooth extraction is indicated?

wrong position and inflammatory processes

in any cases
carious lesion
gingivitis
tonsillitis

3. Indications for third tooth removal:

Pain
Inflamation
Periodontal disease
All answers are correct
no right answer

4. Choose indications for third tooth removal:
Syphilitis
Caries
gingivitis
Sinusitis.
tonsillitis

5. Should doctor extract impacted tooth before orthodontic treatment?
In most cases
Never
Always
if the tooth interferes with the doctor
if there is tonsillitis

Grading Criteria:
The grade on the test is given in proportion to the percentage of correct answers:
90-100% - grade “excellent”
80-89% - grade “good”
70-79% - grade “satisfactory”
Less than 70% of correct answers - grade “poor”.

Grading Criteria:

Evaluation Criteria Demonstrated knowledge, skills, and abilities are evaluated on a 100-point scale, and points are converted to performance grades as follows:90-100 points - awarded if the student correctly answered 90% of the test questions.80-89 points - awarded if the student correctly answered 80% to 90% of the test questions.70-79 points - awarded if the student correctly answered 70% to 80% of the test questions.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.The student's knowledge, skills, and abilities are evaluated on a 100-point scale.Less than 70 points - awarded if the student correctly answered less than 69% of the test questions.

CLINICAL CLERCSHIP “DENTAL ASSISTANT HYGIENIST”

Teachers: docent Tanya Shiryak MD.
Department of Pediatric Dentistry.

Building, Department, Dental Practice Clinics:
Pediatric dental clinic No. 9, Yamasheva 52;
Pediatric dental clinic No 1, Yugo-zapadnay 32;
Pediatric dental clinic No 6, Gubkina 3:
Pediatric dental clinic No. 9, Saban 1;
Ripablic dental clinic, Butlerova 16;
Dental clinic No. 9, Lomjinskay
Dental clinic No. 9, Mira 54;
Clinic-diagnosicheski center, Lukina 1;

KSMU Simulation Center, Amirkhana 16.

Contact details:

- Telephone number: 89046609524 (**Tanya Shiryak**)
- E-mail address: Tanya_shiryak@mail.ru
- Office and working hours: 9-17

- Total hours — 108 hours.
Course: 3, Semester: 6
-practical work: 36
- Self-study: 72

Course description:
Practical work is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Course objectives: The purpose of mastering the discipline
The purpose of the clinical practice is the practical training of students (practical skills and competencies) in preventive dentistry.
Tasks of clinical practice:
- to study the structure of the dental clinic, the organization of dental care for children.
- gain practical skills in identifying and eliminating risk factors for dental diseases;
- get practical skills in the formation of an individual hygiene plan
- to study methods of organizing preventive measures among the population at the individual and group levels;
- to study methods of dental education and motivation of the population to maintain dental health;
- to study the methods of epidemiological dental examination of children and adults;
- get practical skills in the formation of individual programs for the prevention of dental diseases in adults and children

Course topics:

Calendar plan of Practical work

Topic 1. Organization of a dental clinic, department, office.
Topic 2. Medical Emergencies in Dental Practice.
Topic 3. Sterilization and disinfection of dental instruments.
Topic 4. Index estimation DMF, SPITN, PMA
Topic 5. Methods of prevention of dental diseases.
Topic 6. Professional oral hygiene.
Topic 7. Methods of diagnosis and treatment of initial caries.
Topic 8. Health education for children and adults on oral care;
Topic 9. Methods of exogenous prevention of caries.

Text books and required supplies:

1.S. Noble. Clinical Textbook of Dental Hygiene and Therapy// 431.-2 012.
https://www.pdfdrive.com/clinical-textbook-of-dental-hygiene-and-therapy-e157994145.html
2. John M. Powers et all. Dental Materials: Properties and Manipulation.// 2012.-248 P.
https://www.pdfdrive.com/dental-materials-properties-and-manipulation-e189261892.htm
3. Weinberg et all. Oral pharmacology for the dental hygienist.// 2013.-358 P.
https://www.pdfdrive.com/oral-pharmacology-for-the-dental-hygienist-e181527102.html

4. Jill S. Nield-Gehrig, D. E. Willmann. Foundations of Periodontics for the Dental Hygienist, 3rd Edition.- 2011.- 706 P. https://www.pdfdrive.com/foundations-of-periodontics-for-the-dental-hygienist-3rd-edition-d163416793.

Evaluation and grading:
Monitoring progress is carried by the end of practical work (oral examination/ case history/ test/ assessment of practical skills).

Routine performance assessment (practical work, oral examination**,** case history, tests during classes) is carried out using 100 point scale, where 0-60 – "poor", 70-79 – "satisfactory", 80-89 – "good", 90 – 100"excellent" and 10 – "splendid". Unsatisfactory mark during routine performance evaluation or absenteeism is considered to be a student academic debt.

In order to rework the debt the student can attend missed/failed practice days on another day (the teacher is to be notified in advance). Abandoned academic debt is leading to dismissal from the University.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of case history:

CASE HISTORY

Medical information about the patient includes the following aspects:

- Patient complaints (examples: complaints about pigmented film, dental calculus.
- Extraoral dental examination; symmetry of the face, skin color, condition of the lymph nodes, TMJ examination.
- Intraoral dental examination:
  - condition of the oral mucosa, of the gums,
  - condition of the frenum,
  - examination of teeth, dental formula, type of occlusion
- Additional methods; indices of oral hygiene, PMA - indices
- professional hygiene plan/prevention plan
- Caries risk assessment

Dental formula. Universal system:
Permanent teeth:
1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1 | 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8
4.8 4.7 4.6 4.5 4.4 4.3 4.2 4.1 | 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8

Primary teeth:
5.5 5.4 5.3 5.2 5.1 | 6.1 6.2 6.3 6.4 6.5
8.5 8.4 8.3 8.2 8.1 | 7.1 7.2 7.3 7.4 7.5

Clinical example. A girl 15 years (Figure 1).

Complaints of tooth decay, bleeding gums.
Dental history: She is very afraid of dentists, so she did not come to be treated.
Previous diseases: acute respiratory infections 2-3 times a year; no allergies. no hepatitis.

Figure 1. Clinical case

Objectively: the face is symmetrical, skin color is normal, regional lymph nodes are not enlarged, occlusion is orthognathic. The oral mucosa is pink. A lot of soft plaque on the teeth.
Green-Vermillion hygiene index =2 (unsatisfactory).
PMA=60 (moderate gingivitis).

Dental formula:

C	Pt	C	C	R	R	R	M	C	C	C	Pt	C	
1.7	1.6	1.5	1.4	1.3	1.2	1.1	2.1	2.2	2.3	2.4	2.5	2.6	2.7
4.7	4.6	4.5	4.4	4.3	4.2	4.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7
CC	P	C	C	C	C	C	C	C	C	C	C	P	C

indices of caries intensity: DMFT index=27, DMFS =40
Caries risk assessment: high risk of caries.
Treatment.
professional oral hygiene plan:
- Professional hygiene: removal of soft plaque using a polishing brush and paste.
-Exogenous prevention in the dental office: Fluoride varnish: 3 times in 1 day, 4 times a year.
-Non-invasive tooth sealing 1.5, material- Fissurite F.
-Endogenous prevention
«Sodium fluoride» at 1 mg per day, the course of 200-250 days a year.
« Calcium D 3 Nicomed» 250 mg. for 1 month, 2 times a year.
- consultation of a pediatrician.
- ***Recommendations for home hygiene:***

A) Basic hygiene item: toothbrush Junior, medium (for example Curaprox "Sensitive young")

B) Basic hygiene products: toothpaste with high fluoride content 2-3 times a day Colgat Duraphat 2800ppm,

C) Additional hygiene item: superfloss Oral-be.

D) Additional oral hygiene products:

- Rinse with an antiseptic for 2-3 weeks, (for example - Corsodil 0.2% chlorhexidine gluconate), then anti-caries with fluorides (for example Elmex) daily after brushing teeth,
- Apply R. O. C. S. Medical Minerals gel 2-3 times a day after rinsing
- Chewing gum with xylitol (for example Xylitol) 2-3 times a day.

E) Standard method of brushing teeth.

Tests examples to the topic:
1. On the main chair in the dentist's office is needed area:

a. 20 square meters.
b. 14 square meters.
c. 10 square meters.
d. 59 square meters.
e. 13 square meters.
2. If you have universal systems in the dental office need more space:
a. 14 square meters.
b. 10 square meters.
c. 7 square meters.
d. 13 square meters.
e. 59 square meters.
3.Methods of disinfectionare:
a. Physics, chemistry.
b. The physical, the air.
c. Chemical, steam.
d. Steam, the physical.
e. Steam, the air.
4. The processing steps dental instruments are:
a. Disinfection, cleaning, sterilization.
b. Disinfection, cleaning, boiling, sterilization.
c. Autoclaving, pre cleaning, sterilization.
d. Disinfection, autoclaving, boiling.
e. Autoclaving, boiling, sterilization.

PRACTICAL MANIPULATIONS:

PRACTICAL MANIPULATIONS	Recommended number of practical manipulations	Done. Сделано	Подпись врача руководителя Signature of doctor of the clinic	Date/дата	Подпись ассистента КГМУ
1. The number of examined patients, total	15				
- assessment of the caries intensity index: DMFT, DMFS, dmft, dmfs	10				
- hygiene index: OHI, Sil-Low	3				
- gingivitis index: PMA	2				
2. Fissure sealing, total	5				
-invasive fissure sealing	1				
-non-invasive fissure sealing	4				
3. Professional hygiene	6				
-with polishing paste, polishing brush, cup	2				
- using ultrasound	2				
- using air-flo	1				
-with manual scalers	1				

4. Remineralizing therapy, total	6				
-application fluoride varnish	4				
-application remineralizing solution	1				
- application APF- gel or neutral gel	1				
5. Hygiene education (training in brushing teeth)	6				
6. Assisting a hygienist	2				
7. Sterilization of instruments	+				

CLINICAL CLERKSHIP "ASSISTANT DENTIST PEDIATRICIAN"

Teachers: docent Tanya Shiryak, MD
Department of Pediatric Dentistry

Building, Department, Dental Practice Clinics:
Pediatric dental clinic No. 9, Yamasheva 52;
Pediatric dental clinic No 1, Yugo-zapadnay 32;
Pediatric dental clinic No 6, Gubkina 3:
Pediatric dental clinic No. 9, Saban 1;
Ripablic dental clinic, Butlerova 16;
Dental clinic No. 9, Lomjinskay
Dental clinic No. 9, Mira 54;
Clinic-diagnosicheski center, Lukina 1;
KSMU Simulation Center, Amirkhana 16.

Contact details:

- Telephone number: 89046609524 (Tanya Shiryak)
- E-mail address: Tanya_shiryak@mail.ru
- Office and working hours: 9-17

- Total hours — 108 hours.
Course: 5, Semester: 9
-practical work: 36
- Self-study: 72

Course description:
Practical work is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher.

Course objectives: The purpose of mastering the discipline
– to give the dentist professional knowledge on the diagnosis and treatment of major dental diseases, depending on the age of children and anatomical and physiological characteristics of the child's body;
- to develop practical skills in the treatment of major dental diseases in children.
The tasks of mastering the discipline (module):

- to familiarize students with the principles of organization and operation of a pediatric dental clinic, prevention of nosocomial infections;
- to familiarize students with measures on occupational safety and health, prevention of occupational diseases;
- to master methods of prevention of dental diseases, and methods of preventing complications of dental diseases in children,
- to master the methods of diagnosis of dental diseases and deformities of the maxillofacial region in children;
- to master the methods of diagnosis of dental symptoms of internal diseases and infectious diseases in children.
- to master the methods of dental therapeutic, surgical treatment, methods of prevention of complications, rehabilitation of patients with diseases in the maxillofacial region;
- to familiarize students with the documentation (medical history) of the organization of work with medicines, the rules of their storage in a pediatric dental clinic;
- to develop students' skills in studying scientific literature and official statistical reviews, preparing abstracts in pediatric dentistry;
- to develop students' communication and interaction skills with the team, partners, children and adolescents, and their relatives.

Course topics:

Calendar plan of Practical work

Section 1.1.
Introduction to the practice course: Pediatric Dental Assistant
Section 1.2.
Dental examination of children and adolescents.
Section 1.3. Health education for children. Treatment and prevention planning.
Section 1.4. Clinic, diagnosis and treatment of caries in children and adolescents
Section 1.5.
Clinic, diagnosis and treatment of pulpitis and apical periodontitis in children and adolescents
Section 1.6.
Clinic, diagnosis and treatment of periodontal diseases in children and adolescents
Section 1.7. Clinic, diagnosis and treatment of diseases of the oral mucosa in children and adolescents
Section 1.8. Planning the treatment of children with orthodontic pathology.
Section 1.9. Planning the treatment of children with inflammatory diseases of the maxillofacial region.

Text books and required supplies:

1. J.A. Dean, D. R. Avery, R. E. McDonald. Dentistry for the Child and Adolescent / ELSEVIER ,- 2021-10th ed.- 640 p. https://cloud.mail.ru/public/XK4x/Qf6c8oBx8
2. M. E.J. Curzon, M. S. Duggal . Restorative techniques in paediatric dentistry : an illustrated guide to the restoration of extensively carious primary teeth./ London: M. Dunitz.- 124 p. https://e.kazangmu.ru/course/view.php?id=2939

Evaluation and grading:

Monitoring progress is carried by the end of practical work (oral examination/ case history/ test/ assessment of practical skills).

Routine performance assessment (practical work, oral examination**,** case history, tests during classes) is carried out using 100 point scale, where 0-60 – “poor”, 70-79 – “satisfactory”, 80-89 –

“good”, 90 – 100“excellent” and 10 – “splendid”. Unsatisfactory mark during routine performance evaluation or absenteeism is considered to be a student academic debt.

In order to rework the debt the student can attend missed/failed practice days on another day (the teacher is to be notified in advance). Abandoned academic debt is leading to dismissal from the University.

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Example of case history:

The child is 5 years old.
Complaints: swelling of the soft tissues of the cheek on the left, a temperature of 37.5 during the day, pain in the area of 7.4 when biting (Fig. 1).
Objectively: Slight asymmetry of the face due to collateral swelling of the soft tissues of the cheek on the left. Regional lymph nodes are not enlarged.
Status localis: 7.4 The tooth was previously treated for caries, the filling fell out, a deep carious cavity on the distal surface, the tooth cavity was opened, probing is painless, the temperature reaction is painless, percussion is painful, the oral mucosa is hyperemic, edematous, painful when palpated in the area of the tip of the tooth 7.4.
X-ray:
7.4 deep carious cavity communicating with the tooth cavity, medial root at the stage of stabilization, distal root has pathological resorption by 1/3, in the bifurcation area, destruction of bone tissue with indistinct contours with a diameter of d = 0.4 x 0.3, an increase in the space of the periodontal ligament, follicle 3.4 is not involved in the pathological process.

Ds : 7.4. ICD K04.5, chronic granulating periodontitis

Figure 1.

Treatment.

1 visit 01.04.20. 7.5 The filling was removed, the opening of the tooth cavity, the removal of putrid masses, instrumental and medical treatment of root canals with 2% chlorhexidine. The tooth is left open. Rinse with a hot decoction of chamomile 6 times a day.

Appointments

- "Nurofen, suspension".
- Antibiotic "Amoxiclav" 250 mg x 3 times a day. The course is 5 days. Attendance 04.04.23.

2 visit. 04.04.23. No complaints

Objectively: 7.4 percussion is painless, the mucous membrane is pink.

Ds: 7.4 ICD K04.5, chronic granulating periodontitis.

Treatment: 7.5 instrumental and medical treatment of root canals 2% chlorhexidine. The CaON is left in the root canals. Temporary seal Septopak. Attendance 06.04.23.

3 visit. 06.04.23. There are no complaints.

Objectively: 7.5 percussion is painless, the oral mucosa is pink.

Ds: 7.4 ICD K04.5, chronic granulating periodontitis.

Treatment: 7.4 the temporary seal has been removed, the root canals have been sealed with "Zinc oxide eugenol paste". Vitremer base (3M), permanent seal "Te-Econom".

X-ray control in 3-4 months.

PRACTICAL MANIPULATIONS:

PRACTICAL MANIPULATIONS	Recommended number of practical manipulations	Done.	Signature of doctor of the clinic	Date/дата	Подпись ассистента КГМУ
8. The number of examined patients, total	15				
- assessment of the caries intensity index: DMFT, DMFS, dmft, dmfs	10				

- hygiene index: OHI, Sil-Low	3				
- gingivitis index: PMA	2				
9. Fissure sealing, total	5				
-invasive fissure sealing	1				
-non-invasive fissure sealing	4				
10. Professional hygiene	6				
-with polishing paste, polishing brush, cup	2				
- using ultrasound	2				
- using air-flo	1				
-with manual scalers	1				
11. Remineralizing therapy, total	6				
-application fluoride varnish	4				
-application remineralizing solution	1				
- application APF- gel or neutral gel	1				
12. Hygiene education (training in brushing teeth)	6				
13. Assisting a hygienist	2				
14. Treatment of primary tooth caries.	3				
8.Treatment of permanent tooth caries	1				
9.Treatment of primary tooth pulpitis.	2				
10.Treatment of permanent tooth pulpitis	1				
11.Treatment of periodontitis of the primary tooth.	2				
12.Treatment of permanent tooth periodontitis	1				

PRACTICAL CLERKSHIP "ASSISTANT DENTIST (THERAPIST)" 4TH YEAR, 8TH SEMESTER.

Teachers: Associate Professor, Ph.D. Khaliullina G.R.
Venue: For conducting industrial practice in therapeutic
permanent bases are assigned to the students of the Kazan State Medical University. These bases are the dental clinics of the city of Kazan and Tatarstan, staffed with qualified medical personnel – dentists (therapists) who have a sufficient amount of appropriate medical equipment and have the ability to provide industrial training for students.

Contact information:
Phone: (843) 238-27-92 (assistance)
- mail address: konferentciyakzn@mail.ru

Office and working hours: (08.00-16.00), 3rd floor. Assistant's office of the Department of Therapeutic Dentistry

Classroom and independent work hours:
Total 108 hours, including:
Practical classes 72 hours;
Independent work 25 hours
Distance learning 11 hours

Course Description:
Practical work of students consists of daily reception of outpatients. Under the supervision of a doctor-curator, a student must daily receive 8-10 patients with dental diseases requiring therapeutic treatment. In accordance with the curriculum, each student must perform a minimum of practical skills during industrial practice.
Independent work is work with specialized literature or educational materials (literary sources, video and audio materials, multimedia programs and simulators) on the university's educational portal (http://www.kgmu.kcn.ru:40404/moodle/login/index.php) .
During the internship, the student takes part in all medical and preventive measures of the clinic, participates in production meetings and medical conferences. The sanitary and educational work that the student must carry out consists of giving lectures, talking to patients (about the prevention of complications, diet, oral hygiene rules, etc.), drawing up sanitary bulletins, and preventive measures carried out by the clinic.
The purpose of mastering the discipline:
The purpose of mastering the practice is to become familiar with the structure of the dental clinic, the organization of its work on providing medical and preventive care to the adult population . Consolidation of practical skills related to the diagnosis, treatment and prevention of dental and periodontal diseases.

Objectives of mastering practice:
- to familiarize students with the structure of a dental clinic and the organization of dental care for adults;
- to develop methods of dental education and motivation of the population to maintain dental health by students;
- conducting examination of patients during a therapeutic appointment;
- to consolidate practical skills in the diagnosis, treatment and prevention of dental and periodontal diseases;
- to strengthen students' skills in selecting personal hygiene products and preventing dental diseases;
- to consolidate knowledge on providing first aid to patients in emergency situations;
- consolidate knowledge and skills in preparing medical documentation (medical records, sick leave certificates, statistical coupon, etc.);
- to consolidate the skills of health education work by conducting conversations;
- to consolidate communication skills with patients taking into account ethical and deontological standards, depending on the identified pathology and characterological features of patients;
- take an active part in the work of medical conferences and in the events of the medical organization.

Module topics.

Thematic plan of practical classes:
Topic 1. Organization of work of a dental therapeutic office.
Infection control.
Topic 2. Methods of examination of a dental patient with caries and non-carious lesions of dental tissues. Medical documentation. Ethics and deontology in dentistry.
Topic 3. Dental caries. Etiology, pathogenesis of dental caries. Classification of caries
teeth. Methods of caries diagnostics.
Topic 4. Methods of treating dental caries. Use of filling materials
in the treatment of dental caries.
Topic 5. Non-carious lesions of teeth that occur after their eruption. Tooth erosion, abrasion, dental trauma, hyperesthesia. Treatment, prevention.

Topic 6. Methods of diagnosing dental pulp inflammation. Examination of the patient.
Topic 7. Clinic of pulpitis
Topic 8. Methods of diagnostics of apical periodontitis. Examination of the patient
Topic 9. Methods of pulpitis treatment that preserve the viability of the pulp.
Topic 10. Methods of pulpitis treatment that do not preserve the viability of the pulp.
Topic 11. Treatment of apical periodontitis.
Topic 12. Examination of a patient with periodontal pathology : acute (K05.0), chronic (K05.1), ulcerative (A69.10) gingivitis; additional diagnostic methods, drawing up a treatment plan.

Basic Literature

1.Therapeutic dentistry / O. O. Yanushevich, Yu. M.Maksimovsky, L. N. Maksimovskaya et al. Moscow: GEOTAR-Media, 2016. http://www.studentlibrary.ru/book/ISBN9785970437674.html EBS consultant-student
2.Therapeutic dentistry: textbook in 3 parts / ed. by G. M. Barer. Moscow: Geotar-Media, 2009. Part 2: Periodontal diseases. 224 (2) p 102 copies.
3.Therapeutic dentistry: textbook in 3 parts. / ed. by G. M. Barer, Moscow: Geotar-Media, 2015. Part 2: Periodontal diseases. 224 p.http://www.studentlibrary.ru/
EBS consultant-student

Additional literature

1.Dentistry. Recording and maintaining the medical history: a guide / ed. by V. V. Afanasyev, O. O. Yanushevich. 2nd ed., ispr. and dop. Moscow: Geotar-Media, 2013. 160 p. http://www.studmedlib.ru/ www.studentlibrary.ru /
EBS consultant-student
2.Local anesthesia in dentistry: textbook. handbook for students studying in the specialty "Dentistry" / ed. by E. A. Bazikyan, Moscow: GeotarGeotar-Media, 2016. http://www.studmedlib.ru / EBS consultant-student

Periodicals

1.Institute of Dentistry: journal
2.New in Dentistry journal
3. Periodontology: journal
4.Clinical Dentistry: journal

List of Internet resources

1. Electronic catalog of the Scientific Library of KSMU. http://library.kazangmu.ru/jirbis2/index.php?option=com_irbis&view=irbis&Itemid=108
2. jirbis2/index.php?option=com_irbis&view=irbis&Itemid=108 2.Electronic library system of KazanState Medical University. http://old.kazangmu.ru/lib/ 3.Integrated information and library system-Cluster.
3. http://old.kazangmu.ru/lib/index.php?option=com_content&view=article&id=1053&Itemid=100
4. Student's consultant:electronic library. http://www.studmedlib.ru/http: //www.studentlibrary.ru/
5. Doctor's consultant:electronic medical library. http://www.rosmedlib.ru/
6. the electronic library eLibrary.RU http://elibrary.ru/
7. http://elibrary.ru/ the Scopus databaseScopus. https://www.scopus.com/
8. Abstract database Web of Science publication database Science publications. http://apps.webofknowledge.com/
9. clinical medicine database ClinicalKey. https://www.clinicalkey.com
10. Electronic versions of books (28 copies). foreign)..Ebscohosthttp://web.b.ebscohost.com/Электронные://web.b.ebscohost.com/ 1

11. books (9 copies). foreign) on the ScienceDirect platformhttp://www.sciencedirect.com/science/bookbshsrw
12. http://www.sciencedirect.com/science/bookbshsrw Springer electronic scientific information resourcesSpringer. http://link.springer.com/
13. resources of the SpringerNature publishinghouse. http://www.nature.com/siteindex/index.html://www.nature.com/siteindex/index.html
14. Medical newspaper: electronic version. http://www.mgzt.ru/
15. NEIKON scientific journalsNEIKON. http://arch.neicon.ru/xmlui/
16. Archive (review) of media publications. Polpred.com http://www.polpred.com/
17. Consultant plus: legal reference system. Access from library computers

Teaching aids

1.Catarrhal, hypertrophic, ulcerative-necrotic gingivitis. Clinic, diagnosis, treatment and rehabilitation: textbook.-method. handbook for students (VII semester) / comp. and under the general editorship of S. L. Blashkova, H. A. Makarova. 2nd ed., reprint.. and add-ons. Kazan: KSMU Publ., 2012.

2.Periodontal diseases. Clinic, diagnosis, treatment and rehabilitation: textbook.-method. handbook for students (VIII semester) / comp. and under the general editorship of S. L. Blashkova, N. A. Makarova. 2nd ed., reprint.. and add-ons. Kazan: KSMU Publ., 2012, 72 p. (in Russian)

3.Vestibuloplasty as a stage of treatment of patients with periodontal diseases: textbook. manual for students / comp.: Yu. V. Fazylova et al. Kazan: KSMU Publ., 2011, 32 p.

4.Modern aspects of ultrasonic scaling: textbook. manual / comp.: Yu. V. Fazylova et al. Kazan: MeDDok Publishing House, 2011, 40 p.

5.Prevention of the development of transient bacteremia at a dentalappointment: textbook.-method. manual for students / author-comp. by S. B. Kovyazin. Electron. text messages. (415 KB). Kazan: KSMU, 2013. 30 p

6.Roentgenology diagnostics in therapy stomatology : ucheb. -method. manual / SL Blashkova , KA Berezin , E. Yu. Startseva . Kazan: KSMU Publ., 2015, 220 p.

7.Method of directed regeneration of periodontal tissues: textbook. manual for students / SL Blashkova , OV Kostina . Kazan: KSMU Publ., 2015, 58 p.

8.Practice of maintaining a medical record for common dental diseases: textbook. manual for students, resident doctors, cadets of postgraduate training in the specialty 31.05.03-Dentistry / I. I. Giniyatullin, S. L. Blashkova. Kazan: KSMU Publ., 2016, 46 p.

9.Recessionary gums: textbook. manual for students / S. L. Blashkova, O. V. Kostina. Kazan: KSMU Publ., 2016, 56 p.

10.Chronic hypertrophic gingivitis. Clinic, diagnosis, treatment: textbook.-method. manual for students of the dental Faculty / S. L. Blashkova, L. P. Gimadieva. Kazan: KSMU, 2013. 34 p

11. Prevention of periodontal diseases in patients with cardiovascular pathology: textbook. manual for doctors / S. L. Blashkova, E. M. Vasilevskaya. Kazan: KSMU Publ., 2014, 64 p.

12.Analgesia in the clinic of therapeutic dentistry: textbook. manual for students / comp.: S. L. Blashkova, L. P. Gimadieva. Kazan: KSMU Publ., 2016, 48 p.

13.Periodontology. IX semester: study period. manual for students studying in the specialty 31.05.03-Dentistry / S. L. Blashkova, O. V. Kostina, E. V. Zagrodskaya. Kazan, KSMU Publ., 2016, 122 p.

14 .Periodontology . VIII semester: study period. manual for students studying in the specialty 05/31/03-Dentistry / SL Blashkova , OV Kostina , EV Zagrodskaya . Kazan , KSMU Publ ., 2016, 87 p.

Evaluation and grading :

Practice Reporting Forms

Upon completion of the internship, the student receiving the higher professional education must have:
- a written report or diary signed by the immediate supervisor of the practice from the institution,
- a characteristic reflecting his work during practice,
- report on the implementation of the individual assignment of the department (R&D),
- the results of the work performed in interactive form.

Students who fail to complete the internship program without a valid reason or who receive a negative grade may be expelled from KSMU as having academic debt.

The assessment of current academic performance (oral survey) is conducted on a 10-point scale, where 0-6 is "unsatisfactory", 7 is "satisfactory", 8 is "good", 9 is "excellent" and 10 is "excellent".

An unsatisfactory grade during the current assessment, as well as missing practical classes and lectures, is considered an academic failure of the student.

To retake the debt, the student can attend the missed/failed class with another academic group (the teacher must be notified of this in advance), or complete the work using e-learning, distance learning technologies or in another way determined by the teacher. Failure to retake (work off) the academic debt entails expulsion from the university.

Rules of conduct during classes:

– Be respectful.
– Be careful with the equipment.
– Be disciplined.
– Be ready for classes.
– Be involved in the process, don't be shy about asking questions.
– Look professional: You should wear a clean white coat and change of shoes.
– Eating is permitted only during breaks in specially designated areas.
– Use of the phone is permitted only during breaks between classes.

Examples of assignments for the final module:
Test tasks:

1. Eugenol is the basis for :
1) materials for permanent fillings
2) paste for permanent filling of canals
3) paste for temporary filling of canals
4) for insulating gaskets under chemically cured composites
5) for insulating gaskets under light-curing composites
2. Iodine-containing preparations for medicinal treatment of canals:
1) chloramine T , chlorhexidine
2) proteolytic enzymes
3) copper hydroxide - calpium
4) betadine , iodinol
5) hydrogen peroxide
3. Enzyme preparations for medicinal treatment of root canals:
1) sodium hypochlorite, chloramine
2) iodinol , betadine
3) dimethyl sulfoxide
4) lysozyme, trypsin
5) hydrogen peroxide
4. A preparation with a pronounced surface-active effect for medicinal treatment of canals:
1) lysozyme, trypsin
2) iodinol , betadine

3) sodium hypochlorite
4) dimethyl sulfoxide
5) hydrogen peroxide

Situational tasks:

To establish the frequency of secondary caries occurrence when filling cavities of various localizations with composites using medical records. To study the dependence of the frequency of filling loss on the localization of the carious process.

Sample ticket:

1.Dental hyperesthesia
2. Emergency care for acute inflammation in the periapical tissues

Test assignment evaluation criteria:

An “excellent” grade means that the student scored 90% or more of the maximum test score.
Grade “good” – the student scored 80–89% of the maximum test score.
The grade is “satisfactory” – the student scored 71–79% of the maximum test score.
A fail grade means the student scored less than 70% of the maximum test score.

Criteria for assessing situational tasks:

The grade “ excellent ” means that the student freely, with a deep knowledge of the material, correctly and completely solved the situational problem (completed all the tasks, correctly answered all the questions).
The grade “ good ” means that the student answered the questions correctly or made minor errors in the answer in a sufficiently convincing manner, with minor errors in theoretical preparation and sufficiently mastered skills;
The grade " satisfactory " - the student answered the questions of the situational task without sufficient confidence, with significant errors in theoretical preparation and poorly mastered skills; with difficulties, but still able, if necessary, to solve a similar situational task in practice;
The grade “ unsatisfactory ” means that the student has a very weak understanding of the subject and made significant mistakes in answering most of the questions in the situational task, answered additional questions asked of him incorrectly, and cannot cope with solving a similar task in practice.

Response Evaluation Criteria ::

The grade “excellent” means error-free completion of the task, fluent knowledge of the methods of selecting the necessary tools and working with diagnostic equipment; error-free interpretation of the data obtained with justification of one’s own conclusions.
The grade “good” means completing the task with minor errors that were independently discovered and corrected; correct explanation of the results obtained with the help of additional questions from the teacher; correct interpretation of data, justification of own conclusions with the help of additional questions from the teacher.
The grade “satisfactory” – the assignment was completed with errors that distorted the result obtained, but the progress of the task was corrected after additional questions or explanations from the teacher; erroneous interpretation of the research data, but correction of the interpretation after additional questions or explanations from the teacher; lack of justification for one’s own conclusions.
The grade "unsatisfactory" - the completion of the task with errors that distort the result obtained, the lack of correction of the progress of the task after additional questions or explanations from the teacher; the lack of explanation of the results obtained; erroneous interpretation of the

research data, the lack of correction of the interpretation after additional questions or explanations from the teacher, the lack of justification of one's own conclusions.

CLINICAL CLERKSHIP "PRACTICE IN OBTAINING PROFESSIONAL SKILLS AND PROFESSIONAL EXPERIENCE IN PROSTHETIC DENTISTRY - DENTAL ASSISTANT (PROSTHETIC)"

Teachers: Mustakimova Rezeda Faritovna, Shakirov Eduard Iurevich, Shakirova Leisan Rinatovna, Denisov Nikolay Dmitrievich.
Building, Department, classroom: Butlerova 16, Dental clinic Kazan SMU, Department of Prosthetic Dentistry; Amirkhana 16, Dental Simulation Clinic.
Contact details:

- Telephone number: 89625881635 (Denisov Nikolay)
- E-mail address: dr.denisov.nikolay@gmail.com
- Office and working hours: Butlerova 16, Dental clinic Kazan SMU; Monday-Friday 8:00-18:00.

Course description:
Clinical classes is aimed to apply theoretical knowledge in practice. The skills are developed in problem solving process under the supervision of a teacher. Practicing manual skills.
Self-study is work with the special literature or teaching materials (literary sources, video and audio material, multimedia programs and simulators) on the educational portal of the University.

The purpose and objectives of mastering the discipline " Practice in obtaining professional skills and professional experience in prosthetic dentistry - Dental Assistant (Prosthetic)".
The objectives of the production practice in obtaining professional skills and professional experience in orthopedic dentistry are professional and practical training of students in orthopedic dentistry. The practice is focused on deepening theoretical training and consolidating students' practical skills and competencies in the field of prevention and orthopedic treatment of pathological conditions of the dental system, on the formation of clinical thinking among students.

Course: 4
Semester: 8
Clinical classes: 36 hours.
Self-study: 72 hours.
A total of 108 hours.

The content of practice:

1. Introduction to the course of practice in prosthetic dentistry at the clinic.
2. Dental examination of the patient at the prosthetic dentistry clinic.
3. Features of prosthetics in patients with partial dental defects.
4. Features of prosthetics in patients with complete absence of teeth.
5. Features of prosthetics in patients with periodontal diseases.

Examples:

1. Due to the contraction of which muscles the lower jaw moves forward:
A) temporal;

B) the actual chewing;
C) medial pterygoid;
D) lateral pterygoid;+
E) the anterior sections of the biceps muscles.

2. Functional research methods in prosthetic dentistry include:
A) examination;
B) palpation;
C) percussion;
D) rheography;+
E) determination of tooth mobility.

3. Indications for prosthetics with an inlay are the following indicators and doses:
A) 0.25-0.3;
B) 0.45-0.6;+
C) 0.6-0.7;
D) 0.7-0.8;
E) more than 0.8.

4. List the main accounting documentation of the prosthetic doctor:
A) appointment card;
B) the order is an outfit for the preparation of prosthetics;
C) medical record of a dental patient;
D) referral for radiography;
E) the prosthetic doctor's accounting diary.+

5. Define the objectives of the subject of prosthetic dentistry:
A) examination and diagnosis of orthopedic patients;
B) development and selection of denture designs;
C) the basic requirements for the premises;
D) familiarization with the operation of dental equipment drills;
E) analysis of diseases leading to impaired functions of the chewing apparatus, and development of preventive measures.+

Situational task № 1.
Patient K., a 52-year-old worker, went to the clinic complaining of pain in the area of the upper lip frenulum and the transitional fold on the left. Full removable dentures were applied a day ago.
Objectively: On external inspection, there are no changes. Examination of the oral mucosa revealed hyperemia, edema of the frenulum of the upper lip and hyperemia in the buccal region on the left. The labial frenulum of the upper lip and the buccal cords are attached 2 mm above the apex of the alveolar process.
When examining the prostheses in the oral cavity, it was found that the fixation and stability of the prostheses is satisfactory. The border of the base of the upper jaw prosthesis is elongated in the region of the frenulum and buccal cord.
Tasks:
1. Make a diagnosis.
2. Name the most likely cause of injuries in this case.
3. Choose a method of prosthetic correction and justify it.
4. The boundaries of the bases of the upper and lower jaw.
5. With what type of toothless upper jaw can the boundaries of the prosthesis be reduced? Justify the answer.

Text books and required supplies.

9. Electronic catalog of the scientific library of Kazan State Medical University. http://lib.kazangmu.ru/jirbis2/index.php?option=com_irbis&view=irbis&Itemid=521&lang=en
10. Electronic library system of KSMU https://lib-kazangmu.ru/english
11. Student electronic library Student's Konsultant, Books in English https://www.studentlibrary.ru/ru/catalogue/switch_kit/x2018-207.html
12. Scientific Electronic Library Elibrary.ru http://elibrary.ru
13. Reference information system https://mbasegeotar.ru/cgi-bin/mb4x
14. Medical journals and articles PubMed https://pubmed.ncbi.nlm.nih.gov/
15. Archive of scientific journals of foreign publishers NEIKON http://arch.neicon.ru/xmlui/
16. Journal of Prosthodontics
17. The International Journal of Prosthodontics
18. Journal of Prosthodontic Research (Official Journal of Japan Prosthodontics Society)
19. Journal of Prosthetic Dentistry
20. Journal of Indian Prosthodontic Society
21. The Journal of Advanced Prosthodontics

Classroom rules:

- Be respectful
- Be careful with equipment
- Be disciplined
- Be prepared for the classes
- Be involved, do not hesitate to ask questions
- Look professional: you have to wear clean white coat and change shoes
- Eating is allowed only during brakes
- Using phone is allowed only during brakes

Evaluation and grading:

Evaluation criteria for test:
The test score is given in proportion to the share of correct answers:
90-100% - "excellent" grade
80-89% - "good" grade
70-79% - "satisfactory" rating
Less than 70% of correct answers are rated "unsatisfactory".

Evaluation criteria for situational task:
90-100% (excellent) – a comprehensive assessment of the proposed clinical situation; knowledge of theoretical material, taking into account interdisciplinary connections; a complete answer to the question to the illustrative material, correct diagnosis, offering several treatment options with a choice of modern materials, taking into account the clinical situation; consistent, confident implementation of clinical and laboratory stages of manufacturing the selected design, taking into account the function, occlusal features and aesthetics.
80-89% (good) – comprehensive assessment of the proposed situation, minor difficulties in answering theoretical questions; incomplete answer to the question to the illustrative material, incomplete disclosure of interdisciplinary connections; correct diagnosis, correct choice of tactics; logical justification of theoretical questions with additional comments from the teacher;

consistent, confident implementation of clinical and laboratory stages of manufacturing the selected design taking into account the function, occlusal features and aesthetics.
70-79% (satisfactory) – difficulties with a comprehensive assessment of the proposed situation; an incomplete answer, including a question to the illustrative material, requiring leading questions from the teacher; one treatment option is proposed, without taking into account modern materials, correct, consistent, but uncertain performance of clinical and laboratory stages of construction, taking into account function, occlusive features and aesthetics.
Less than 70% (unsatisfactory) – incorrect assessment of the situation; incorrect answer to the question to the illustrative material; incorrect diagnosis, incorrect treatment, leading to a deterioration of the situation, violation of patient safety; incorrect implementation of the clinical and laboratory stages of manufacturing the proposed prosthesis design.

ELECTIVE: RUSSIAN AS A FOREIGN LANGUAGE. LINGUISTIC AND REGIONAL STUDIES

Teachers teaching the course:

Associate Professor Fidaeva L.I., Associate Professor Chevela O.V., Associate Professor Fedotova S.I., Associate Professor Evdokimova A.G., Associate Professor Amirova R.M., Associate Professor Svetlova R.M., Associate Professor Ibragimova L.G., Associate Professor Alikova E.A., Associate Professor Kuznetsova E.G., Associate Professor Gilemshina A.G., Senior Lecturer Fomina S.E., Senior Lecturer Yakubova L.S., Senior Lecturer Nikityuk V.P., Senior Lecturer Baltaeva V.T., Senior Lecturer Yusupova L.G.
Building, department, auditorium #. NUC, Department of Russian and Tatar languages,

Contacts:
Associate Professor of the Department
of Russian and Tatar Languages O.V. Chevela
Associate Professor of the Department
of Russian and Tatar Languages S.I. Fedotova
Phone number: 88432364530

Courses: 1
Semesters: 2
Total 108- hours.
Credit units of labor intensity ZET 3
Practical (seminar, laboratory practicals)
classes 57 hours
Independent work 51 hours.

Course Description:

The scientific basis of the discipline is the theoretical provisions of a number of sciences, primarily linguistics, pedagogy, psychology and psycholinguistics. Linguistic and regional studies as an aspect of the practical course of the Russian language implements the practice of selecting and presenting in the educational process information about the national and cultural specifics of speech communication in order to ensure the communicative and socio-cultural competence of students studying the Russian language. Regional studies is considered as an academic discipline, the subject of which is a specifically selected and systematized set of socio-political, historical, geographical and other background knowledge related to the content and form of speech communication of native speakers of a given language and included in the

educational process in order to ensure the educational and upbringing goals of training and the communicative needs of students, realized in the studied (Russian) language.

Know:

- the main communicatively significant grammatical categories of the Russian language (independent parts of speech, prepositions, conjunctions), the syntax of a simple and complex sentence in accordance with the profile being studied;
- the main ways of combining lexical units and the main word-formation models;
- elementary norms of Russian speech etiquette;
- 1,300 units of commonly used vocabulary;

Be able to:

- deepen and expand theoretical knowledge and practical skills in the discipline;
- perform current work on educational material; tests and assignments in practical classes;
- work with banks of tasks, multimedia educational, information and reference and control programs, prepared special audio and video materials.
- activate cognitive activity;

a) in reading:

- be able to read texts taken from different sources, understand the basic and additional information of adapted texts of regional studies, informational and journalistic, social and professional nature;
- read and understand texts from the social and cultural and social and everyday communication spheres, using different types of reading.
- read texts from recommended educational literature, extract the necessary information and convey it orally and in writing with varying degrees of condensation;
- make various types of plans for the texts read;

b) in listening

- listen to and understand the information contained in a monologue,
- audit the information of an oral message from the social and cultural and social and everyday sphere of communication with subsequent transmission of its content with varying degrees of condensation;

c) in speaking

- understand the basic information presented in individual monologues and dialogues of a social and everyday and socio-cultural nature;
- be able to initiate a dialogue in simple situations of a standard type, maintain a conversation about oneself, a friend, family, studies, work, learning a foreign language, working day, free time, hometown, health, weather, etc., and also construct one's own statement based on the text read;
- use the acquired skills of formulating statements about one's intentions in a limited set of situations
- apply grammatical norms and a minimum vocabulary in speech.
- independently generate a text according to a specified model, construct a coherent detailed statement on a given topic, be able to conduct dialogues of various types;
- express one's own attitude to the facts, events set out in the text, the characters and their actions.
- understand the content of the interlocutor's statements;
- adequately respond to the interlocutor's remarks;
- establish and maintain social contacts with other people (acquaintance, greeting, addressing acquaintances and strangers, expressing gratitude and apologies
- express assessments, opinions and subjective-emotional attitudes towards persons, objects, events and actions;
- receive and transmit specific information about people, facts, events.
- apply grammatical norms and a minimum vocabulary in speech.

d) in writing

- be able to write a short letter, note, congratulations, etc., outline the main content of the source text, based on questions

- construct a written monologue of a reproductive nature based on a read or listened to text in accordance with the communicative setting;

Have:

- linguistic, speech and actually communicative material necessary for solving the following communicative tasks:

- master the elementary norms of the Russian literary language;

- speech genres of question and communication of information;

- oral and written speech skills.

- linguistic, speech and communicative material, necessary for mastering the elementary and basic level for solving the following communicative tasks:

- master the norms of Russian speech etiquette when meeting people, when addressing senior members of the teaching staff;

- speech genres of asking and communicating information, greetings, farewells, gratitude, requests, refusals, apologies and congratulations.

Course objectives: The purpose of mastering the discipline

The general purpose of the discipline "Russian as a Foreign Language. Linguistic and Regional Studies" in a medical university has an applied, practical focus and is intended to solve the problems of teaching Russian to foreign students of the medical specialty in order to prepare them for clinical practice in Russian, for life and study in a Russian language environment, for familiarization with the history and traditions of Russia and the perception of its basic values.

Within the framework of the given program, three educational goals are realized: practical, general educational, educational.

The general educational purpose consists in forming in foreign students:

knowledge of regional studies (about the geography and history of Russia, about the current state of society, about material and spiritual culture, about the history of medicine and great medical scientists);

about the Russian language in comparison with the native language - knowledge that allows one to master a new system of concepts through which reality can be perceived.

The educational goal also involves the development of:

- attention, memory and thinking; - communicative and cognitive abilities;

- general educational skills and abilities - to work with a book and a dictionary, to express one's thoughts in written and oral forms, etc.

Educational purposes are achieved in the course of academic and extracurricular work and are aimed at developing students' sense of responsibility, tolerance, ability to behave with fellow students, elders and patients, compliance with the internal regulations of KSMU, and the rules of stay on the territory of the Russian Federation.

As a result of familiarization with the history, political and state structure of the country of the studied language, social and ethnic structure, economy, education, health care, mass media, main religious confessions, etc., students should have created a sufficiently complete system of background knowledge, including the worldview and views prevailing in a given society, ethical assessments and tastes, norms of verbal and non-verbal behavior.

Students must master the basic skills of language analysis in order to identify national and cultural semantics, as well as the techniques of regional studies of texts. The tasks of teaching language are inextricably linked with the tasks of studying the country.

Educational purposes and objectives of the course

1. Fostering tolerance towards representatives of a foreign-language cultural environment.

2. Teaching the basic techniques of effective intercultural interaction.
3. Fostering interest in further study of the Russian language system.
4. Fostering a harmoniously developed linguistic personality.

Learning objectives of the discipline:

As a result of studying the discipline, students must master the following competencies:

- readiness to work in a team, tolerantly perceive social, ethnic, religious and cultural differences (OK-8);

readiness to communicate in oral and written forms in Russian and foreign languages to solve problems of professional activity (OPK-2)

Calendar of practical classes

1,2 semester

	Sections / Topics Discipline	**labor intensity (hours)**	**Types of educational activities, including independent work of students and workload (in hours)**						**Forms of current monitoring of academic performance**
			Аудиторные учебные занятия				**Distance learning**	**Independent work of students**	
		Total	**Lectures**	**Interactive lectures**	**Practical classes**	**Interactive practical classes**			
	Section 1. Vocabulary. Russia in names and dates.	42			24	18			
.	Topic 1.1. Vocabulary. History of the Russian state.	8	-	-	4	4			Working with text, reading subtest, monologue, writing subtest, listening subtest.
.	Topic 1.2. Vocabulary. The Great Patriotic War. Military leaders. The feat of doctors during the Great Patriotic War.	6	-	-	4	2			Working with text, reading subtest, monologue, writing subtest, listening subtest.
.	Topic 1.3. Modern Russia. State	4	-	-	2	2			Working with text,

	structure of Russia. Symbols of Russia. Coat of arms and anthem of Russia. Main religious confessions of Russia.								reading subtest, monologue, writing subtest, listening subtest. Preparing a presentation
.	Topic 1.4. Geography and toponymy of Russia and Tatarstan. Sightseeing tour of historical places of Kazan. Literary local history.	8			4	4			Working with text, reading subtest, monologue, listening subtest, writing subtest, following the excursion.
.	Topic 1.5. Great names of Russia. (Lomonosov, Mendeleev, Pushkin, Lermontov)	8	-	-	4	4			writing subtest
.	Topic 1.6. History of medicine. Medical Kazan. (Bekhterev, Gruzdev, Klyachkin, history of the Shamovskaya hospital). Excursion to the KSMU museum. Sightseeing tour of memorable places. Literary local history.	8			4	4			Working with text, reading subtest, monologue, listening subtest, writing subtest, following the excursion..
.	Control lesson on section 1.	2	-	-	2	-			Country Studies Test
	Section 2. Pages of Russian culture.	32	-	-	19	13			
	Topic 2.1. Traditional culture and traditional values of Russia.	2	-	-	1	1			Working with text, reading subtest, monologu

									es, listening subtest, writing subtest following the excursion, preparing a presentation
	Topic 2.2. Russian holidays.	8	-	-	4	4			Working with text, reading subtest, monologue, listening subtest
	Topic 2. 3. Education in Russia.	2	-	-	1	1			Working with text, reading subtest, monologue, listening subtest
0	Topic 2.4. Music and Fine Arts of Russia. Excursion to Kazan Museums	8	-	-	4	4			Working with text, reading subtest, monologue, writing subtest following the excursion.
1.	Topic 2.5. Russian speech etiquette. Speech culture.	2	-	-	1	1	-		Working with text, reading subtest, monologue
2	Topic 2.6. Oral folklore.	2			1	1			Preparing messages, working with artistic text
3.	Topic 2.7. Russian language in the modern world.	2			1	1			Working with Internet resources

									and printed publications. Developing annotation skills.
4.	Final test lesson.	4			4				Country Studies Test. Final training

Methodological materials defining the procedures for assessing knowledge, skills, abilities and (or) experience of activities characterizing the stages of competency formation

The procedure for assessing learning outcomes is carried out on the basis of the Regulation of Kazan State Medical University on the forms, frequency and procedure for current monitoring of academic performance and midterm assessment of students. The following types of students' educational activities in the discipline "Russian as a Foreign Language. Linguistic and Regional Studies " are subject to current monitoring of academic performance (hereinafter referred to as CMAP): attendance of practical classes, results of independent work. CMAP is conducted by a teacher assigned to implement the educational program in a specific academic group or a teacher responsible for the types of educational activities of students.

When conducting practical classes, it is envisaged to use active forms of classes, built in a traditional form (including a survey) and using interactive teaching methods, in combination with extracurricular (independent) work with the support of a teacher.

The current control is conducted at each lesson to check the degree of development of specific skills and the level of proficiency in the studied dose of language material, to stimulate students' academic work, and to improve the methods of teaching the discipline. It can be conducted during all types of classes in the form selected by the teacher or provided for by the subject plan. The results of the current control are reflected in the log of academic classes and are used by the department for the operational management of the educational process.

The current control of academic performance should be organized and conducted in such a way as to identify:

the degree of development of students' skills and abilities in each section and topic;

the degree of responsibility of students for academic work, the level of development of their abilities, the reasons that prevent them from working productively;

the level of mastering the skills of independent work;

deficiencies in the organization and conduct of classes (independent work).

Based on the analysis of the results of the current control, each teacher must promptly outline measures to eliminate the identified deficiencies in the organization of the educational process in the discipline of the department. Well-organized and methodically competently conducted current control should stimulate students' interest in studying the Russian language, increase their activity in learning, and also develop the habit of systematically working independently on the educational material.

Students' work is assessed during practical classes, which involves doing exercises (orally and in writing), oral answers.

The student's answer is estimated at 10 points.

Current control of the results of independent work in workbooks, written tests, oral surveys, and test control is carried out in the form of assessing the results of independent work in

workbooks, completing written tests, oral surveys, and testing. Current control of the results of independent work is carried out at each lesson for all students. At the end of each section of the thematic plan (module), the current control is carried out for all students in the group. During practical classes, the teacher evaluates any, especially successful action (for example, participation in a discussion), only the solution of a full-fledged problem is marked. Teachers will strive to determine the assessment in the dialogue (external assessment of the teacher + external assessment of students + self-assessment). The student has the right to challenge the grade given. A separate mark is given for each academic task or group of tasks demonstrating mastery of a separate skill.

The assessment of students' academic performance on a separate topic is expressed on a 10-point scale, where 0-6 – "bad", 7 - "satisfactory", 8 – "good", 9 – "very good"and 10 - "excellent".

Module on a 100-point scale. The assessment must be reflected in the academic journal.

69 (unsatisfactory):

- Non-attendance of practical classes or a large number of absences.
- Incorrect response or refusal to respond
- Lackofactivityin class
- Low level of material proficiency.
- Independent work:Tasks for independentwork are not completed, either they contain a lot of errors, or there is a high percentage of plagiarism.
- Lexical and grammatical errors in tasks.

70-79 (satisfactory):

- Attend most of the practical classes
- The answer is correct, but not sufficient
- Low activity in the classroom
- Low level of material proficiency.
- Independent work:
- Tasks for independent work are completed, but with errors or with an average level of borrowing
- Lexical and grammatical errors in tasks.

80-89 (good):

- Attending all practical classes, skipping only for a valid reason
- Correct, sufficient answer.
- Average activity per class
- Average level of material proficiency.
- Independent work:
- Tasks for independent work are mostly performed without errors and with a small amount of borrowing.
- There are no lexical or grammatical errors.

90-100 (excellent):

- Attending all practical classes, skipping only for a valid reason
- Regular correct answers, includingusing additional literature
- High activity in the classroom
- Fluent knowledge of the material.
- Independent work:
- Tasks for independent work are completed without mistakes or borrowing
- There are no lexical or grammatical errors.

90-100 points – the student demonstrates knowledge of the minimum vocabulary of a conversational nature, the ability to understand elementary questions by ear (conversation), correctly use grammatical forms, good command of all types of speech activity, possession of both productive and reproductive speech skills.

80-89 points - the student has sufficient command of all types of speech activity, mainly correctly uses the lexical minimum and the studied grammatical and syntactic material in oral and written forms of expression, demonstrates sufficient competence in the socio-cultural and socio-everyday spheres of communication with native speakers. The mistakes made are not of a communicative nature, reproductive speech skills prevail.

70-79 points – the student has a poor command of all types of speech activity, has a limited vocabulary and does not always use it correctly, has significant difficulties in using the studied grammatical and syntactic material in oral and written forms of expression, makes a significant number of communicative errors, demonstrates only reproductive speech skills, has low competence in the socio-cultural and social-everyday spheres of communication with native speakers.

less than 70 points - the student has practically no command of the main types of speech activity, the lexical minimum and lexical and syntactic material, finds it difficult to use the studied material in both forms of expression. The mistakes are of a communicative nature, competence in the socio-cultural and socio-everyday spheres of communication with native speakers has not been formed.

The final (rating) grade is made up of grades for modules (maximum 100 points per module), the current grade (maximum 10 points). Assessment and evaluation criteria:

List of primary and secondary educational literature required for mastering the discipline (module)

Primary educational literature

List of primary literature Number of copies

1. Moskovkin L.V., Silvina L.V. Russian language. Elementary course for foreign students. Publishing house SMIOPress, 2014. – 528 p.

2. Shustikova T.V., Kulakova V.A. Russian language is my friend. Basic level.- 6th ed., corrected. And add.- Moscow: RUDN, 2014. – 849 p.

Additional educational literature

1. Yakubova L.S., Kuznetsova L.G. Preparing for the final exam in Russian: a teaching aid for foreign students. – Kazan, KSMU, 2012. – Part 1.

2. Yakubova L.S., Baltaeva V.T., Nikityuk V.P. Russian-Hindi educational dictionary: for foreign first-year medical students studying in an intermediary language: more than 3190 units. – Kazan, KSMU, 2014. – 116 p.

3. Evdokimova A.G., Baltaeva V.T. Russian language in stories and dialogues: a teaching aid for foreign students. – Kazan, KSMU, 2012. – Part 1.

4. Evdokimova A.G., Baltaeva V.T. Russian language in stories and dialogues: a teaching aid for foreign students. – Kazan, KSMU, 2012. – Part 2.

List of resources of the information and telecommunications network "Internet" (hereinafter referred to as the "Internet") required for mastering the discipline (module

1. Fedotova S.I., Chevela O.V. Russian as a Foreign Language. Part 1. Elementary Level. – Distance Course. – http://www.kgmu.kcn.ru:40404/moodle/course/view.php?id=467

2. Portal on Russian as a Foreign Language “RussNet” (in English).

http://www.russnet.org

3. Resources for Students of Russian Language and Culture of Russia (Russian Studies Department, Bucknell University) (in English).

http://www.departments.bucknell.edu/russian

4. Evdokimova A.G., Baltaeva V.T. Russian Language in Stories and Dialogues: A Teaching Aid for Foreign Students. – Kazan, KSMU, 2012. – Part 2.

5. Russian for everybody (Russian language for everyone) – Russian as a foreign language course RUDN 2000 (Russian and English versions).

http://www.LinguaRus.com

6 Russian Web Tutor (Interactive materials on Russian as a foreign language)

http://www.auburn.edu/~mitrege/RVT

7. . Materials on Russian as a foreign language by Professor T. Bayer (Middlebury College).

http://www.middlebury.edu/~beyer/mapryal/

http://www. gramota.ru

8. Electronic catalog of the scientific library of KSMU [Electronic resource].

URL: http://library.kazangmu.ru

9. Electronic library system of KSMU Copyright holder: scientific library of KSMU (FS on intellectual property No. 2012620798, registration date 17.08.2012) [Electronic resource]. URL: http://old.kazangmu.ru/lib/

10. Electronic library system elibrary.ru — electronic versions of Russian scientific and technical journals. Current agreement No. D-3917 dated 14.02.2017. Access period: 14.02.2017 — 14.02.2018. Unlimited access from university computers [Electronic resource]. URL: http://elibrary.ru

11. Culture of written speech [Electronic resource]. URL: www.gramma.ru, free.

12. Encyclopedic Dictionary of Medical Terms [Electronic resource].

URL: http://studentmedic.ru

13 Russian dictionaries [Electronic resource]. URL: www.slovari.ru

14. National Corpus of the Russian Language [Electronic resource]. URL: www.ruscorpora.ru

15 Practical skills for a graduate of a medical university [Electronic resource] / Bulatov S.A., Anisimov O.G., Abdulganieva D.I., Akhmadeev N.R., Bikkineev F.G., Gorbunov V.A., Orlov Yu.V., Petukhov D.M., Sadykova A.R., Sayapova D.R. - Kazan: Kazan State Medical University. – Access mode: http://www.studmedlib.ru, free.

Information reference system:

National Corpus of the Russian Language

http://www.ruscorpora.ru/index.html - The Corpus of the Russian Language is an information and reference system based on a collection of Russian texts in electronic form. The corpus is intended for anyone interested in a variety of issues related to the Russian language: professional linguists, language teachers, schoolchildren and students, foreigners studying Russian.

Online translators and dictionaries with the Russian language:

http://online.multilex.ru/ - English-Russian online translator "Multilex"

http://www.rambler.ru/dict/enru/ - New English-Russian dictionary

http://slovari.yandex.ru/ - translation from/into Russian, German, French, Italian, Spanish, Latin, Ukrainian

http://www.multitran.ru/ - database of multilingual dictionaries.

Databases of Russian language dictionaries on the Internet

http://www.martindalecenter.com/Language_3_Russian.html – database in English

http://www.gramota.ru/slovari/online/ – database in Russian

Methodological guidelines for students on mastering the discipline (module)

Requirements for completing the test.

The test is aimed at identifying the level of students' mastery of lexical and grammatical knowledge, skills and abilities on the topics covered. The work indicates the topic and the student's full name, without a title page. The work is done on a computer or by hand in neat, clear handwriting. When completing the work, it is not allowed to use a textbook, dictionaries, or other reference materials. If necessary, you can use a draft. Entries in the draft will not be checked or assessed.

Requirements for conducting an individual interview

The interview is conducted according to a list of questions known to students in advance, individually with each student. The latter must, having received the questions, explain the concepts that are given in these questions. The student does not receive additional time for preparation. No more than 5 minutes are allocated for working with one student.

Requirements for written answers to questions

The work is submitted in writing, no more than 15 to 20 minutes are allocated for them. The work must be individual in nature, if several works coincide, the teacher has the right to cancel them.

Requirements for tasks for assessing skills and abilities

The tasks are completed in the classroom, during practical classes. The tasks are individual in nature, the teacher has the right to decide whether to give them orally or in writing.

Requirements for test tasks

Tests for elementary and basic levels are used by the teacher to check the residual knowledge of students. Test tasks are designed for independent work without the use of auxiliary materials. To complete a test task, the student must carefully read the question. After reading the question, you should start reading the proposed answer options. You must read all the options and choose only one index (digital designation) as an answer, corresponding to the correct answer. In each test, only one of the options is correct. The choice must be made in favor of the most correct answer. A limited time is allocated for completing the test. It may vary depending on the level of the test takers, the complexity and volume of the test. As a rule, the time for completing a test task is determined based on the calculation

Requirements for situational tasks (role-playing games) - case method:

Case method is a form based on the study, analysis, and comprehensive consideration of a problem that is relevant for a given group of students. They must analyze the situation, understand the essence of the problem, propose possible solutions, and choose the best one. The essence of this method is that students are asked to find a solution to a situation that relates to real-life problems and the description of which reflects a practical task. A distinctive feature of this method is the creation of a problem situation based on facts from real life. Tasks are given in the form of special problems (cases), students gain knowledge as a result of analytical and creative activities. This method has a number of features that distinguish it from other interactive forms, for example: the central point is the problem, not the subject, the case must deal with a specific object, and not just with general theory, students are required to actively participate in the learning process, and not just be passive listeners.

The purpose of the elementary and basic levels of proficiency in the Russian language is the formation and further development of speech skills and abilities in all types of speech activity (reading, listening, speaking and writing), the formation and development of regional studies and socio-cultural competence.

To achieve this purpose, the main study time is allocated to practical work on the skills and abilities of speech communication, including: 1) teaching the language system; 2) developing speech skills of speaking, listening, reading, writing; 3) familiarization with the culture of the country of the language being studied (Russian as a foreign language, Russian as a foreign language, Russian as a native language); 4) educational tasks.

When studying the academic discipline, it is necessary to use active forms of learning and master practical skills to generate oral and written texts that are correct from the point of view of various norms of the Russian language, and adequately understand oral and written texts created

by native speakers for native speakers in the conditions of natural speech communication (authentic texts).

Language and speech material is selected and distributed taking into account its communicative significance - first, students are taught the grammar and vocabulary most necessary for communication. New linguistic phenomena are presented as part of speech samples that are related to one or several communication situations. The learning process itself is to a certain extent similar to the process of real communication, since the basis of learning is communicative practice, the constant implementation of conditional communicative and genuine communicative exercises. All actions of the teacher and students are directed/

Rules of student conduct in classes on the subject "Foreign language":

- attend classes regularly;
- do homework;
- be prepared for class;
- not be late;
- listen carefully to the teacher's explanations;
- actively participate in discussions on a given topic;
- do not talk about abstract topics;
- be polite to others, observe the rules of etiquette of speech communication;
- use a mobile phone only with the teacher's permission and only for educational purposes;
- do not eat or drink;
- do not use obscene expressions, gestures;
- do not make noise;
- have a neat appearance, wear a white coat.

Standard control tasks or other materials necessary for assessing knowledge, skills and (or) experience of activities that characterize the stages of competence formation in the process of mastering an educational program

Materials for the oral part of the test (certification) - 2nd semester

Sample topics for a monologue:

1. Праздники России.
2. Великие люди России (А.С.Пушкин., М.Ю. Лермонтов, Д.И.Менделеев и др. На выбор).
3. Русский язык в современном мире.
4. Образование в России.
5. Литература и искусство России.
6. Государственное устройство России.
7. Казань – столица Татарстана.
8. В.С. Груздев.
9. В.М.Бехтерев.
11. Г.А.Клячкин.
12. Е.М.Лепский.
13 И.В.Домрачев.
14. Известный медик-герой ВОВ Н.Н.Бурденко

1. Holidays of Russia.
2. Great people of Russia (A.S. Pushkin, M.Yu. Lermontov, D.I. Mendeleev and others. Your choice).
3. Russian language in the modern world.
4. Education in Russia.
5. Literature and art of Russia.
6. State structure of Russia.

7. Kazan is the capital of Tatarstan.
8. V.S. Gruzdev.
9. V.M. Bekhterev.
11. G.A. Klyachkin.
12. E.M. Lepsky.
13. I.V. Domrachev.
14. Famous physician-hero of the Great Patriotic War N.N. Burdenko

Sample topics for presentation:
1. Жизнь и творчество А.С. Пушкина.
2. День славянской письменности.
3. Русские художники.
6. Роль медиков в Великой Отечественной войне.
7. Интернационализм в годы Великой Отечественной войны.
8. Великие ученые России.
9. Христианские праздники.
10. Славянская и индийская демонология.
11. Казань медицинская.
12.Пушкинские места России.

1. Life and work of A.S. Pushkin.
2. Day of Slavic Literature.
3. Russian artists.
6. The role of doctors in the Great Patriotic War.
7. Internationalism during the Great Patriotic War.
8. Great scientists of Russia.
9. Christian holidays.
10. Slavic and Indian demonology.
11. Medical Kazan.
12. Pushkin places in Russia